

**MAWQATMUTI'KW**



# OUR CONNECTION VIOLATED

**N**O TRIBE HAS the right to sell, even to each other, much less to strangers.... Sell a country! Why not sell the air, the great sea, as well as the earth? Didn't the Great Spirit make them all for the use of his children?

The way, the only way to stop this evil is for the Red Man to unite in claiming a common and equal right in the land, as it was first, and should be now, for it was never divided.

We gave them forest-clad mountains and valleys full of game, and in return what did they give our warriors and our women? Rum, trinkets, and a grave.

Brothers—My people wish for peace; the Red Men all wish for peace; but where the white people are, there is no peace for them, except it be on the bosom of our mother. Where today are the Pequot? Where today are the Narragansett, the Mohican, the Pakanoket, and many other once powerful tribes of our people?

They have vanished before the avarice and the oppression of the White Man, as snow before a summer sun.

... *Chief Tecumseh*

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Photo Credit: photograph by Robert Del Tredici/the Atomic Photographers Guild

A wall of uranium tailings radioactive waste from the Stanrock Mill near Elliot Lake, Ontario.

*This photograph was taken in the 1980s. Since then they have improved the look of it by covering it with rocks. Given the extreme longevity of these radioactive toxic waste materials, however, this is not much of an improvement. Radon gas still escapes, and weather will still erode the site.*

*... Robert Del Tredici*

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Mawqatmuti'kw is also produced to feature articles and information about MAARS work to promote knowledge about aquatic resources, ocean management, communal commercial fisheries, collaborative partnerships and governance.

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## **Front Cover Credit**

Kodemizer at the English language Wikipedia. Sweetgrass (*Hierochloe odorata*). The Mi'kmaq and other Algonquian Aboriginal Peoples of Canada believe sweetgrass is a purifier, and burn sweetgrass before all ceremonies. It is a reminder to respect the earth and all things it provides. Some Aboriginal Peoples believe it was the first plant to cover Mother Earth

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# GUEST WRITER

## LEADING UP TO CONFEDERATION by JOHN JOE SARK

Surely, many Canadians will joyfully celebrate the 150th anniversary of the Charlottetown Conference that led up to the Confederation of Canada. However as a Mi'kmaq person and it is undoubtedly the sentiment of the majority of Mi'kmaq and other Indigenous Peoples of Canada—I would offer an alternate viewpoint.

It is a known fact that Canada—and all of what was to be known as the new world—was stolen from Indigenous Peoples by Christian European Nations by way of Papal Bulls issued in 1452 and 1453. Indeed, these papal documents were frequently used by Christian European conquerors in the Americas to justify an incredibly brutal system of colonization which dehumanized and slaughtered not only the Mi'kmaq People but thousands of other Indigenous

Peoples in North and South America. The British looked down upon indigenous people by regarding their territories as being "inhabited only by brute animals". These Papal Bulls must be repealed as they still have a detrimental effect on the Mi'kmaq and other Indigenous People of North America and all Indigenous People in the world. It is unfathomable to me that a Pope of the Roman Catholic Church could issue Papal Bulls that are so contrary to the loving words of Jesus Christ.

King Henry VII of England granted in the year 1496, a Royal Patent to John Cabot and his sons to all lands in the New World not "discovered" by Portugal or Spain. It is known as the 1496 Royal Charter of the Church of England. It reads in part:

*"And that the before-mentioned John and his sons or their heirs and deputies may conquer, occupy and possess whatsoever such towns, castles, cities and islands by them thus discovered that they may be able to conquer, occupy and possess, as our vassals and governors lieutenants and deputies therein, acquiring for us the dominion, title and jurisdiction of the same towns, castles, cities, islands and mainlands so discovered;..."*

It is a known fact that this is the way the British justified the expropriation of Mi'kmaq land, resources and the slaughter of our people. As it was a direct result of papal Bulls issued by the Vatican, especially the In Cetera document, in which Pope Alexander stated his desire that the "discovered" people be "subjugated and brought to the

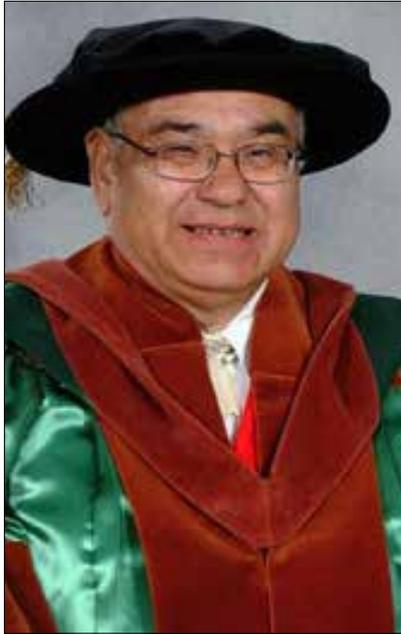
faith itself." Pope Alexander stated in a subsequent Papal Bull—issued May 4, 1493—that Spain must not attempt to establish its dominion over lands, which had already "come into the possession of any Christian lords."

These Papal Bulls and English Royal Charter supposedly gave the English Crown the right to take the land on Prince Edward Island from the Mi'kmaq People and granted them to the British gentry. The British did not follow their own due process of law, which they enacted through the Royal Proclamation of 1763, which states in part:

*"We do therefore, with the Advice of our Privy Council, declare it to be our Royal Will and Pleasure, ... that no Governor or Commander in Chief in any of our other Colonies or Plantations in America do presume for the present, and until our further Pleasure be Known, to grant Warrants of Survey, or pass Patents for ... any Lands whatever which, not having been ceded to or purchased by Us as aforesaid, are reserved to the said Indians, or any of them..."* The Royal Proclamation is part of the Constitution of Canada."

One thing one could do was to complain to the provincial government, which in principle represented the Crown. That is precisely what the Mi'kmaq Chiefs on Prince Edward Island did in 1832 after nearly all of their land was granted to a handful of wealthy English "proprietors." Here is the complete text of their appeal, as it was recorded in the official Journals of the Legislative Assembly of Prince Edward Island.

*Fathers: Before the white men crossed the great waters, our woods offered us food and clothes in plenty, the waters gave us fish, the woods*



*As a representative of the Mi'kmaq Grand Council, Keptin Sark has lobbied internationally for indigenous rights. He has had audiences with The Pope on the subject of residential schools. He contributed to the drafting of The United Nations' Declaration on the Rights of Indigenous Peoples. Mr. Sark was appointed as Mi'kmaq Ambassador to the Vatican in 1994, the United Nations Human Rights Commission in Geneva in 1994, the Acadian National Society in New Orleans in 1999, and the Acadian National Society in France in 2002. John Joe Sark lives in Johnston River, Prince Edward Island.*

*game, our fathers were hardy, brave and free—we know no want—we were the only owners of the Land.*

*Fathers: When the French came to us they asked us for land to set up their wigwam; we gave it freely; in return they taught us new arts, protected and cherished us, sent us holy men who taught us Christianity. They made books for us and taught us to read them—that was good and we were grateful.*

*Fathers: When your fathers came and drove away our French fathers; we were left alone—our people were sorry but they were brave—they raised the war cry and took up the tomahawk against your fathers. Then your fathers spoke to us, they said, "put up the axe, we will protect you, we will become your Fathers." Our fathers and your fathers had long talks around the Council fire—the hatchets were buried and we became friends.*

*Fathers: They promised to leave us some of our land but they did not. They drove us from place to place like wild beasts—that was not just.*

*Fathers: Our tribe in Nova Scotia, New Brunswick and Cape Breton*

*have land on which their families are happy. We ask of you, Father, to give us a part of that land that was once our father's whereon we may raise our wigwams without disturbance and plough and sow that we may live and raise our children. Fathers, you may soon see not one drop of Indian blood in the Island, once our own—where is our land now? We have none. We are poor—do not forsake us—remember the promises your fathers made.*

The chiefs were evidently aware that New Brunswick and Nova Scotia had already set aside a number of "Indian reserves". The Mi'kmaq had not agreed to restrict themselves to reserves. In fact very few Mi'kmaq actually lived on reserves until the early 1900's.

While many would celebrate, others of us will be contemplating the true sacrifices of the due process of Confederation.

With this, I offer you a counter viewpoint to the collective celebration of the 150th Anniversary of the Charlottetown Conference.

# EDUCATION

## FISHERIES MANAGEMENT

A CHANGING CLIMATE

NOAA, February 13, 2014 - How will we manage fish populations as the climate changes? NOAA Fisheries biologist John Manderson is working on one small piece of the puzzle.

However fast you think climate change is happening on land, it's happening even faster in the ocean. Marine species are particularly mobile, and they're quickly moving toward the poles in order to stay cool as things heat up.

This poses a challenge to fisheries management because it has the potential to affect our estimates of fish populations. That's because if the distribution of fish changes—if the fish are no longer where they used to be—then we

might over- or under count them in our surveys.

Most types of distribution shift would not affect population estimates because they'd be picked up by the survey. But for those cases where it could be a problem, our scientists are working on a solution.

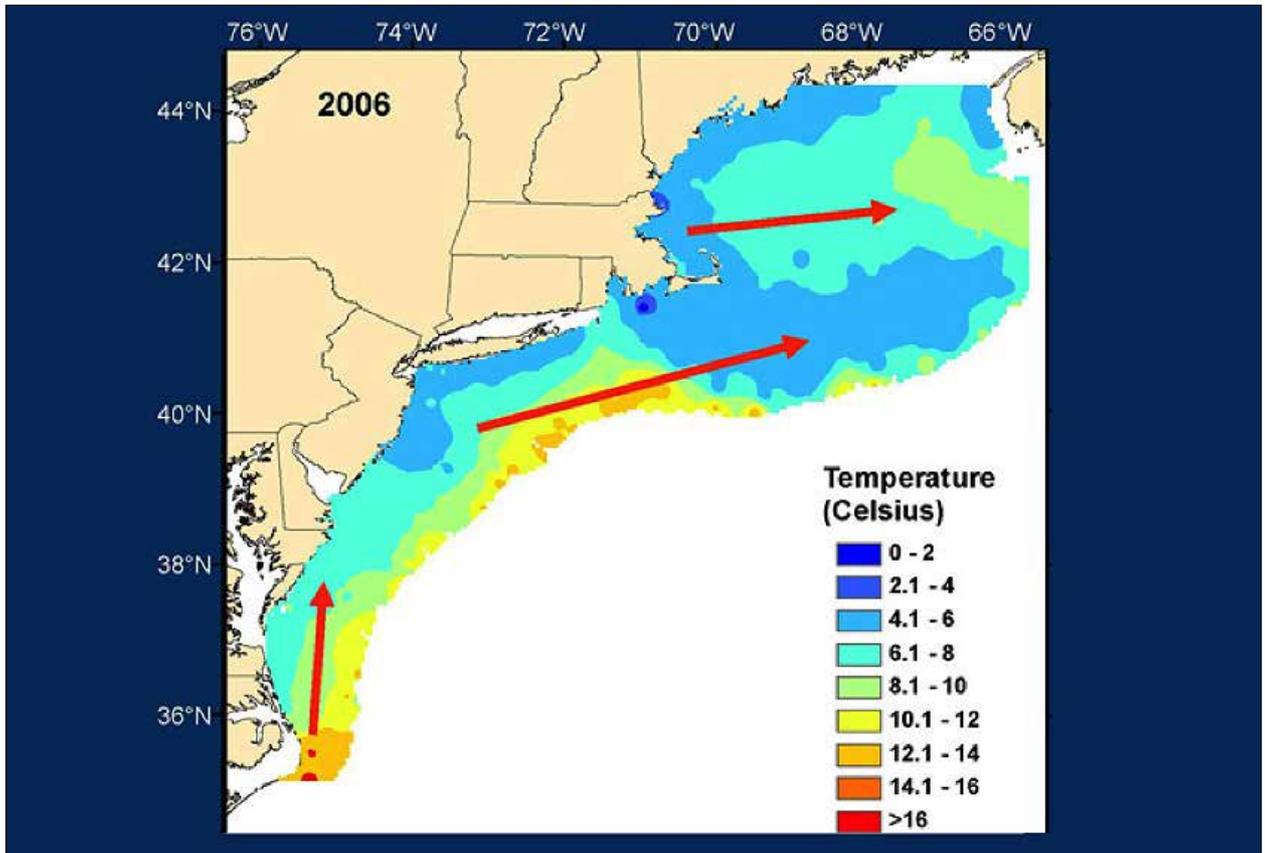
John Manderson is a NOAA Fisheries biologist, and he's working on the stock assessment for butterfish. By studying the habitat ecology of this species, Manderson hopes to map shifts in butterfish habitat caused by changing ocean temperatures. Those maps can then be used to fine tune estimates of butterfish abundance.

