

Not for profit organization established in Grenada in 1995
kido-ywf@spiceisle.com

Mission Statement

**The social and the environmental must now come together.
Indeed, they should have never been apart**

Health Hazard Awareness Campaign on Sea Turtle as Food

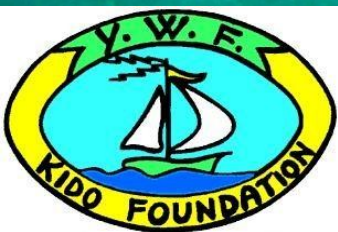
2010/2011



The Goal

Educate the public that the traditional consumption of turtle meat, blood and eggs as food puts consumers at a high risk of food poisoning

Once the link between human health hazards & sea turtle consumption becomes a publicly discussed issue, the market demand for turtle meat & eggs decreases and a total ban on sea turtle hunting in the State of Grenada is more likely to be approved by the Government



Location



Background info

The waters surrounding the tri-island State of Grenada & the Southern Grenadines provide foraging and mating areas for Green (*Chelonia mydas*) and Hawksbill turtles (*Eretmochelys imbricata*). Loggerheads (*Caretta caretta*) are decreasingly found in these waters.

Leatherbacks (*Dermochelys coriacea*) & Hawksbills (*Eretmochelys imbricata*) nest on our beaches.



The Law in Grenada

No person shall fish for, take, sell, purchase, have in his possession or disturb the nest of any sea turtle of any size at any time.

No person shall fish for, take, sell, purchase or have in his possession any leatherback sea turtle of any size at any time.

No person shall fish for, take, sell, purchase, have in his possession or disturb any species of sea turtle during the designated closed season (1st May – 31st August).

No person shall fish for, take, sell, purchase, have in his possession or disturb any sea turtle under 25lbs at any time.

Anyone found violating this regulation will be prosecuted.

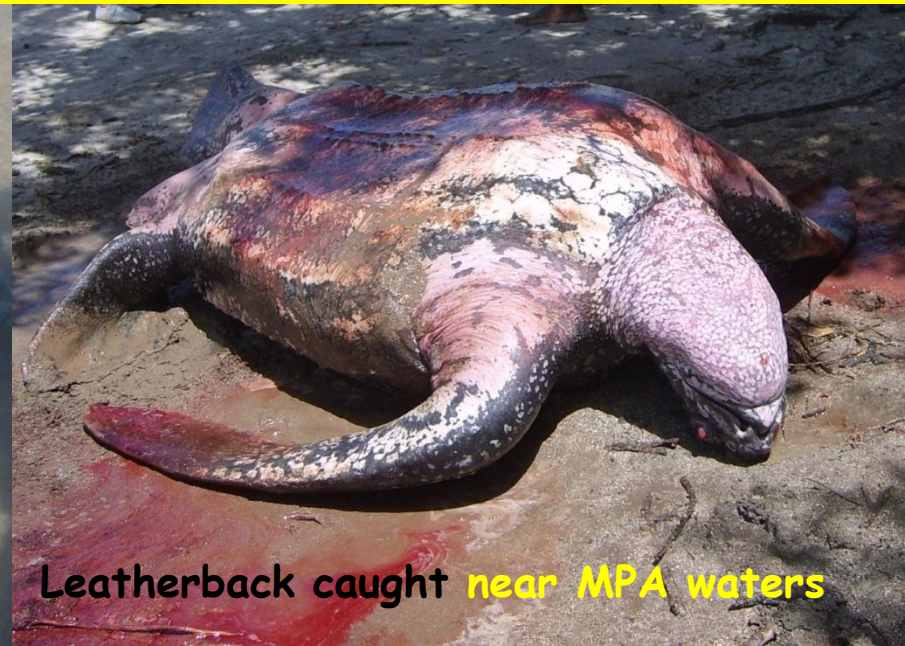
Targeted fishing practices (one speed boat with 3 fishers hauled 30 turtles in one trip) and consumption of turtle eggs (for assumed aphrodisiac purposes-6 eggs in one go) are widespread.

Mature Hawksbills, caught at the beginning and end of the hunting season (September-April), are likely to be in their nesting period (May-December).

In Grenada, nesting leatherbacks are under a greater pressure: the traditional culture of eating sea turtle eggs and meat brings poachers to defy the law and slaughter leatherbacks in unmonitored nesting beaches.



Hawksbill caught within MPA waters near Sandy Island, Carriacou



Leatherback caught near MPA waters

Enforcement of the present legislation is non-existent. In Carriacou, non targeted Leatherbacks remain entangled in fishers' nets in March-April, at the end of their long journey from their foraging grounds to their nesting grounds or are caught while nesting



This Leatherback was caught & dragged 150 ft inshore in the south of the island on March 29, 2006

The turtle was named Donella after Donell, a boy from Carriacou who alerted us and helped in the turtle rescue



Donella nested in Petit Carenage, Carriacou north,
three months later, in June of 2006.
She returned to nest on the same beach in 2008 & 2010



Other chronic anthropogenic impacts affecting sea turtles include: loss of suitable nesting beaches due to development & sand mining
Sand mining in Petit Carenage, main nesting beach in Carriacou for leatherbacks & hawksbills, on July 14, 2010



Activities

- Power Point presentations
- Newspapers articles
- Leaflets
- Radio programs
- School programs

Based on current research findings related to the contamination of sea turtle meat & eggs by heavy metals & chemicals (METHYL-MERCURY, POLYCHLORINATED BIPHENYLS-PCBs, CADMIUM, chlordan, dieldrin, DDT) and potentially harmful bacteria.

