

Fishing in Times of High Prices

Recent events show how vulnerable world fisheries are to increases in fuel costs, but those most affected personally are the small-scale fishing people of the South and their families

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During the first decades of the second half of the 20th century, 'appropriate technology' for fishermen of developing countries had become a big issue. The various bilateral and international development agencies, busy at that time in 'technology transfer' projects, became eventually aware that large chunks of the machinery and equipment they were introducing in Third World countries had turned into rusty heaps. Still, such projects that mainly benefited the equipment

materials, and installed OBMs in their canoes, *kattumarams*, *janghadas* and other traditional craft, and small diesel engines in their various boats, dories, skiffs and *dhow*s. Perhaps they did all this too fast, equally quickly doing away with their sails, oars and paddles. With the passing of years, increasing numbers of sea-going fishermen began shifting from OBMs to diesel engines.

One consequence of the motorization of small craft has been an increase in the loss of life at sea; with motorized crafts, fishermen tended to travel greater distances offshore, which put them at greater risk if the engines failed. Those who once employed sails stopped taking them to sea, while most of the younger fishermen—of the second and third generations of engine users—were never trained in sailing and would hardly know how to handle sails in an emergency. Thus, the art of sailing, an important skill, has been lost in the fisheries of many developing countries.

The other consequence of motorization of craft is a new one: dwindling of fishing people's incomes due to the spiralling rise in fuel prices, the cost of fuel being, in most fisheries, the main financial factor of production. In the North, fishermen have been holding strikes in protest against rising diesel prices, which have increased by 240 per cent since 2004. While the recent events in the North show how vulnerable world fisheries are to increases in fuel costs, those who are the most affected personally are the small-scale fishing people of the South and their families. Let us not forget that

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manufacturers and their agents, but hardly the local 'recipients', have been promoted for years. The artisanal and commercial small-scale fishermen were often blamed for being conservative, stubborn and dumb not to embrace the technology wonders parachuted upon them by the well-meaning development agents.

But this allegation has been belied by the swift adoption of synthetic twines and nets and outboard motors (OBMs) throughout the small-scale fisheries all over the Third World, an expansion that occurred both with and without outside technical assistance. As it appears, fishermen were wise and fast enough to grasp the economic benefits of motorization and advanced

This article is by **Menakhem Ben-Yami** (benyami@actcom.net.il), Fisheries Adviser, based in Israel

about 40 mn small-scale and artisanal fishermen—whatever term we choose to use—represent some 90 per cent of the people employed in the fishing trade worldwide.

All over the world, small-scale and artisanal fisherfolk are now also hit by the rising prices of food. While this problem is not specific to fishing peoples and their communities, it certainly does not miss them out.

In South Africa, small-scale fishermen, including about 30,000 subsistence fishermen who rely exclusively on the sea to survive, and already struggling with uncertain catches, tougher fishing policies and quotas, have been hit hard by the rocketing fuel prices. The surge in both diesel and petrol prices is adding to their woes, making it difficult for them to earn a living. Although most attention has been given to diesel fuel prices, it is petrol that runs the OBMs of most of the artisanal fishermen worldwide.

Petrol prices have risen at a rate parallel to that of diesel. In Australia, for example, two years ago it used to cost around A\$12.50 to fill a tank of fuel for an OBM; last June, a full tank cost A\$40. Fuel price rises forced many artisanal fishermen throughout the world to work closer to shore and try to scrape out a living with meagre catches. In industrialized countries, some fleets that use less fuel and can charge higher prices for fish may just about cope...so far. But in countries where hundreds of thousands of fishermen beach their craft to deliver their catches to fish-processing women and market fishmongers, often far from the end consumer, price increases, as a rule, dissipate among the intermediate stages. Thus, many small-scale fishermen have recently decided to fish with hooks-and-line from shore or from small paddle boats, and keep their larger fishing craft beached or in the harbour. Others have just given up fishing to wait for better times.

Artisanal fishermen have never been spoiled by their governments, though recently fishermen in Thailand have been promised some discount on fuel price by their government. In many countries, fleets of local and foreign industrial fishing vessels that

are supposed to be fishing offshore are considered, for the purpose of fuel pricing, as merchant fleets and enjoy tax-free or discounted-tax fuel prices. Not so local small-scale fishermen who have to purchase fuel, especially petrol for their OBMs, at the same prices as private car owners. For example, during the introduction of the 'deep-sea fishing policy' in India in 1991, the government made it possible for foreign vessels to avail diesel fuel at the rate of Rs 2 per litre whereas domestic fishermen in Kerala in south India had to pay Rs 7.62.