To do this, Manderson

is working with physical oceanographers that model fine-scale changes in ocean temperatures. He's also working with stock assessment scientists to find a way to incorporate his mathematical adjustment into their fish population models.

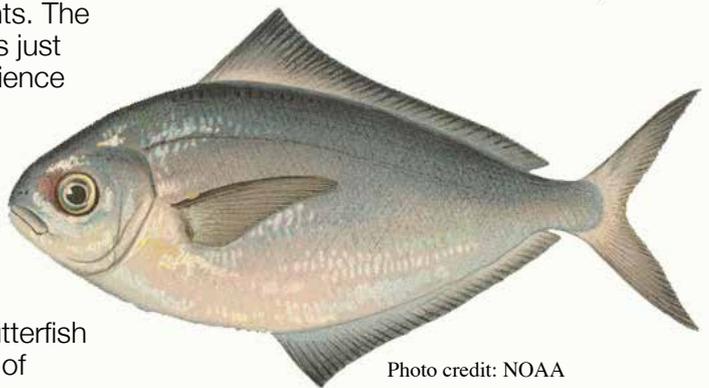
Perhaps most importantly, Manderson is working with fishermen. "Because no one understands the habitat ecology of an animal better than it's predator," he said.

Manderson and the scientists and fishermen he's collaborating with aren't the only ones working on this problem. All along our coasts, NOAA Fisheries scientists and their partners are developing ways to incorporate



environmental data into stock assessments. The world is changing quickly, and this story is just one example among many of how our science is changing with it.

Butterfish are one of the species that are thought to be moving due to climate change. These shifts may have the potential to skew estimates of the butterfish population. Because butterfish are important prey for tuna and other valuable species, NOAA estimates the butterfish population and puts a limit on how many of them can be caught by squid fishermen.



Story Credit: National Oceanic and Atmospheric Administration (NOAA) , - [www.fisheries.noaa.gov](http://www.fisheries.noaa.gov)

# TECHNOLOGY

## NEW MOBILE PHONE APP WILL TRACK LITTER

PEOPLE WILL SOON BE ABLE TO REPORT the litter they find on the beach, thanks to a new mobile phone app developed by the European Environment Agency (EEA).

Huge amounts of plastic and other debris are increasingly found in the sea, harming marine wildlife and potentially threatening human health. However, the composition, movement and origins of rubbish ending up in our seas and on beaches are still not widely understood.

To help understand this issue, the EEA is launching Marine Litter Watch, which uses modern technology to help tackle the problem of marine litter. Organized groups and members of the public can use the app to upload data on the litter they find on their beach. This data will be used to better understand the problem, and will hopefully help support a policy response as formulated in the European Marine Strategy Framework Directive. The app is currently available for Android devices and will soon be published for iPhone and iPad.

Story Credit: European Environment Agency, 3 March 2014 - [www.eea.europa.eu](http://www.eea.europa.eu)



Image © Bo Eide

## DEMARICATION OF NATIVE TERRITORIES ESSENTIAL FOR VENEZUELA'S **AMAZON REGION**

by Humberto Márquez

Indigenous people in southern Venezuela are demanding faster progress in the demarcation of their territory, greater attention from the state to their needs, and protection from incursions by gold panners and armed groups across the border from Colombia.

**CAÑO DE UÑA, Amazonas, Venezuela , Nov 19 2013 (IPS)** - “All of the countries of the Amazon basin say they want to protect the environment, but they all have agreements with transnational corporations for the construction of roads or for mining and exploitation of forests,” Curripaco indigenous leader Gregorio Díaz Mirabal, from the south of Venezuela, told Tierramérica.\*

“In Venezuela there are more than 50 laws and provisions that favour the rights of indigenous people, but it is hard to enforce them, and decisions about our affairs are principally consulted with indigenous leaders who hold positions in the government,” added Díaz Mirabal, coordinator of the Regional Organisation of Indigenous Peoples from Amazonas (ORPIA), which groups 17 of the 20 native groups from this southern state.

“That is the case of the concession granted to the Chinese company Citic to carry out a mining survey of Venezuela,” he added. “We don’t want mines, and we don’t want to be treated as criminals, as destabilisers or agents of the CIA (U.S. Central Intelligence Agency), or as if we were defending other foreign interests.”

Since June, 11 native organisations from Amazonas have been asking for a meeting with President Nicolás Maduro to call for a moratorium on Citic’s mining exploration activity, and for an acceleration of the demarcation of indigenous land.



Shaman José Carmona is opposed to incursions of armed groups from Colombia. Credit: Humberto Márquez/IPS

“The only way for us to survive is to defend the environment, our habitat; as guardians of the Amazon we are helping to save the planet,” Guillermo Arana, a leader of the Uwotyja or Piaroa people, told Tierramérica.

He lives in the community of Caño de Uña, which is set against the backdrop of the Autana tepuy – a mountain with vertical sides and a flat top.

After a several-hour journey

by boat from Puerto Ayacucho – the regional capital located 400 km south of Caracas – heading upstream on the Orinoco, Cuao and Autana rivers, the tepuy that is also known as Wahari-Kuawai or “tree of life” in the language of the Uwotyja Indians comes into view.

The communities live in clearings in the jungle, near the rivers, which are raging during the current rainy season. On the granite bedrock, the layer

of soil and vegetation in this area is thin and fragile.

*“We have found indigenous people with numbers branded on their arms by miners who use them as property.” -- Yanomami activist Luis Shatiwe*

In Amazonas, a state of 184,000 sq km, 54 percent of the 180,000 inhabitants are indigenous people. Mining has been banned by law here since 1989 and most of the

territory enjoys some form of environmental protection.

The demarcation of indigenous territories was established in the 1999 constitution, to be carried out by a national commission under the Environment Ministry.

According to the commission's last report, from 2009, 40 collective property titles were granted to 73 communities of 10 different native ethnic groups, making up a total of 15,000 people.

No property title has been

issued to an entire ethnic group, of the 40 indigenous peoples in Venezuela. Instead they have been granted to certain communities, none of which are in Amazonas.

"It is a complex process due to the multi-ethnicity – several native groups coexisting in the same territory – and because there are specific legal statutes in force in indigenous areas with respect to the environment, security, development and the borders," said César Sanguinetti, a member of the

Curripaco ethnic group and a national legislator representing Amazonas state for the governing United Socialist Party of Venezuela.

Sanguinetti told Tierramérica that "the state intends to make progress soon towards the demarcation of the territories, hopefully by the end of the year."

Another indigenous lawmaker from the ruling party, José Luis González, said "we could serve as a liaison for a meeting with President Maduro if necessary.



*Uwottyja children in the Amazon community of Samaria. Credit: Humberto Márquez/IPS*

“Now, the title that comes out of the demarcation process will enable the communities to strengthen their collective property ownership and step up their demands for their rights, but that won’t put an end to illegal mining,” said González, chairman of the parliamentary Indigenous Peoples Commission and a member of the Pemón community, in the southeast of the country.

While Citic staff are studying Venezuela’s mining resources in different regions of the country, small-scale gold-panning operations are mushrooming across the intricate topography of Amazonas, almost always run by gold panners from Brazil, Colombia or other countries in the region.

Anecdotal evidence gathered by Tierramérica indicates that there are dozens of artisanal gold mines and hundreds of migrant gold panners deforesting entire sections of rain forest, polluting rivers with the mercury used to separate the gold, and exploiting the local population.

“We have found indigenous people with numbers branded on their arms by miners who use them

as property, making them work in exchange for almost nothing: a bit of food, rum, a machete. They use them as beasts of burden, and they use the women to service them,” Yanomami activist Luis Shatiwe told Tierramérica at a spot along the upper stretch of the Orinoco river which borders Brazil.

And José Ángel Divassón, apostolic vicar of Amazonas, said “These people have not been consulted, as the constitution requires, about the agreement with Citic, which aggravates the existing situation: for more than 30 years there has been illegal mining here, especially on the upper stretch of the Orinoco.”

For 690 km a river separates the western flank of Amazonas state from Colombia. In this border region, essential goods are scarce – food, gasoline for the boats used for transportation, basic utensils and materials – and they are smuggled across the border, due to the differences in prices between the two countries.

In Venezuela gasoline costs 1.5 cents of a dollar per litre – compared to 100 times that across the border in Colombia.

The local indigenous

people also complain that members of the Revolutionary Armed Forces of Colombia (FARC) make incursions across the border, set up camp, stock up on supplies, and even impose their own laws in their territories.

“The gold and the guerrillas are wreaking havoc,” the governor of Amazonas, Liborio Guarulla, a left-wing indigenous leader who is opposed to the Maduro administration, told foreign correspondents. “The guerrillas behave as the vanguard that protects the business of illegal mining, violating indigenous areas and damaging the environment.”

The Uwottyja communities met in May with representatives of the FARC and asked them to withdraw from their territory.

“The guerrillas have come here to tell us they are revolutionaries fighting against the empire,” shaman José Carmona, the leader of the Caño de Uña Council of Elders, told Tierramérica. “But we are peaceful people, we don’t want weapons – we want to live peacefully in the territories that belong to us.”

Story Credit: *This story was originally published by Latin American newspapers that are part of the Tierramérica network, <http://www.ipsnews.net>.*

# CHALLENGES

## ABORIGINAL RIGHTS A THREAT TO CANADA'S RESOURCE AGENDA

by Martin Lukacs, Shiri Pasternak

The Guardian News Media, 4 March 2014 - Canadian government closely monitoring how legal rulings and aboriginal protest pose an increasing 'risk' for multi-billion dollar oil and mining plans.

The Canadian government is increasingly worried that the growing clout of aboriginal peoples' rights could obstruct its aggressive resource development plans, documents reveal.

Since 2008, the Ministry of Aboriginal Affairs has run a risk management program to evaluate and respond to "significant risks" to its agenda, including assertions of treaty rights, the rising expectations of aboriginal peoples, and new legal precedents at odds with the government's policies.