SEA TURTLES and EGGS
are NO longer Safe Food!



Power Point presentation
by **Tyrone Buckmire**
Director of Kido Foundation

Venue: Carriacou Resource Center
Date: Friday, December 3rd, 2010
Time: 5pm

This presentation will inform the public about the latest discoveries of health hazards related to the consumption of sea turtles as food



WSPA
World Society for the Protection of Animals

Approach

Our Social/Educational Approach is:

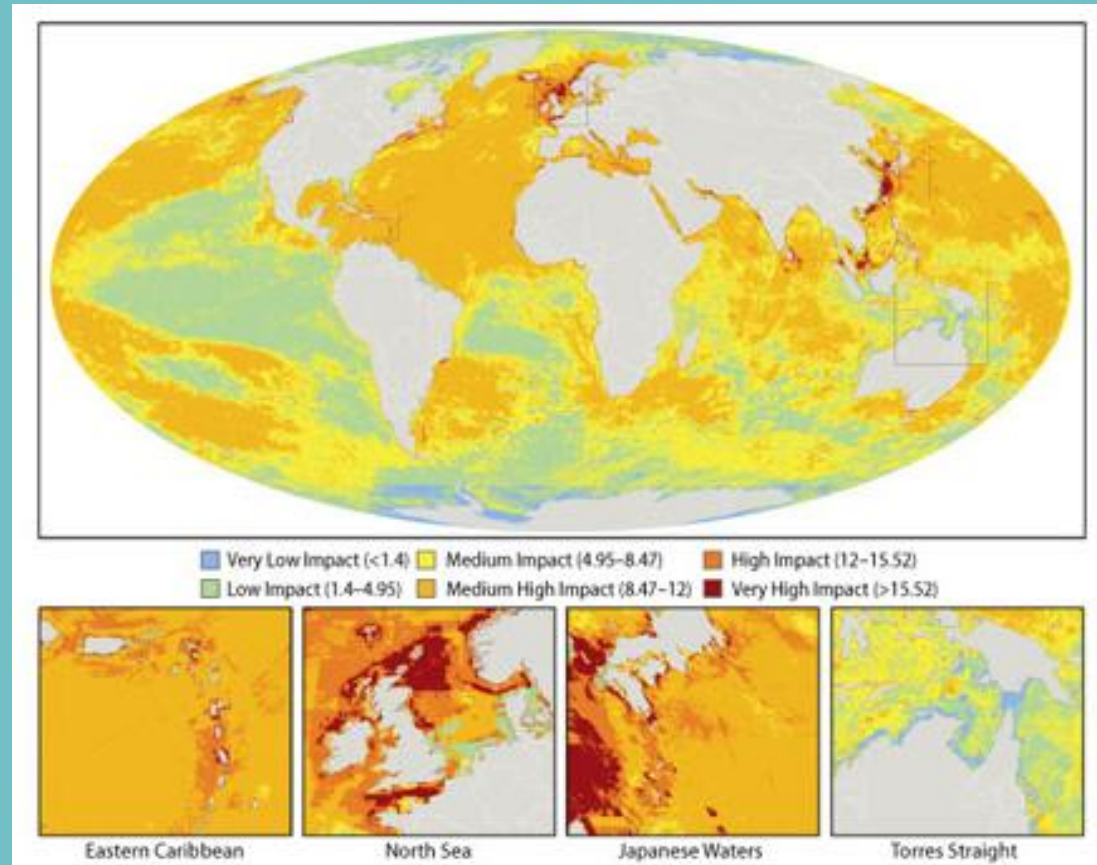
- **Avoiding the condemnation** of traditional fishing practices and consumption of sea turtle meat and eggs
- **Spreading verifiable information** (scientific findings, photographs and case studies) on the potential health risks for humans (especially children and women of childbearing age) consuming turtle meat, blood and eggs

Kido sea
turtle
presentation
Harvey Vale
primary
school
Carriacou
2011



- **Pointing out facts:**

- Sea creatures safe to consume 50 years ago may no longer be safe, because ocean pollution reached dangerous levels, due to the planet's rapid industrialization utilizing mercury (in the past 40 years)
- Also the Caribbean sea is polluted
- Turtles are long distance migratory species & may spend part of their life in highly contaminated areas (i.e. The Gulf!)
- During their long lives turtles accumulate elevated levels of contaminants.



