

Achieving sustainable fisheries



The discussion on sustainable fisheries should be holistic and ecosystem-based, not hijacked by the bluefin tuna debate.

A conference held recently under the aegis of Din I-Art Helwa addressed various issues related to the sustainability of fisheries. The conference, aptly entitled 'Fished out?', sought to tackle this hot potato from various angles.

Presentations were made by fisheries management authorities, journalists, marine biologists, lawyers, representatives of the Malta Environment and Planning Authority and of the aquaculture industry, as well as the former European Commissioner for Fisheries and Maritime Affairs Joe Borg.

Incidentally, the conference did not revolve solely around the topic of tuna farms, as sensationalist reporting in one newspaper would have it. The reporter was present throughout most of the conference but decided to highlight only the aspects related to tuna farming.

While it may be true that bluefin tuna makes the headlines and captures the public's imagination, reducing the highly complex issue of sustainable fisheries to just the debate over one species is tantamount to trivialising it.

Conspicuous by their absence were local (traditional) fishermen, despite them being one of the main actors in the sustainable fisheries parody. Stanley Farrugia Randon compensated in part for their absence by taking up their cudgels during his presentation.

Locally, it is estimated that 500 full-time and 700 part-time fishermen still ply the waters to eke out a living – despite this, traditional fishermen proverbially shy away from events such as this conferences. Thus, some novel thinking may be needed to attract them to such meetings in future.

DLH executive president Simone Mizzi, in her opening speech, set the background to the conference by illustrating the world's greater reliance on fish as a source of protein in recent years. She referred to statistics on expanding fishing fleets and catches, with the latter more than quadrupling over the 1950 to 1992 period.

Dr Borg emphasised the imminent reform of the EU Common Fisheries Policy, the revamped version of which should come into force on January 1, 2013. The CFP is considered a failure by fishermen and environmental groups alike and was initially reviewed in 2002.

Dr Borg's tenure saw the coining of the term 'Integrated Marine Policy', which encompassed all the various intertwined issues related to the management of marine space, including fisheries and aquaculture, marine protected areas (MPAs), marine transport, ports and harbours, coastal tourism, blue energy generation (such as offshore wind farms), resource extraction out at sea, and so forth.

A presentation by Andreina Fenech Farrugia from the Fisheries Control Directorate within the Ministry for Resources and Rural Affairs elaborated on the various local fisheries management measures. As accountants put it, 'if it can be measured, it can be managed'.

Malta successfully defended its right to a 25-nautical-mile fisheries management zone during its membership negotiations with the EU.

This zone, originally called the exclusive fishing zone, was first set in 1971. It places restrictions on the number, size and engine capacity of fishing vessels within this marine zone, mainly to safeguard the limited fish stocks and Maltese fishermen's interests in the area.

For instance, all fishing vessels operating within this zone cannot exceed a maximum length of 12 metres (except those fishing for lampara and dolphin fish).

Furthermore, trawling was prescribed for designated zones only and was prohibited in coastal waters (that is, waters shallower than 200m). These are just two from a whole host of other management measures.

In his presentation, Darrin Stevens from Mepa's Ecosystems Management Unit focused on local MPAs. There are five MPAs in local waters, covering about five per cent of Malta's territorial waters and encompassing most of the local *Posidonia oceanica* meadows. Of these, only one (Rdum Majjiesa) is a recognised Natura 2000 site.

Stevens expounded as to how Mepa is currently considering venturing into deeper waters and designing offshore MPAs.

Environmentalist Caroline Muscat's presentation was arguably the most thought-provoking. In it, she sought to emphasise the unsustainability of the tuna ranching industry.

For example, she mentioned that the spawning stock biomass of the eastern Atlantic stock of the bluefin tuna has plummeted by 75 per cent in the past 40 years, from 305,000 tons in 1957 to just 78,000 tons in 2007.

She also denounced EU subsidies for the modernisation of the fishing fleet and the subsequent subsidising of the scrapping of part of the fleet, all within the space of a few years.

Anthony Debono represented Fish4Tomorrow, a recently-launched laudable venture bringing together Din I-Art Helwa, Nature Trust, Sharklab and Greenhouse, which seeks to highlight issues such as overfishing, by-catch and Catchment Management Plan failures.

Fish4Tomorrow also promotes innovative approaches including shifts in eating habits, such as opting for seasonal fish in order to eliminate demand for species during the closed season. Mr Debono quoted Gordon Ramsay, the eminent Scottish chef, television personality and restaurateur, as saying that "chefs are part of the problem. We're responsible for making people want certain fish".

My presentation addressed the issue of alien (non-indigenous) and gelatinous species and their impact on fisheries. The inexorable warming of the Mediterranean Sea is ushering in an uncanny influx of alien marine species (mainly, but not exclusively, through the Suez Canal) in a process known as tropicalisation.

While the impact of most of these new arrivals on indigenous marine species is the subject of speculation, the impact of some of these species is well known.

For instance, *Caulerpa taxifolia*, is a Lessepsian (a species coming in through the Suez Canal – named in honour of the canal's builder French engineer and diplomat Ferdinand de Lesseps) green alga that is very invasive, spreads rapidly and has a high growth rate. It forms dense meadows (up to 14,000 blades per m²) on various types of seabed, especially in areas characterised by high nutrients.

This leads to the formation of homogenised microhabitats and replacement of native algal species. It reduces the variety of native species growing on rocky seabeds by between 25 and 55 per cent, and, under certain conditions, outcompetes indigenous seagrass species.

The alga's dense clumps of rhizomes and stolons form an obstruction to fish feeding on benthic invertebrates. *Caulerpenyne*, the most potent of the endotoxins protecting this macroalgae against epiphytes and herbivores, is toxic to molluscs, sea urchins, herbivorous fish, at least during summer and autumn.

Mediterranean people are slowly developing a taste for some Lessepsian invaders – for instance, two species of rabbitfish are regularly consumed in the eastern Mediterranean, while the cornet fish has, as of late, begun to be sporadically sold even in local fish markets.

The current onslaught on Mediterranean fish resources seems to be promoting a vicious cycle whereby a proliferation of jellyfish are in turn making the problem even worse by eating up the little food available in the Mediterranean.

For example, last summer a gargantuan 200km-long swarm of nomadic jellyfish individuals was spotted off the coast of Israel, containing an estimated 100 million jellyfish. Such a swarm is roughly estimated to consume a staggering 500,000 tons of plankton over the 100 days of summer – it is as if a swarm of locusts stripped all the food out of the sea.

If one were to draw a unifying theme that consistently emerged from all the conference proceedings, it was that of advocating the need to harmonise the different approaches to achieving sustainable fisheries, mainly within the framework of the ecosystem-based approach.

Such an approach emphasises the need to view the resource to be managed (in this case, fish) not in isolation but within the marine ecosystem where, incidentally, atmospheric conditions, nutrient levels, runoff from land and man's activities all play a vital role.

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