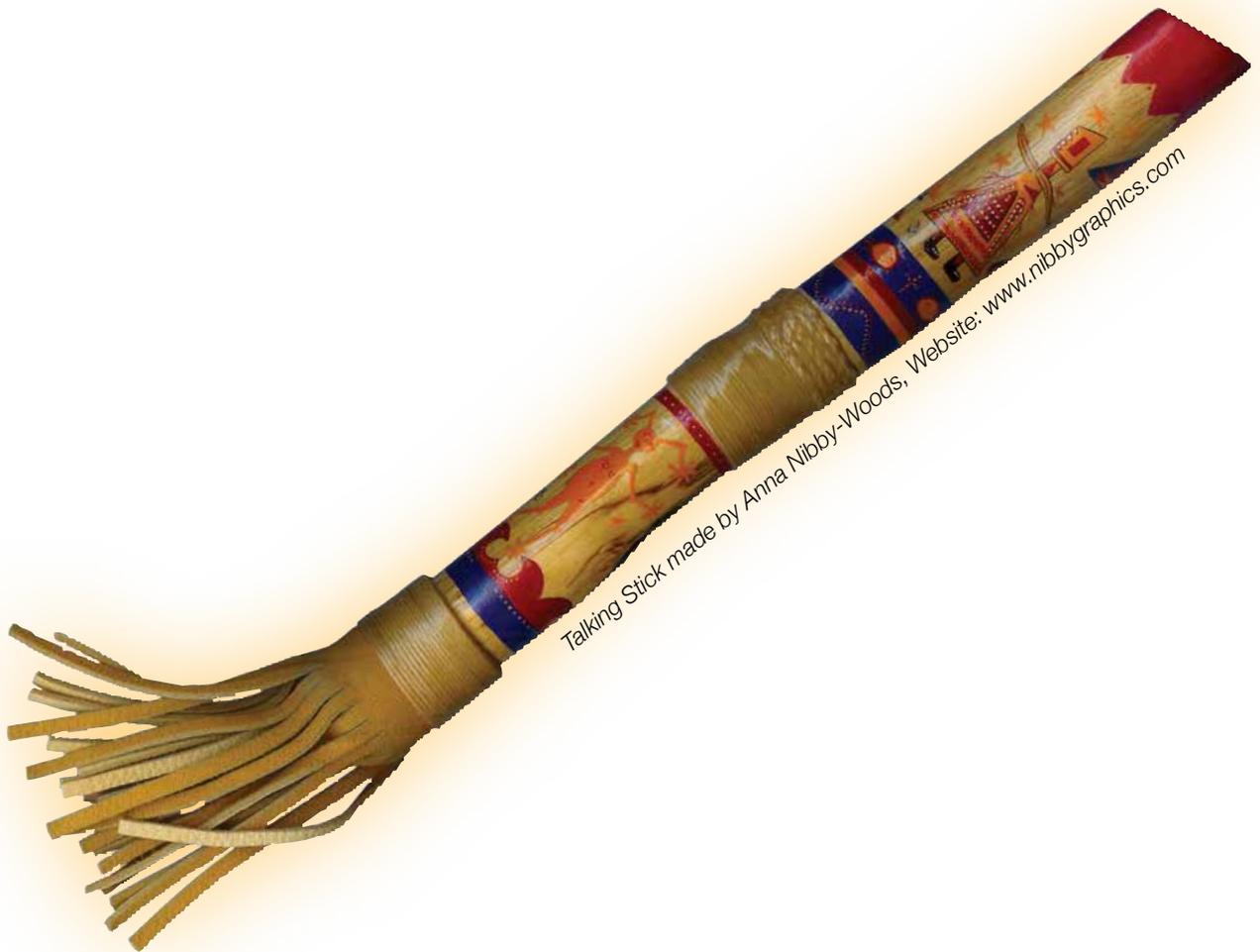
Yearly government reports obtained by the Guardian predict that the failure to manage the risks could result in more "adversarial relations"

with aboriginal peoples, "public outcry and negative international attention," and "economic development projects [being] delayed."

"There is a risk that the legal landscape can undermine the ability of the department to move forward in its policy agenda," one Aboriginal Affairs' report says. "There is a tension between the rights-based agenda of Aboriginal groups and the non-rights based policy approaches" of the federal government.

The Conservative government is planning in the next ten years to attract \$650 billion of investment to mining, forestry, gas and oil projects, much of it on or near traditional aboriginal lands.

Critics say the government is determined to evade Supreme Court rulings that recognize aboriginal peoples' rights to a decision-making role in, even in some cases jurisdiction over,



resource development in large areas of the country.

“The Harper government is committed to a policy of extinguishing indigenous peoples’ land rights, instead of a policy of recognition and co-existence,” said Arthur Manuel, chair of the Indigenous Network on Economies and Trade, which has lead an effort to have the economic implications of aboriginal rights identified as a financial risk.

“They are trying to contain the threat that our rights pose to business-as-usual and the expansion of dirty energy projects. But our legal challenges and direct actions are creating economic uncertainty and risk, raising the

heat on the government to change its current policies.”

A spokesperson for the Ministry of Aboriginal Affairs declined to answer the Guardian’s questions, but sent a response saying the risk reports are compiled from internal reviews and “targeted interviews with senior management in those areas experiencing significant change.”

“The [corporate risk profile] is designed as an analytical tool for planning and not a public document. A good deal of [its] content would only be understandable to those working for the department as it speaks to the details of the operations of specific programs.”

Last year Canada was swept by the aboriginal-led Idle No More protest movement, building on years of aboriginal struggles against resource projects, the most high-profile of which has targeted Enbridge's proposed Northern Gateway pipeline that would carry Alberta tar sands to the western coast of British Columbia.

"Native land claims scare the hell out of investors," an analyst with global risk consultancy firm Eurasia Group has noted, concluding that First Nations opposition and legal standing has dramatically decreased the chances the Enbridge pipeline will be built.

In British Columbia and across the country, aboriginal peoples' new assertiveness has been backed by successive victories in the courts.

According to a report released in November by Virginia-based First Peoples Worldwide, the risk associated with not respecting aboriginal peoples' rights over lands and resources is emerging as a new financial bubble for extractive industries.

The report anticipates that as aboriginal peoples become better connected through digital media, win broader public support, and mount campaigns that more effectively impact business profits, failures to uphold aboriginal rights will carry an even higher risk.

The Aboriginal Affairs' documents describe how a special legal branch helps the Ministry monitor and "mitigate" the risks posed by aboriginal court cases.

The federal government has spent far more fighting aboriginal litigation than any other legal issue – including \$106 million in 2013, a sum that has grown over the last several years.

A special envoy appointed in 2013 by the Harper government to address First Nations opposition to energy projects in western Canada recently recommended that the federal government move rapidly to improve consultation and dialogue.

To boost support for its agenda, the government has considered offering bonds to allow First Nations to take equity stakes in resource projects. This is part of a rising trend of provincial governments and companies signing "benefit-sharing" agreements with First Nations to gain access to their lands, while falling short of any kind of recognition of aboriginal rights or jurisdiction.

Since 2007, the government has also turned to increased spying, creating a surveillance program aimed at aboriginal communities deemed "hot spots" because of their involvement in protest and civil disobedience against unwanted extraction on their lands.

Over the last year, the Harper government has cut funding to national, regional and tribal aboriginal organizations that provide legal services and advocate politically on behalf of First Nations, raising cries that it is trying to silence growing dissent.

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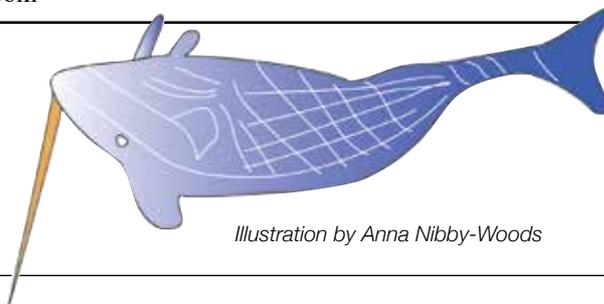


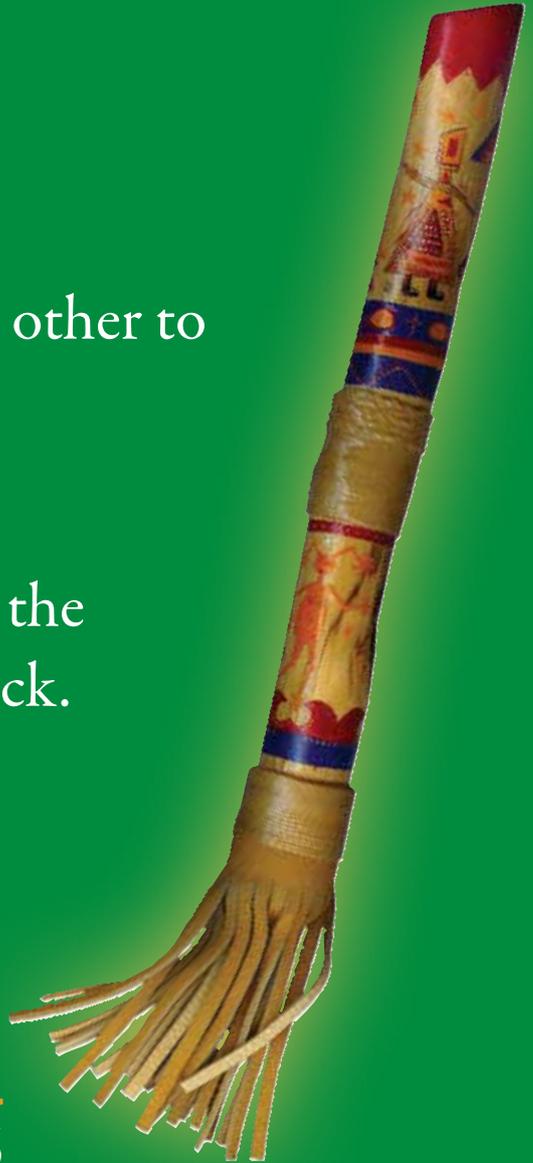
Illustration by Anna Nibby-Woods

*We all live together...*

We have to listen to each other to understand.

Listen to learn.

Listening and learning is the purpose of the talking stick.



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## TAGGED BLUEFIN TUNA 16 YEARS AT LARGE RECAPTURED AFTER

**By tagging fish for NOAA's Cooperative Tagging Program, fishermen have contributed greatly to our scientific understanding of many valuable species.**

Al Anderson, a charter boat captain out of Point Judith, Rhode Island, participates in the NOAA Fisheries Cooperative Tagging Program, which provides free tags to fishermen so they can contribute to our scientific understanding of fish. One of the fish he tagged, a bluefin tuna, was recently recaptured after 16 years. In the history of the program, only two recaptured fish had been at liberty so long.

That bluefin weighed a mere 14 pounds when Anderson caught it in the Mudhole east/southeast of Block Island in 1997. When a Nova Scotia fisherman recaptured it late last year, it weighed more than 1,200 pounds.

Anderson started tagging 45 years ago when he was a graduate student in fisheries biology at the University of Rhode Island. But ask him today why he tags so many fish, and he'll cite the career he ultimately settled into. "I'm a fisherman," he said. "I want to know where the fish go."

Scientists want to know as well. That's why NOAA provides fishermen with tags to put on fish they catch and release, including highly migratory species like tunas, sailfish, and marlin. After tagging a fish, they send the tag number to NOAA Fisheries, along with date, location, length and weight. If the fish is recaptured, the fisherman can read the number and call it in. That allows scientists to track migration patterns and estimate growth and mortality rates for these valuable species.

Bluefin tuna travel widely and fast. Anderson once recaptured a bluefin off Rhode Island that had been tagged ten days earlier near New Orleans. In that brief time the fish traveled at least 1,600 miles. And bluefin tuna that Anderson first tagged have been recaptured off the coasts of Turkey and France.

These conventional tags provide snapshots of data when the fish is tagged and again when it's recaptured. For a more detailed picture, scientists also deploy PSATs— pop-up satellite archival tags.

"They're basically a flash drive that you attach to the fish," said Derke Snodgrass, a biologist at NOAA's Southeast Fisheries Science Center.



*Charter boat Al Anderson with a one year old bluefin tuna that he had just attached a tag to. The tag will allow scientists to track the fish's growth and movement if the fish is recaptured. Photo courtesy of Al Anderson.*

Those devices record temperature, depth, and light intensity every ten seconds, with the timing of changes in light intensity used to estimate latitude. The PSATs detach after a year or less, then float to the surface and transmit summary data via satellite. When possible, scientists or other boaters recover the PSATs so its gigabytes of data—too much for satellite transmission—can be retrieved.

Pop-up satellite archival tags provide a huge amount of data on habitat preference, movement, and diving behavior, but because they're costly there's only so many of them. Conventional tags provide less data per tag, but fishermen with the Cooperative Tagging Program have put them on roughly 270,000 fish of almost 80 different species since the program began in 1954.

"That gives us a lot of statistical power," said Snodgrass. Data from conventional tags has helped scientists identify distinct stocks of fish, an important step in managing them. And long-term recaptures like the bluefin that Al Anderson tagged 16 years ago provide valuable data on longevity and help to refine age and growth models for the species.

Some of those species have declined in number over the years. "When I started tagging bluefin, there were so many they were a pain in the neck," said Anderson. "I would put lures in the water for striped bass, and schools of small bluefin would leave me with no line on my striper outfits."

That was in the early 1970s, when there was little market for bluefin tuna. Today they're prized for their fatty flesh, and a single bluefin can net a fisherman over ten thousand dollars.

"We see a lot fewer of them today," Anderson said.

