

Beware flying mud!

Helene Marsh suggests how researchers can safeguard their reputation

CONSERVATION is no stranger to controversy. As Charlie Pye-Smith recently reported, pressure groups often draw conclusions that go beyond the evidence, and take scientific findings out of context (This Week, 9 January, p 16). My own ecology group's 25-year study of a threatened marine mammal—the dugong—initiated a battle between fishers, conservationists and government management agencies in Australia. Our research, which showed that there had been a decline in dugong numbers in the southern Great Barrier Reef region, was misrepresented and sensationalised by protagonists on both sides of the debate.

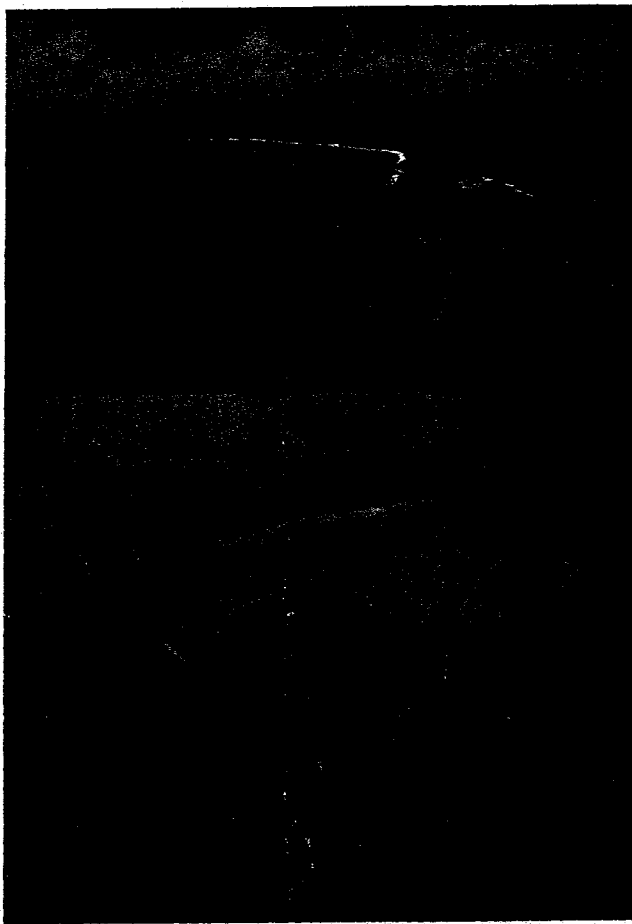
The plight of the dugong in Queensland has been a hot issue for several years. By 1996, the Australian government was under great public pressure to protect this walruslike animal. In 1997, the Great Barrier Reef Marine Park Authority released a report based on our research in which it proposed the setting up of dugong sanctuaries. The GBRMPA's report had not been peer reviewed. Subsequently, the Australian and Queensland governments decided to set up "dugong protection areas" where gill nets—suspended vertically in the water—would be limited or eliminated. Conservationists had claimed that dugongs were drowning in gill nets.

A self-proclaimed "wise-use group" mounted a vitriolic campaign of letters and press releases slurring the professional reputations of the researchers involved. It professed outrage that the governments had succumbed to demands from conservationists to close fishing operations without considering that loss of habitat might be contributing to the dugongs' decline. Our research group was pilloried because the report had not been peer reviewed, even though it was the GBRMPA that decided to go ahead and publish.

The wise-use group used anonymous scientists to challenge the significance of our findings. Yet our research had been peer-reviewed and published in journals

such as *Wildlife Research* and the *Journal of Wildlife Management*, as well as various GBRMPA publications. But the wise-use group accused the scientists of "wilfully engineering an artificial emergency to milk the public purse".

Mud sticks, so with wisdom born of hindsight—and after discussions with colleagues who have had similar



experiences—I would like to suggest ways in which scientists can limit the impact that this kind of exposure can have on their professional reputations.

Firstly, many government agencies require that the reports they commission be peer-reviewed to ensure quality control. If they don't, the scientists involved should insist on this practice as part of their contract with the commissioning body. Second, it is worth remembering how easy it is to unwittingly prompt an extreme response by making statements that are insensitive to the protagonists in a dispute.

Third, scientists should omit equivocal material that is not central to their argument, as it may distract attention from the main evidence. A useful strategy is to produce a draft report for review by independent readers from a range of backgrounds. One may assume that lobby groups are likely to hire their own scientists to criticise your work once it is released, so it is as well to check your arguments first.

Your advisory role as a scientist can be emphasised in a report by providing a menu of options, each with its associated costs and benefits, instead of a doctrinaire recommendation. This approach can be very powerful. Not only does it enable the consequences of the "do-nothing" option to be presented, but it can also protect your work from extremist interpretation. A range of options is a much less well-defined target than a single recommendation, and is likely to be more independent of your personal values.

Finally, scientists negotiating the terms and conditions for reviews of controversial issues should aim to retain the right to publish and to make media comment on their reports, especially if they have had only limited input into the review's terms of reference. A media strategy developed by the scientists and the commissioning agency is helpful. Many scientists are uncomfortable when dealing with the media: reputable media

training courses may prove enlightening and helpful in this situation.

Scientists must not assume that the public will understand their work, or that others will successfully—and fairly—present their studies for them. It is time that the scientific community accepted the challenge of publicly accounting for its research. □

Helene Marsh is professor of environmental science at James Cook University of North Queensland, Townsville, and a programme leader in the Cooperative Research Centre for the Ecologically Sustainable Development of the Great Barrier Reef