

"The health of our oceans is intrinsically linked to the future of life on this planet"

PRE-DIVE BRIEFING PACK

Eco-Region 2b South America - Pacific Coast - Sub-tropical



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1.0 General Information

This booklet is a **pre-dive briefing pack** for the **South America - Pacific Coast - Sub-tropical** eco-region. Please feel free to print it and take it with you as an 'aide memoir' for your dive. It contains all the information you need to contribute to the **EARTHOINE** Global Dive Log.

1.1 Introduction

The **EARTHDIVE** Global Dive Log is a pioneering methodology that has been developed in partnership with **UNEP-WCMC** and marine scientists from around the world. These marine scientists helped establish thirty **EARTHDIVE** eco-regions - areas of water that share a relatively similar climate and contain a common assembly of natural habitats and species. They then identified key indicator species for each region - an important set of marine animals whose numbers and changing population can tell us a lot about the changing state of our oceans.

You can help observe and record sightings of these marine animals during a dive or snorkel trip and enter observations into the **Global Dive Log**. You can also record evidence of key anthropogenic pressures - changes in the marine environment brought about by human activity such as pollution and overfishing. Any data you enter onto the **EfRTHDIUE** website can be viewed by you and other visitors.

The **EfRTHDIUE** eco-regions span all of the world's oceans - not just those areas with warm water and coral reefs. Whether you are diving in Scotland or Saint Lucia, Connecticut or Cocos, Denmark or Dominica, your data collection is equally valid and valuable. So you don't have to wait for the next exotic dive trip - home waters are just as important!

Each eco-region also has its own types of megafauna, from dolphins to whale sharks, from whales to polar bears (if you like really cold water) and provision is also made in the Global Dive Log to record sightings of these exciting animals.

Collecting this valuable information for **EfIRTHDIUE** helps create a **Global Dive Log** - a valuable research tool.

This briefing pack lists the indicator species and anthropogenic pressures for the Mediterranean eco-region.

Thank you for recording scientific information for **EARTHDIVE**.

1.2 How to record your observations into the Global Dive Log

When recording scientific information for **EfRTHDIUE**, divers are recommended to follow our 7 Point Plan. You will find the use of a slate or some other method of taking notes underwater, such as a laminated fish identification card, invaluable. Always try to transfer your data to the **EfRTHDIUE** website as soon as possible following your dive. Let dive buddies and dive leaders know what you are measuring, as they may be able to help with some post-dive questions on identification.

- **1.2.1** Try and ensure that the time of the underwater recording session is accurately noted. The length of the session can be all of the dive or just a period during the dive e.g. 10 minutes. You may even spend periods of time recording different indicators. For example there may be a dense aggregation of drums, which you count for 10 or 15 minutes. On the other hand you may look for other species such as groupers for most of the dive. Whatever your choice, the data is important so try to add the recording time in the notes for each indicator.
- **1.2.2** When possible always record <u>actual</u> counts of indicator species. If this is too difficult on the dive then enter your data into the abundance scale in the Global Dive Log as an estimate.



- **1.2.3** Only record an indicator to species if you are 100% certain that it is that species. Otherwise record to genus or to family, e.g. an indicator for the sub-tropical Atlantic Coast of South America is the dusky grouper (*Epinephelus marginatus*). If you are uncertain of the species but recognise the genus, call it *Epinephelus sp.* If you do not have time to recognise it, or do not know it apart from that it is a grouper, then just record it as that it's just as important!
- **1.2.4** Record as much background as possible in the notes section of the Global Dive Log for each indicator, i.e. depth of sighting, type of habitat (lower reef slope, kelp bed, sand with scattered rocky outcrops etc). Particular behaviour should also be noted spawning behaviour in fish or invertebrates for example.
- **1.2.5** When recording always fin slowly and evenly with minimal sudden movements. Moving rapidly will disturb resident fish causing them to hide from view more quickly. By moving slowly and evenly you have more chance of seeing indicator species and recording their presence/absence more accurately. Always look carefully for particular indicators such as lobsters, which are often under overhangs or in crevices.
- **1.2.6** On your way to and from your dive site, record any observations you have made regarding the listed anthropogenic pressures for this eco-region.
- **1.2.7** Following your dive, make notes from your slate or memory and keep them in a safe place. Add any further comments within 24 hours before you lose some of the detail from your memory.