Over the years, Anderson and his charter clients have tagged tens of thousands of striped bass, almost five thousand bluefin, and 1500 sharks.

Anderson keeps a record of who caught which fish, and he notifies the client if their fish is recaptured. Many of his clients are conservation-minded, and they enjoy contributing to the science.

But that's not the main reason Anderson has a dedicated clientele. "People like to fish with me," he said, "because we catch a lot of fish."

Story Credit: NOAA, [www.nmfs.noaa.gov](http://www.nmfs.noaa.gov)

# AWARENESS

## UP TO 100,000 DEAD FISH A MYSTERY IN NEVADA MARINA

January 16, 2014 – NEVADA – State wildlife officials are trying to figure out why all the fish have died in a northern Nevada marina where the stocked fishery has flourished since the man-made lake was created nearly 15 years ago. As many as 100,000 trout, bass and catfish have died over the past month in the Sparks Marina along U.S. Interstate 80 east of Reno, apparently the result of a dramatic, unexplained drop in dissolved oxygen levels, Nevada Department of Wildlife spokesman Chris Healy said Wednesday. Scientists say a bitter cold snap could have caused oxygen-poor waters to rise from the old rock quarry's bottom to the surface, but they don't understand what sparked the massive die-off. Fish biologists confirmed low oxygen levels caused the death of an estimated 3,000 fish in one corner of the lake in mid-December but Healy said they thought at the time the event

was localized and of limited impact. Since then, they've been unable to detect any live fish in the 77-acre lake. Numerous dead fish have been removed from the lake's shoreline and Healy said it's likely the rest sank to the bottom. "The 100,000 dead fish figure is something that is probably a pretty conservative guess," said Healy, who estimates they've stocked close to 1 million adult fish in the lake since they started in 1998. "We don't know if any small fish have survived, but for all intents and purposes, the fishery doesn't exist anymore," he told The Associated Press. The Reno Gazette-Journal first reported scientists determined the problem was much more serious than they realized after a boat survey on Monday found dissolved oxygen levels far too low to support the fish at 11 different sampling locations. Readings from an electronic fish-finder also revealed no fish swimming in the lake's depths.

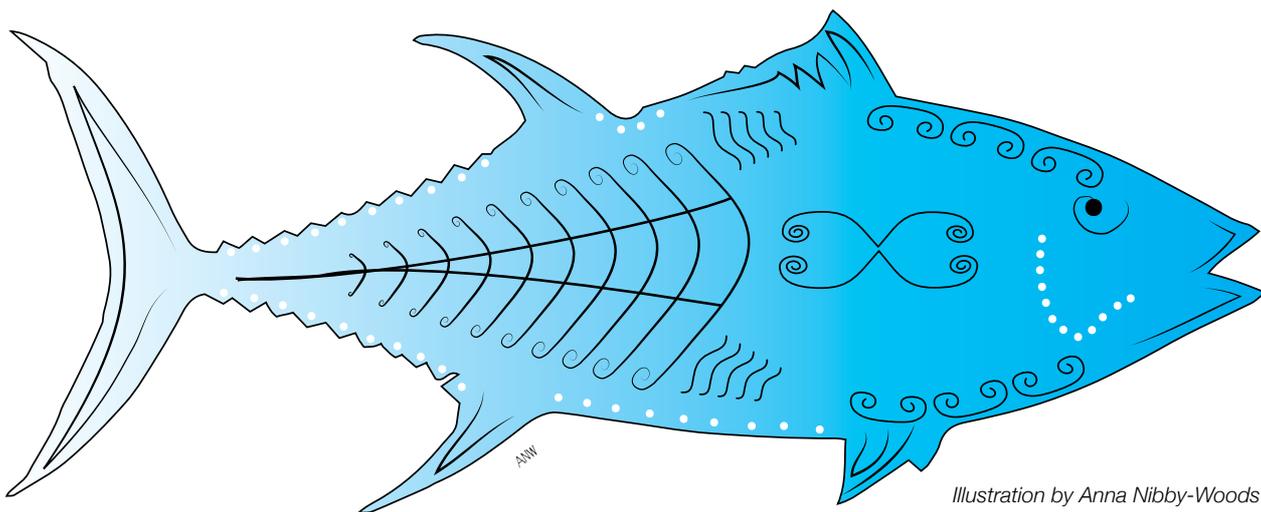


*As many as 100,000 trout, bass and catfish have died over the past month in the Sparks Marina along U.S. Interstate 80 east of Reno*

Lakes like the marina consist of different layers of water temperatures, with the warmest water on top holding the highest oxygen content, Healy said. He said one theory is that the surface water may have chilled very quickly, sank toward the bottom of the lake and stirred up material on its floor, causing a “violent turnover” that could have sucked up additional oxygen. “Everything is a theory right now,” Healy said. Sparks city spokesman Adam Mayberry emphasized there’s no health or safety threat at the marina. He said the water typically is of good quality and no similar problems have occurred before. “Even with the biological anomaly we are seeing, it’s still a very safe body of water,” he said. “You just can’t fish in the marina right now because there aren’t any fish there, and we are trying to figure out why.” The Sparks Marina opened in 2000, with a 2-mile walking and bike trail, beaches, playgrounds, picnic areas and a fishing pier. The former aggregate pit operated by Helms Construction Co. had been found to be contaminated in

1988 by pollutants leaking from an adjacent tank farm, but state environmental officials said all the pollution had been cleaned up before a 1997 New Year’s Day flood sent Truckee River waters into the pit. Michael Drinkwater, manager of the Truckee Meadows Wastewater Reclamation Facility which collects water from the lake, is awaiting results of new toxicity tests conducted last week but said routine testing has revealed no problems before. “There’s no obvious indication hydrocarbon pollution could be associated with the die-off,” he told the Gazette-Journal. Healy said testing earlier this week found dissolved oxygen levels in the range of 1.1 to 1.9 parts per million. Fish do best with levels in the range of 7 to 9 parts per million and typically can’t survive when it drops below 5 parts per million, he said. The department annually stocks the marina in late February or early March 1, but he said they won’t be doing that this year unless the dissolved oxygen level “makes a big recovery.” – ABC News

Story Credit: The Extinction Protocol, Geologic and Earthchange News events (ABC News) - [www.theextinctionprotocol.wordpress.com/](http://www.theextinctionprotocol.wordpress.com/)





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# ECO TIMEROCKS

## GILBERT VAN RYCKEVORSEL

ECO TIMEROCKS

**Nova Scotian artist Gilbert van Ryckevorsel**, a well known professional underwater photographer of Atlantic coastal and inland waters creates *ECO TIMEROCKS* using his talent, an eco friendly sub straight in Atlantic beach rocks and a love for biodiversity.

His unique art form, *ECO TIMEROCKS* is reminiscent of the historic mariner's craft known as "scrimshaw". Instead of the traditional engraving on whale tooth ivory, Gilbert employs solid granite beach rock as his canvas. Timeless buffeting by the waves of the North Atlantic and the powerful currents of inland rivers have created the infinite shapes of the Eco Timerocks.

Gilbert's lifetime experience of observation in underwater environments of both saltwater and freshwater inspired engraved creations called *ECO TIMEROCKS*. The engraved motifs depict endangered marine life and give meaning to our contemporary ecological focus. For instance, the existence of Atlantic Salmon today is becoming questionable and a species of vital importance to our aquatic environment today is endangered. The Atlantic Salmon is regarded as an indicator species measuring the health of our freshwater resources as being original, natural and pure by their mere presence. The Atlantic Salmon is symbolic of our enduring Canadian Heritage.

The Atlantic Swordfish is one of a few large fish still fished offshore and their population is rapidly approaching extinction. The Atlantic Swordfish is one of the last great predatory species.

This rock image features the Atlantic Swordfish (*Xiphias gladius*) and Atlantic Salmon (*Salmo salar*) as a timely presence in our inshore / offshore waters.



by Gilbert van Ryckevorsel. Size: as on desktop Price: \$250.00 Website: [www.salmonphotos.com](http://www.salmonphotos.com)

# CLIMATE CHANGE

## ZANZIBAR'S ENCROACHING OCEAN MEANS LESS WATER

by ERICK KABENDERA

### **ZANZIBAR, Tanzania, June 12 2013 (IPS)**

- Khadija Komboani's nearest well is filled with salt water thanks to the rising sea around Tanzania's Indian Ocean island of Zanzibar.

And until recently, the 36-year-old mother of 12 from Nungwi village in Unguja on the northernmost part of Zanzibar, spent most of her day walking to her nearest fresh water supply to collect safe drinking water.

"The water is very salty so it can't be used for anything. You will use a lot of soap and water if you use it for washing clothes or dishes. Another difficulty is that you can't use it for cooking or drinking. That is why we had to walk for long distances to collect water from fresh water wells," Komboani tells IPS.

According to Zanzibar's Department of Environment, rising sea levels have resulted in seawater mixing with fresh water supplies and

contaminating the wells here. Zanzibar does not have rivers and the main source of water remains groundwater, which depends on the currently erratic rainfall.

"The villages used to be far from the shore, but now everyone lives close to the ocean." -- Masoud Haji

But thankfully, for Komboani, the experience of spending hours collecting water is now just a memory, since the implementation of a project to supply clean and safe water to households in her village.

In October 2012, the Africa Adaptation Programme (AAP) of the United Nations Development Programme (UNDP) constructed an eight-km pipeline from Kilimani village, in the interior, to Nungwi village, which lies along the coast. A huge water tank near Kilimani village sustains the water supply.



*Over the years Zanzibar's sea levels have risen to erode beaches and contaminate some of the island's fresh water supply. Credit: Giandomenico Pozzi/CC by 2.0*

The AAP, a climate change programme implemented in 21 African countries, aims to assist Tanzania with the development of climate-smart policies and climate change adaptation projects.

Meanwhile, the 15,000 people from Nungwi village now have access to water 24 hours a day, which can be sourced from taps and reservoir tanks.

Komboani says that since the water project was introduced, she now has more time to concentrate on her business of selling snacks. She says she earns approximately five dollars a day from this.

“I don't have to worry about waking up early to collect water anymore. I use the time to engage in other productive activities, such as

selling snacks and working in my vegetable garden.

“My husband used to accuse me of being unfaithful when I would return home late from the well. I am now glad that we have peace in our home,” she says.

Not only has it brought peace to Komboani's home, but the easy access to drinking water has saved many women and girls from unwanted marriages.

Zanzibar's North A district commissioner, the equivalent of a governor, Tatu Mganga, says her office had to intervene several times when they heard about women being married off so they could be used to fetch water for their new husbands.

“Such incidents were common and we had to

intervene and rescue girls when we heard these stories,” Mganga tells IPS.

She says that while everyone in Nungwi village was affected by the shortage, women and children suffered the most because they were responsible for fetching water for their families.

Mganga says that the lives of the people from Nungwi village and its surrounding areas have now changed for the better.

“Almost all the people living in the area now have access to clean and safe water. Families can now wash their hands and clothes, and bathe properly. Subsequently, there has been improved sanitation,” says Mganga.

UNDP country director for Tanzania, Philippe Poinot, tells IPS that the AAP is focused on improving the supply of clean and safe water to households through pilot projects.

“Women and children were walking for too long to fetch water from dirty surface water points (and consumption of this water) had accelerated ill health,” Philippe says. The rampant use of unclean water in Nungwi village led to an increase in pneumonia and skin diseases. Local health authorities say there has since been a decrease in these cases.

Ally Jabir Haiza, Zanzibar’s district health officer, tells IPS that the water from shallow wells along the island’s coast was tested and found to be excessively salty. This, he explains, impacted on healthcare in the area. In Unguja, a newly built maternity ward could not be used because of the shortage of clean water.

“Students too could not concentrate on their studies because they were frequently worried about fetching water when they returned home. And they were already tired when they commenced their lessons in the morning (from going to fetch water before school).

“Sometimes new mothers from Nungwi, who were experiencing postpartum stress, were forced to walk down the three-km road to fetch water from the nearest fresh water well,” says Hiza.

But now that fresh water is being piped in, the residents of Nungwi village have access to more water – some 20 litres per day compared to the five litres a day they collected from their nearest fresh water wells.