STATE of the **OCEAN**

LESS THAN **4%** is INTACT

- **Listing possible negative health effects** caused by the consumption of contaminated turtle meat, blood & eggs, such as brain damage in fetuses and children
- **Explaining** that, though some people who ate turtle or eggs for many years feel healthy, this does not prove that the building up of contaminants in their body is not present. Records show that any turtle today may be heavily contaminated and its consumption can pose risks of serious food poisoning



Grenada, June 12, 2010. Kido Power Point presentation at media retreat event, with the participation of Dr. Jennifer Isaac, MD

- Debunking myths that eating sea turtle does not cure anemia, asthma and respiratory problems and eggs are NOT aphrodisiacal: there are no data supporting such claims, on the contrary, eggs can have high concentrations of pollutants that might actually impair fertility!

The Impact on Health of Consuming Turtle Products

By

Dr. Jennifer Isaac MD

In collaboration with
Grenada Fund
for
Conservation Inc.
and
KIDO Foundation



Please
don't
eat me!



WSPA
World Society for the Protection of Animals

T

urtles live for many years. They migrate thousands of miles from feeding grounds in cooler climates to nesting grounds in warmer climates and can travel up to approximately 130 miles per day.

They eat everything, seaweed, sponges, fish, mollusks and because of their longevity and migratory behavior, may accumulate many pollutants from these food items including potentially lethal toxins including harmful algal blooms known as "red tides".

Some of the toxins they accumulate include environmental pollutants such as:

- Heavy metals: Mercury and Cadmium and these two are synergistic.
- Pesticides like chlordane, dieldrin and DDT, PCB's (Polychlorinated Biphenols)

The levels of toxins and heavy metals contained in turtle products often exceeds international food safety standards.

The WHO & EU have set allowable concentration of DDT and its breakdown products in food no higher than 50ppb (parts per billion). In oceans, the concentration of some breakdown products of DDT is as much as 770ppb and 1200ppb.

I

n general, the effects of these toxins and heavy metals, especially mercury, include developmental effects on fetuses and children, neurotoxicity, nephrotoxicity and liver cancer.

Turtle eggs, wrongly considered an aphrodisiac, may have such high concentration of pollutants that they may actually cause impaired fertility.

The effects on the nervous system in children include neuro-developmental diseases, mental retardation, ADD (Attention Deficit Disorder) and possibly autism. In adults, memory problems, Alzheimer's, dementia, ALS (Amyotrophic Lateral Sclerosis), MS (Multiple Sclerosis) Parkinsons, Encephalopathy (non specific brain malfunction), inability to concentrate, tremor, ataxia (loss of balance), impaired hearing, tunnel vision, dysarthria (slurred speech), headaches and depression. Some other conditions linked to toxicity are chronic fatigue syndrome, fibromyalgia and, especially in men, heart diseases and impaired sexual function. Kidney toxicity causes leaking of protein into the urine and renal failure.

GI symptoms are nausea, excessive salivation, vomiting, diarrhea and colitis. (V & D can in turn lead to serious dehydration and death).

I

n addition to toxins, turtles may carry bacteria eg. mycobacteria (family of organisms that causes TB) salmonella, vibrio (family of organisms that causes cholera), E-coli, Chlamydia (causing a pneumonia-like disease) leptosira (headaches, fever, muscular aches, abdominal pain, vomiting, diarrhea, red eyes, jaundice).

Therefore, consuming improperly cooked turtle meat can make you very sick, cause diarrhea, vomiting, dehydration and ultimately death. Turtles also carry flatworms, (trematodes), some amoebae and cryptosporium (funguses)

I would like to recommend that strictly from a health standpoint, it is **extremely hazardous to consume turtle products.** There is a problem in the accumulation of toxins, you cannot get rid of toxins by cooking the meat. The cooking would kill bacteria and fungus, but not eliminate the toxins.

Pollution is the problem, we may have a clean environment in the Caribbean, but, since the turtles travel long distances and live so long, it is a question of toxic accumulation in their bodies. They are high up in the food chain, so they have a potential to accumulate these toxins present in their food (jellyfish, sponges, crustaceans, small fish, sea grasses). We want to minimize human exposure to these contaminants, which create permanent damage in your body.

Kido Foundation
Carriacou
Grenada

Phone: 473-443 7936
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"The impact on Health of Consuming Turtle Products"

Leaflet produced by Dr. Jennifer Isaac, MD in collaboration with
Kido Foundation & Grenada Fund for Conservation

The leaflet is distributed to audiences of Power Point presentations,
including school children

- Introducing a variety of case studies of food poisoning & contaminated turtles around the world & proof that unhealthy turtles are also found locally
- Indicating that a healthy looking turtle may in fact be contaminated !



The photos of these two green turtles were very effective to show the danger of eating turtle meat, especially when it was explained that fibropapillomatosis is a process and can be internal too.

Tainted turtle meat is often offered for sale in public local markets, regardless of evident tumors, which are simply cut off.

The turtle in left photo was rescued by Kido at the Carriacou fish market in 2007. It was for sale for public consumption. Juvenile green on the right, rescued in 2010.

