



Newsletter

Shark Research Institute Global Headquarters
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HISTORIC WIN FOR SHARKS AT CITES!



The Convention on International Trade in Endangered Species (CITES), the single most powerful of the United Nations Treaties governing the fate of 35,000 species of endangered animals and plants, convened March 3-15, 2013 in Bangkok, Thailand — and SRI was there in force.

CITES convenes every three years at its Convention of Parties (CoP) and its 178 member nations (Parties) to CITES agree to abide by its decisions. Only a Party may propose a species for a CITES listing, which is why SRI has worked behind the scenes for the past three years, supplying scientific authorities in various countries with

documentation, journal articles, and data they required when drafting the proposals.

Shark populations are in freefall, but they have been thrown a lifeline; CITES has finally listened to the scientists," said Glenn Sant of TRAFFIC.

At CoP16, CITES voted to list oceanic whitetip sharks, scalloped hammerhead sharks, smooth hammerhead sharks and great hammerhead sharks, the porbeagle shark, and manta rays (all species) on Appendix II. Although Appendix II listings don't ban international trade outright, they require exporting countries to issue permits and ensure that trade is not detrimental to the species — but given the status of the species now listed an Appendix II, that will be very difficult. Any country that fails to comply with CITES decisions faces sanctions, and INTERPOL's Project Scale ensures any violations will be strictly enforced.

After years of discussions, CITES also clarified regulations regarding Introduction from the Sea — important because it concerns marine species (such as sharks) caught on the high seas. CITES also uplisted the freshwater sawfish from Appendix II to Appendix I, thereby prohibiting international trade in the species.

A huge thanks to SRI Board members Michael Aw (of Ocean Geographic Society) and Georgienne Bradley and Jay Ireland (also of



Michael Aw

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who spent many hours talking with delegates at CoP16 about the shark proposals, and Marie Levine for continual updates of proceedings at CITES via her blog. Joe Romeiro and Bill Fisher provided copies of their compelling films that we showed to delegates. Underwater photographers David Doubilet, Jennifer Hayes,

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Marty Snyderman, Paul Spielvogel and Andy Murch provided still images for the information sheets on each species that SRI distributed to every delegate, and Brian Darvell in Hong Kong, Nancy Papathanasopoulou in Dubai and Ali Alhafez in Kuwait, provided translations for Arabic-speaking countries, while Yuri and Ilona Sobelov provided Russian translations.

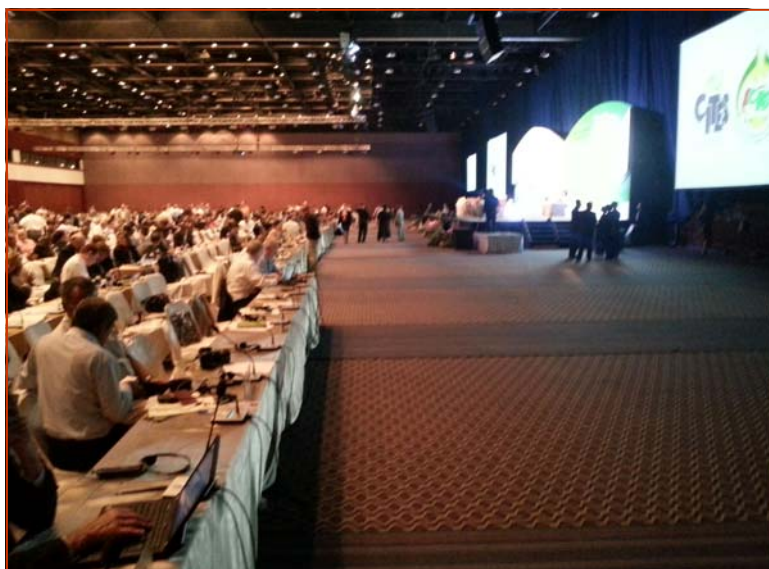
Back in 2002 at CoP12, when the European Union, India, Madagascar, the Philippines successfully proposed the whale shark and basking shark for Appendix II, Species Survival Network (SSN), IUCN, Shark Research Institute, TRAFFIC and WildAid were there. In 2004, at CoP13 when the white shark, proposed by Australia and Madagascar, was listed on Appendix II, they were the only organizations advocating for sharks. At Cop14 and CoP15, sharks lost to the Japanese & Chinese blocs.

