MONASH University

Media Release

Date: 8 July 2008

Mercury contamination found in stranded dolphins from Victoria

Recent research into contaminant levels in stranded dead dolphins from Port Phillip Bay and the Gippsland Lakes has revealed that mercury may be a contributing factor to dolphin deaths. Mercury is likely to have come from the sediments of the Bay and the Lake, and there is concern that dredging activities may increase the dolphins' exposure.

Researcher from Monash University, Alissa Monk, says 'levels of mercury found in dolphins from both Port Phillip Bay and the Gippsland Lakes are within a range considered to cause negative health effects, and are high compared to most other dolphin populations from around the world '.

Ms Monks' work, under the supervision of Dr Ross Thompson at the School of Biological Sciences, and supported by Coastcare, West Gippsland CMA, the Gippsland Lakes Board and the Dolphin Research Institute, has measured a range of contaminants in dolphins and their food sources. Mercury levels found in fish were considered low and were fine for human consumption. However dolphins are more at risk of mercury contamination than other marine life because of their place in the food chain and the amount of food they consume – a process called biomagnification. The smallest ocean life ingest mercury-contaminated food, and are then eaten by large fish, which are ultimately fed on by dolphins. Dolphins consume large amounts of fish – sometimes as much as 10 kilograms of fish per day – and have a long life span of around 20 years. Therefore they accumulate large amounts of mercury over their lives.

Mercury has been shown in previous studies to bioaccumulate in dolphins, but this is the first study to find particularly high levels in stranded animals in coastal Victoria. Of particular note was the fact that dolphins washing up dead on the coast had considerably higher mercury levels than live dolphins in the same area. It is feared the live populations may be jeopardised by the release of more contaminants.

Dr Ross Thompson suggests the sediment contains mercury, which in Port Phillip is likely to have originated from historical gold mining sites, where mercury was used in gold processing, and potentially industrial sources. "Over time, the mercury has been washed down through waterways, including the Yarra River, and come to rest on the bottom of the Bay" Dr Thompson said. Lakes?

Fellow researcher from Monash University studying the genetics of the dolphins, Kate Charlton, says 'the levels found are a concern to these populations'. Ms Charlton's research has found the dolphins in Port Phillip Bay and the Gippsland Lakes represent a potential new species that has been long isolated. Ms Charlton states 'the population sizes are considered small, with approximately 90 individuals in Port Phillip Bay and 50 in the Gippsland Lakes, and the loss of an individual, especially a breeding female, is of great concern'.

Dr Thompson said it is critical that further studies are done throughout the bay dredging process to ensure any further decline in dolphin health can be identified and managed.