According to Sheha Mjanja, director of environment in Zanzibar’s Vice President’s Office, several surveys conducted over the past 10 years have confirmed that the island is vulnerable to the impact of climate change, particularly rising sea levels and beach erosion.

“The impact of climate change in Nungwi village is one of the biggest challenges at the moment. The water is quickly eating into the land and we fear the situation could worsen,” Mjanja tells IPS.

Mjanja adds that rising sea levels could cause a serious water shortage on the island as salt water is increasingly seeping into the ground water supply.

He says that the government is currently preparing a strategy paper to address the impact of climate change here and hopes to involve the private sector in implementing solutions.

Meanwhile, the elders here are witness to the impact climate change has had on this island. One community elder, 58-year-old Masoud Haji, tells IPS that over the years sea levels have risen about 80 metres.

“In December, we didn’t see any rains, compared to when I was young. The ocean was far from the shore, but it has now risen ... the villages used to be far from the shore, but now everyone lives close to the ocean,” Haji says.

# VIEWS FROM MAARS

MARITIME ABORIGINAL AQUATIC RESOURCES SECRETARIATE

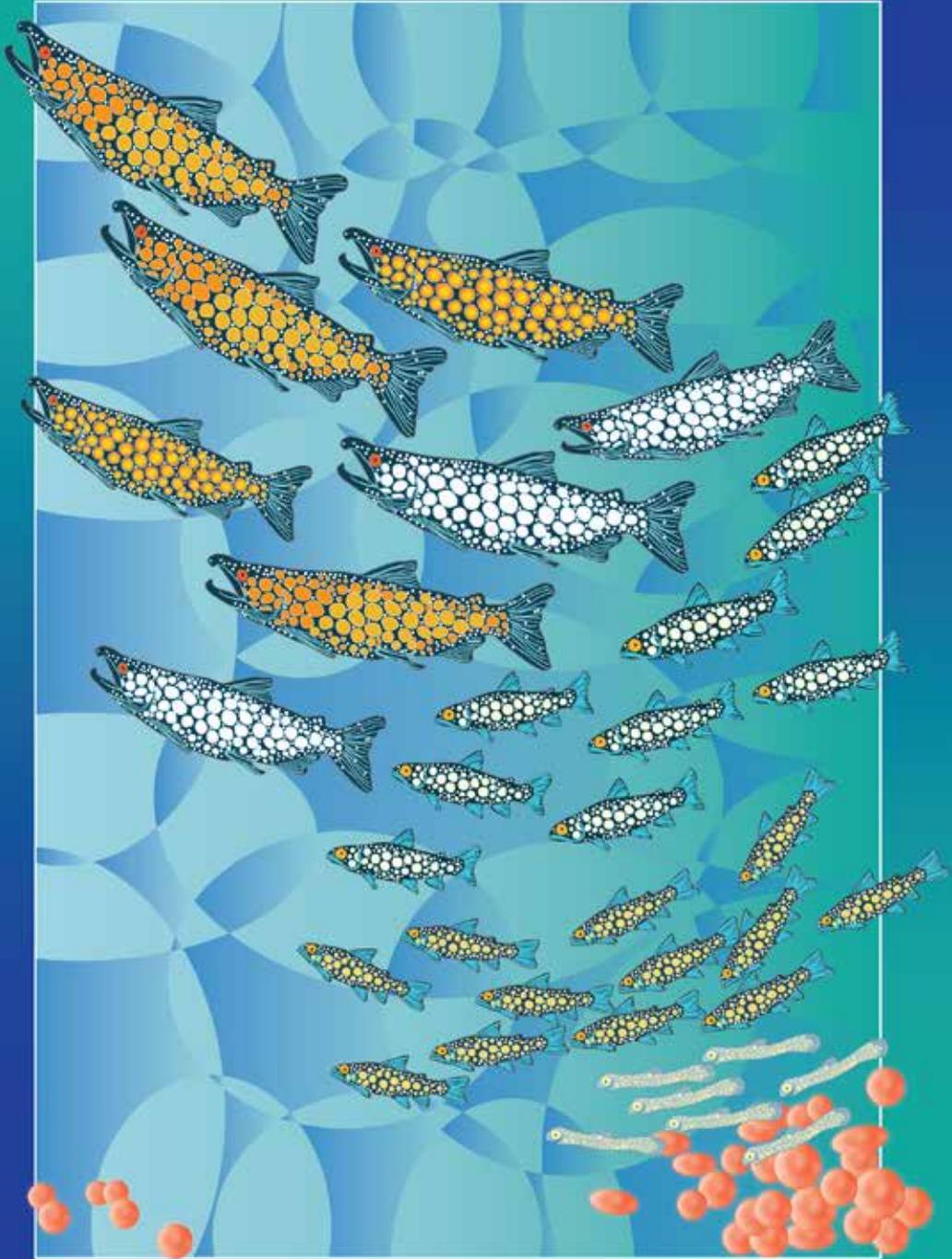
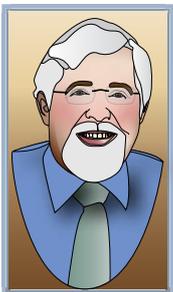


Illustration by Anna Nibby-Woods

# FISHERIES RESOURCES

## USE OF FISH OR IS IT ABUSE by ROGER HUNKA



Many readers involved in the fishing industry, will recall the Court Decision in the Larocque case, where a fisher took the Department of Fisheries and Oceans to Court, arguing that the Minister did not have authority under the Fisheries Act to use a quota of fish from the total allowable quota to fund DFO science activities.

The Court determined that the fish resource is a public resource, and indeed the Department should not use quota from a fishery to fund Departmental works a part of DFO's mandate.

With that decision DFO scrambled and introduced Interim Guidelines for the Allocation Process for Use of Fish, while it worked on introducing an amendment to the Fisheries Act, which would give the Minister such authority

and comply with the spirit of the decision.

Throughout the 2013 and 2014 fiscal year, over thirty-five (35) scientific or management projects considered to be critical to their respective fisheries have been financed using the Larocque Relief Funds set to expire March 31, 2014.

In 2012, the Government introduced countless changes to countless Acts in the "Jobs, Growth and Long-term Prosperity Act, 2012, without benefit of public input. Be that as it is, Section 10 of the fisheries Act now reads:

*10. (1) For the proper management and control of fisheries and the conservation and protection of fish, the Minister may determine a quantity of fish or of fishing gear and equipment that may be allocated for the purpose of financing scientific and fisheries management activities that are described in a*

*joint project agreement entered into with any person or body, or any federal or provincial minister, department or agency.*

*(2) The Minister may specify, in a licence issued under the Act, a quantity of fish or of fishing gear and equipment allocated for the purpose of financing those activities.*

In the spring of 2013, a DFO representative attended a meeting in Halifax, wherein she presented representatives of some fishery sectors with "policy questions for consideration", and the copy of Section 10. At that point it was made known that Section 10 is too broad and liberal, to the point that provinces, other departments and or agencies could come to the Minister and ask for quantities of fish or gear and equipment to finance a whole host of activities.

DFO made no comment. Then in mid December DFO wrote to the MAARS group of Native Councils and their Aboriginal Communal Commercial Fisheries Entities, requesting comments or questions on the draft National Policy Framework for the implementation of the Minister's new authority under Section 10 of the Fisheries Act.

The groups have responded as well as the Maritime Aboriginal Peoples Council on the Draft National Policy, with many concerns. Notably, that at one time without such authority Regional Directors and Science, faced with the slicing of science budgets, cautiously looked at the resource sector itself to finance the critical work required of DFO for the proper management of the fishery.

Now with the broad and liberal scope of Section 10, it most certainly will fall prey to abuse. Section 10 not only contemplate vital science activities, it also contemplates control and management of fisheries, conservation and protection of fish, fishing gear and equipment, described in joint project agreements which

may be entered into with any person, body, government, department or agency.

MAARS team members expressed concerns and had questions:

1) the Minister should not be able to use quantities of fish of one species to fund any activities associated with another species. To do so, would make vulnerable to pillage or plunder good fish stocks to support activities or works required for poor stocks, an abuse of fish.

2) Aboriginal Representatives at least from the Native Council communities in the Maritimes should be advised before any joint project agreements are concluded for the use of fish, gear or equipment with an opportunity for us to comment on what we may consider to be an abuse of fish gear or equipment.

3) Could the Minister use a quantity of Lobster Licenses to buy a patrol boat for the patrolling or lobster fishers?

4) Could the Minister use a quantity of fish to hire part time protection officers?

5) Could the Minister use a quantity on Blue Fin Tuna to finance a survey of Blue Fin Charter mortalities?

6) Could the Minister use a quantity of Skate to do a Science survey on Skate Nursery beds?



DFO Mandates, Works and Activities should be financed through the necessary and requisite appropriations of Parliament.

Broadly written, Section 10 Minister's authority for the *use of fish*, will in time result in the *abuse of fish*.

*Illustrations by Anna Nibby-Woods*

# COLLABORATION

## MINISTER'S MEETING

by KRISTA HIGDON

Fisheries Ministers meet with Harvesters in Debert and begin work on commercial fisheries strategy.

Fisheries and Aquaculture Minister Keith Colwell continued the tradition he started in 1998 and met with fish harvesters from across the province on February 21. The guest speaker was Federal Fisheries Minister Gail Shea.

Both ministers addressed those gathered and renewed their commitment to ensuring the fishing industry is sustainable and profitable. Both also encouraged organization among industry

members, saying one voice is much easier to listen to and work with than many.

Minister Colwell also announced that Nova Scotia will develop a Commercial Fisheries Strategy to ensure the fishing industry is sustainable, creates jobs and helps grow the Nova Scotia economy.

“Quality and innovation is needed in the fishing industry to drive up exports and to grow the sector of the Nova Scotia economy,” said Mr. Colwell. “The Ivany commission stressed the need for this in traditional Nova Scotia industries.”

The strategy will consist of six pillars:

- Industry Organization
- Safety and Training
- Efficiency
- Market Development
- Quality
- Innovation

The Department of Fisheries and Aquaculture will work with industry organizations and the Aboriginal community to help develop the strategy.

In the afternoon attendees at the conference participated in small-group discussion about the 6 pillars that will be included in the strategy.



Minister Gail Shea (Canada)

*“This is your strategy and we need you to be involved,”*



Minister Keith Colwell (Nova Scotia)

The groups unanimously agreed that industry organization was the most important. Minister Colwell said to those gathered at the conference. “Its success will depend on you.” The department is aiming to have the strategy completed in 2014 for implementation early in 2015.



Nova Scotia Fisheries & Aquaculture Minister Keith Colwell addresses conference participants.  
Photo credit: Mark MacPhail

# PARTNERSHIPS

## FSRs CELEBRATES 21 YEARS OF FISHERIES LEADERSHIP

by PATTY KING

The Fishermen and Scientists Research Society (FSRS) held its 21st Annual Conference on February 14-15, 2014 in Truro, NS, celebrating 21 years of fisheries leadership. The conference attracted 114 participants, including fishermen, scientists from academia and government, graduate students, Aboriginal representatives, and others interested in supporting the objectives and research of the FSRs.

The day started off with opening remarks from Kim MacNeil, Associate Deputy Minister, NS Fisheries and Aquaculture. Mr. MacNeil acknowledged that, "The Fishermen and Scientists Research Society is well recognized for bringing fishermen and scientists together. Together, they work on the real issues facing fishermen and the industry." He also stated that, "Given the changes in focus on fisheries research and science by government, some of the new fisheries management directions and sustainability demands, your (the FSRs's) work

has become even more important and crucial to our fishing industry."

The two-day event included presentations on topics ranging from Marine Climate Change in the Maritimes Region to Grey Seal Predation. Jon Grant from Dalhousie University led off with a presentation on Interactions between Aquaculture and the Surrounding Environment. The morning session also included presentations by Andrea Battison, CrustiPath, on Moulting Recovery in Lobster; Kumiko Azetsu-Scott, Bedford Institute of Oceanography, on Ocean Acidification in Canada's East Coast; and Dave Hebert, Fisheries and Oceans Canada, on Marine Climate Change in the Maritimes Region.

