Treasures of the Bay

BITTER TRUTH

MD. ASADULLAH KHAN

BANGLADESH has now gained sovereign right to fish, mine and explore any resource within 19,000 sq km of the Bay by virtue of the verdict given by the UN Permanent Court of Arbitration (PCA) in The Hague.

In absence of the legal rights demarcating territorial boundary for the nations around the sea, there was hardly any law or principle to exploit resources like fish and marine life. According to Food and Agricultural Organisation (FAO), around 60% of the world's various commercial fish stocks are being harvested beyond sustainable limit. If over-fishing continues, it could hurt poor countries like Bangladesh, The Philippines, India, Sri Lanka and Maldives because people here rely more heavily on fish for protein than do people of rich countries.

The people of our country have to realise the importance of the sea for our survival and national well-being. The sea is the wellspring of life. The sea shapes the character of this planet, governs weather and climate, stabilises temperature, and yields to the atmosphere the moisture that falls back on the land replenishing Earth's rivers, lakes and streams and us. Yet we keep on destroying our most precious resource without even knowing what we are losing. We have the power to eliminate creatures from the sea as surely as we have eliminated creatures from the land. But with each loss the living fabric that makes the planet habitable and hospitable becomes weaker, less stable and more likely to evolve in new directions not to our liking.

No one really knows what the consequences will be of over-fishing or ocean dumping and incredibly little has been done to find out. The sea is the Earth's life-support system. The services provided are so fundamental that most of us tend to take them for granted. In the past century, without much thought we have removed billions of tons of living creatures from the sea and added to it billions of tons of toxic substances. Fish, shrimp, clams, and other living things are regarded as commodities, not as vital components of a living system upon which we are utterly dependent.

The biggest assault has been made on coral reefs, vast variegated architectures of limestone and living tissue that serve as iridescent underwater cities for countless plant and fish populations. Many prized fish are captured by an insidious fishing method involving sodium cyanide, literally called a murder weapon. In measured doses, cyanide temporarily stuns fish, making them easy to catch, and the toxin is flushed from the fish's system later. But there is no mechanism for purging the cyanide from the waters where it is sprayed. New research shows that cyanide used to snag live fish is poisoning the reefs.

Much to our concern, buffeted by storms, pollution and even dynamite, majestic formations of coral are in deep trouble. "Reefs are tough," observes Clive Wilkinson, biologist at the Australian Institute of Marne Science. "You can hammer them with cyclones, and they'll bounce right back. What they can't bounce back from is chronic, constant stress. Reports have it that an estimated 10% of the world's 600,000 sq km of reef has been destroyed during the past 50 years by a variety of causes, including industrial pollution. Experts estimate reefs are coming under such sustained attack that they may perish by the year 2050. Coral reefs are more than beautiful structures. Their stony ramparts serve as storm barriers that protect shorelines and provide ships with safe harbour. And like the tropical forests to which they are frequently compared, reefs are vast biological repositories -- as yet untapped -- for medicinal and industrial uses.

Most people think that oil spills cause the most harm to ocean life. Fishing boats with their huge nets and 1,000 hook lines wreak far more havoc on the marine life than spilled oil. Besides, fishing extracts 80 million tons of sea creatures worldwide. An additional 20 million tons of unwanted fish, seabird, marine or mammals and turtles get thrown overboard dead. Over-fishing has depleted major populations of cod, swordfish, tuna, snapper, sharks and grouper.

Contrary to popular thinking, most ocean pollution does not come from ships, it comes from the land. Gravity is the sea's enemy. Silt running off dirt roads, and clear-cut forest lands ruins coral reefs. Pesticides and other toxins sprayed into the air and washed into rivers flow into the ocean. The biggest source of coastal pollution is waste from farm animals, fertilizers, and human sewage. They can spawn red tides and other harmful algal blooms that rob oxygen from the water, killing sea life. Reports say that the Mississippi river, whose fine heartland silt once built fertile delta wetlands, is creating a spreading dead zone, almost devoid of marine life, in the Gulf of Mexico. Improving sewage treatment and cleaning up the run-off from farms will be increasingly vital for preserving coastal water quality.

The looming question is, how much can we take from the ocean's living systems without disrupting the way the ocean works, either as a continuing source of seafood or as a functioning life support system? How long can we get away with poisoning the sea through either deliberate waste disposal or the inadvertent flow of contaminants from land and sky?

