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“Development on the margin”

## Adverse Effects of Agrochemicals on Migratory Waterbirds in Africa

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### Abstract

Available information shows that the number of migratory birds is declining, but so far reasons are unknown. It is hypothesised that agrochemicals have adverse impacts on migratory waterbirds. In particular, fertiliser pollution can cause the destruction of their habitats and pesticide pollution can deprive them from their food or intoxicate them, consequently leading to metabolic disturbances, breeding failures, or instant death. Object of research was to find out, if the decline of migratory waterbirds might be a result of their residence in Africa.

The information of the entire study was derived entirely from publications and grey literature. The data available at the time this thesis was written must be considered insufficient to deliver scientific evidence because of lack of recent data. Hence, all findings are preliminary. Conclusions made cannot be interpreted as proof but could be used as indicators for further empirical research.

Focus was put on the species covered by the African Eurasian Waterbird Agreement (UNEP-AEWA). Information about breeding time, feeding habits, habitats and time of residence in Africa was derived from literature. It was then correlated with information about population size, population trends, distribution, and migratory behaviour derived from UNEP-AEWA.

Data about the application of pesticides in Africa is scarce or if available out-dated or inconsistent. Pesticide legislation, particularly in sub-saharan Africa, is weak. Their prices have increased since the implementation of structural adjustment programmes in the 1990s. African farmers rely on pesticides and the majority of poor farmers acquire pesticides of doubtful quality from illicit sources and lack knowledge about the correct handling of pesticides as described in the used literature.

Environmental destruction and pesticide pollution have occurred in the past and are still occurring today on an increasing scale. Information about population declines, breeding time, feeding habits, habitats of the birds covered by UNEP-AEWA combined with the information of the unregulated pesticide markets, allow the assumption that pesticide application, mostly overdosed, is contributing to the declining numbers of migratory waterbirds.

**Keywords:** Africa, agrochemicals, fertilisers, pesticides, waterbirds