

sharkwater



tribute entertainment

rob stewart photography

GUIDE

Grades 4-8

By Geraldine Mabin

www.sharkwater.com



Table of Contents

Introduction	1
Section A Before Viewing	
What do you know and think about sharks?	5
Facts or myths about sharks	6
Section B During the Viewing	
Facts collected from viewing: Student sheet	7
Section C After Viewing	
True or False	9
Who said this and what did they mean?	10
Suggestions for Follow-up Activities	11
Suggestions for Fictional Writing	13
Suggestions for Factual Writing	14
Sharks: Find out more about them	15
Word Search	16
Take a deep breath	18
Swim like a fish	19
Long line fishing	20
Shark fin soup	21
Where in the world is Costa Rica?	22
Fact or myths about sharks: The truth	23
Word Search answers	25
Create your own Word Search	26
Section D Resources and Links	
Sharkwater Productions	27
Biographies	31

BEFORE VIEWING THE MOVIE

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

Note to Teachers:

The movie *SHARKWATER* is a rich source of information on a number of topics other than just sharks. It can provide launching opportunities for a number of science, math, geographical and language related activities connected to the curriculum. This guide will introduce some of these opportunities.

It would be helpful to have previewed the movie before showing it to the students as there are some scenes and concepts that might need to be edited and/or explained.

Tell the students about Rob Stewart and his early fascination and respect for sharks and how this has influenced his life. Use the **Bio Sheet** at the back of the guide, in section **D**.



Who's afraid of the big, bad sharks?

Do you believe that sharks are killers and are to be feared?

Or do you believe that sharks are the most amazing and mystical animals on earth, the ones we fear the most but cannot live without?

Rob Stewart has always believed that sharks are beautiful and hold the key to the balance of nature in our world. He believes this balance is in danger of being destroyed and with it, us.

Why? How can we stop this?

In his quest to find out more about the shark, Rob finds himself in the middle of criminal activities at sea involving a pirate boat ramming, gun boat chases and ruthless killings. Rob and his friends take it upon themselves to try to stop the slaughter of sharks and halt the breakdown of the underwater ecology.

SECTION A: BEFORE VIEWING **SHARKWATER**

SHARKS

What do *you* know and think about sharks?

Jot down as many facts and opinions about sharks as you can think of:

➤ _____

➤ _____

➤ _____

➤ _____

➤ _____

➤ _____

➤ _____

➤ _____

➤ _____

➤ _____

➤ _____

➤ _____

➤ _____

FACTS OR MYTHS ABOUT SHARKS?

Think you know all about sharks? Well, here are some commonly held myths about sharks—how many do you think are true?

Most sharks are harmful to people.

Sharks must roll over on their sides to bite.

Sharks eat continuously.

Sharks will eat anything.

Whale sharks, the largest species of sharks, are voracious predators.

The great white shark is a common, abundant species found off most beaches visited by humans.

Sharks are not found in freshwater.

Most sharks cruise at high speed when they swim.

Sharks have peanut-sized brains and are incapable of learning.

All sharks have to swim constantly.

Sharks have poor vision.

Sharks are hard to kill.

All sharks are the same.

The biggest enemy to sharks is man.

Source: Mote Marine Laboratory, Sarasota, Florida

SECTION B: VIEWING ***SHARKWATER***

Look and listen for information about:

NEW FACTS ON SHARKS:

- _____
- _____
- _____
- _____
- _____

TYPES OF SHARKS:

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

COUNTRIES MENTIONED:

- _____
- _____
- _____
- _____
- _____
- _____
- _____

SECTION B: VIEWING **SHARKWATER** (CONTINUED)

FINNING:

- _____
- _____
- _____
- _____
- _____
- _____

LONG LINE FISHING:

- _____
- _____
- _____
- _____
- _____
- _____

ENDANGERED ANIMALS MENTIONED:

- _____
- _____
- _____
- _____
- _____
- _____

SECTION C: After VIEWING ***SHARKWATER***

True or False

Read these statements and indicate whether they are true (T) or false (F). If a sentence is false, highlight the incorrect word and replace it with a word that will make the statement true.

- Sharks are mammals.
- Sharks have been on earth for over 400 thousand years.
- Rob Stewart has always believed that sharks are beautiful.
- Shark fins are worth over \$200 U.S. per fin.
- Captain Paul Watson's ship, Ocean Warrior, is used to track down and stop long line fishermen.
- The Galapagos Islands are filled with animals that have been protected but long line fishing has been made legal there.
- Rob Stewart was asked by Paul Watson to help him stop long line fishing.
- Shark fins are used to make shark fin soup but they do not add flavour.
- Leather-backed turtles are an endangered species.
- Rob Stewart was accused of seven counts of murder by the officials in Costa Rica.