The situation of fishing people in the developed North is anything but bright. In Europe, some of their representatives are saying that chunks of the fishing fleet may increasingly be forced to tie up at the dock because of fuel costs.

Standard of living

Fishworkers in industrial fleets are more sensitive to such crises. Most of them do not have the 'African option' of boarding old, small dugouts and paddling out to handline for fish, even if only to feed their families. They are living at quite a different—and much higher—standard of living, which makes them quite alarmed at any threat to their material comfort.

MENAKHEM BEN-YAMI



A fishing boat in South Africa's Calk Bay. Increasing diesel and petrol prices are adding to the woes of South Africa's fishermen

The cost of diesel fuel for fishing vessels is the burning issue of the day. A couple of years ago, owners of a small 'artisanal' shrimper would spend 30-40 per cent of their total running expenses on fuel. Today they would have to spend twice as much. Yet the prices of their shrimp catches have not increased proportionally, due to the ever-increasing supply of farmed shrimp in the market. Fishermen thus

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have to deduct the cost of fuel spent on the fishing trip from the money earned from selling their catches and search, often in vain, for what is left. Reports from south and southeast Asia and even from Japan, where the price of fuel oil is 2.7 times the price it was five years ago, talk of hundreds of small-scale fishing vessels, including diesel-powered trawlers and shrimpers, tied to the dock, because they could not go on fishing viably. Fishermen are getting bitterly angry and frustrated as they are forced to stay at home, deprived of their ability to make a living.

A report from Florida, United States (US), says that up to 80 per cent of shrimp fleets are tied up at different ports and every water-related activity is suffering because of the sky-rocketing price of diesel fuel. Soaring prices are also hurting North Carolina's commercial fishermen, squeezed by low dockside prices for catches and mounting fuel bills. The Statewide average price of a gallon of diesel was up 65 per cent from what it was a year ago. Although fishermen were getting better prices for some of their fish, most prices have not kept pace with fuel costs, which is why shrimpers, crabbers and gillnetters are staying in port, waiting for better times. All along the east coast of the US, 20 to 40 per cent of the commercial fishing boats have been tied to the docks from the beginning of the year.

The situation on the west coast and Alaska, where diesel fuel prices have increased more than 50 per cent over the past year, is not any better. In the meantime, many fishing people who depend on fishing as their only income, say that they can no longer afford to fuel their boats and cannot earn a living. However, in the US, they know exactly whom to blame, when they turn to the Congress for legislative help: the speculators and the owners of, and lobbyists for, the oil companies. American legislators obliged and introduced The Fisheries Fuel Tax Relief Act of 2008, which, if approved, is supposed to go a long way towards helping fishermen.

In the European Union (EU) fisheries provide a livelihood for some 400,000 people, mainly in Spain, France, Italy and Portugal. In numbers they make up fewer than one per cent of the world's fishing people, but in terms of fish catches, their share of value in the world's fish yield is much higher.

In Britain, between 2007 and 2008, the cost of diesel fuel doubled and is expected to rise further as analysts predict crude oil prices rising to US\$150 per barrel, and possible spikes up to US\$200 per barrel. Consequently, fish prices on British markets would increase between 7 and 50 per cent, with the average price increase across all species being 23 per cent.

Europe's angry fishermen have staged protests against the increasing fuel prices. Demonstrations turned violent at the EU headquarters in Brussels. The European and American fishermen's advantage over their poorer brethren in the South consists of their strong organizations, electoral power, and physical presence and protest actions in the ports of their countries.

Ports blocked

In some 20 ports, fishing vessels plugged harbour entrances and blocked oil tankers and other ships from loading or unloading, while on land fishers blocked roads. Their main grouse is that their governments are taxing fuel at the same rates as they did before the shattering price rises, which gives the governments enormous financial gains, but offers only losses for the fishers.

The protests spread to ports in the Atlantic, the English Channel and the Mediterranean. Fortunately, these fishers live in countries where such protesters are not fired on or incarcerated without proper trial.

The Northern governments are sticking to the notion that any reduction of taxes is tantamount to a subsidy; they hope to use the fishing industry's financial difficulties to reduce fishing effort and capacity, in a kind of Organization of Petroleum Exporting Countries (OPEC)-induced fishery management. According to EU's Fisheries Commissioner, Joe Borg, it is illegal for the EU to subsidize fuel. This "would do nothing to solve underlying problems", according to Borg. And the solution? Shrink the fleets. So the EU Fisheries Commission has already proposed a package of assistance to fishermen who stop fishing or modernize their boats with fuel-saving equipment. There will be no tax reliefs, but there is talk about short-term financial assistance, which may not be immediately forthcoming, of course.