Robert Chisholm, MP for Dartmouth-Cole Harbour, kicked off the afternoon session by talking about the importance of the FSRs and the vital research they do. He was followed by Jessica Cosham, Dalhousie University, and



*Patty King*

Bénédikte Vercaemer, Fisheries and Oceans Canada talking about Green Crab (*Carcinus maenas*) Monitoring and Management in the Maritimes. Conference attendees then learned about how lobster science can take advantage of technology when Jean Côté and Donald Walker, Regroupement des pêcheurs professionnels du sud de la Gaspésie (RPPSG), demonstrated how the Gaspé lobster fishermen produce reliable, timely and accessible data using an electronic logbook (E-log).

The FSRS collaborates with a range of partners, including the Canadian Fisheries Research Network (CFRN). Graduate students, the scientists of the future, are a key component of the CFRN. The work of a number of those students was highlighted at the FSRS conference. University of New Brunswick (Saint John) students Brady Quinn, Gudjon Mar Sigurdson and Kristin Dinning gave updates on their lobster research projects, while University of British Columbia student Rachel Neuenhoff presented the results of her Gulf of St. Lawrence Fishery Survey on Grey Seal predation.

Day Two began with Nell den Heyer from Fisheries and Oceans Canada reporting on the results of her research on halibut. Attendees



*Robert Chisholm*

then had the opportunity to learn about what is going on in the Gulf Region with Rachel Neuenhoff's presentation, followed by a presentation by Leonard Leblanc, Gulf Nova Scotia Fishermen's Coalition, on the 26B North Lobster Science Project.

The conference included a Student Poster Competition, with a People's Choice Award and prizes for the top three posters selected by a panel of judges. The People's Choice went to Gudjon Mar Sigurdsson. The Judge's Choices were: 1st Place – Alexandre Samson, 2nd Place – Brady Quinn, and 3rd Place – Elizabeth Baker. Congratulations to all the students who participated on their informative posters highlighting the valuable research they are doing.

Copies of the presentations are available on-line at <http://www.fsrns.ca/conference.html>. Summaries of the presentations, as well as the Scientific Program Committee Report presented on Day Two of the conference, are included in the Winter 2014 issue of *Hook, Line and Thinker*, the FSRS's newsletter, which will be available on-line in early April. For more information about the FSRS, check out their website at [www.fsrns.ca](http://www.fsrns.ca) or contact them at [info@fsrns.ca](mailto:info@fsrns.ca).

# AAROM

## SCIENTIFIC SYMPOSIUM by ANDREW CHASE

The first ever Science Symposium was held on February 26th and 27th at the Rodd Hotel & Resort in Miramichi. This premier event was organized in partnership with the Gespe'gewap Mi'gmaq Resource Council (GMRC) and the North Shore Mi'gmaq District Council (NSMDC) AAROM bodies.

The purpose of this event was to bring together the Aboriginal Aquatic Resources and Oceans Management - AAROM bodies to encourage a dialogue between AAROM bodies and to showcase their AAROM work, scientific programs, environmental initiatives, training, and fishery officer recruitment.

As such the organizers took this opportunity to bring together the eight AAROM bodies from Atlantic Canada and Quebec to promote dialogue about their work, share best practices, build capacity and to strengthen the

professional relationships between the Eastern network of Mi'kmaq, Innu and Wolastoqiyik science teams.

The event was attended by representatives from the GMRC and NSMDC as well as other AAROM bodies, the Maritime Aboriginal Aquatic Resources Secretariate (MAARS), l'Agence Mamu Innu Kaikusseht (AMIK), Unama'ki Institute of Natural Resources (UINR), Mi'kmaq Confederacy of Prince Edward Island (MCPEI), Maliseet Nation Conservation Council (MNCC), Mi'kmaw Conservation Group (MCG) and Qualipu First Nation (QFN).

Throughout the two days, the AAROM bodies were invited to set up tradeshow kiosks to display and share material, brochures and reports, and they were encouraged to network with other AAROM bodies in order to promote continued dialogue between the participants.



*Aboriginal Aquatic Resources and Oceans Management - AAROM bodies*

Each AAROM was invited to give a one-hour presentation about their organization and work.

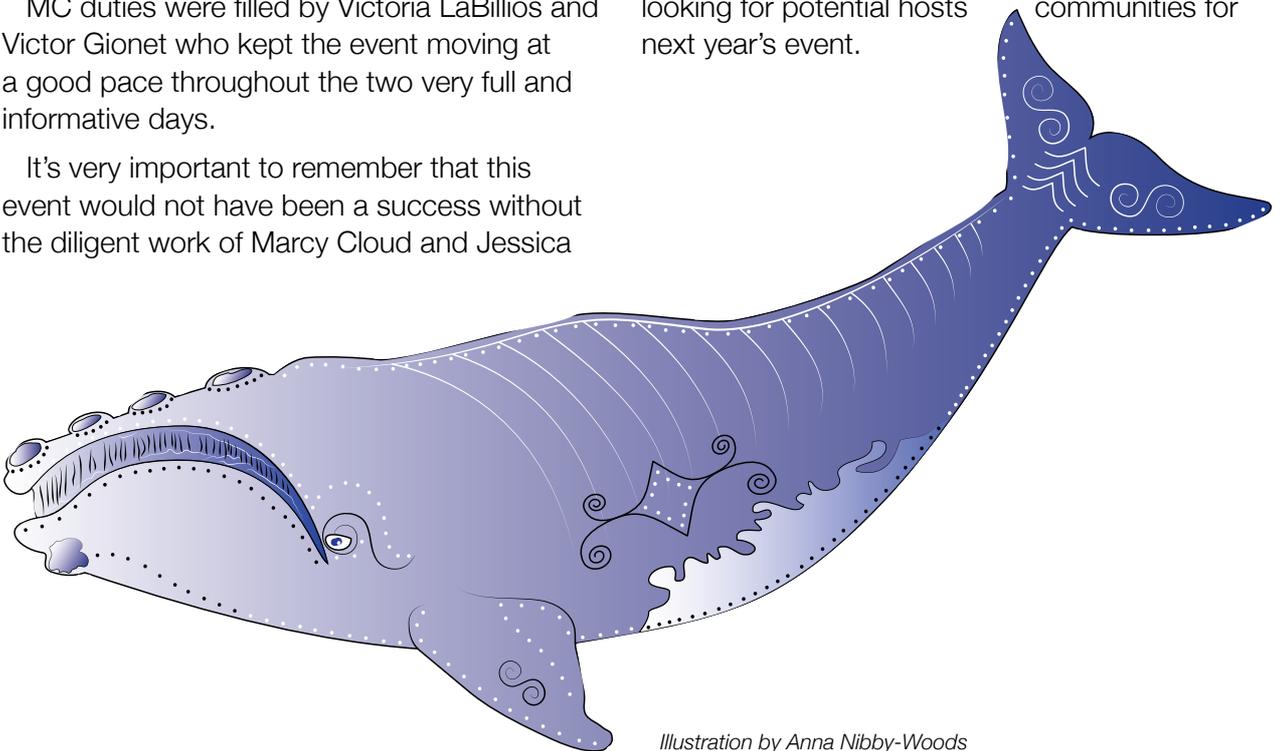
They also had the opportunity to provide an overview of their organization, discuss projects, share challenges and successes, and finally highlight and discuss one key project.

MC duties were filled by Victoria LaBillios and Victor Gionet who kept the event moving at a good pace throughout the two very full and informative days.

It's very important to remember that this event would not have been a success without the diligent work of Marcy Cloud and Jessica

Gideon, both of whom were responsible for booking the venues, organizing agenda and inviting the different AAROM groups.

Due to the success of this first AAROM Science Symposium we are aiming to make this an annual occasion and are currently looking for potential hosts communities for next year's event.



*Illustration by Anna Nibby-Woods*

# CONSERVATION

## HAMILTON DECLARATION

by JOSHUA MCNEELY



MAARS and IKANAWTIKET applaud the signing of the Hamilton Declaration by the States of Bermuda, the United States, the Azores, the United Kingdom, and Monaco, as well as the key international partner, the UN Convention on

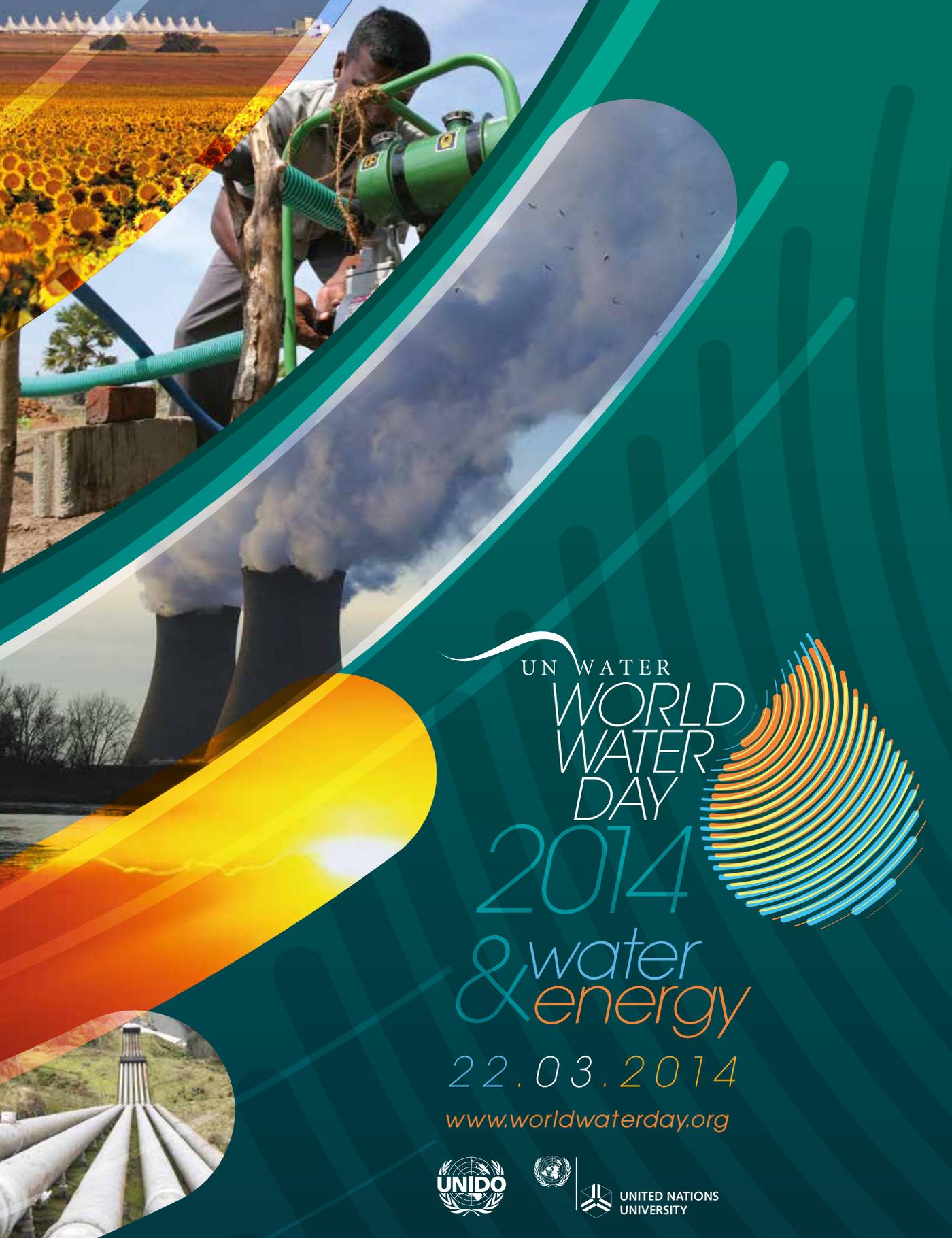
Migratory Species, and other international organizations. This “high-seas conservation coalition” declares the Sargasso Sea – the world’s only holopelagic seaweed ecosystem – as internationally important and deserving of international recognition, protection, and conservation for its high biological and ecological significance, its cultural importance, and its outstanding universal value. We also commend the

courage and leadership of the Bermudian youth to themselves expand upon the Hamilton Declaration with their own Bermuda Youth Declaration to raise awareness, fundraise, become involved in research, create documentaries, teach younger children, and push for the inclusion of the Sargasso Sea as an important topic in school science curriculum.