But the Parties took back their power from China and Japan at CoP16; Australia, Brazil, Colombia, Comoros, Costa Rica, Croatia, Ecuador, Egypt, the European Union, Honduras, Mexico, and the USA demanded protection for threatened species of sharks.

The successes at CoP16 were a team effort as many more conservation organizations have come to understand the enormous protection CITES offers to marine species. Also advocating for sharks at CoP16, were Defenders of Wildlife, Divers for Sharks, German Elasmobranch Society, Humane Society International, Pretoma, PEW Environment Group, Project Aware, Sea Shepherd-Hong Kong, Shark Advocates International, Shark Defenders, Shark Trust, Wildlife Conservation Society, the Yale School of Forestry & Environmental Studies, and at Plenary, by Fins Attached! When the shark proposals were finally ratified, delegates whooped and cheered while the theme from 'Rocky' danced in our heads.



Michael Aw, Jay Ireland, Jose Truda Palazzo of Divers for Sharks, and Georgienne Bradley



This landslide victory for sharks is also due to our sponsors who generously provided funds for our work at CITES: The Bennett Family Foundation, Robert Ferrara, Roy Jarrett, Patrick Haemmig, Maureen & Steve Langevin, Keith Pamper, Oakleigh B. Thorne, and Countess Wiltraud Salm.

As the UK Minister for Environment David Heath said at the plenary session: "It's been a good day for species conservation around the world; CITES is addressing issues of global importance and acting in the best interest of species in need. This has been a historic Conference of the Parties."

Thank You to Our Supporters!

We are very grateful for the continued support of:

- The Adikes Family Foundation
- Adjacent to One
- Adventure Aquarium
- Galveston Chapter, American Association of Zoo Keepers
- The Bennett Family Foundation
- William Bunting, Jr.
- Patricia Chock
- Seth Davidson
- Dr. Sylvia Earle
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- Craig Grube
- Patrick Haemmig
- The Horgan Family
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- Lotus 333 Productions
- Jenkinson’s Aquarium
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- Al Vinjamur
- The WAVE Foundation
- Kathrin Winkler & Angus Campbell
- Josip Zeko

Status of Shark Fin Trade Bans

In the works	MD, NY, NJ, TX	Bans on possession and sale of shark fins.
Dec-2012	Cook Islands	Possession and sale of shark products banned.
Nov-2012	American Samoa	Shark fishing banned in its territorial waters, and the sale, possession, and distribution of fins and other shark parts prohibited.
Oct-2012	Costa Rica	Import and trade in shark fins banned.
Jul-2012	Illinois, USA	Possession, sale and trade of shark fins prohibited. The bill became effective January 1, 2013.
Jul-2012	Bahamas	All shark fishing, sale and trade in shark products banned.
Oct-2011	California, USA	Possession, sale and trade of shark fins prohibited.
Aug-2011	Oregon, USA	Possession, sale and trade of shark fins prohibited (with an exception for dogfish).
May-2011	Washington, USA	Possession, sale and trade of shark fins prohibited.
Mar-2011	Guam	Possession, sale and trade of shark fins and ray parts prohibited (with an exception for subsistence fishing).
Mar-2011	Marshall Islands	Moratorium on the export of shark fins and the possession and sale of shark products,
Jan-2011	Commonwealth of the Northern Mariana Islands (CNMI)	Possession, sale and trade of shark fins prohibited (with an exception for subsistence fishing).
Jul-2010	Hawaii, USA	Possession, sale and trade of shark fins prohibited.



A country's natural resources are its capital assets — its wealth and its future. Exploitation of a country's mineral resources is an example of “consumptive use” of a natural resource. The country loses the asset **forever** for a **one-time** monetary gain.

An alternative is the “non-consumptive” use of a natural resource. In this case, the country protects the resource as a capital asset, as a living, renewable natural resource that **generates continuing revenue streams to its economy, year after year.**

An example of “non-consumptive use” and its far greater monetary benefit is the Maldives. In 1993, a dead reef shark was only worth US\$33.50 to its local economy, while a live reef shark generated US\$33,500 per year in tourist revenue¹. By 2002, shark tourism in the Maldives was valued at US\$7.4 million².

