

# **Potential Ecological Hazard Association with Agrochemicals Management in Dry Zone of Sri Lanka**

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## **Abstract**

Agro pesticides are mostly organic chemicals which are used in pest and disease control in agricultural production. Among the various pest controlling measures, use of pesticide is popular due to its high potential to kill pest and quick activity. Overuse and misuse of pesticides are very common among the agricultural communities due to various reasons. Situation can be critical in dry zone of Sri Lanka due to a cascade system where the water is used to irrigate one set of field in a upper elevation is drained off to another water storage body and used for human consumption and irrigation of another set of fields in the lower elevation. This creates many environmental problems such as, contamination of soil, ground water and surface water bodies, and bioaccumulation of toxic substances.

Research was conducted to determine the pesticide residues in surface water bodies of selected site at Galgamuwa in system Mahaweli. Meegalawa tank and its catchments area were selected as study site for the research, where located in lower elevation of the main study site of the Managing Agrochemicals in Multi-use Aquatic System(MAMAS) project. This was done by analyzing residues of most commonly used pesticides (Chlorpyrifos, Propanil. and Dimethoate) using gas chromatography.

In pesticides residue analysis, out of five samples both propanil and chlorpyrifos were identified in two samples which were taken from Meegalawa tank and distribution channel, residues of propanil was detected in another sample which was taken from one of the field channel. The residue of dimethoate was not detected in any of the sample. According to this study, it is concluded that residues of pesticides are present in the surface water bodies.