Although the Sargasso Sea is over 1,000 km away from the Maritimes, it is a vital ocean area for Aboriginal Peoples in the East, because it is the only spawning area for the American Eel – one of the three fatty fishes important to our traditional diet.

To read the Bermuda Youth Declaration, visit: <http://www.royalgazette.com/article/20140320/ISLAND07/140329992>

*Illustration by Anna Nibby-Woods*



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# PROTECTION

## SIGNING OF THE SARGASSO SEA CONSERVATION HAMILTON DECLARATION CMS PARTICIPATES IN

**Bonn**, - On 11 March Governments from across the world travelled to Bermuda to sign the Hamilton Declaration on Collaboration for the Conservation of the Sargasso Sea. The UNEP/ CMS Secretariat participated in this meeting and was declared a key partner. The March Meeting was spearheaded by the Government of Bermuda, which leads the Sargasso Sea Alliance.

The Declaration is a non-binding political statement that was signed by the governments of Bermuda, the Azores, the United Kingdom, the United States

of America and Monaco who are interested in voluntarily collaborating on efforts to conserve the Sargasso Sea - a vast mid-Ocean gyre named for the frequent occurrences of a type of free-floating seaweed called Sargassum.

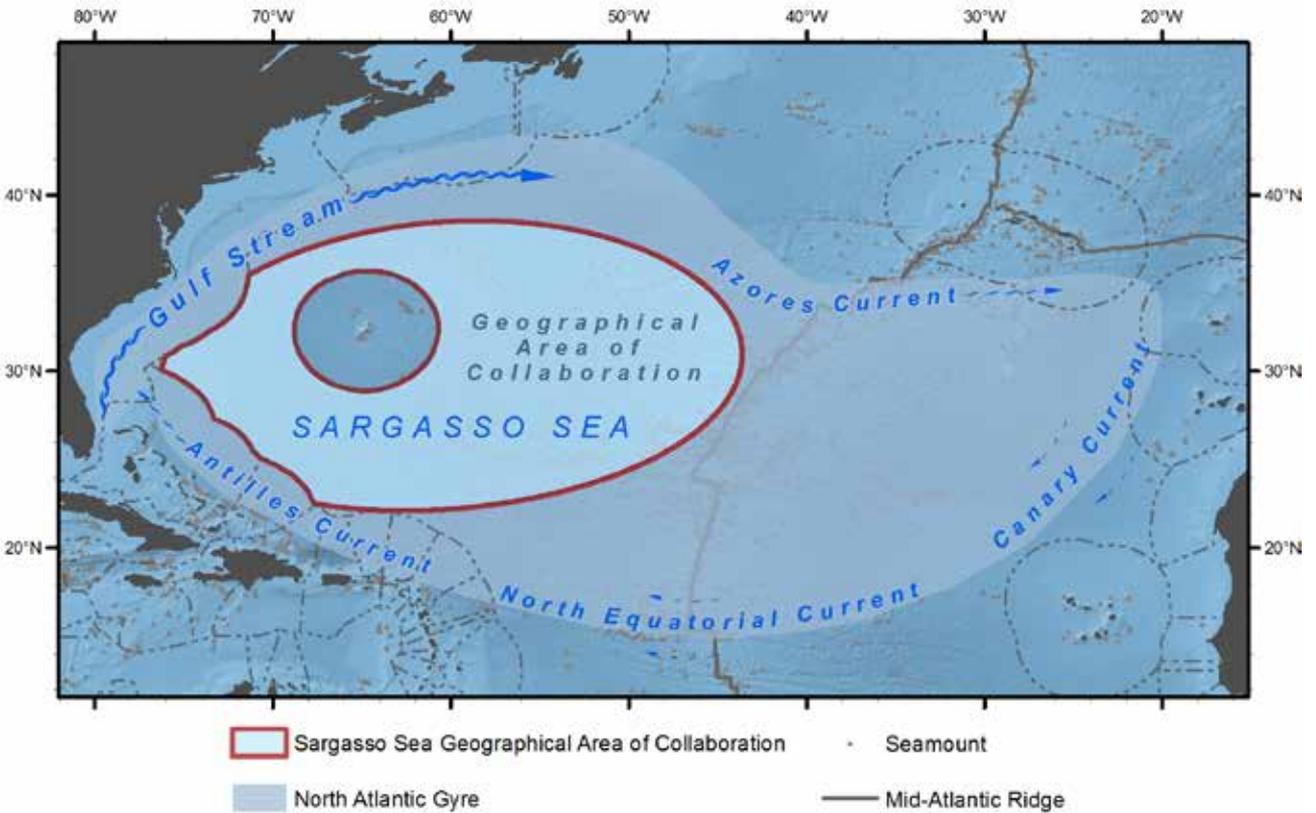
The meeting of the signatories discussed proposals that will be directed through existing international and regional organizations to define the required conservation measures for the Sargasso Sea. Representatives of 11 countries and territories from around the Sargasso Sea and Europe reaffirmed their support for the initiative, led by

the Government of Bermuda, to collaborate over the conservation of the Sargasso Sea ecosystem.

Premier Craig Cannonier signed the Hamilton Declaration, involving Bermuda along with other nations which have joined forces to conserve the environment of the Sargasso Sea ecosystem. Mr. Cannonier said: "As you may know, Bermuda is the only land mass in the middle of the Sargasso Sea. We see it as our responsibility to lead the stewardship of this unique marine ecosystem and to request the support and assistance of the international



Dr. David Freestone and The Hon. Craig Cannonier, Premier of Bermuda, as first signatory. Credit: F. Rilla



Map Credit: Sargasso Sea Alliance/Duke University Marine Geospatial Ecology Lab/MCI

community in this task.”

© Sargasso Sea Alliance  
Other nations and territories represented were Sweden, the Turks & Caicos Islands, the British Virgin Islands, the Netherlands, the Bahamas and South Africa. Representatives from the Secretariats of five international organizations: the Convention on Migratory Species (UNEP/CMS), the Oslo and Paris Commission, the International Seabed Authority, the inter-American Convention for the Conservation of Atlantic Sea Turtles and International Union for the Conservation of Nature. As the representative for CMS Secretariat, Francisco Rilla gave a presentation on the extreme importance of the Sargasso Sea for migratory animals. This presentation was well received and led to CMS being announced as a key partner organization to the Hamilton Declaration.

A press release stated: “The Sargasso Sea Alliance (SSA), which was founded in 2010 and led by the Government

of Bermuda, aims to seek protection measures for this unique high seas, open ocean ecosystem through the bodies which already have regulatory authority for areas beyond national jurisdiction — such as the International Seabed Authority, International Maritime Organization, the regional fisheries bodies and the Convention on Migratory Species. Partners will select qualified individuals to serve on the Commission. Commissioners will be unpaid and will serve in a largely virtual setting.

The Governments represented will pledge support for the initiative to conserve the Sargasso Sea – the two million square mile ecosystem that surrounds the islands of Bermuda.

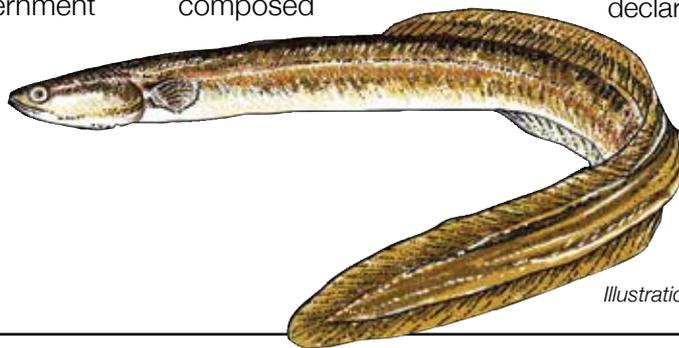
As signatories, Governments will also be consulted by the Government of Bermuda in the selection of Sargasso Sea Commissioners. The Commission has been composed

of distinguished experts and different organizations of international repute committed to the conservation of high seas ecosystems. The Government of Bermuda, in consultation with the Signatories and Collaborating Partners, selected qualified individuals to serve on the Commission.

The Hamilton Declaration defines the Sargasso Sea ecosystem to include international waters or areas beyond national jurisdiction as well as Bermudian waters, but the Bermudian Exclusive Economic Zone (EEZ) will remain under the sovereignty and management authority of the Government of Bermuda.

This is the first time an international alliance has been formed to develop protection measures for an iconic high seas ecosystem, using existing international law frameworks

To download the full text of the Declaration: <http://www.sargassoalliance.org/hamilton-declaration>.



*Illustration by Anna Nibby-Woods*

Story Credit: Convention on Migratory Species (CMS), 2014 - [www.cms.int/news](http://www.cms.int/news)

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# CORPORATE GOVERNANCE

## PEPSI PLEDGE SIGNALS MOMENTUM ON LAND RIGHTS

by CAREY L. BIRON

WASHINGTON, March 18, 2014 (IPS) - PepsiCo, the world's second largest food and beverage manufacturer, has agreed to overhaul its longstanding policies around land rights, instituting a series of new safeguards and transparency pledges throughout its global supply chains.

Anti-poverty and development advocates are lauding the announcement, made Tuesday at the company's New York headquarters.

*"These companies are very competitive, and it turns out that a simple index, aimed at encouraging a 'race to the top', is an effective tool." -- Chris Jochnick*

Coming on the heels of a similar pledge made late last year by Coca-Cola, the move appears to strengthen a new trend in corporate recognition

of land rights, while also offering clear recognition of the growing power of consumer demand.

PepsiCo's new pledge includes a "zero tolerance" policy for agriculture-related "land-grabbing", or large-scale land acquisitions, among all of its commodity suppliers, only the second such company to do so.

In addition to its namesake sugared soft drink, PepsiCo owns a vast empire of well-known consumer brands,

including Gatorade, Tropicana, Quaker and Frito-Lay.

"Agriculture is an integral part of PepsiCo's supply chain," Paul Boykas, vice president for public policy at PepsiCo, said Tuesday.

"Regardless of the source of the commodity – whether from suppliers, directly or indirectly, a farm or processor – this land policy defines our intentions and the actions we as a company will take to recognise land rights throughout our supply chain."



*Sugar cane being sold at a market on the edge of Phnom Penh. The global soft drinks market alone is thought to use some 176 million tonnes of sugar each year. Credit: Michelle Tolson/IPS*

With annual sales of some 65 billion dollars, PepsiCo is the world's second-largest producer of soft drinks, producing global brands including Mountain Dew, Miranda and others. The global soft drinks market alone is thought to use some 176 million tonnes of sugar each year, while PepsiCo's commodity usage spans hundreds of ingredients.

In its new land policy, PepsiCo notes that it sources its raw materials from a "wide range" of land tenure set-ups, both formal and informal. As

an initial step, the company says it will "comprehensively map", and then implement a "presumption of transparency" throughout, its supply chains.

It has also pledged to implement free, prior and informed consent (FPIC) principles when either the company or its suppliers are acquiring land, with the aim of ensuring a substantive conversation and negotiating process with local communities.

Further, when the company or its suppliers are operating in a country that does not

have "adequate land rights protections", PepsiCo says it will lobby the national government of that country to put in place and implement specific FPIC principles.

This unusual step is part of a broader commitment to be public and vocal about its new land policies, an agreement reportedly won through discussions with the anti-poverty group Oxfam International.

"This commitment to be a public advocate – towards others in the industry, towards governments and suppliers



*This land in Liberia has been leased by the government to Equatorial Palm Oil for 50 years. PepsiCo's new pledge includes a "zero tolerance" policy for agriculture-related "land-grabbing", or large-scale land acquisitions, among all of its commodity suppliers. Credit: Wade C.L. Williams/IPS*

– is new terrain, both for campaigners and certainly for the companies themselves,” Chris Jochnick, the director of the private sector department at Oxfam America, told IPS.