In 1997, Western Australia's whale shark tourism valued at US\$3.1 million³. After whale sharks were listed on CITES Appendix II, their whale shark tourism exploded and by 2005 it had risen to US\$12 million during the two-month whale shark season⁴.

In 2003, whale shark diving in Thailand generated an estimated US\$110 million to the local economy⁵. In South Africa, white shark tourism was valued at US\$4.2 million⁶, and by 2008 their tiger shark tourism alone was valued at US\$1.7 million⁷.

By 2004, whale shark tourism in Belize was generating US\$3.7 million during the 6-week season at Gladden Spit, with US\$1.35 million to five communities. Each living whale shark was valued at US\$2.09 million over its lifetime⁸. In 2004, the **global value** of whale shark tourism alone was conservatively estimated at US\$47.5 million annually⁹.

By 2005, whale shark tourism in Donsol, Philippines had created 300 jobs, and generated an annual income and economic return of US\$623,000¹⁰. That year, shark diving contributed US\$4.5 million to the economy of the Seychelles¹¹, and two years later whale shark tourism *alone* was creating revenues of US\$4.5 million to the entire archipelago¹².

By 2008, shark-related tourism in the Bahamas was contributing more than US\$78 million to the local economy¹³. By 2010, shark and ray diving in the Canary Islands were estimated to be generating US\$22.9 million annually to the local economy¹⁴.

By 2011, shark-diving contributed US\$42.2 million to the economy of Fiji, a sum composed of revenues generated by the industry combined with the taxes paid by shark-divers to the government¹⁵.

By 2012, shark diving was generating approximately US\$18 million annually to the economy of Palau. The annual income in salaries paid by shark-diving industry was estimated US\$1.2 million and the annual tax income generated was approximately 14 percent of all business tax revenue. The annual value of one reef shark to tourism and the government is US\$179,000, and its lifetime value (based on a 16-year lifespan) is US\$1.9 million¹⁶.

In 2012, the landed value of shark fisheries was about US\$630 million, and had been declining for the past decade as result of overfishing. By contrast, shark ecotourism had showed average yearly increases of 30% and was generating more than US\$324 million per year to range states. It is projected that shark ecotourism could generate more than US\$780 million within two decades¹⁷.

Shark ecotourism is fast becoming a huge global industry, generating millions of dollars to coastal countries with healthy shark populations¹⁸.

Sharks reproduce slowly which makes depleted populations slow to recover. Sharks are indeed Golden Gooses to be protected. Both national and international protection for sharks is critical to sustaining shark populations as capital assets.

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On Lemon Sharks & Facebook Friends

Social networks are common among animals and provide evolutionary advantages: multiple eyes searching for food and predators ensure higher rates of survival than for loners.

As with blacktip sharks studied in the field by cognitive ecologist Ila France Porcher¹, researchers at the Bimini Biological Field Station in the Bahamas have found that lemon sharks, too, have social networks. “They basically have friends — individuals that they prefer to follow and have social interactions with — lemon sharks have friends they actively keep in touch with and transfer knowledge between themselves and other sharks,²” reported behavioral ecologist Tristan Guttridge.

When Guttridge took 42 juvenile lemon sharks out of the wild and placed them in captivity — eliminating their need to hunt for food and evade predators — the sharks still attempted to socialize. The 33' x 33' pens were divided into two outer compartments and a central area. Various numbers of sharks were placed in the outer compartments, and one in the center area, allowing the sharks to interact in the compartments or remain alone.

“We had an individual in the middle of the pen, and it could swim anywhere it wanted to, but it would always spend more time on the side with other individuals,” he said. “There wasn’t any predation risk. They weren’t getting any more food. They just had this social attraction.” And, although it was expected the sharks would be territorial and aggressive toward each other “we never see aggression between individuals” of a lemon shark group, he added.

Hanging out with friends is important to acquiring knowledge. Lemon sharks learn from observing others according to research published in the journal *Animal Cognition*³. In that study, scientists trained a group of lemon sharks to hit a target, rewarding successes with food. Then, untrained sharks were allowed to interact with and observe (a) the trained (demonstrator) sharks or (b) sharks with no previous training (i.e., sham demonstrators).

