10. RESEARCH GAPS

In researching for this review, the most significant deficiency in information relates to the limited number of independent, comparative studies of antifouling coating performance on any scale. The exceptions are the international program of panel trials of extensive ship patch trials of non-toxic coatings in the WWF-LimnoMar program in Germany (Watermann *et al.*, 1998, 2001), and the Environment Australia funded antifouling patch trial project and DSTO/RAN projects in Australia. Most other information on performance and efficacy of products comes from trials conducted by the paint manufacturers themselves and, understandably, only positive outcomes are publicised.

Also, despite the considerable number of research programs underway worldwide directed at finding new methods of fouling prevention and control, the limited number of commercially-available alternatives to TBT products highlights the continuing need for research in this area. Few active agents or processes identified in research programs have been transitioned through to commercial products and research to facilitate this process is warranted. Such research would include both the development of technologies into usable products, and determination of environmental and ecotoxicological characteristics necessary for the approval and registration of any new bioactive substance or process. Ways of facilitating technology transfer and linkages between research organisations and paint manufacturers also warrant investigation.