“It’s very helpful to have major companies advocating on these issues at both the global and national level, among their industry peers and vis-à-vis the direct suppliers. For local communities and NGOs, it’s also useful to be able to point to these major

companies and say that they’re insisting on FPIC standards.”

### **Race to the top**

Both the recent Coca-Cola and now the PepsiCo pledges came about in part due to negotiations with and public pressure organised over the past year by Oxfam, and Jochnick says the new commitments are significant. He particularly points to the zero tolerance for land grabbing as “very ambitious”.

A year ago, Oxfam began a new initiative aimed at highlighting the land policies adopted by 10 of the world’s largest consumer brands, including PepsiCo and Coca-Cola. In November, Oxfam and others filed a shareholder resolution calling on PepsiCo to file an annual report “focused on the issue of land rights along the company’s supply chains”.

“PepsiCo’s sources of sugar include suppliers that

# world oceans day

june 8



# Together

we have the power to protect the ocean

have been linked to land grabs, which poses risk to the company and shareholder value,” the resolution stated. “PepsiCo must urgently recognize this problem and take steps to ensure that land rights violations are not part of its supply chain.”

In November, Coca-Cola announced that it would institute a “zero tolerance” policy for land-grabbing. Since then, almost 275,000 people have signed petitions calling on PepsiCo to follow suit.

“We’ve been surprised ourselves with how much pressure consumers have been able to exert, and how sensitive the brands are to that kind of engagement,” Jochnick says.

“These companies are very competitive, and it turns out that a simple index, aimed at encouraging a ‘race to the top’, is an effective tool. These companies would choose to be a leader rather than be perceived as a laggard.”

A year ago, just two of the companies on Oxfam’s list of 10 had even begun talking about land rights. According to an updated scorecard released last month, seven companies

are now making specific commitments on the issue (the scores don’t include the new pledges by PepsiCo).

“We feel there’s real momentum around land rights right now,” Jochnick says. “So the next step will be to use that action to push the suppliers – Cargill, Bunge – to focus more broadly on land.”

### **Weak standards**

As part of its new commitments on Tuesday, PepsiCo noted its ongoing participation in at least two multi-stakeholder groupings, aimed at creating voluntary social and environmental standards around the production of palm oil and sugarcane. Global demand for these products is currently surging, constituting the majority of the recent increase in land-grabbing.

Yet activists have increasingly panned these industry-led certification initiatives, including the Roundtable on Sustainable Palm Oil (RSPO) and Bonsucro, which focuses on the global sugar supply. Nonetheless, for the moment PepsiCo says it will continue its participation in both groupings.

“PepsiCo’s new land policy is a positive step. But instead of taking responsibility for eliminating land grabbing from its palm oil supply chain, PepsiCo is relying solely on the inadequate standards of the RSPO,” Gemma Tillack, a senior forest campaigner at the Rainforest Action Network (RAN), a watchdog group, told IPS.

“The RSPO continues to certify companies that destroy rainforests and cause massive climate pollution and human rights violations. To fully address these serious problems, PepsiCo must join other leading consumer companies and adopt a truly responsible palm oil sourcing policy.”

Last week, RAN and other advocacy groups formally opened to applications a new standards initiative, the Palm Oil Innovation Group (POIG), which aims to “build on” the RSPO process. In a joint statement released last week, POIG’s membership said it will “prove that palm oil production does not need to be linked to forest destruction, social conflict or worsen climate change.”

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## **PepsiCo Land Policy** (March 18, 2014 )

PepsiCo is committed to doing business the right way and has a zero tolerance for illegal activities in our supply chain and land displacements of any legitimate land tenure holders<sup>1</sup> which are contrary to the International Finance Corporation (IFC) Performance Standards. We recognize these situations can occur, and PepsiCo has a responsibility to address them.

Agriculture is an integral part of PepsiCo's supply chain. Our products depend on a safe, high-quality, and affordable supply of agricultural raw materials to meet the demands of our business as well as the expectations of our consumers, customers and other stakeholders. PepsiCo's Land Policy is an essential part of the broader and more comprehensive PepsiCo Responsible Sourcing Guidelines. These Guidelines incorporate appropriate portions of our PepsiCo Supplier Code of Conduct, Sustainable Farming Initiative, Environmental Health and Safety Policy, and Sustainable Agriculture Policy.

Agriculturally based raw materials are supplied to PepsiCo by our suppliers, both directly and indirectly, from farms and processors globally. The countries where these raw materials are sourced from represent a wide range of land tenure systems, both formal and informal.

In recognition of these different country level approaches PepsiCo will:

- Adhere to the legal requirements of each country in which we are operating and sourcing from.
- When PepsiCo is acquiring land, engage in fair (based on effective grievance mechanisms and processes) and legal negotiations on land transfers and acquisitions and utilize the IFC Performance Standards to implement the Free, Prior, and Informed Consent (FPIC) principles for agricultural development, in developing countries.<sup>2</sup>
- Through appropriate mechanisms in the PepsiCo Responsible Sourcing Guidelines, such as the PepsiCo Supplier Code of Conduct, require our suppliers meet IFC Performance Standards, including FPIC, in their land acquisitions (including leasing and utilization). In countries from which PepsiCo sources raw commodities and where we do not believe adequate land rights protections are in place that are consistent with the IFC Performance Standards and the UN FAO Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (UN FAO Guidelines), advocate for the national government to use and follow the IFC Performance Standards and UN FAO Guidelines.

In addition, PepsiCo will:

- Further develop and maintain a comprehensive map of our raw agricultural commodities supply chain.
- Engage with appropriate industry and other groups to positively impact and respect all legitimate land tenure rights and the people who hold them.
- Utilize the PepsiCo Responsible Sourcing Guidelines as well as the PepsiCo Sustainability Councils and processes to ensure continued engagement with and compliance by suppliers on relevant land issues.
- Commit to a presumption of transparency such that relevant information related to land acquisitions by PepsiCo will be made public if circumstances permit.
- Actively engage, and appropriately advocate, on the latest policies, programs, and opportunities concerning land rights and tenure in industry, governmental and international organizations that are addressing land rights policy.

In order to ensure a confidential and safe process for investigating grievances which are raised by affected parties and to help ensure the PepsiCo Land Policy is properly implemented, PepsiCo and our suppliers will utilize appropriate grievance mechanisms, such as the PepsiCo Speak Up! hotline, to provide for reporting of suspected breaches of this policy to PepsiCo.

Additional information concerning PepsiCo's Speak Up! hotline, and how to report a suspected violation of this and other PepsiCo policies, can be found on our website: <http://www.pepsico.com/Company/SpeakUp>

PepsiCo follows the IFC Performance Standards definition of FPIC which can be summarized as:

- **Free** - Consent to the sale of land is given voluntarily and absent of "coercion, intimidation or manipulation."
- **Prior** - Consent is sought sufficiently in advance of any authorization or commencement of activities from an existing land owner.
- **Informed** - Ensures that information is provided prior to seeking consent to acquire and that information is provided as the acquisition process proceeds.
- **Consent** - Refers to the collective decision made by the land rights-holders and reached through the customary decision-making processes of the affected peoples or communities.

<sup>1</sup>A legitimate land tenure holder for purposes of this document is defined as a person, family, community, or business with rights to the land or associated natural resources, whether based on indigenous rights, custom, informality, or occupation, regardless of whether the right is currently protected by law or formally recorded.

# ENVIRONMENT

## CLIMATE CHANGE REPORT STUNTING FISH by RENEE LEWIS

America Aljazeera, March 19, 2014 - Fish sizes reduced by as much as 29 percent over past 40 years as ocean temperatures increased, scientists say.

Climate change may be stunting fish growth, a new study has said. Fish sizes in the North Sea have shrunk dramatically, and scientists believe warmer ocean temperatures and less oxygenated water could be the causes.

The body sizes of several North Sea species have decreased by as much as 29 percent over a period of four decades, according to the report, published in the April issue of *Global Change Biology*.

The report presents evidence gathered as researchers followed six commercial fish species in the North Sea over 40 years. Their evidence showed that as water temperatures increased by 1 to 2 degrees Celsius, an accompanying reduction in fish size was observed.

It is generally accepted among scientists that decreased body size is a universal response to increasing temperatures, known as the “temperature size rule,” the report said. But before this report, led by scientists at Scotland’s University of Aberdeen, there was no empirical evidence showing this response in marine fish species.

The scientists warned that fish stunting cannot be unequivocally blamed on temperature changes, but they did observe fish stunting across varying species and backgrounds that coincided with a period of increasing ocean temperature.

Other factors that could have influenced fish size include fisheries-induced evolution and intensive commercial fishing — which favors larger specimens. But, the scientists said, these causes would not be likely to affect growth rates across species, which was observed in the North Sea study.

Scientists at the University of Washington have been working on a similar study,



*It is generally accepted that decreased body size is a universal response to increasing temperatures. But before this report, there was no empirical evidence showing this response in marine fish species. Suzanne Plunkett/Getty Images*

looking at many species of fish from Alaska to California. Tim Essington, an associate professor of aquatic and fishery sciences at UW who is working on the study, said he was looking into whether changes in fish body size could be related to environmental parameters.

"We haven't seen the same strong response," Essington told Al Jazeera. "But we have seen variation in the sizes of some stocks, like halibut. Its body size has been shrinking sharply over the past 10 years, and has resulted in reduced catch quotas and higher prices at the supermarket."

He said various factors explain why UW results were different from those of the Scottish team. University of Aberdeen scientists were looking at a much more localized area and a unique data set, and had many more years of data to make

comparisons.

Overall, Essington said the Aberdeen findings represented a plausible hypothesis that should be looked at more closely, and that warmer temperatures could explain the stunting.

"Fish aren't any different than us. It's all about the difference between how much we eat and how much energy we expend. And they're arguing that temperature is changing the fishes' energy versus expansion rates," which could result in smaller sizes, Essington said.

The Aberdeen findings echoed earlier model-derived predictions that fish would shrink in warmer waters. Those projections for future fish size reduction are already being seen in the North Sea, scientists said.

The first global projection of the potential for fish stunting in warmer, less oxygenated

oceans was carried out by the University of British Columbia in 2012, and published in the journal *Nature Climate Change*.

The projection said changes in ocean and climate systems by 2050 could result in fish that are 14 to 24 percent smaller globally.

"It's a constant challenge for fish to get enough oxygen from water to grow, and the situation gets worse as fish get bigger," said Daniel Pauly, principal investigator with the University of British Columbia's Sea Around Us Project, and the co-author of the UBC study.

The study warned that strategies must be developed to curb greenhouse-gas emissions or risk disrupting food security, fisheries and the very way ocean ecosystems work.

Story Credit: America Aljazeera, March 2014, Renee Lewis - [www.america.aljazeera.com](http://www.america.aljazeera.com)

# A COMPELLING REASON

## June 8th is WORLD OCEANS DAY

For the past decade the Maritime Aboriginal Peoples Council (MAPC), the Maritime Aboriginal Aquatic Resource Secretariate (MAARS) and IKANAWTIKET Environmental Incorporated have worked at preserving, protecting, informing and promoting Mother Earth.

On World Oceans Day (June 8) people throughout Mother Earth celebrate and honour the oceans which connect all of us.

The oceans provide humanity with food, resources, sea travel and influence climate patterns.

To allow students to participate in World Oceans Day celebrations in Nova Scotia, we will hold World Oceans Day activities on Friday, June 6.

Be a part of this global celebration. Visit the MAPC, MAARS, IKANAWTIKET display booth at the

Maritime Museum of the Atlantic  
1675 Lower Water Street  
Halifax, Nova Scotia Canada  
902 424-7490

on Friday, June 6th 2014.





*photo credit: Dennis Jarvis, Lawrenceton Beach, Nova Scotia*

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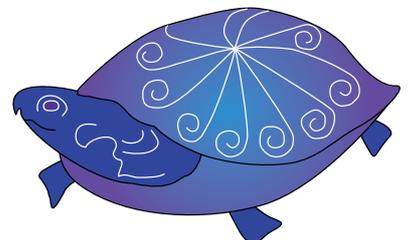
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and our biodiversity, killing  
our young, and poisoning  
our food, water, and air?"*



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