Now make up statements for other students to do.

SECTION C: After VIEWING ***SHARKWATER***

Who said this and what did they mean?

“People think that Hammerhead sharks are ugly. I think they’re beautiful.”

“It felt like part of my family was dying.”

“Sharks are very fierce!”

“They are the gentle giants of the warm water world.”

“If God gave us food, then we must eat!”

“It wasn’t an issue between two boats anymore: they were going to stop us from saving sharks.”

“It was easy to see their motivation.... money!”

“Now I knew why we were being arrested and why we were in serious trouble.”

“Every animal depends on the ocean for its survival.”

“We have the power to change it for the better.”

SECTION C: After VIEWING ***SHARKWATER***

SUGGESTIONS FOR FOLLOW-UP ACTIVITIES

Some Topics for Discussion

Ask the students to identify the different themes that occur in the movie. They might include:

- Rob Stewart's mission
- Myths about sharks
- The consequences to our environment of sharks being eliminated
- Long line fishing
- Finning
- Sea Shepherd and conservationist Paul Watson
- Different types of sharks
- The Galapagos Islands

FURTHER INVESTIGATION

Students choose one of the topics identified (see above) that they would like to investigate further. This can be done either individually or in small groups.

Process:

- i) Select topic
- ii) Ask the students to identify facts already known
- iii) Generate questions to which they would like to find answers
- iv) Research and gather information
- v) Present information in interesting way to others, such as a newspaper article; radio report; PowerPoint; poem; TV program; commercial or short play

Other Suggestions

Trivial Pursuit

The students brainstorm a number of facts they have gathered from the movie. They turn these into questions and write them on cards with the answers on the back. These can be played as simply question and answers or they can make a game board to go with the cards.



Shark Fin Soup and Other Fin Items



The students research the different ways in which shark fins are used. What medications include shark fins and what are they supposed to do? What exactly is shark fin soup? How much do these products sell for in our country?

Section C : AFTER VIEWING **SHARKWATER**

Suggestions for Fictional Writing Activities

Note to Teacher:

Talk with the students about the message that we are learning from seeing the movie. Get them to generate the main topics. Get them to suggest different ways of writing fictional pieces to share their information and their concerns. Here are some suggestions:

- i) You are on the ***Ocean Warrior*** with Paul Weston and you see a long line fishing boat approaching. What are they doing? What do you do to try and stop them? What happens?
- ii) You are a deep-sea diver and you are sent on assignment to Costa Rica to photograph sharks. You find that sharks are being slaughtered for their fins, and their bodies thrown back into the ocean. You decide to do something to stop this. What do you do?
- iii) You are a shark but your world is being destroyed by man. Try to convince people on earth that they are ruining our planet by hunting and killing so ruthlessly.
- iv) Rob Stewart is trying to find out who is running the shark fin business in one of the countries he visited. He has asked you to go with him and you agree. You set off but you have to take care that you are not seen doing this. What happens?
- v) A great white shark has been spotted off the coast of Australia. People are frantic! You are invited to speak on the TV about sharks and how they are **not** the killers we make them out to be. Write your speech for the show.

SECTION C: AFTER VIEWING **SHARKWATER**

Suggestions for Factual Writing Activities

- i) Write a letter to **Rob Stewart** telling him what you think about his mission to save sharks. Tell him what his movie has shown you and how it has changed your opinion of sharks.
- ii) Make a poster informing people of the truth about sharks and urge them to act and stop the killings.
- iii) Find out what is involved in **long line fishing**. Then write an article that could go on the web site that would persuade people to protest against it. Which countries need to be contacted? Who should be contacted? Who can help?
- iv) Find out about the underwater food chain. Sharks were once the head of this chain and shaped the evolution of the other creatures. How has this changed? What effect will the decrease in number of sharks have upon our lives and the environment?
- v) Find out which groups are trying to protect sharks. Look on the web for details. What do these groups say their mission is? Compare them: are they different? How do they do what they say they want to do? What do you think of them?

SHARKS..... Find out more about them!



Note to Teacher...

After viewing the movie, find out what the students have learned about sharks. How has it changed their thinking about sharks? Discuss.