Why Sea Turtles are Important

Sea turtles play an important role in the marine ecosystem and our lives. Sea turtles' diet includes jellyfish, which is the main diet for leatherbacks; sea turtles therefore help control jellyfish populations. Did you know that jellyfish devour fish eggs and larvae, mostly those of yellowfin tuna? Relentless hunting of turtles and poaching of their eggs could drive turtles to extinction within the next ten years, and the consequences are clear: the demise of sea turtles causes the loss of important amounts of fish species consumed by humans.

Hawksbills protect reefs by feeding on sponges, clearing space for the formation of new coral colonies. Green turtles feed on sea grasses, keeping the beds short and healthy, thus providing shelter to hundreds of species of small fish and crustaceans. The decline of the Caribbean Green turtles contributed to the die-off of sea grasses and the disappearance of coastal fish. Sea grasses protect the coastline from wave erosion thus stabilizing beaches. Loggerheads feed on crustaceans and discard the bits of shell in their feces; the disintegration of the shells increases the nutrient rate in the ocean-bottom ecosystems.

Ocean Life and Pollution

Stopping the harvesting and consumption of sea turtles and their eggs is important not only to contribute to the health of marine eco-systems, but also to preserve our own health. Sea turtles have been a traditional food supply for many peoples in the Caribbean, but recent research has shown that turtle meat is often heavily contaminated. By eating turtle meat or eggs we can put ourselves at risk of serious permanent health damage and even death.

Our oceans have been massively polluted with heavy metals, mercury in particular, for the past 40 years, due to chemical industrialization. Yearly, up to 6,000 tons of mercury are released into the environment.



Coal-burning and chlor-alkali industries use mercury for producing chlorine (used in plastics, pesticides and PVC pipes). Incinerators burning waste, including our popular backyard burning of garbage containing plastic, release mercury into the air, land and water, ending up in our oceans.

Turtles, in their long migratory lives, accumulate in their bodies elevated levels of contaminants present in the marine environment: mercury, cadmium, POPs (Persistent Organic Pollutants) and a cocktail of different pesticides. Inorganic mercury, in contact with water organisms, becomes methyl-mercury, a highly

Sea Turtles and Their Eggs: NO LONGER SAFE FOOD

by Marina Fastigi



Above: Children with a healthy hawksbill turtle to be released. Sea turtles have been a traditional food supply for many peoples in the Caribbean, but recent research has shown that turtle meat is now often contaminated

Left: Youth group in Carriacou with a rescued green turtle, also ready for release

toxic form of mercury. Small fish feed on tiny contaminated organisms; larger fish feed on small fish, accumulating mercury in their bodies; unable to expel these heavy metals through digestion, these remain in the organic system, poisoning it. High in the marine food-chain, migratory species such as the largest fish (tuna, swordfish, marlin, sharks, king mackerel, etc.), dolphins, whales and turtles end up carrying very

high concentrations of methyl-mercury in their flesh, blood, organs and eggs.

The Global Map of Human Impact on Marine Ecosystems (Science magazine, 15 February 2008) shows that the Caribbean Sea ranges from "Medium" to "Very High" impact in terms of pollution and overfishing.

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Fish-eating migratory species (including birds) have been tested and found to be highly contaminated even in the most remote areas of the planet, demonstrating that location is no longer a factor of safety from pollution. Pollutants are everywhere, spread through the food-chain process of sea and air creatures, winds and ocean currents.

Connecting the Dots of a Larger Picture

Since 2002, the Barbados Sea Turtle Project, the University of the West Indies and the Wider Caribbean Sea Turtle Conservation Network (WIDECAST), including the Kido Foundation, have been applying ID tags to nesting and foraging turtles to monitor their migrations. Some hawksbills nesting in the Eastern Caribbean (as well as Green turtles that forage there) travel to the heavily polluted Gulf of Mexico, and our southern-born leatherbacks travel as far north as Nova Scotia, Canada and across the Atlantic to Britain's coastal waters.

Tuna is today a highly contaminated fish. In the USA and Europe, labels on large fish packages in supermarkets warn consumers of possible health concerns. According to an article in the September 16th, 2006 issue of New Scientist magazine, the level of cadmium in sea turtles measures three times higher and mercury ten times higher than in tuna!

High levels of cadmium, aluminum, chromium, lead, silver, mercury and titanium were found in tissue samples taken from nearly 1,000 whales over a five-year period, from polar to equatorial waters. Mercury as high as 16 parts per million was found in these whales. Mercury-high fish (shark, swordfish), which health experts warn children and pregnant women to avoid, typically have levels of about one part per million.

The World Health Organization and EU have set allowable concentrations of the banned pesticide DDT and its breakdown products in food at no higher than 50 ppb (parts per billion). Sea turtles in the Atlantic have showed concentrations of breakdown products of DDT as high as 1,200 ppb.

Health Hazards

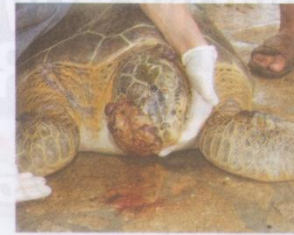
Medical researchers warn of the insidious effects that mercury toxicity may cause to the brain development of unborn babies and younger children. Effects include neuro-developmental diseases, mental retardation, attention deficit disorder and autism. Other serious risks for children and adults are neurotoxicity, kidney disease and liver cancer.