Thank you

2.0 The South America - Pacific Coast -Sub-tropical Eco-Region

This eco-region comprises the coastal waters of the subtropical Chilean regions (regiones) V to VII (5 to 7).

A current of cold Antarctic water known as the Humboldt (or Peru) Current flows from the southern tip of Chile, northwards as far as Peru, then turns west and leaves the coast. This causes an upwelling of deep, nutrient-rich water to rise up along the coast, creating perfect conditions for abundant



plankton and an extraordinary variety of marine mammals, seabirds, and fish. The current is slow and shallow. The cool sea waters contrast with the warmer, on-shore, sub tropical temperatures.

The waters of this eco-region teem with huge schools of small fish, mostly pelagic, such as anchovies, sardines and jack mackerel. These small creatures are the basis for the eco-region's food chain that other species rely on, including Chilean dolphins and Burmeister's porpoises. Both the endangered Humboldt and Magellanic (*Spheniscus magellanicus*), penguins benefit from the current and are often mistaken for each other. A number of species of turtles, including the leatherback and loggerhead, can be found throughout the region, as are southern sea lions (*Otaria flavescens*) and South American fur seals (*Arctocephalus australis*).

For scuba divers who are also interested in ornithology, the air is filled with the sharp calls of seabirds such as Wilson's petrels, flesh-footed and sooty shearwaters, and grey and red-necked phalaropes. Inca terns will dive to catch anchovies.

When the climatic phenomenon El Niño comes to the area every few years, the ocean grows warmer and the surface layer of water becomes more dense. It is then



difficult for the Humboldt Current to maintain its typical upwellings, and the water becomes less nutrient-rich. Fish and wildlife populations can collapse when an El Niño changes wind and temperature patterns. This makes marine life vulnerable to intensive fishing practices, with overfishing leading to a loss of biodiversity These events have also led to sequential changes, where sardines and anchovies have replaced each other periodically as the dominant species in the ecosystem.

Although the Galapagos Islands are on the equator, well to the northeast of the region, the effect of the cold Humboldt Current is felt there, despite the great distance. The marine ecosystems of the Galápagos Islands, like the terrestrial ecosystems, include a diverse flora and fauna, with high levels of endemism, an unusual phenomenon for marine communities. A large number of rare and endangered species are to be found, including green turtles (*Chelonia mydas*), flightless cormorants, and marine iguanas.

The sea and its currents are a prime factor affecting climatic conditions in the islands. Water temperatures show immense variety depending on the time of year and geographic position. The El Nino current affects the Galapagos with a flow of warm water southwest from the Panama Basin. This does not happen every year, but it is a regular cause of disruption to the seabirds that depend on the cold waters for fish.

Various forces--the equator, the diversity of currents, the surrounding waters and changes in elevation--all contribute to a variable and sometimes difficult climate. It also makes for a vital element in the complex world of the Galapagos Islands, with their two distinct seasons.

3.0 Indicator Species

All Sharks

What to look for and record in the South America - Pacific Coast - Subtropical:

Low numbers are indicators of overfishing Groupers (Serranidae) Low numbers are indicators of overfishing

Lobsters Low numbers are indicators of overfishing

Abalone (Haliotis spp.) Low numbers are indicators of overfishing

Snappers (*Lutjanidae*) *Low numbers are indicators of overfishing*



The International Union for Conservation of Nature and Natural Resources (IUCN) provides a listing of species that are at risk of global extinction. The 'IUCN Red List Categories and Criteria' are intended to be an easily and widely understood system and can be found at http://www.redlist.org The general aim of the system is to provide an explicit, objective framework for the classification of the broadest range of species according to their extinction risk. If any of the indicator species for this Eco-Region have been classified as Critically Endangered, Endangered or Vulnerable on the list, then we have included that information below.