This brings to our notice the depletion of the enormous resources of the Bay of Bengal. The Bay of Bengal comprises the north eastern part of the Indian Ocean and lies between peninsular India to the west and Myanmar, Thailand and Malaya peninsula to the east. The vast expanse of water of the Bay of Bengal with its extensive marine floor remains an unexplored and unrevealed reserve of resource potential. The several mighty rivers on the north, and their contribution to huge sediment transport from a vast catchment area of the Himalayas, play a significant role in the physical environment of the Bay.

These rivers carry about 24 billion tons of sediment along with a huge volume of water discharge every year into the Bay of Bengal. The fish resources of the Bay of Bengal are mainly exploited by Bangladesh, India, Myanmar and Thailand. Annual catch of different types of fish ranges near 2 million tons. Reports say that Thailand and Myanmar had so long illegally caught fish in the territorial and exclusive economic zone of Bangladesh, but now that the PCA has allocated our territorial rights, this piracy might stop. Reports suggest that the total earning from fishing is about $215 million per year. This amount can be increased by about five times with use of mechanised equipment.

The Bay is still unexplored, but significant amounts of hydrocarbon and some heavy radioactive beach sands have been discovered. Heavy minerals like zircon, limonite, garnet and monazite have been discovered in some beach sands of the coastal areas of Bangladesh. About 472 species of fin-fish and 10 species of shells, molasses and crabs have been identified in Bay fishing grounds.

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Adapting to climate change: The next generation

POLITICS OF CLIMATE CHANGE

SALEEMUL HUQ

AT this time all the countries on the planet have come to accept that human induced climate change is real and, if not tackled, may become the greatest weapon of mass destruction the world has seen. Even the United States of America has now finally come to accept this reality and is beginning to take actions. So the first stage is to recognise that the problem is real and needs to be tackled. The next stage is to tackle it through both mitigation actions (reducing the emissions of greenhouse gases that cause climate change) and adaptation (preparing to deal with the adverse impacts of climate change). The latter action, adaptation, is a learning-by-doing process and itself has gone through various generations of understanding. I will enumerate some of them below and look forward to what the next generation might entail.

First generation of adaptation:

The first generation of adaptation consisted mainly of adaptation planning and started in the Least Developed Countries (LDCs) over the last decade or so with the National Adaptation Programmes of Action (NAPA) undertaken by all forty-nine LDCs. These proved to be valuable for raising awareness about the problem and identifying possible options to tackle them through adaptation projects, many of which are now being implemented with financial support from the LDC Fund created by the United Nations Framework Convention on Climate Change (UNFCCC) and managed by the Global Environment Facility (GEF). Since then, many other developing countries and even some developed countries have started the first generation activities of adaptation planning.

Second generation of adaptation:

The second generation consists of implementing adaptation projects, which has also started in the LDCs and is now spreading to other developing countries, and even some developed countries. These typically consist of building dykes and embankments to protect areas and infrastructure from flooding; developing flood, drought and saline tolerant varieties of crops; as well as capacity building and training. Many such projects have now been funded by countries themselves as well as from the LDC Fund, Adaptation Fund and other sources of funding. Many of the earlier projects are nearing completion and are ready for some lesson learning from them. Such learning from the first round of implemented projects should inform the next generation so that they can be better designed.

The next generation:

We are now on the cusp of beginning the next generation of adaptation which needs to be informed from the experiences of the first and second generation activities, so it needs to be *learning from experience of adaptation* exercise. This will require the practitioners who implemented the first and second generation of adaptation activities to be actively engaged in learning those lessons from experience and informing the next generation of adaptation activities. One indicator of whether or not such lessons have being learnt will be whether the next generation of activities are significantly different from the first and second generations (which would indicate that a learning process has taken place), or they simply repeat the activities of earlier generations (in which case it can be assumed that no lesson learning took place).

This is particularly important as all developing countries now move into the next round of developing National Adaptation Plans (NAP), which differ from the earlier NAPAs in that they should include lessons from the experiences of the earlier generations of adaptation planning and activities.

Bangladesh's position in the adaptation learning ladder:

All countries need to go up the adaptation learning ladder one step at a time. However, countries that are lower down the ladder can learn from those who have gained more experience and thus shorten the time needed to move from one generation to the next. Bangladesh has been one of the first movers on adaptation over the last decade and has gained a great deal of experience across government, NGOs, researchers, and even private sector on how to adapt to the adverse impacts of climate change. At this moment it needs to stop and reflect a little and assess what has been learnt, before it embarks on the next round of actions. A thorough evaluation of the lessons learnt so far through a critical lesson-learning review is much needed. One opportunity for the government to carry out and then present their lessons learnt would be the five-day International Gobeshona Conference on Climate Change Research in Bangladesh (www.gobeshona.net) to be held in Dhaka from January 7 to 11, 2015.