Diseases and symptoms induced by mercury poisoning include chronic fatigue, fibromyalgia, depression, anxiety, obesity, dementia, Parkinson's disease, cancer, heart failure and heart disease, memory problems, Alzheimer's, amyotrophic lateral sclerosis, multiple sclerosis, encephalopathy (non-specific brain malfunction), inability to concentrate, tremors, loss of balance, impaired hearing, tunnel vision, slurred speech, headaches, muscle pain and twitches, insomnia, digestive problems and food allergies.

Aphrodisiac or Impaired Sexual Function?

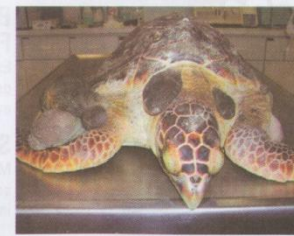
Sea turtle products have been prescribed over the centuries as remedies for anemia, asthma and respiratory problems and, in the Caribbean, sea turtle eggs are traditionally claimed to be an aphrodisiac, consumed mainly by males hoping to boost their sexual performance. According to doctors, the opposite is

true: the high concentrations of cholesterol and pollutants in turtle eggs may impair sexual performance and lower fertility; namely, it is the very consumption of turtle eggs that likely caused the embarrassing physical failure in the first place!



Above: This Green turtle with tumors was on sale at the local fish market

Below: A hawksbill with fibropapillomas. First seen on Green turtles in the 1980s, this type of tumor has now spread to other turtle species



Poisoning and Deaths

Reported globally, cases of poisoning and deaths (especially among children) from eating sea turtle meat, organs and eggs and drinking turtle blood, reveal the seriousness of the problem. In June this year, in Thailand, three persons died of chelonitoxism from ingesting hawksbill turtle meat: a village woman, an 11-month-old boy breast-fed by his mom who had eaten the same turtle meat, and a 60-year-old woman. Dozens of those who shared that turtle meat also suffered from symptoms including respiratory difficulty, stomach pain, nausea, vomiting, fever and double vision, but survived. In the Solomon Islands six children died out of the 28 people affected within five days

of eating turtle meat.

Based on the mortality statistics related to turtle poisoning, the public — in particular women of child-bearing age, nursing mothers and small children — should be discouraged from consuming any sea turtle products. Though turtles may appear healthy, there is a high risk that they carry internal tumors or dangerous bacteria and are contaminated with methyl-mercury, cadmium, POPs and pesticides.

Tumors Affecting Sea Turtles

Turtles too suffer from the pollutants they ingest and increasingly develop fibropapillomas (tumors or cancerous growths), which affect humans as well. On March 21st, 2007 in Carriacou, a mature Green turtle with a four-inch fibropapilloma bulging over her right eye was purchased alive by Kido Foundation at the fish market, thus preventing her contaminated meat from being sold to the unsuspecting public. This turtle had several smaller tumors on her neck, flippers and plastron. An inquiry among fishermen revealed that it was not the first sea turtle with fibropapillomas to be sold to the public in Carriacou.

International fisheries records show that sea turtles worldwide are afflicted with fibropapillomas. First seen on Green turtles in the 1980s, this type of tumor has now spread to other turtle species. It grows on soft tissues, eyes and mouth, through the carapace and plastron (belly), on lungs, kidneys, liver and intestines.

Bacteria Present in Sea Turtles

Ongoing studies show that sea turtles and eggs carry bacteria, vibrios (which may cause Typhoid, salmonella, vibrio [may cause cholera], E-coli, chlamydia (causing a pneumonia-like disease), leptospirosis, arsenic and potentially lethal toxins from ingesting algal blooms (red tides).

Data from 2003 - 2004 showed that 80 percent of the samples of Green turtles in Baja California exhibited high antibody levels of leptospirosis. People infected with leptospirosis often have no symptoms, but left untreated, it can cause kidney damage, meningitis, liver failure, respiratory distress or death.

Cooking may kill bacteria and fungi (although it is very difficult to eliminate bacteria from your hands and tools after handling raw meat), but cooking does not eliminate the harmful toxins, which once ingested remain in our bodies. It is important to underline that cooking turtle meat or eggs cannot get rid of heavy metals.

Proposal for the Immediate Future

Common sense and deep concern for public health, as well as basic environmental conservation, suggest that authorities in charge need to establish a moratorium for hunting sea turtles in each Caribbean state, banning the trade and consumption of turtle products. It is also strongly suggested that authorities and the media duly inform the public of the health hazards associated with the consumption of sea turtles and eggs, as well as of other contaminated ocean creatures, which may expose us and future generations to serious health hazards.