3.1 Sharks

Identifying sharks in the wild is a great challenge! While scientists can spend weeks examining every detail of a species, divers may encounter a shark for only a few seconds or minutes. Many species look alike and one individual may not be identical to the next. There are, however, relatively few species in any one specific dive site



and with some preparation and a little practice it is possible for all of us to recognise the more common and distinctive species.

The key to successful shark identification underwater is a process of elimination, based on a mental checklist of the main features to look for in every animal encountered. One feature alone is rarely enough for a positive identification, so gather as much information as you can before drawing firm conclusions.



Whale Shark

EARTHDIVE wants you to record sightings of sharks. That in itself is valuable. A total count of <u>all species</u> and the time duration of the count is important information in itself and you can record this data in the Global Dive **Log**.



Blue Shark

However, identifying the actual species is even more important. If you do not recognise a species, ask your buddy, dive leader or other divers in the group, who may have seen it also. Or, record unusual features like, needle sharp teeth, incredibly long tail, diamond-shaped open mouth or a flattened hammer-shaped head. All these observations are sufficiently distinctive to help us and others make an identification. Record these details in the notes section for each indicator in the Global Dive Log.

Colour is also helpful - note the main background colours of both the upperside and underside as well as distinctive markings. The

dorsal (back) fins can also tell us a lot. Do they have a broad or narrow base? Are they curved or upright? Are they falcate (sickle shaped)? Are the tips rounded or pointed? What is the background colour of the fins?

Some species have very distinctive dorsal fins - the first dorsal of the oceanic whitetip, for instance, is huge, rounded and conspicuously marked with a mottled white tip.

One thing we are pretty sure of (unless the **Global Snapshot** proves us wrong!), is that all sharks are restricted in their range in one way or another. Whitetip reef sharks are only found in the Pacific and Indian Oceans (including the Red Sea), for example, while bull sharks are found virtually worldwide but only in tropical and sub-tropical waters. Caribbean reef sharks occur mainly around island reefs, whereas oceanic whitetip sharks are more common farther offshore in oceanic waters.

In this way we can tell you which sharks you might encounter in the **South America – Atlantic Coast Subtropical** eco-region and some of these are listed below, but given the enormous diversity of species within the region, this list is not all-inclusive:

- Basking Shark
- Blue Shark
- Bluntnose Sixgill Shark
- Broadnose Sevengill Shark
- Great White Shark (Vulnerable IUCN)
- Porbeagle Shark
- School or Tope Shark (Vulnerable IUCN)
- Shortfin Mako Shark
- Smooth Hammerhead Shark
- Thintail Thresher Shark
- Whale Shark (Vulnerable IUCN)

Cetorhinus maximus Prionace glauca Hexanchus griseus Notorynchus cepedianus Carcharodon carcharias Lamna nasus Galeorhinus galeus Isurus oxyrinchu Sphyrna zygaena Alopias vulpinus Rhincodon typus



3.2 Groupers (Serranidae)

When people talk about coral reefs, fishermen tend to shrug their shoulders and complain about snagged lines and torn nets. But when you talk about groupers, they suddenly sit up and pay attention. Groupers are among the economically most important fishes of the coral reef, because of their popularity as food. Yet without the coral reef there would probably be no groupers.

For this reason, groupers are an extremely important indicator species and your record of their existence or nonexistence during your dive tells us a lot. Like all indicators, it



is valuable if you can record the particular species you sight. However, recording the total number of groupers is just as important. Some of the species that you may encounter in the warmer waters of Chile and north to Central America are listed below.

