

A new trend in destructive fishing activities in riverine habitats of Sri Lanka

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Decline in native fish populations in riverine habitats of Sri Lanka is attributed to interaction of a number of human induced factors foremost are deforestation, improper use of agrochemicals, over exploitation, introduction of exotic species and destructive fishing activities, etc. Use of plant-derived poisons and dynamiting for killing fish, which are legally prohibited are known to pose threats to freshwater biodiversity in several river basins of Sri Lanka. We observed a new trend of destructive fishing especially practiced in the Mahaweli river basin of Sri Lanka. A highly toxic chemical substance that is occasionally applied to kill external parasites of farm animals such as ticks and mites is used to kill fish and shrimps in streams of Mahaweli river basin. The people living in the Amban Ganga catchment and around irrigation canals in Anuradhapura and Polonnaruwa districts are largely engaged in this destructive practice. The chemical widely employing is 'Dipterex' commonly known as trichlorfon or the commercial trade name of NEGUOEN (generic name is dimethyl phosphonate). Dipterex is a white crystalline water soluble solid organophosphate pesticide of half life >40 days. It is known to be highly toxic to fish and wildlife and is extremely toxic to aquatic invertebrates; acute toxicity for freshwater fish 1.6 - 180 ppm and for invertebrates 0.18-7300 ppb. After applying a quite high dosage of dipterex into a water body, it mixes up with water rapidly forming a white cloud and leads to a sudden kill of all macro invertebrates and small fish in the streams. Although this particular toxic substance is sold in the market only on the prescription of a veterinary surgeon, its misuse in the streams for killing fish and invertebrates is a threat not only to freshwater biodiversity but also to human health since people consume these poisoned fish and shrimps as a food. Application of dipterex is largely practiced by people in the eastern slope of Knuckles mountain region in the Mahaweli river basin. The species caught using this destructive fishing methods included the endemic fish species namely *Puntius martenstyni*, *P. srilankensis*, *P. sinhaia*, *Carra ceylonensis*, *Chela ceylonensis*, *Schistura notostigma* and *Belontia signata*. Indigenous fish species caught were *Heteropneustes fossilis*, *P. dorsalis*, *P. vittatus*, *P. bimaculatus*, *P. ticto*, *Rasbora caveri*, *R. daniconius*, *Lepidocephalichthys thermalis*, *Macrones vittatus*, *Etroplus maculatus*, *Glossogobius guiris* and *Awous melanocephalus*. *Caridina* spp. and some crabs were also killed significantly by this destructive method. We appeal that stern action should be taken immediately to ban this destructive fishing method in Sri Lankan streams and irrigation canals.