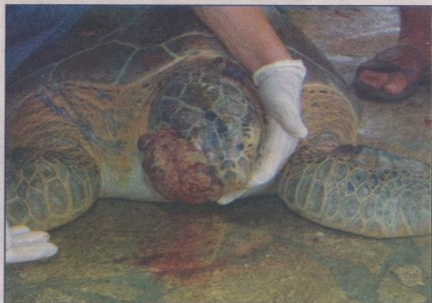
Marina Fastigi, Ph.D. is Director of Kido Foundation, a not-for-profit organization in Carriacou, Grenada. "Sea Turtle as Food is a Health Hazard for Consumers" is a Kido public awareness campaign, supported by the World Society for the Protection of Animals (www.wspa-international.org). For more information call (473) 443-7936 or e-mail kido-yuz@spicsele.com.

The October 2010 issue of widely distributed Caribbean Compass published a two-page article by Kido Foundation:

'Sea Turtles and Their eggs: NO LONGER SAFE FOOD'

We received positive feedbacks from readers as far as China (from Sea Turtles 911 in Hainan Island) requesting to publish the article for educational purposes.

Sea Turtles and Sea Turtle Eggs are no longer safe food!



Sea Turtles in the Marine Eco-system

Sea Turtles play an important role in the Marine Ecosystem and our lives. Their diet (main diet for Leatherbacks) includes jellyfish, which devour fish eggs and larvae (mostly yellow fin tuna). Therefore Sea Turtles help control jellyfish populations; yet relentless hunting and eggs poaching may drive this 100 million years old species to extinction in 10 years! The consequences are clear: the demise of sea turtles causes the loss of important amounts of fish species consumed by humans.

Hawksbills, by feeding on sponges, clear space for the formation of new reef coral colonies. Greens, by feeding on sea grasses, maintain them healthy, thus providing vital shelter to hundreds of species of small fish and crustaceans. The decline of the Caribbean green turtles contributed to the die-off of sea grasses (which protect the coastline from wave erosion thus stabilising beaches) and the disappearance of coastal fish (1).

Ocean life & pollution

Coal-burning and chlor-alkali industries use Mercury for producing chlorine (used in plastics, pesticides, PVC pipes), yearly releasing up to 6,000 tons of Mercury in the air, land and water, ending up in our oceans. Incinerators burning waste, including our popular backyard burning of garbage containing plastics, also release Mercury, which, in contact with water organisms, becomes the highly toxic Methyl-mercury.

Small fish feed on tiny contaminated organisms; larger fish feed on small fish and, being unable to expel these contaminants through digestion, these remain in their bodies poisoning it. High in the marine food-chain, migratory species such as the largest fish (tuna, swordfish, marlin, sharks, king mackerel, tilefish, etc), dolphins, whales and turtles end up

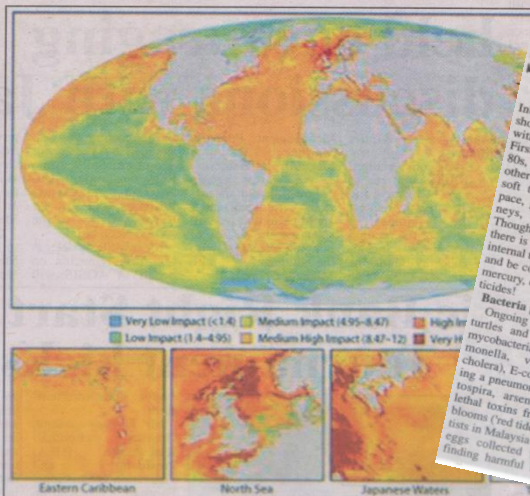
carrying very high concentrations of contaminants present in the ocean, Methyl-mercury, cadmium, POPs (Persistent Organic Pollutants) and pesticides, in their flesh, blood, organs and eggs.

The Global Map of Human Impact on Marine Ecosystems (Science 15 February 2008) shows that the Caribbean Sea ranges from Medium to Very High impact in terms of pollution and overfishing (a mere 4% of the entire World Ocean is still healthy, unpolluted and rich in biodiversity). Fish-eating migratory species (including birds) were found to be highly contaminated even in remote areas of the planet (2), demonstrating that location is no longer a factor of safety from pollution. Pollutants are everywhere, spread through the food-chain process of sea and air currents, winds and ocean currents.

Connecting the dots of a larger picture

Since 2002, UWI and Wider Caribbean Sea Turtle Conservation Network (WIDECAST), including Kido Foundation, have been applying ID tags to nesting and foraging turtles to monitor their migrations: some hawksbills nesting and green foraging in our EC area travel far to the heavily polluted Gulf of Mexico and our nesting leatherbacks travel as far as Nova Scotia, Canada and across the Atlantic to Britain's coastal waters. Tuna with high concentrations of Methyl-mercury, fished in the US Pacific coast, have been contaminated by Asian coastal pollution (ScienceDaily - 3/05/2009). In USA and Europe supermarkets, labels on large fish packages warn consumers of possible health risks. The level of cadmium in Sea Turtles measures 3 times higher and mercury 10 times higher than in tuna! (3)

High levels of cadmium, aluminum, chromium, lead, silver, titanium and mercury (as high as 16 parts per million) were found in tissue samples taken from nearly



1,000 whales over a five-year period, from polar to equatorial waters. Mercury-high fish (shark, swordfish), which health experts warn children and pregnant women to avoid, show levels of about 1 part per million. (4)

Allowable concentrations of the banned pesticide DDT and its breakdown products in food were set by the World Health Organization and EU at no higher than 50 parts per billion: Sea turtles in the Atlantic showed concentrations of breakdown products of DDT as high as 1,200 ppb! (5)

Health Hazards

Medical researchers warn of the insidious effects that Mercury toxicity may cause to the brain development of unborn babies and younger children: effects include neuro-developmental diseases, mental retardation, Attention Deficit Disorder and autism. Other serious risks for children and adults are neurotoxicity, kidney disease and liver cancer.