The goliath grouper (*Epinephelus itajara*), sometimes called the jewfish is classified as critically endangered on the IUCN Red List. It is present in the eastern Pacific Ocean from the Gulf of California to Peru, although unlikely to be seen as far south as even Chile's warmest waters. Found in inshore waters to depths of 45m, this indicator prefers areas of rock, coral, and mud bottoms. It is solitary and territorial by nature and feeds on crustaceans. It can reach lengths of 2.5m, and weigh up to 450kg. There is anecdotal evidence of goliaths stalking and attempting to eat divers!

The jewfish is notable as one of the few groupers to be seen in brackish waters. It is territorial near areas of refuge such as caves, wrecks, and ledges, showing an open mouth and quivering body to intruders. It can also produce a distinctly audible rumbling sound generated by the muscular contraction of the swim bladder. This sound is intended both as a warning to intruders and as a location method for other groupers.

Here are the other types of Grouper you are likely to encounter in the South America - Pacific Coast - subtropical eco-region:

- Broomtail Grouper
- Gulf Grouper (Vulnerable IUCN)
- Itajara (Critically endangered IUCN) (aka Goliath or Jewfish)
- Leopard Grouper (Vulnerable IUCN)
- Sailfin Grouper (Vulnerable IUCN)
- Sawtail Grouper (Vulnerable IUCN)
- Spotted Grouper
- Starry Grouper

Mycteroperca xenarcha Mycteroperca jordani Epinephelus itajara

Mycteroperca rosacea Mycteroperca olfax Mycteroperca prionura Epinephelus analogus Epinephelus labriformis

3.3 Rock and Reef Lobsters



The Palinurus genus

Lobsters have recently suffered a dramatic demographic decline; entire populations have been annihilated by intensive fishing, especially where tourism abounds. The diversity of lobsters, molluscs and shrimp is low in the region, with perhaps less than ten species of lobster to be found. However there are two endemic species of lobster,

the Juan Fernandez rock lobster (*Jasus frontalis*) and the Chilean jagged or spiny lobster (*Projasus bahamondei*) The Chilean jagged lobster, is generally not commercially exploited, but is frequently landed as



bycatch. Other lobsters to be found will include the squat lobster (*Pleuroncodes monodon*) and *Palinuras spp*.

The Palinurus genus (often frequently transcribed as Panulirus) or Spiny Lobster is represented by numerous species in all the world's tropical and sub-tropical seas. It is a predatory, nocturnal animal decorated coat.

They are often numerous locally; they linger in crevices (with their long

during the day and hunt small benthic (bottom dwelling) organisms at night, but they also feed on organic detritus when they happen across it.

They are not overly aggressive, and will only attack very small (about 1/5 their size) animals, so from the lobster's predation most larger organisms are safe. They can eat sessile (permanently fixed and immobile) organisms such as barnacles, and clams.

3.4 Abalone (Haliotis spp.)

Abalones are slow-growing, herbivorous marine snails. They belong to a large class of molluscs (*Gastropoda*) with single-structured shells. There are over 100 species worldwide in the single genus *Haliotis*, which means 'sea ear', a reflection of the flattened shape of the shell. It is no surprise then that it is called 'Oreille de Mer' in France.

Abalone shells can be oval or rounded, with a row of respiratory pores and large dome towards one end. The strong, muscular foot generates enough suction to allow the abalone to fix itself firmly to rocky surfaces. They are found from the intertidal to the depth

Haliotis



Concholepas concholepas

3.5 Snappers (*Lutjanidae*)

The snappers are a large and diverse group of robustbodied, carnivorous fishes. Most species possess relatively large mouths with stout canine teeth and bodies covered with relatively large, coarse scales. They are frequently brightly coloured. They are demersal (spending most time swimming close to the sea bed) in some cases down to 450m and are found in the tropical and sub topical waters of the Atlantic, Indian and Pacific Oceans.