Going Deeper...Further Activities

Get the students to generate some shark related topics that they would like to research. These might include:

- ❖ Different types of sharks and where they are found
- ❖ Statistics (length; weight; habitat; food; speed; etc.)
These results could be presented in graph form
- ❖ Countries where sharks are found. Make maps to illustrate information
- ❖ Numbers of sharks found 10 years ago compared with present day

Students could prepare black outline drawings of the sharks, showing the statistical information in chart form.

WORD SEARCH

Find these words in the word search on the next page:

- 1) BREATHE
- 2) DIVING
- 3) FACTS
- 4) FINS
- 5) FINNING
- 6) FISH
- 7) FOOD
- 8) GALAPAGOS
- 9) GILLS
- 10) GUATEMALA
- 11) GUNS
- 12) MYTHS
- 13) OCEAN
- 14) ONE
- 15) OXYGEN
- 16) PIRATES
- 17) PREDATOR
- 18) PREY
- 19) ROB STEWART
- 20) SENSITIVE
- 21) SHARKWATER
- 22) SHOT
- 23) SOUP
- 24) SWIMMING
- 25) TAIWAN
- 26) TANK
- 27) TRESPASS
- 28) TRUTH
- 29) TURTLE

S	H	I	O	C	E	A	N	S	G	I	L	L	S	G
H	S	H	T	Y	M	C	R	T	N	S	E	A	O	A
R	E	H	N	S	E	T	A	R	I	P	R	E	Y	L
A	T	A	A	S	W	I	M	M	I	N	G	A	S	A
L	T	M	E	R	C	R	O	T	A	D	E	R	P	P
A	B	M	N	O	K	I	T	L	D	E	H	F	L	A
M	E	E	T	B	O	W	H	I	T	H	T	I	O	G
E	O	T	R	E	S	P	A	S	S	T	A	N	K	O
T	G	U	D	T	H	T	P	T	N	A	I	S	G	S
A	N	R	O	E	O	I	U	I	E	E	W	S	N	F
U	I	T	O	W	T	N	O	W	G	R	A	B	I	D
G	V	L	F	A	C	T	S	R	Y	B	N	S	N	E
U	I	E	I	R	E	N	T	O	X	T	H	O	N	E
N	D	C	K	T	R	U	T	H	O	M	M	O	I	D
S	S	E	N	S	I	T	I	V	E	G	A	D	F	Y

Take a deep breath

How do sharks breathe?



Sharks are fish and breathe through gills. Water flows through these slits and the oxygen is removed from the water and passes through the shark's bloodstream. While some sharks have to keep moving to breathe, others (like the nurse shark) can breathe by pumping water over their gills through opening and closing their mouths while at rest of the bottom.

Find more information on how sharks breathe. Make a diagram to show where the gills are located. Are they the same on the different types of sharks?

What percentage of oxygen is found in water compared with the percentage found in the air? Is it the same?

Make a model of a shark showing the position of the gills.

Swim like a fish!



Do you know what SCUBA stands for?
Ask some friends if they know.

Man has always looked to nature for inspiration. For hundreds of years, man has tried to breathe underwater like the shark and other fish. He has longed to be able to swim under water for hours at a time and be able to breathe as comfortably as he does on land.

SCUBA diving is one of the modern ways in which we have been able to be under water for fairly long periods.

But how did we get to this stage?

Research the different attempts that have been made to breathe under water. Draw the inventions that have been made over history.

What do you think are the advantages?

Design your own underwater breathing mechanism.



LONG LINE FISHING—“**We** are the predators and sharks the prey.”

What is **long line fishing**? Describe how it is done and what is used.

Who does it? What effect does it have?

What is snared?

What do you think of this method? Give your reasons.

Where in the world does it take place?

Find a world map and mark the places.

How can this be stopped? Find the groups who are trying to make it illegal.

How can we help to put an end to it? Why should we?

SHARK FIN SOUP



What is shark fin soup?

Why is shark fin soup so popular? What else are shark fins used for?

Jot down everything you know about shark fins.

Generate some questions you would like answered.

Check out the web and see what you can find out.

Make a poster showing the information you have found.

What do you think we can do to help stop the finning?

Where in the world is Costa Rica?

Rob Stewart began his diving and photographic activities in the Cayman Islands, at the age of eight. Since then, he has visited many other countries in the world.

Find the following countries on the world map:

- Cayman Islands
- Ecuador
- Guatemala
- Galapagos Islands
- Costa Rica
- Taiwan
- China

Find some other countries that were mentioned in the movie.