Diseases and symptoms induced by Mercury poisoning list: chronic fatigue / fibromyalgia / depression / anxiety / obesity / dementia / Parkinson's disease / cancer / heart failure / heart disease / memory problems / Alzheimer's / Amyotrophic Lateral Sclerosis / Multiple Sclerosis / Encephalopathy (non specific brain malfunction) / inability to concentrate / tremors / loss of balance / impaired hearing / tunnel vision / slurred speech / headaches / muscle pain and twitches / insomnia / digestive problems / food

allergies (2) (3) (6) (7).

Aphrodisiac or impaired sexual function?

Sea turtle products have been prescribed for centuries as remedies for anemia, asthma and respiratory problems and, in the Caribbean, sea turtle eggs are traditionally consumed as an aphrodisiac by men hoping to boost their sexual performance. According to doctors, the opposite is true: the high concentrations of cholesterol and pollutants in turtle eggs may impair sexual performance and lower fertility; namely, it is their very consumption that likely caused the embarrassing physical failure in the first place! (5).

Poisoning and Deaths

Cases of poisoning and deaths (especially children) from eating sea turtle meat, organs, eggs and drinking its blood, are now reported globally and reveal the seriousness of the problem: in June 2010, in Thailand, THREE persons died of food poisoning from ingesting Hawksbill turtle meat: a woman, an 11-month-old boy breast-fed by his mom who had eaten the same turtle meat, and a 60-year-old woman. Dozens of those who shared that turtle meat suffered from food poisoning (8). In the Solomon Islands: 6 children died, out of 28 people affected, within 5 days of eating turtle meat (5).

Based on these mortality statistics, the public, in particular women of childbearing age, nursing mothers and small children, should be discouraged from con-

suming any sea turtle products (2).

Cruelty Issue

Catching turtles is a practice involving severe cruelty: many turtles endure a long painful death by drowning when caught in nets (they need to breathe air at least every 20 minutes, they have lungs); they are dragged ashore on their backs, left dry in painful positions for days until sold! Turtles often endure further agony, being chopped to pieces under cutlass blows while still alive, their flippers severed off and their eggs taken from their wombs forced open by a rusty blade! Most turtles slaughtered are 60-70 years old or more!!! Turtles represent an irreplaceable link to the health of our oceans!! Their demise will be a loss for humans too.

Tumors affecting Sea Turtles

Turtles, who too suffer from the pollutants they ingest, increasingly develop Fibropapilloma: cancerous growths, which affect humans as well. On 21/03/07 in Carriacou, a mature Green turtle with a 4 inch thick Fibropapilloma bulging over her right eye was purchased alive by Kido Foundation at the fish market, thus preventing her contaminated meat from being sold to the unsuspecting public. This turtle had several smaller tumors on her body. An inquiry among fishermen revealed that it was not the first sea turtle with Fibropapilloma to be caught and sold to the public in Carriacou.

Continued on page 05

Sea Turtles and Sea Turtle Eggs are no longer safe food!

From page 04

International Fisheries records show that sea turtles are afflicted with Fibropapilloma worldwide. First seen on Green turtles in 1980s, this tumor has now spread to other turtle species. It grows on soft tissues (eyes, mouth), carapace, plastron (belly), lungs, kidneys, liver and intestines (9). Though turtles may appear healthy, there is a high risk that they carry internal tumors, dangerous bacteria and be contaminated with Methyl-mercury, cadmium, POPs and pes-

and high concentrations of POPs (Persistent Organic Pollutants) from Green turtles in Baja California in 2003-2004 exhibited high antibody of Leptospiriosis, damage, meningitis, liver failure, respiratory distress, or death (3) (5).

It is important to underline that cooking turtle meat or eggs cannot get rid of heavy metals. Cooking may kill bacteria and fungi (although it is very difficult to eliminate bacteria from your hands and tools after handling raw meat), but cooking does not eliminate the harmful toxins, which once ingested remain in our body (3).

Awareness of Health Care Authorities and Media Alerts

In January 2010, the WHO and FAO of the UN held a meeting of experts on health risks from eating meat and blubber from fish, whales, dolphins, porpoises and sea seafood. In a May 2010 press

release the Grenada Sustainable Development Council stated that Methyl-mercury is a poison affecting the nervous system and that exposure during pregnancy is a serious concern, because it may harm the development of an unborn baby's brain, affect the heart and circulatory system and cause cancer.

