

Status Survey

# Sharks, Rays and Chimaeras: The Status of the Chondrichthyan Fishes

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# Executive Summary

Sharks and their relatives – the batoids (including skates, rays, guitarfishes and sawfishes) and chimaeras – are a diverse group of cartilaginous fishes (class Chondrichthyes), comprising about 1,200 living species. Unfortunately, the life-history traits that have served these species well during their 400 million years of evolution (slow growth, late maturity, and low rates of population increase) also make many of them vulnerable to intense human exploitation.

Shark fisheries have historically been undervalued and ignored by fishing interests, managers and conservationists. But no longer: many species are now taken in vast numbers in both directed commercial, subsistence and recreational fisheries, and as bycatch in fisheries targeting other species. Rapid expansion of the trade in shark fins in recent decades has led to the widespread practice of shark finning and altered the landscape of shark management and conservation. Sharks are now among the world's most versatile and valuable fishery resources, providing an important source of protein in some regions and luxury goods in others.

With this rise in commercial value of sharks, the threats to their populations have also escalated. These include directed fishing, bycatch, habitat loss and habitat degradation from a variety of assaults. Fishing is, by far, the largest cause of chondrichthyan depletion worldwide. Many historic shark fisheries were characterised by boom-and-bust cycles of exploitation, making the fishery economically unviable while leaving behind a locally depleted population to recover over time. But as fisheries have expanded during the past two decades, in many waters to meet the growing demand for shark fins, few shark populations now remain unexploited or are given the opportunity for recovery. Reported global landings have increased steadily since the early 1950s, when they were around 200,000t. By 2000, 828,364t were landed according to the United Nations Food and Agriculture Organization's (FAO) fisheries data, yet even this is likely to be a gross underestimate of actual mortality. It is impossible to predict the effect that such exploitation, when compounded by the insidious and poorly quantified threats from habitat loss and global climate change, will have on the oceans' sharks.

Despite increasing concern over the vulnerability of sharks to this overexploitation, effective international shark conservation and management remains woefully lacking. Some progress has been made through the adoption of the FAO International Plan of Action for the Conservation

and Management of Sharks, but its implementation is extremely slow. Only a very few depleted species that enter international trade are listed in the CITES Appendices (Convention of International Trade in Endangered Species of Wild Fauna and Flora). Many other conservation and management tools are available to help ensure sustainable shark fisheries, but the political will to implement these tools must still be generated.

The IUCN/SSC Shark Specialist Group (SSG) has prepared this Status Survey to provide a comprehensive resource documenting the biology, threats, and opportunities for global action for the conservation of chondrichthyan fishes. The Survey arose out of widespread concern that many populations are in serious decline worldwide, resulting from expanding exploitation largely in the absence of fisheries management, conservation measures, or reliable data to guide sustainable fisheries. Its eight chapters include information on taxonomy, biology, and life history; the products, trade, and economics of exploitation; regional reports summarising shark fisheries from nine geopolitical SSG regions and their fishing nations; and status assessments for more than 100 species. The wealth of information collected here reflects the wide variety of work undertaken by the global SSG network.

This Status Survey will be widely distributed to SSG members, research and academic institutions, fisheries departments, the Food and Agriculture Organization, regional fishery organisations, conservation groups and concerned individuals, in the hope that it will inspire and form a strong scientific foundation to promote the conservation and sustainable management of chondrichthyan populations and their habitats around the world. It will also regularly be updated and expanded on the SSG website <http://www.flmnh.ufl.edu/fish/organizations/ssg/ssg.htm>.

The Status Survey also sets the stage for a Conservation Action Plan, which will be published as a separate document to identify priorities and a global strategy for the conservation of sharks and their relatives.

The SSG will use this report and the forthcoming Action Plan to guide its future activities, encourage and direct research, conservation and precautionary management activities from international to domestic levels, and for fundraising to support these efforts. Without such initiatives, chondrichthyan populations and the fisheries they support will not be viable for much longer.

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