

FOSAF's response

Dr W R Bainbridge
Chairman,
FOSAF Environmental Committee

Leonard Flemming is to be commended on his response article to Dean Impson's proposal to use piscicides as a tool for, as he puts it, 'saving threatened fish and rehabilitating inland waters'. A number of Flemming's observations (such as that relating to trout co-existing with indigenous fish species) corroborate similar observations that some of us have made in the summer rainfall areas. Flemming raises a number of critically important questions which we believe must be addressed. Further, we are of the opinion that in order to satisfy Section 75 of NEM:BA, these questions should be addressed **prior** to the implementation of the proposed field operation to apply rotenone to certain Western Cape rivers. In our view, authorization for the exercise to proceed, should be given only when the full impacts and possible mitigation measures, are fully understood, in the spirit of the National Environmental Management Act.

Impson states in his article, that an Environmental Impact Assessment will be undertaken prior to the proposed application of rotenone. We believe that a number of the key issues raised by Flemming should be addressed in the EIA and any concerns addressed before the proposed application of rotenone is permitted to take place. As a minimum, the following should be included:

The concerning fact that apparently no environmental impact studies have been undertaken on the use of rotenone in this country; and as a consequence, many uncertainties must exist on this issue, including possible complications related to such issues as strain-specific extinction of fish and aquatic insects. We ask whether sufficient is known about the use of rotenone **and the possible risks involved in its use in South African river systems**, to justify these trials proceeding? We also enquire whether there is reasonable certainty that the exercise will not incur yet further harm?

We believe that the relative importance of alien fish as a threat to indigenous aquatic biodiversity, as compared to the environmental factors listed by Flemming and others (see e.g., the FOSAF Policies and Objectives and the Trout Position Paper) should be assessed, in order to determine whether these may have been over-estimated, as also suggested by Flemming. As far as FOSAF is aware, the effect of alien fish in this context has generally been considered to be of lower significance than other environmental stressors like pollution, water abstraction, damage to the riparian zone, etc. If, as many of us believe, these other factors are indeed more cogent problems than are posed by alien and invasive fish, then surely priority should be given to addressing these prior to considering the use of rotenone? Not that we are saying that the alien fish problem should not also receive attention, just that we should get our priorities right.

Should the alien fish threat prove to be significant, we need to know whether there is clear evidence that the use of rotenone to remove the alien fish would be the most effective and

appropriate means of addressing this threat.

In the event that the use of rotenone is considered the most appropriate method for addressing the issue: What are the possible or likely risks that could be incurred by the use of rotenone, as compared to the expected benefits, and what measures must be taken to neutralize the rotenone once it has passed the area to be treated, bearing in mind its toxic and blanket-effects qualities? (According to Hinson (2000), rotenone can cause water to have a bad odour and taste. He warns also that rotenone is not only toxic to target organisms like fish, but is also potentially toxic to non-target organisms, including humans). The point is how will these potentially harmful effects be mitigated?

In conclusion, and in view of the highly controversial and potentially risky nature of the proposed action, FOSAF proposes that in terms of Section 75 (5) of NEM:BA, the Minister of Environmental Affairs and Tourism should be requested to establish an oversight committee comprising both suitably qualified and experienced professionals and stakeholder representatives to undertake inter alia, the following:

Oversight of the EIA process that is to be undertaken; and

The implementation of the proposal to use piscicides (rotenone) if this is found to be appropriate.

Acknowledgment.

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Reference

Hinson, D. 2000. Rotenone characterization and toxicity in aquatic systems. Principles of environmental toxicology, University of Idaho. [Online] www.agls.uidaho.edu/etox/resources/case_studies/ROTENON2.PDF

"An undisturbed river is as perfect as we will ever know, every refractive slide of cold water a glimpse of eternity."

Thomas McGuane, Midstream, an outside chance, 1990.

"The body and spirit suffer no more sudden visitation than that of losing a big fish, since, after all, there must be some slight transition between life and death. But, with a big fish, one moment the world is nuclear and the next it has disappeared. That's all. It has gone."

Norman Maclean.