In June 2010 Kido Foundation delivered a printed report on these issues of national relevance to the Ministry of Health in Grenada, and conducted a media retreat together with Grenada.

Conservation, in which media workers were informed of the special intervention of speaker Dr. Jennifer Isaac, MD from Grenada.

Proposal for the immediate future

Common sense and deep concern for public health, as well as basic environmental conservation practices, suggest that authorities in charge need to establish a complete moratorium for hunting the

last sea turtles in Grenada, banning the consumption of turtle products. It is also strongly suggested that authorities and the media duty inform the public of the health hazard associated with the health hazard of sea turtles and eggs, other contaminated ocean creatures, thus protecting citizens and our future generations from exposure to serious health hazards.

Kido Foundation, Not-for-profit organization, Carriacou, Grenada

Sea Turtle as Food is a Health Hazard for Consumers' is a Kido Foundation awareness campaign, supported by WSPA. For a Power Point presentation and discussion with interested audience contact us at 473- 404 5814 or kido-yw@kido.org

Why Healthy Oceans Need Sea Turtles: The Importance of Sea Turtles to Marine Ecosystems

by Wilson, E.G., Miller, K.L., Allison, D. and Magliocca, M. oceans.org/seaturtles(2)

(5) A. Alonso Aguirre, wildlife epidemiologist, Columbia University in 'Sea Turtles-What Not To Eat' by Janet Raloff, Science News 16/09/2006

(6) Making the Connection: Human Health and Sea Turtle Consumption, by Jesse Marsh, the Monterey Bay Aquarium's senior fisheries research analyst for the Monterey Bay Aquarium's Seafood Watch program and at The Ocean Conservancy and a research associate

(7) Mark Hyman, MD - Huffington Post, February-March 2010

http://phuketwan.com/tourism/phuket-turtle-poisoning-

(9) http://www.turtle-hospital.org/fibropapilloma.htm (10) 2009 Marine Science Review #373

In September 2010 a more extensive article was published by the Grenadian Voice

Interviews and Radio Programs

Tyrone Buckmire,
Kido Foundation director,
held two interviews
in Grenada with MTV
and WEE FM radio on
June 12 and July 6, 2010



Tyrone conducted three Q&A programs at two local radio stations in
Carriacou: Kayak 106 FM & Sister Isles Radio in December 2010.

These radio programs had a wide audience in Carriacou & the Grenadines
islands and the notion that sea turtles are no longer safe to eat became
the 'talk of the town'. In several occasions we were told that fishermen
were having a hard time selling turtles!

If the consumption of turtle meat and eggs decreases, out of caution
and care for the health of children and mothers, there will be less
incentives for fishers to set their nets for turtles.

More radio programs are scheduled in Grenada with Spice Capital Radio
for a two-month period, as well as added media interviews

Power Point presentations are ongoing in the primary and secondary schools of Carriacou: children report home their clear understanding that it is not safe to eat turtle meat and eggs and show their parents Dr. Isaac's leaflet to support their statements

Kido presentations also highlight that **hunting turtles is a cruel practice** inflicted on peaceful animals that play an important role in the marine ecosystem



In a fishing community it is necessary to communicate that sea turtles are essential for keeping healthy reefs & sea grass beds and that, due to the turtle-jellyfish-fish larval food chain, **the massive decline of sea turtles also contributes to the rapid decline of ocean fisheries**

Lessons learned (so far...)

1- Write (lobby) to the Ministry in charge...but do not expect an answer or an immediate action

2- Use local RADIOS to spread your message: IT WORKS !

3- Communicate your message to CHILDREN at school: they listen, understand and carry the message to their families and friends



4- Make sure your facts are supported by scientific evidence and are verifiable by your audience (Internet)

5- A locally respected professional (an MD in our case) supporting your findings adds credibility to your message

Lessons learned (so far...) 2

6- Listen to your audience, some of their questions may take you by surprise.

A sample of questions and statements we received following the radio programs and when talking to people on the street:

- a) Sea turtles are not legally protected all year around in Grenada because they are not an endangered species in Grenada!
- b) If the turtles with tumors are released back to the sea, is this dangerous to humans? Will this cause more pollution in the sea? Should we kill them when we find them?
- c) If you inject a cancerous tissue of an animal to another one that has cancer, this one is cured!

End of presentation...



...beginning of a Vision

Declaration of Interdependence

excerpts - David Suzuki Foundation

We humans are but one of thirty million species weaving the thin layer of life enveloping the world



The stability of communities of living things depends upon this diversity

Linked in that web, we are interconnected —
using, cleansing, sharing and replenishing
the fundamental elements of life.



Our home, planet Earth, is **finite**;
all life shares its resources and the energy from
the sun, and therefore has limits to growth.

For the first time, we have touched those limits.



When we compromise the **air**, the **water**, the **soil** and the **variety of life**, we steal from the endless future to serve the fleeting present.

At this turning point
in our relationship
with Earth,
we work for an
evolution:

from dominance
to Partnership
from fragmentation
to Connection
from insecurity
to Interdependence



Thank you!