Mark the places where sharks are found. What are the capital cities of these countries? Who lives there? What kind of food do they eat? What is the population of each country?

Generate some questions that you would like answered and then research them.

Which country would you choose to go to if you could join Rob? Give your reasons.

THE TRUTH ABOUT SHARKS: ANSWERS TO “FACT OR MYTH about sharks”

Most sharks are harmful to people—Untrue!

Of the more than 350 shark species, about 80 per cent are unable to hurt people or rarely encounter people.

Sharks must roll over on their sides to bite—No!

Sharks attack their prey in whichever way is most convenient, and they can protrude their jaws to bite prey items in front of their snouts.

Sharks eat continuously—Preposterous!

Sharks eat periodically depending upon their metabolism and the availability of food. For example, juvenile lemon sharks eat less than two per cent of their body weight per day.

Sharks will eat anything—Wrong!

Most sharks prefer to eat certain types of invertebrates, fish and other animals. Some sharks eat mainly fish. Others eat other sharks or marine mammals. Some sharks are even plankton-eaters.

Whale sharks, the largest species of sharks, are voracious predators—Incorrect!

Whale sharks, which are the largest fish that ever lived, are plankton feeders like the great whales, thus the name.

The great white shark is a common, abundant species found off most beaches visited by humans—Not!

Great whites are relatively uncommon large predators that prefer cooler waters. In some parts of their range, great whites are endangered.

Sharks are not found in freshwater—Forget it!

A specialized osmoregulatory system enables the bull shark to cope with dramatic changes in salinity—from the freshwaters of some rivers to the highly saline waters of the ocean.

Most sharks cruise at high speed when they swim—Invalid!

Although some sharks may swim at bursts of over 20 knots (23 miles per hour), most sharks swim very slowly at cruising speeds of less than 5 knots (5.75 miles per hour).

Sharks have peanut-sized brains and are incapable of learning—Fallacious!

Sharks' relatively large and complex brains are comparable in size to those of more advanced animals like mammals and birds. Sharks also can be trained.

All sharks have to swim constantly—Misconceived!

Some sharks can respire by pumping water over their gills through opening and closing their mouths while at rest on the bottom.

Sharks have poor vision—Erroneous!

Sharks' eyes, which are equipped to distinguish colours, employ a lens up to seven times as powerful as a human's, and some shark species can detect a light that is as much as 10 times dimmer than the dimmest light the average person can see.

Sharks are hard to kill—Off Base!

Stress of capture weakens a shark, and so some sharks are easily killed in hook-and-line or net fishing.

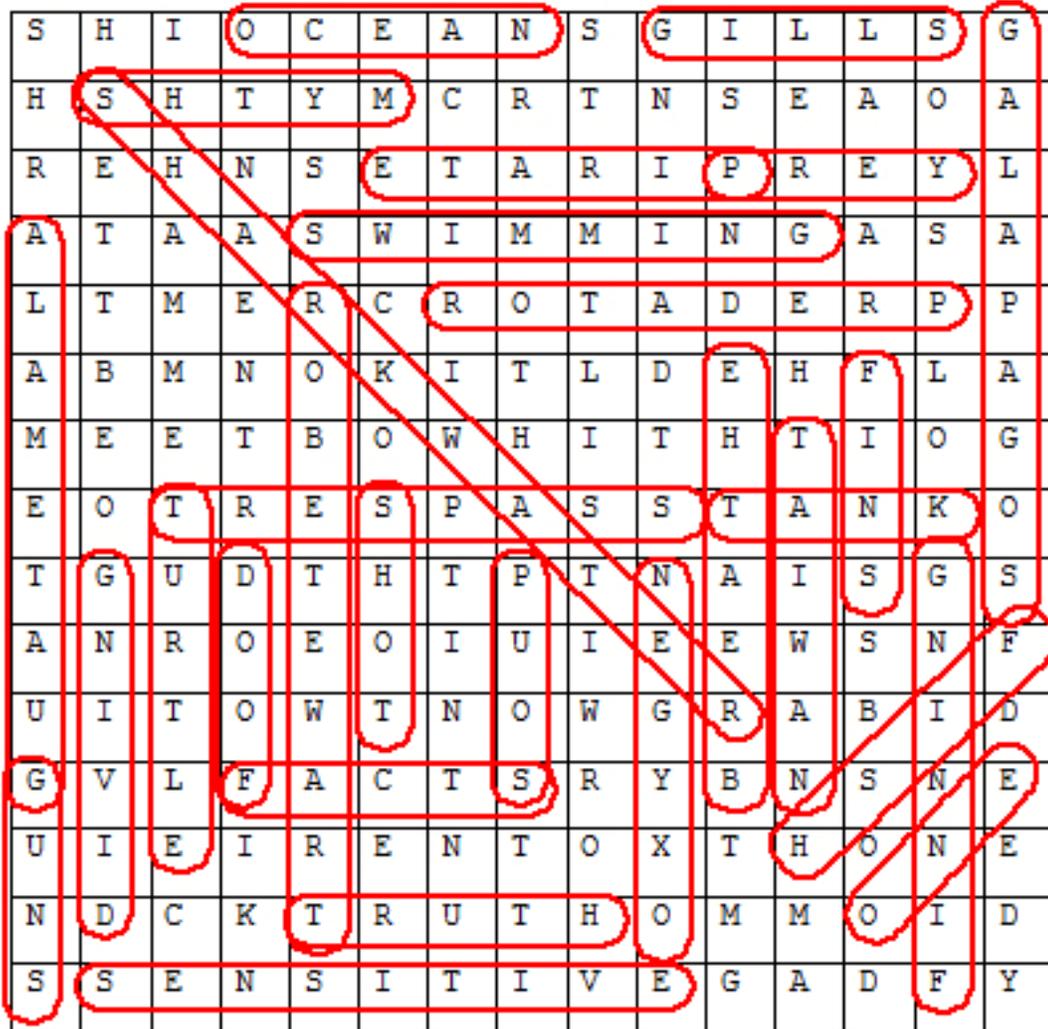
All sharks are the same—Misconstrued!

