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## Tiny sardines offer great guilt-free value

By David Suzuki with Faisal Moola

When the six-year-old daughter of David Suzuki Foundation sustainable fisheries analyst Scott Wallace returned from a birthday party, excited about the hockey cards she got in her loot bag, her Dad asked, "What players did you get?" She replied that she got the "sardine twins" from the Vancouver Canucks.

Most Canadians are aware of the value of the Sedin – not sardine – brothers to the Canucks, but we don't know much about the value of eating sardines and other small fish.

Last month, renowned UBC fisheries scientist Daniel Pauly and his colleagues released a study in National Geographic magazine that looked at the global "seafoodprint", a measure of all the plant matter required to sustain seafood production. The higher up the food chain a seafood product occupies, the more photosynthetic energy is required to produce it and, therefore, the larger its seafoodprint.

For example, eating a pound of tuna represents roughly 100 times the seafoodprint of eating a pound of sardines, according to Dr. Pauly.

As long as harvests are tightly controlled to ensure that only a small portion of the total mass of living organisms is taken, eating species lower on the food chain takes much less of the world's ecosystem energy and is therefore more sustainable.

Species such as sardines, anchovies, herring, and mackerels – collectively categorized as small pelagic fish – already make up about 37 per cent of all fish landed from the ocean. The data are varied, but it appears that only about 10 to 25 per cent of small pelagic fish caught in the world are directly consumed by humans. The remaining 75 to 90 per cent are ground up into fish meal and oils to feed pigs, cattle, farmed salmon, and chicken, or are used as bait to catch larger fish – an inefficient use of perfectly edible protein.

Aside from their merits as a sustainable food source (visit [SeaChoice.org](http://SeaChoice.org)), small fish are inexpensive, typically caught without using a lot of fossil fuels, and among the healthiest foods a person can eat.

Health Canada recommends that pregnant women eat sardines and similar seafoods because they are valuable sources of omega-3 fatty acids, vitamins, calcium, and protein.

Because these fish are found in tight schools, capturing them requires little chasing around, dragging of nets, or setting of lines, so their carbon footprint is low. Some research suggests that small pelagic fish may be the most efficient protein system in the world in terms of the energy used to capture them.

In 2009, B.C. sardine fishermen received about three cents a fish. I could go to Port Hardy during sardine season and buy a truckload for the price of an average Canucks ticket, \$150. This same mass of halibut would cost about \$15,000 – 100 times more.

You'd think that any food that is tasty, healthy, sustainable, and cheap would be a preferred consumer choice, but direct per capita consumption of these types of fish in North America has dropped steadily since about 1985, and last year, the only remaining sardine and herring canning plant in the United States shut down.

The trend in the U.K. and Europe is the opposite. There, these types of fish are steadily growing in popularity. In the U.K. alone, demand for the Cornish sardine went from seven tonnes a year to 1,800 tonnes in less than 15 years, an increase attributed to consumers wanting local, nutritious, and sustainable options.

Sardines are the second-largest fishery in Canada's Pacific waters. But about half of the British Columbia catch is sold as bait for the high-seas long-line fishery for tuna – ironically, a highly unsustainable enterprise. Less than a fraction of a per cent is actually eaten by Canadians. On the Atlantic coast, only a small proportion of the herring caught is eaten by humans. The rest provide bait for the lobster fishery.

Sardines are a true rarity – a guilt-free food item. Every serving is one less used as bait or eaten by a

pig, chicken, cow, or farmed salmon. Given the nutritional value of sardines and other small fish, it's possible that eating them is one of the secrets to the success of the Sedin brothers. After all, they're from Sweden, where small fish have always been a popular food choice.

Learn more at [www.davidsuzuki.org](http://www.davidsuzuki.org).

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### **Website links and resources**

[Daniel Pauly](#)

[National Geographic Seafoodprint study](#)

[Small fish](#)

[SeaChoice](#)