

Interactive comment on “Status of organochlorine pesticides in Ganga river basin: anthropogenic or glacial?” by P. K. Mutiyar and A. K. Mittal

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Organochlorine pesticides are ubiquitous in environment due to their persistence as different researches confirmed their presence in different environmental components. Some of these pesticides are banned for agriculture use however their restricted use is allowed in vector control programs in India. Some of these pesticides may found in other pesticides e.g. Dicofol or kelthane may contain DDT impurities. The research paper on OCP residues in Ganga river basin covering 3 states further strengthen the findings of OCP persistence and their use in India. Water of river Yamuna a major tributary of River Ganga was also found to contaminated with varying levels of these pesticides in Haryana and Delhi state (Kaushik et al. 2008). The present study is important to understand the spatial pattern of these pesticides in different regions of

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India. However, I want to highlight some points in the paper as: 1. At page 3 lines 14-17 author mentioned that OCP are banned recently? It would be better if they clear on which context they are reporting on Global or country scale. Also DDT is banned for agriculture from 1989? It's better to modify this statement. 2. On the same page lines 18-19 author write that there is so single study on Ganga basin however river Yamuna is also a part of Ganga basin and there are published research on Ganga basin like of : A. Agnihotri, N. P., Gajbhiye, V. T., Kumar, M., & Mohapatra, S. P. (1994). Organochlorine insecticide residues in Ganga river water near Farrukhabad, India. *Environmental Monitoring and Assessment*, 30, 105–112. B. Mohapatra, S. P., Kumar, M., Gajbhiye, V. T., & Agnihotri, N. P. (1995). Ground water contamination by organochlorine insecticide residues in a rural area in the Indo-gangetic plain. *Environmental Monitoring and Assessment*, 35, 155–164. C. Singh, K. P., Malik, A., Mohan, D., & Sinha, S. (2005). Persistent organochlorine pesticide residues in alluvial groundwater aquifers of Gangetic plains, India. *Bulletin of Environmental Contamination and Toxicology*, 74, 162–169. D. Micropollutants levels in macroinvertebrates collected from drinking water sources of Delhi, India. H. R. Sharma, R. C. Trivedi, P. Akolkar and A. Gupta. *International Journal Environmental Studies / (A Taylor & Francis Group, U.K)* 60(2): 99–110 (2003). E. Kaushik, C. P., Sharma, H. R., Jain, S., Dawra, J., Kaushik, A. (2008). Levels of pesticide residues in river Yamuna and its canals in Haryana and Delhi, India. *Environmental Monitoring and Assessment*, 144, 329–340. F. Kaushik, A., Jain, S., Dawra, J., Sahu, R., & Kaushik, C. P. (2001). Heavy metal pollution of river Yamuna in the industrially developing state of Haryana. *Indian Journal of Environmental Health*, 43(4), 64–168.

In this case I advised the authors to rewrite their statement.

3. As beta-HCH was found in most of the samples of UK stretch, author can highlight and elaborate this finding. Among HCH isomers beta-HCH is most persistent and least reactive and even resistance to microbial degradation can be one of the explanation of more beta-HCH residues in water. 4. Author can compare his findings to see the

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trend in OCP residues in river water. 5. It would be better if authors can continue their research on OCP residues in soils and agricultural runoff during rainy seasons in Ganga basin to have more interesting and fact based findings.

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