There is no "typical" shark. The more than 350 species all differ in habitat, lifestyle and body form.

The biggest enemy to sharks is man—Absolutely! That's why man must now do all he can to preserve them.

Information taken from www.sharkin.com/myths.html

WORD SEARCH ANSWERS



Section D: **SHARKWATER**

Production Notes from SHARKWATER

Sharks have long stirred hostility and anxiety in humans. Countless books, films and sensationalized headlines have made the mere idea of "shark" synonymous with images of vicious attacks by indiscriminate killing machines. "The truth is that sharks have much more to fear from us," says filmmaker Rob Stewart, who has spent years filming hundreds of hours of videotape trying to prove just that to a skeptical public.

Toronto-born Stewart, an expert diver and underwater photographer, joined members of the Los Angeles-based Sea Shepherd Conservation Society aboard the *Ocean Warrior* for a four-month expedition to deter shark poaching in Costa Rica and Ecuador—the perfect opportunity to start filming his documentary on the relationship between sharks and people. A series of life and death situations including a pirate boat ramming, attempted murder charges, arrests, espionage, corruption and hospitalization were the last things he expected on his journey that has become the beautiful and revealing film, *Sharkwater*.

Stewart has had a life-long fascination with sharks. At the age of eight, while snorkeling in the Cayman Islands, his dream came true when around the corner of a reef he saw his first shark close-up. "I was amazed because it was so cool to see something so big and so powerful and so perfect," said Stewart. During extensive study, he learned that sharks have shaped the evolution of ocean species, giving rise to schooling behaviour, camouflage, speed, size and communications. Far from the public perception of sharks as indiscriminate predators with no purpose outside of attack, they have been an integral part of ocean life for 400 million years. Despite surviving for longer than any other large animal on earth, their populations are being wiped out. "No one wants to save sharks—they want to save pandas and elephants, and they're afraid of sharks." Stewart's original vision was to make a beautiful underwater film about sharks, which quickly changed into a human drama.

Frustrated by the widespread misconceptions and driven to change them, Stewart embarked on a journey that would prove exciting, invigorating, satisfying and dangerous—often at the same time. "I was working as a wildlife photographer and had published articles on what was happening to sharks around the world after I discovered illegal shark fishing in the Galapagos. We set up a fund where people reading the articles could donate money towards placing a patrol boat in the Galapagos islands. We received virtually no money, and I realized there's got to be a better way to reach people. Print clearly wasn't the most powerful medium I could be using, so I decided to make a film."

In April of 2002, Stewart teamed up with world-renowned conservationist Paul Watson of the Sea Shepherd Conservation Society on an excursion aboard their ship, *Ocean Warrior*. Invited by the Costa Rican government to patrol the waters around the Island of Cocos, Stewart expected to film sharks underwater, not realizing that he would be thrown into a situation where everything that could go wrong, would go wrong.

