

How tasty is the Chinese mitten crab in Flanders?

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The Chinese mitten crab *Eriocheir sinensis* is, as its name predicts, originally from China. Presumably this crab immigrated to America and Europe as larvae in the ballast water of ships. In contrast to China, in Europe the crab is not so appreciated. It is an invasive exotic species that provides economic and ecological damage in both freshwater and saltwater. The crabs dig burrows in levees and riverbeds, influencing the stability of dikes. The crab can also damage nets and fishing gear, or eats the bait. The crab is omnivorous, and might threaten also indigenous species. The Chinese mitten crab is thus responsible for many problems, but in Flanders there might be a simple solution. In China and Japan, the crab is a true delicacy. The question is now: could this crab be promoted as a delicacy here too? The rivers where this crab lives here, such as the Scheldt, are surely contaminated with substances harmful to human health.

Water quality monitoring in the Westerschelde shows that the pollution consists primarily with heavy metals, Polycyclic Aromatic Hydrocarbons (PAHs), dioxins and dioxin-like substances. Because the metals are present in the water and bottom sediments, they end up in the food of the crab and might therefore accumulate in the meat of the crab that would be consumed by humans. Research from the Netherlands and England confirmed that the crab actually can contain contaminated meat. The pollutants in the meat can increase the risk of renal failure, liver failure and various cancers significantly. To investigate the suitability of the Chinese mitten crab for human consumption, it is necessary to estimate the amount of absorbed contaminants. This study aims to calculate the amount of Chinese mitten crab that can be consumed without exceeding the tolerable daily intake. The risks associated with the intake are also examined.