Afterwards, sharks paired with ‘demonstrator’ sharks performed a greater number of task-related behaviors than sharks paired with ‘sham demonstrators’. When tested in isolation, sharks previously paired with ‘demonstrator’ sharks completed a greater number of trials and made contact with the target significantly more often than observers previously paired with ‘sham demonstrators’. The results indicated that juvenile lemon sharks, like numerous other animals, are capable of using socially-derived information to learn about their environment.

Next, the team wants to take a look at lemon shark personality. Though the findings are preliminary, individual lemon sharks show some signs of having specific mannerisms such as shyness, according to biologist Jean-Sebastien Finger of the Bimini field station. In shark terms, this means they’re less sociable than usual. In human terms, it suggests they might have only a few Facebook friends.



Lemon sharks tend to swim with sharks their own size, says biologist Finger, possibly because they eat similar food and avoid the same predators, such as larger lemon sharks. The downside of being part of the social network is an increased risk of contracting diseases and parasites.

Photo by Kathyne Cope

1. Porcher, I. F. (2010) *My Sunset Rendezvous*, Strategic Book Group, Durham, CT.
2. Guttridge TL, Gruber SH, Gledhill KS, Croft DP, Sims DW and Krause J. 2009. Social preferences in juvenile lemon sharks, *Negaprion brevirostris*. *Animal Behaviour*. 78, 543-548.
3. Guttridge, T. L, Van Dijk, S., Stamhuis, E.J., Krause, J, Gruber, S. H. Brown, C. (2013) Social learning in juvenile lemon sharks, *Negaprion brevirostris*. *Animal Cognition*, 16:1, 55-64.

Kids 4 for Sharks — Local . . .

We never miss Hopewell Elementary School's annual Science Fair, held this year on March 16th at the NJ school.



This medal winning student did a project on DNA mapping and Dean told him how that is utilized to ID sharks that have been finned.

Dean Fessler, a.k.a. Sharkman, spent many hours with the young scientists.



"I was moved to see a mother helping her daughter draw/sketch a white shark. How times change," said Dean.

. . . and Nationally

SRI member Sara Brenes, also known as "The Shark Whisperer", decided that it would be a great idea to "Pay It Forward" and have a Shark Whisperer Organization **Kidz Conservation Awards** program. Sara wants to reach out to those who make conservation efforts in order to acknowledge their efforts. No matter how big or small their contribution, each person makes a difference. Today's youth will be tomorrow's future ocean guardians.

Any child 17 or younger may participate. Or, any group or organization run or administered by children 17 or younger will qualify. In order to meet eligibility requirements the child or group must be actively involved in shark, beach or ocean conservation. Sara is hoping to inspire the next generation to be actively involved in caring about sharks and our oceans and the planet's future.

Winners are randomly chosen. In order to be considered please email Sara@SharkWhisperer.org a short essay about yourself, your nominee or your group or organization. Include a description of what the nominee does and the conservation theme that they are involved in. Include how the nominee's efforts benefit conservation and the results of the nominee's effort's. Note if there is a history of commitment and accomplishment. Describe how the nominee is an inspiration to others.



Nominees will be notified of their award via email and subsequent postings on Facebook and the Shark Whisperer Organization Blog and Website. Winners will receive a Stand Up Paddleboard Tour, Shark Whisperer goody bag and lunch with Sara the Shark Whisperer. In cases where the winner is not able to meet in person, Sara will Skype the winner to speak with them personally. Winners not able to go on paddle board tour will receive a Shark Whisperer Organization gift basket. All winners will receive a Shark Whisperer Medal of Honor and a Shark Whisperer T-Shirt.

Field Expeditions

WHALE SHARKS — Cancun, Mexico

August 6 to August 10, 2013.

At present, this is the only open SRI expedition. Dr. Jennifer V. Schmidt, Director of SRI's DNA study and the project leader, will once again be taking swimmers and snorkelers to the Afuera Whale Shark Aggregation. (Note: no scuba; bubbles frighten the sharks). Cost is \$1400 per person (double occupancy). Half the spots are already filled.