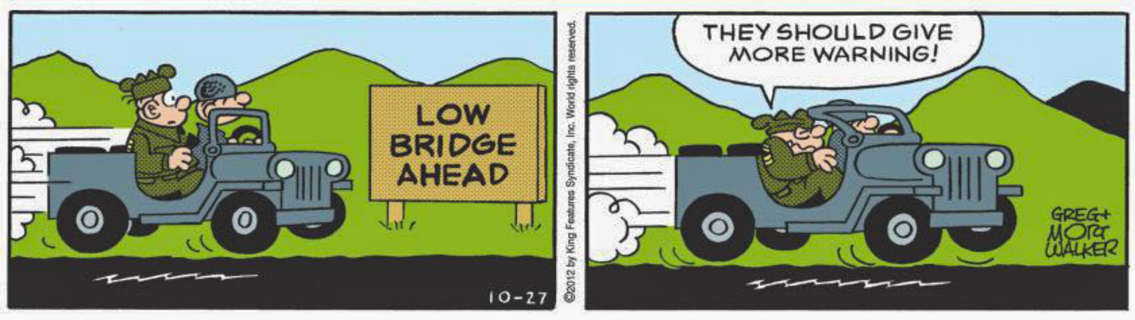
The writer is Director, International Centre for Climate Change and Development (www.icccad.net) at the Independent University, Bangladesh.

QUOTABLE *Quote*

Difficulties are meant to rouse, not discourage. The human spirit is to grow strong by conflict.

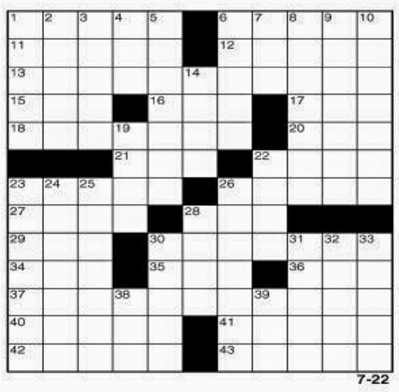
William Ellery Channing

BEETLE BAILEY by Mort Walker



HENRY by Don Tranchte

CROSSWORD by Thomas Joseph



ACROSS
1 "Cheers" regular
6 Nev neighbor
11 Kidney-related
12 Sports spot
13 "I can't make that decision"
15 Aussie bird
16 Low number
17 Krazy --
18 Bad mark
20 Tad's dad
21 Box office sales, in Variety
22 Noted lab assistant
23 Swirly prints
26 Active folks
27 Velocity
28 Signing need
29 PC key
30 Phone playback
34 Golf peg
35 Metal source
36 Writer Brand
37 "Speak away!"
40 Playful mammal
41 Bengal beast
42 Bird abodes
43 Rugby or cricket

DOWN
1 Blubbered
2 Door holder's words
3 Briefly
4 Writer Weldon
5 Step on the gas
6 Insertion symbol
7 Compass trace
8 Pipe problem
9 About to be a mother
10 Stumbles
14 Server system
19 Raison d'--
22 Charged particles
23 Speech
24 Paint board
25 Swears
26 Barren areas
28 Lima's land
30 Othello and others
31 Pedro's pal
32 Arcade patron
33 Put to use
38 So far
39 Brief drop

Yesterday's answer

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

CRYPTOQUOTE 6-18

QFZ TZZMZRQ TZIXVXQXPV PI BPLQF XR YXIZ NR BZQ LVQPLSFZT GB QJNOZTB.
-- NYIJZT VPJQF CFXQZFZNT

Yesterday's CRYPTOQUOTE: THE HAPPINESS OF A MAN IN THIS LIFE DOES NOT CONSIST IN THE ABSENCE BUT IN THE MASTERY OF HIS PASSIONS.
-- ALFRED LORD TENNYSON

A XYDLBAAXR is LONGFELLOW
One letter stands for another. In this sample, A is used for the three L's, X for the two O's, etc. Single letters, apostrophes, the length and formation of the words are all hints. Each day the code letters are different.

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