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**Arthropod-mediated ecosystem services**  
**Managing for ocean biodiversity**  
**Designing intensively managed landscapes**

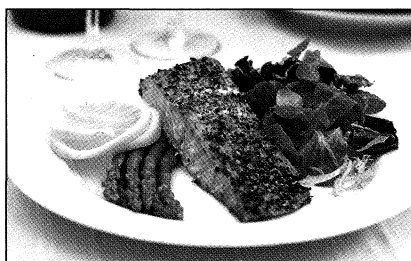
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## Fishy health claims in doubt

Noreen Parks

For years, health authorities have urged people to consume more seafood, especially fatty fish (or oils derived from them), to increase their intake of omega-3 fatty acids, touted for alleged “healthy heart” benefits and the power to ward off chronic diseases, such as cancer and diabetes. However, a multi-disciplinary analysis in the March issue of *Canadian Medical Association Journal* (2009; **180**: doi:10.1503/cmaj.081274) concludes that these claims are exaggerated, and warns that the escalating demand for fish driven by such recommendations is exerting unsustainable pressure on fisheries already hampered by multiple threats.

To evaluate the evidence for seafood’s health-conferring benefits, medical doctor David Jenkins, of St



*Is fish really that good for you?*

Michael’s Hospital (Toronto, Canada), and his colleagues reviewed a wide spectrum of research. While many studies seemed to demonstrate heart-health advantages, others did not – including research revealing that non-fish-eaters, such as vegetarians, experience no increased risk of illness. However, such “negative” findings are often ignored, Jenkins contends. Moreover, he points out, sorting out how other factors – such as lifestyle – may influence the results can be difficult, and thus are often not considered.

According to Jenkins’ coauthor, fish-

eries ecologist Daniel Pauly (University of British Columbia, Vancouver, Canada), wide consensus exists on the critical status of global fisheries, in contrast to the scientific uncertainty over the value of boosting fish consumption. Despite intensified fishing efforts, global harvests have fallen since the late 1980s, while the number of collapsed stocks has risen exponentially since 1950. “Projected forward, these trends imply the collapse of all commercially exploited stocks by mid-century”, Pauly cautions.

The incompatibility between surging seafood demand and plummeting fisheries also has socioeconomic ramifications, as fish catches are increasingly diverted from poorer nations toward newly affluent and developed countries.

As the researchers point out, omega-3 fatty acids are available from other dietary sources, including walnuts, flaxseed and other vegetable oils, yeasts, and algae. Further research is necessary to verify the role fish oils play in human health, they conclude, particularly since current dietary recommendations to increase fish consumption may not be sustainable. ■

## Fires fuel deforestation crisis in Kenya

Jen Schoenburg

In late March, forest fires ravaged several of Kenya’s key moisture reservoirs, including the 400 000-hectare Mau Forests Complex. Estimates of total damage vary, with some reports that 25–35% of the Mau Complex was affected. The Mau is Kenya’s largest forest and the source of water for at least 12 rivers and several lakes, including Lake Victoria, which feeds the Nile River. Water levels in rivers draining the forest have fallen considerably because of extensive deforestation – now compounded by the fires – which complicates a drought situation that has affected the food supply for about 10 million local residents.

Additional fires burned in the Aberdares and Karura forests and threatened nearly 60 species of wildlife, including huge numbers of flamingos,

that depend on Lake Nakuru for their survival. According to reports, fires destroyed more than 25% of Mount Longonot National Park, and zebras, buffaloes, and giraffes were among the wildlife forced to cross roads and residential areas to reach safety.

The fires intensify an already dire deforestation problem in Kenya, where illegal settlements, logging, and charcoal burning have depleted the country’s forests down to a critical 1.7% of the total land area, according to the Kenya Forests Working Group (Kilimanjaro, Kenya). Christian Lambrechts, a Policy and Programme Officer at the UN Environment Programme (UNEP, Nairobi, Kenya), says “The fires have contributed further to the degradation of the Mau Forests Complex, which supports key economic sectors through ecological services”. UNEP estimates that the Kenyan government could lose more than US\$300 million per year from the tourism, tea, and energy

sectors should deforestation continue at its current rate.

Kenya’s energy sector is at particular risk. Says Lambrechts, “The US\$260 million Sondu Miriu hydroelectricity project, operational since 2007, could be in jeopardy if deforestation in the Mau is not addressed promptly, because the plant depends on water from the forest. An additional 41% of Kenya’s installed energy capacity could be provided by water from the Mau Complex if it remains intact”.

Kenyan officials believe the fires were set deliberately, to make space for farmland or by members of forest communities opposed to government plans to displace them; several suspects have been arrested. The arrival of the rainy season may bring little relief; officials fear that topsoil may erode, hindering fish breeding in Kenyan lakes, and that flooding may occur, both resulting from deforestation. ■