Hundreds of whale sharks gather at the surface in the Afuera

SARDINE RUN — South Africa

June & July 2013

The Sardine Run is one of the ocean's great spectacles! Huge humpback and Brydes whales, hundreds of sharks, great pods of dolphins, and clouds of ocean birds follow and feed on the massive shoals of sardines as they migrate through the warm waters of the Indian Ocean! Spaces are filling up! If you are interested in witnessing and/or diving this incredible marine event, contact us for space availability. Cost for 5 days/6 nights double occupancy is ZAR17,500 (currently US\$1,882) or ZAR19,250 (US\$2,070) single supplement.



Expeditions are also being planned to study:

OCEANIC WHITETIP SHARKS — Bahamas

WHALE SHARKS — Cuba

BLUE & MAKO SHARKS — Rhode Island

If you'd like to come along on any of these expedition, please call SRI HQ at 609.921.3522 as soon as possible

Photo by Vince Canabal

Beneath the Sea — A Weekend of Sharks, Diving and Ocean Everything!

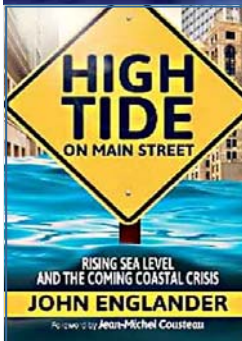
Show Dates are March 22 – 24, 2013. Beneath the Sea (a.k.a. BTS) is the world's largest consumer dive show. Held at the Meadowlands Convention Center, it is only 10 minutes from New York City.

Diving legends Jean-Michel Cousteau, Eugenie Clark and Valerie Taylor, and many members of Women Divers Hall of Fame will be at BTS!

Events include an international film festival, awards banquet, imaging competition and Divers of the Year. One of the highlights of the show is the Ocean Pals Poster Contest for Children. This year's theme is Save Our Sharks, and SRI's Dean Fessler will host the Awards Ceremony on Sunday.

With 164 exhibitors and workshops and seminars on wreck diving, education, deep explorations, photography, travel, dive medicine, environment and shark diving there is something for everyone. And be sure to visit SRI at Booth 221, join one of our expeditions, pick up a new book on sharks, or hang out and 'talk shark'.

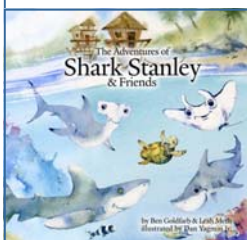
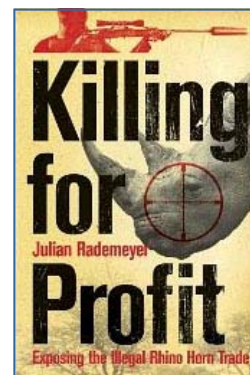
Members' Bookshelf



High Tide on Main Street, by John Englander. \$19.95 or \$9.99 Kindle e-book through Amazon.com. Englander is an oceanographer, geologist and explorer who specializes in Sea Level Rise (SLR). This book explains (in non-scientific terms) exactly what SLR is and how it has occurred for millions of years. Next, John examines the economic and geographic impacts of SLR in this century. While we can't stop sea level rise, we can intelligently adapt our coastal communities to prepare for the coming coastal crisis.

"Amazing information about what is going to happen with sea level and the coastlines in the coming decades. I really enjoyed the book and John's easy style of writing. I am sure you will too." ... Amos Nachoum

Killing for Profit: Exposing the Illegal Rhino Horn Trade, by Julian Rademeyer. \$17.82 or \$8.79 Kindle e-book through Amazon.com. Rhino horn is worth more than cocaine, heroin or even gold on the black markets of Southeast Asia and China. Now, *Killing for Profit* brings you the story of one man's journey into a violent underworld where ruthless criminal syndicates will stop at nothing to attain their prize – a tale of greed and corruption and of an increasingly desperate battle to save from extinction an animal that has existed for over 50 million years. This is investigative journalism at its gripping best. Journalist Julian Rademeyer follows the bloody trail of the syndicates, poachers, smugglers, hunters and hustlers from the frontlines of the rhino wars in Zimbabwe and South Africa to the medicine markets of Vietnam, and into the lair of a wildlife trafficking kingpin on the banks of the Mekong River in Laos. This book will appeal to anyone concerned about the survival of our endangered animal species and the environment in general.