There are over one hundred individual species globally, but within the Pacific Coast Sub-tropical eco region there are only a limited number of species that you are likely to see at diving depth, and these will tend to be in the warmer waters of the region. Some of the species that you may encounter in

the warmer waters of Chile and north to Central America are listed below.

now scarce as a result of overfishing.

- Blue and Gold Snapper
- Pacific Cubera Snapper
- GlasseyeB Snapper

Lutjanus viridis Lutjanus novemfasciatus Heteropriacanthus cruentatus





Mexican Barred Snapper Jordan's Snapper Mullet Snapper Pacific Red Snapper Spotted Rose Snapper

Hoplopagrus guentherii Lutjanus jordani Lutjanus aratus Lutjanus peru Lutjanus guttatus

4.0 Anthropogenic pressures

EARTHOIDE is recording five different types of anthropogenic Pressures (effects resulting from the actions of humans). Collection of this data enables us to establish an ever-evolving **Global Snapshot** of our oceans.

The types of anthropogenic pressures are the same for each region and are:

•	Surface Pressures	paper, wood, plastic and any other man-made debris
•	Boat Activity	pleasure, fishing, commercial
•	Subsurface Pressures	litter, sediment, physical damage
•	Evidence of Fishing	pots, traps, discarded nets, blast damage, cyanide damage, other etc.
•	Coastal Development	resorts, villages, towns, distance from the dive sites etc.

Please note any information you feel is relevant and record the data in the notes section for each impact in the Global Dive Log.

Thank you.

5.0 eCORD

EARTHDIVE asks all of its members to subscribe to the principles of **eCORD** - the **EARTHDIVE** Code of Responsible Diving - and to encourage others to practice them. **eCORD** is a straightforward 7 Point Plan which will help divers to limit the anthropogenic impact of recreational diving - while at the same time making their diving experiences more rewarding and enjoyable. Be sure to incorporate the 7 points in your dive planning!

1. Know your limits.

Every dive is different and every diver is different. Always ensure that you dive within the limits of your training and experience, whilst taking due account of the prevailing conditions. Take the opportunity to advance and extend your skills whenever that opportunity arises. In particular, buoyancy skills can become a little rusty after any prolonged absence from the water. If you can't get pool or confined water practice before your trip, get your buoyancy control checked out by a qualified instructor on your first dive! There are many national and international dive training organisations which offer a comprehensive range of courses and instructional material beyond basic skills level. Take advantage of them!

2. Be aware of the marine environment and dive with care.

Not surprisingly, many dive sites are located where the reefs and walls play host to the most beautiful corals, sponges and fish - fragile aquatic ecosystems! Starting with your point of entry, be aware of your surroundings: never enter the water where there are living corals, water plants or reeds. Once underwater, it

only takes one unguarded moment - a careless kick with a fin, an outstretched hand, a dragging gauge or octopus - to destroy part of this fragile ecosystem. Even fin kicks too close to the reef or sand can have an adverse effect - so dive with the utmost care. Photographers in particular need to take greater care as they strive for



that best-yet shot! Don't let your dive become an adverse anthropogenic impact! And remember that these rules apply just as much to 'hard' dive sites - such as wrecks, which have become the home of diverse marine life - as well as fresh-water and other sites.

3. Understand and respect marine flora and fauna.

A large part of the joy of diving is in learning more about the plants and animals who live in this unique underwater environment. In order to survive and thrive, many living creatures disguise themselves to look like plants and inanimate objects, or develop defence mechanisms such as stings. Some even do both! (Have you seen a stonefish lately?) The **EfRTHDIUE** briefing packs (available to members only) provide information about indicator species for the region in which you are planning to dive. In addition, dive training organisations run marine naturalist and identification courses. The more that you learn, the more that you will see, the more that you will derive pleasure from your underwater experience - and the safer you will be for yourself, other divers and the marine environment!

4. Don't interfere.

First and foremost, be an observer in the underwater environment. As a general rule, look don't touch. Remember that polyps can be destroyed by even the gentlest contact. Never stand on coral even if it looks solid and robust.