In addition to the usual challenges a first-time filmmaker faces, Stewart endured situations that would exhaust even a seasoned documentarian. Stewart recalls, "On our way to Cocos Island we intercepted the Varadero, a fishing boat illegally long lining in Guatemalan waters." That incident set Stewart's film into an entirely new direction. He explains, "I never got into the water for the first month there, so my underwater documentary dreams were crushed. I realized this was a really fascinating story, and decided to film everything that was going on."

The focus had now changed and the stakes were considerably higher. Sharks are caught for their fins, and despite some countries having banned shark finning, shark poaching is rampant because of how profitable it is. One pound of dried shark fin can retail for \$300 dollars or more. Prized in Asia as a delicacy, shark fin soup has generated a worldwide, multi-billion dollar industry, where more than 100 million sharks are killed each year. The process of "finning" involves cutting off the shark's fins, after which the rest of the body is thrown overboard, wasting over 95 per cent of the animal.

"When we arrived in Costa Rica, the *Ocean Warrior* was charged with seven counts of attempted murder for the altercation with the Varadero, despite the fact that the president of the country invited us there," notes Stewart. "Everyone else involved was wondering why the whole judicial system was attacking us, and ignoring the illegal fishing boat. While on shore, we had a chance to find out more about the shark finning operations."

Stewart learned that although shark finning is illegal in Costa Rica, Costa Rican fins were showing up all over Asia. Extensive research uncovered a connection between the Taiwanese mafia and the shark fin supply. With the help of an insider, Stewart went undercover to investigate the shark fishing industry in Costa Rica, finding out that illegal shark finning was rampant along Costa Rican coasts. "There were millions of dollars in fins in dozens of illegal shark finning operations, that the authorities were ignoring," explained Stewart. "After being chased and threatened by operators with guns, our guide admitted that the 'shark-fin mafia' was on the lookout and it would not be a good idea to be seen in town."

After spending weeks fighting attempted murder charges in Costa Rica, Stewart and the crew of the *Ocean Warrior* fled Costa Rica to avoid arrest. In an epic chase, they wrapped barbed wire around their boat so the coast guard couldn't jump onboard, and fled to international waters.

Narrowly escaping arrest, they headed to the Galapagos Islands, where they were invited by the National Park to protect the marine reserve from illegal fishing.

Guns and shark fin traffickers proved to be only a few of many dangers Stewart was to face. Although not sure how he contracted it, his lymphatic system had become infected with what is known as "flesh eating disease" and he was in danger of losing his leg and possibly his life. At this point he was unsure whether the film would ever be completed.

"This was the ultimate low. Everything had gone wrong. We'd been kicked out of virtually all the countries we had been to. I would have been arrested if I went back to Costa Rica, and at the

end of all this, I had not shot anything underwater. I had come to shoot an underwater documentary and instead shot this human drama. And now I was going to lose my leg, maybe my life. The situation was so bad, and I couldn't tell everybody at home what exactly was happening.

"I also hadn't made the movie I'd wanted to make yet, or spent any time underwater with sharks. So much was left to be done. It would have been crazy to give up at that point. So I stayed in hospital for a week and eventually the infection cleared up and off I went again," notes Stewart. "I was very lucky."

Having come so far, stopping at this point was not an option for Stewart: "I needed to get back into Costa Rica and find a way to stop the finning." Knowing he would be arrested immediately, Stewart had to sneak back into the country by bus. What he returned to was far from expected. Costa Ricans had begun to rally for sharks and fight against the illegal shark fishing.

Stewart returned home to Canada to start editing his movie. Before much of the work could be done, however, Stewart had to get well from the many illnesses acquired while shooting—diagnosed with Dengue Fever, West Nile virus and TB at the same time, there was not much energy available to focus on *Sharkwater*. "I fought that off for a year while doing little trips and hibernating trying to get better. The internal time actually led to the development of the shark concepts and the theories that make up the body of *Sharkwater*."

Stewart spent the next four years on *Sharkwater*, shooting over 400 hours of footage in 15 different countries, and editing and crafting the story along the way. "I had to learn virtually everything about filmmaking as I went, so my learning curve was incredibly steep."

Despite the numerous challenges, Stewart has combined his extraordinary underwater imagery with a compelling original soundtrack composed by Jeff Rona (featuring music from Moby, Nina Simone, Portishead, Aphex Twin and more) and interviews with renowned experts to create his first feature film, *Sharkwater*.