1 Summary

Changes in the abundance of commercially important crustaceans in the North Pacific led PICES to form Working Group 12 in 1997. Objectives were to identify important North Pacific crustacean stocks, to describe historical changes in their abundance, to identify current research programs on them, and to clarify mechanisms that might account for their observed patterns of abundance. The PICES Region includes almost all of FAO Statistical Areas 61 and 67 and a small portion of Area 71. The Region in 1998 provided 48% of world crab landings and 45% of world shrimp landings, excluding data from North Korea.

The world-wide importance of the PICES Region with respect to crustaceans has been increasing over the last 15 years, with crab and shrimp landings increasing at an annual compound rate of 7.8% and 8.2%, respectively. Of the 48 crustacean species that have accounted for commercial fisheries landings in the PICES Region, 33, or 69%, are endemic to it.

Five FAO species groupings (16 species in four families) make up 79% of crab landings in the PICES Region. Four of these are brachyurans and the other is an anomuran (king crabs). The gazami crab (Portunidae, *Portunus trituburculatus*) fishery in the Yellow Sea area alone represented 39.5% of landings over this period. Harvested snow and Tanner crabs (Majidae, *Chionoecetes* spp.) include five species. Landings of king crabs (Lithodidae) include three species of *Paralithodes* and two species of *Lithodes*. The Dungeness crab (*Cancer magister*) is the largest cancrid in the Pacific and supports an important eastern Pacific inshore fishery from the eastern Aleutian Islands south to California. Hair crab (*Erimacrus isenbeckii*), rock crabs (*Cancer* spp.) and sheep crab (*Loxorynchus grandus*) provide small fisheries in the PICES Region, but except for hair crab, fisheries are poorly documented.

Three families of shrimps are commercially important in the PICES Region, and their landings have made up 93.8% of shrimp landings within the PICES Region over the last 15 years. Sergestidae includes the akiami paste shrimp (*Acetes chinensis* and *Acetes japonica*), that supports the largest shrimp fishery in the PICES Region, as well as the world. Penaeidae occur in the waters of China, Korea and southern Japan, and major fisheries exploit Kuruma shrimp/prawn (*Marsupenaeus japonicus*); the cocktail, or southern rough shrimp (*Trachysalambria curvirostrus*); fleshy prawn (*Fenneropenaeus chinensis*) and Shiba shrimp (*Metapenaeus joyneri*). The Pandalidae include the genera *Pandalus* and *Pandalopsis* and this family accounts for virtually all shrimp landings from northern Japan around the North Pacific rim to California. In terms of volume, the northern shrimp (*Pandalus borealis,* or *eos*) and the ocean shrimp (*Pandalus jordani*) have been most important economically, although six additional species have contributed substantially to the catch in various areas. There have been some recent attempts to exploit deepwater glass shrimps, Family Pasiphaeidae. Other species of shrimp such as many Crangonidae, which provide important commercial fisheries in the northeast Atlantic, are present in the PICES Region but are only harvested to a minor extent or as incidental catch.

Mantis shrimps, stomatopods (Squillidae) that are not closely related to the more familiar decapod shrimps, are briefly discussed for comprehensiveness, although the only species commercially exploited is *Oratosquilla oratoria* in the Bohai Sea. Mantis shrimps are widely distributed in Chinese waters and are also found around Korea and Japan, where they used to be historically more important. Spiny lobsters (Decapoda, Palinuridae) are exploited in Japan, South Korea, and China (*Palinurus japonicus*), and in California (*P. interruptus*).