

In my editorial I explicitly and repeatedly refer to “swordfish or tuna from overfished and declining stocks” and to “Mediterranean swordfish.” Even the ICCAT report Kerstetter cites suggests that the Mediterranean swordfish stock is in crisis. So what is the point of criticizing my editorial on the basis that another swordfish stock can be “proudly” eaten because, in Kerstetter’s words, it has “rebound[ed] to near maximum sustainable yield levels”?

The government of Greece has recently set the minimum commercial size for swordfish to zero, thus further promoting the removal of juveniles, a policy to which the EU appears complacent. Italy persistently keeps deploying pelagic driftnets targeting swordfish. These nets kill cetaceans, sea turtles and manta rays and are banned from EU countries. Similar examples of mismanagement are found everywhere (with some exceptions of course), and the devastating global impact of overfishing has become so outrageous that it is now featured in high-profile documentary films such as “The End of the Line.” Loss of large marine predators and shifting environmental baselines are increasingly well documented worldwide. In such gloomy circumstances, I believe pride should stem from actions other than eating swordfish.

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Sedentarization of Tibetan Nomads

A recent sedentarization program was officially launched by the government of southwest China’s Sichuan Province, the so-called “new tent-dwelling life” project (NTDL), which plans to help nomadic Tibetan communities build permanent houses to improve their living conditions. Historically, most of this region was inhabited by Tibetan mobile pastoral-

ists, who lived in felt tents and moved with their herds to different seasonal pastures. Official statistics show that among the 112,000 families of 533,000 Tibetan herdsmen in Sichuan, 219,000 still have no fixed residences and 254,000 are living in shanty houses. It is hoped that the NTDL will benefit those 473,000 unsettled or poorly sheltered herdsmen and their families. According to the government’s plan, from 2009 to 2012, Sichuan will spend ¥18 billion (U.S.\$2.6 billion) to construct 1409 permanent settlements within a total area of 240,000 km² (approximately equivalent to the area of the United Kingdom) in 29 pastoral counties.

It is likely, however, that the NTDL will pose great challenges to the environment, especially in the Qinghai-Tibet Plateau, which is a unique and fragile high-elevation ecosystem (Xin 2008). For ecologically sustainable development on the scale of an entire plateau, we think it is important to study the ecological effects of sedentarization systematically. Similar housing projects have been carried out in the neighboring Tibet Autonomous Region and northwestern provinces of Qinghai and Gansu, but scientists, conservationists, and politicians have overlooked the ecological effects.

The ecological impacts of the NTDL will manifest themselves in several ways. For example, biodiversity and ecological processes in the region may be affected through immediate habitat loss and increased fragmentation of the alpine grasslands. Areas near permanent settlement sites will face more pressures because the ecosystems will be disturbed by human and human-associated activities such as habitat modification, construction works, introduction of new predators or competitors, and overgrazing. That construction of 10,000,000 m² of settlements and >12,000 km of roads will lead to additional landscape conversions is inevitable. New road networks will also result in increased accessibility to natural grasslands. In

addition, the NTDL will promote local tourism and related economic development, and more people will move to the region and tax an already heavily burdened landscape. Although the development will create excellent opportunities, it will also increase the risk of pollution, habitat destruction, and introduction of exotic species (Liu & Diamond 2005). One particularly important issue for the NTDL is the possible loss of Tibetan pastoral mobility, which is an integral and dominant component of ecosystems in the plateau and is essential to their structure and functioning. Over time this loss will become apparent and will have profound ecological effects on biodiversity and ecosystem functioning.

Undoubtedly, the NTDL will have significant impacts on biodiversity and ecosystem properties in this region, and there is an increasing likelihood that the grassland ecosystems will be degraded and that pastoral systems will become increasingly vulnerable. The outcomes of this program should not go unstudied. We view the NTDL as an extraordinary opportunity to unravel the dramatic and complex effects of sedentarization on the environment on a grand scale. To fully appreciate the multi scale and multidimensional ecological effects, it is critical to establish long-term monitoring programs with permanent field sites and to conduct initial field surveys to establish credible reference conditions for future research.

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