Always resist the temptation to feed fish and discourage others from doing so. You may interfere with their normal feeding habits, damage their health and encourage aggressive behaviour. Leave only your bubbles!

5. Take only what you need.

The marine environment is a valuable source of food for mankind and it is important that it remains so into the future. If you are among those divers who enjoy taking food from the sea, observe some simple rules:

- Obtain any necessary permits or licenses.
- Comply with all relevant fish and game regulations. These are designed to protect and preserve fish stocks, the environment and other users.
- Only take what you can eat. If you catch it and can't eat it, put it back.
- Never kill for the sake of 'sport'.
- Avoid spear fishing in areas populated by other divers or visitors to the area, or where you might cause collateral damage.

Don't be tempted to collect shells, corals or other mementos of your dive. If you want a souvenir, take a photograph!

6. Observe and report.

As an **EARTHDIUE** member, you will be in a unique position to monitor and report on the health, biodiversity and any obvious damage to dive sites using the **EARTHDIUE** Global Dive Log. In addition, we would encourage you to report anything unusual to the appropriate local marine and environmental authorities, or if this is difficult, get your dive centre to do it for you. They have a vested interest in a healthy marine environment, and will normally be more than willing to help. Always be on the lookout for physical damage, fish stock depletion, pollution and other environmental disturbances. If the dive operation itself is causing damage -say by anchoring to the reef - then let them know how you feel in no uncertain terms!

7. Get involved.

No matter where you are diving or snorkelling, be it at home or abroad, there will be at least one (and often many more) marine conservation bodies who are active in the area. Don't be afraid to approach them for information, to offer help, or just to find out what they have to offer. You will receive an enthusiastic welcome! They will provide you with lots of opportunities to contribute to marine conservation.



6.0 Appendices

Post Dive Recording Sheet - General Data (complete/add/delete/tick as applicable)					
Dive No: Dive Site Name:					
GPS: N/S: E/W: (Decimal Degrees up to 7 decimal points)					
Date: // // Boat Shore Water Type: Salt //Brackish//Fresh					
Dive Type: Recreational Technical Training Drift Search Wreck Drift Night Other					
Time In: Time Out: (24 hour clock) Dive Time: (hr:mins)					
Air/Nitrox Start: End: (psi or bar) Max Depth (ft/m)					
Visibility:f/m Temperatures: water: ⁰ C/ ⁰ F air: ⁰ C/ ⁰ F					
Current: None 🗌 Light 🗌 Medium 🗌 Strong 🗌 (tick)					
Surface Conditions: Cloudy Sunny Partly Cloudy Rain Variable other					

IF DIVING WITH A CLUB/DIVE CENTRE/LIVEABOARD OR RESORT, WERE YOU GIVEN AN ENVIRONMENTAL BRIEFING: YES D NO D

Please record any other information you normally record immediately following a dive. Add this data to the **earthdive** website via your control panel as soon as possible. **Thank you**

Post Dive Recording Sheet - Indicator Species

Important Note: If you allocated some time to looking for one of the indicator species, but didn't find any, please make sure that you record a **0 (zero)** count in the appropriate box, and record how much time you spent looking for the indicator.

	All Sharks
The second se	How many Sharks did you see? (tick box and/or record actual number)
	0 🗌 1 - 5 🗌 6 - 20 🔲 20 - 50 🗌 51 - 250 🗌 >250 🗌
	Actual Number (write actual number)
	How long were you looking for this indicator? [(minutes)
	Add your additional information here. In what type of habitat did you see this indicator? Can you record its species? What was it doing? At what depth did you see it/them?
	Additional Information:

 All Groupers	
How many Groupers did you see? (tick box and/or record actual number)	
0 🗌 1 - 5 🗌 6 - 20 🗌 20 - 50 🗌 51 - 250 🗌 >250 🗌	
Actual Number (write actual number)	
How long were you looking for this indicator? ((minutes)	
Add your additional information here. In what type of habitat did you see this indicator? Can you record its species? What was it doing? At what depth did you see it/them?	
Additional Information:	

	Lobster How many Lobsters did you see? (tick box and/or record actual number)	
TEN	0 🗌 1 - 5 🗌 6 - 20 🗌 20 - 50 🗌 51 - 250 🗌 >250 🗌	
	Actual Number (write actual number)	
	How long were you looking for this indicator? [(minutes)	
	Add your additional information here. In what type of habitat did you see this indicator? Can you record its species? What was it doing? At what depth did you see it/them?	
	Additional Information:	



	Abalone How many Abalone did you see? (tick box and/or record actual number)
C. L	0 🗌 1 - 5 🗌 6 - 20 🗌 20 - 50 🗌 51 - 250 🗌 >250 🗌
	Actual Number (write actual number)
	How long were you looking for this indicator? [(minutes)
	Add your additional information here. In what type of habitat did you see this indicator? What was it doing? At what depth did you see it/them?It would be helpful if you note whether the abalone you observed were in seperate colonies, and over how large an area each colony was spread (m ²).
	Additional Information:

Snappers (<i>Lutjanidae</i>) How many Snappers did you see? (tick box and/or record actual number)
0 🗌 1 - 5 🗌 6 - 20 🗌 20 - 50 🗌 51 - 250 🗌 >250 🗌
Actual Number (write actual number)
How long were you looking for this indicator? [(minutes)
Add your additional information here. In what type of habitat did you see this indicator? What was it doing? At what depth did you see it/them?
Additional Information:





	Surface Pressures
	Did you see any Surface Litter? (tick box)
	Yes 🗌 No 🗌 Dont Know 🗌
If yes please record a other relevant information	any details (plastic, wood, paper, other etc.) Please record quantity and ation.
	Boat Activity
WIT ABO	Boat Activity Did you see any Boat Activity? (tick box)
	Boat Activity Did you see any Boat Activity? (tick box) Yes No Dont Know
If yes please record a etc)	Boat Activity Did you see any Boat Activity? (tick box) Yes No Dont Know any details (i.e fishing boats, pleasure boats, commercial vessels any of

	Subsurface Pressures			
1.2.10	Did you see any Surface Litter? (tick box)			
	Yes 🗌 No 🗌 Dont Know 🗌			
If yes please record an	y details (litter, sediment, physical damage, coral bleaching other etc).			

A TRACK	Evidence of Fishing			
	Did you see any Surface Litter? (tick box)			
a state of the second	Yes 🗌	No 🗌	Dont Know 🗌	
If yes please record any details (pots, traps, discarded nets, blast damage, cynanide damage, other etc).				

Evidence of Coastal Development
Did you see any evidence of Coastal Development? (tick box)
Yes No Dont Know
If yes please record any details (resorts, villages, towns, distance form the dives site etc).

Evidence of the illegal trade in endangered species

Any observations you make below and record in the Global Dive Log will be passed onto **TRAFFIC**, the world's wildlife trade monitoring network.

TRAFFIC works to ensure that the trade in wild plants and animals is not a threat to the conservation of nature. It has offices covering most parts of the world and works in close co-operation with the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). **TRAFFIC** is a joint programme of WWF and IUCN-The World Conservation Union.

YE BAN	Evidence of the	illegal trade i	n endangered species
	Did you find any of the illegal trade	evidence at an e of endangere	y time during your holiday/dive trip ed species. (tick box)
© Elizabeth Fleming Turtle shell ornaments on display	Yes	No 🗌	Dont Know 🗌
If yes please record any deta Please refer to the TRAFFIC laws, and contact information	ils (the species, sa Guide for more in of TRAFFIC to re	ale location, an formation conc port offences.	d any other available information). erning species identification, local
			TRAFFIC