The well-organized Japanese fishermen submitted a petition to their government seeking fuel cost subsidies, easier terms for new loans, and tax breaks. Though the government originally refused to subsidize the increases in fuel costs, it now appears that the government is likely to extend emergency financial aid to fishery operators to alleviate the impact of soaring oil prices. This is not very surprising, in view of the protest actions taken by thousands of Japanese fishers and their boats, and the incessant daily demand for fish in this avidly fish-eating nation. The Japanese government may also consider an expansion of funding for fishery businesses that introduce energy-saving measures.

The upsurge of fuel prices worldwide has thrown diverse fishing people into a single common dilemma: how to keep making a living under drastically changed conditions? And this is not the first time that people are wondering how to reduce the use of fossil fuel by the fishing industry.

The solutions to this dilemma would differ with various types of

fisheries—small-scale, medium-scale, industrial—and according to the countries or regions they are based in, and the natural and socioeconomic conditions under which they operate. There are some obvious solutions like using lower horsepower (hp) engines or using existing engines at moderate revolutions per minute (rpm). Other solutions could be:

(1) the use of auxiliary sail-power to get to, and from, fishing areas;

(2) shifting to any passive fishing methods that are less fuel-guzzling than trawling, dredging, etc. Purse-seining, for example, although a very active fishing method, does not need to consume heavy amounts of fuel, if the fishing operations take place close to fish-landing centres;

(3) navigating only at cruising speed, except in emergency;

(4) trawlers should use the benefit of the increased towing power of propeller nozzles to save fuel rather than increase the towing speed; shift to drag-reducing fishing gear/methods: hydrodynamic trawl-boards (for example, cambered, oval, slotted); stronger but thinner twine in netting (for example, Dyneema); two-boat trawling and Danish seining instead of otter trawling; shift to double-rig trawls (using only one pair of doors);

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(5) keep in mind that smaller catches nearby may be sometimes more economic than larger catches in distant fishing grounds; and, finally,

(6) don't fish on your Sabbath—spend the time with your family.

Rule-beating

The folly of regulating fishing capacity by boat length results in 'rule-beating'—10-m-long monsters that are almost half as wide and deep as they are long. Wiser regulation would force boat designers to consider the physical law that

MENAKHEM BEN-YAMI



Using lower horsepower (hp) engines or using existing engines at moderate revolutions per minute (rpm) can cut fuel costs

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length/displacement is proportional to speed/hp; in other words, with other parameters remaining constant, the longer the boat, the less power it needs to attain the same speed.

The measures taken by fishermen to cope with the rise in fuel prices include an increase in the use of static gear like gillnets, pots and traps, longlines and handlines, which do not require the fishing vessel to tow gear through the water; more fuel-efficient engines; and less trawling. Measures such as these can improve the ratio of fish caught per unit of fuel used, making fishing financially more efficient.

Trolling, in most cases, is fuelwise an inefficient method, except for some more expensive and abundant fishes. Fishermen who power their canoes and other displacement-hull craft with OBMs and small diesel engines should keep in mind that each boat has a cruising speed at which the distance-to-fuel consumption ratio is best. 'Speeding up' the engine beyond cruising speed results in relatively small gains in speed and great waste of fuel. Increasing the speed of a large canoe from, say, 7 knots to 9 knots may raise fuel consumption by more than 50 per cent.

Fuel can be saved not only in running engines. In Africa's Lake Victoria, for instance, fishermen from Mbita, a small fishing centre on the Kenyan side of the lake, who use light bulbs to attract fish,

can now recharge batteries for fishing lamps and other electrical appliances at low cost at a solar energy station set up by the company that sells energy-saving lamps. For the fishermen this offers a great potential for saving both fuel and money, and for the company, it is an opportunity to make profits because around 175,000 fishermen currently use kerosene lamps in night fishing.

Incidentally, this is not the only recent case in which the interests of fishing people and equipment companies coincide; the introduction of mobile phones to inshore and coastal fishermen in several parts of the world, including many developing countries, has considerably improved both safety at sea and fish-marketing opportunities.

The spiralling increases in the cost of energy in fisheries in the last few years have produced a chain of consequences that were hardly possible to envisage some time ago. One can only hope that the world's small-scale fishing people—who constitute over 90 per cent of the manpower in fisheries worldwide and provide over half of the world's food fish—and their communities will somehow manage, with or without much help from their governments.

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