The Adventures of Shark Stanley & Friends, by Ben Goldfarb and Leah Meth, illustrated by Dan Yagmin, Jr., students at the Yale School of Forestry and Environmental Studies Available for free as a special online release by Shark Defenders and Sage Magazine. Download at: <https://www.dropbox.com/s/ln5h9g494dd7k26/The%20Adventures%20of%20Shark%20Stanley%20%26%20Friends.pdf>. The story follows Stanley — a courageous hammerhead shark — and his three companions,

Pierre the Porbeagle, Waqi the Whitetip, and Manta Reina, as they navigate human perils through their undersea home. The quartet dodges longlines, harpoons, slime-covered reefs, and garbage patches, along the way discovering how sharks and other predators help keep ecosystems healthy.

The four characters correspond to the four species of sharks and rays to which the Convention on the International Trade of Endangered Species (CITES) just granted increased protection.

Available at SRI Headquarters

Aquariana and the Golden Pearl, by Penny Dabestani (signed by the author). \$25, plus S&H. This book speaks to the heart of every young girl who loves the sea and strives to stop the damage being done to it by humans. It is an enchanting book!

The Fragile Edge, by Julia Whitty. \$15, plus S&H. A mesmerizing, scientifically rich portrait of teeming reef and sea life in the South Pacific.

New Jersey Coastwalks, by D.W. Bennett, illustrations by Marie Levine. \$20, includes S&H. Published by the American Littoral Society in 1978, with the exception of the Shark River walk (condos have since been built on that site), the walks are still 'walkable' — despite Hurricane Sandy.

Items Wanted for our Upcoming SPRING AUCTION!

Our Annual Spring Auction will start next month on Bidding For Good. Do you have any paintings, sculpture, dive vacations, gold doubloons, anything weird or wonderful that you'd like to donate? If so, please contact SRI-HQ. Every donor will receive a tax receipt for the full retail value of their donation and deduct the value from their 2013 US Federal Income taxes.

Thank you to all our supporters who have already donated items. *We really appreciate your creativity and generosity!*

Journal Article Estimates New High for Shark Mortality

Worm, B., Davis, B., Ketteimer, L., Ward-Page, C.A., Chapman, D., Heithaus, M.R., Kessel, S.T., Gruber, S. (2013) Global catches, exploitation rates, and rebuilding options for sharks, *Marine Policy* 40:194-204

Adequate conservation and management of shark populations is becoming increasingly important on a global scale, especially because many species are exceptionally vulnerable to overfishing. Yet catch statistics for sharks are incomplete, and mortality estimates have not been available for sharks as a group. A new journal article presents global catch and mortality of sharks from reported and unreported landings, discards, and shark finning. The study estimates them at 1.44 million metric tons for the year 2000, and only slightly less in 2010. Based on an analysis of average shark weights, this translates into a total annual mortality of about 100 million sharks in 2000, 97 million sharks in 2010, with a range between 63 and 273 million sharks per year.

Further, the exploitation rate for sharks was calculated by dividing two independent mortality estimates by an estimate of total global biomass. As an alternative approach, exploitation rates for individual shark populations were compiled and average from stock assessments and other published sources. The three independent of the average exploitation rate ranged from 6.4% to 7% of sharks killed annually. The exceeds the rebound rates (average at 4.9% per year), and explains the continuing declines in most shark populations for which data exists.

The consequences of this unsustainable catch and mortality rate for marine ecosystems may be substantial. Global shark mortality needs to be reduced drastically to rebuild depleted shark populations and restore marine ecosystems with top predators.

Shark Fishing Tournament — Cancelled!

Good News! On January 10, 2013, the Environment Ministry of the Dominican Republic said it will not issue a permit for the announced shark fishing tournament along Santo Domingo's coast south, citing negative impact on wildlife.

Environment minister Bautista Rojas Gomez warned that his agency ensures the conservation and sustainable use of biodiversity and wouldn't endorse such activity, noting that there are no studies on the shark population along Dominican Republic's Caribbean coast.

The official added that Environment Law 64-00 empowers that agency to invoke the precautionary principle for such situations.

