EUROPEAN LAKES UNDER ENVIRONMENTAL STRESSORS
SPECIAL FOREWORD

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Frequented lakes are multipurpose or multifunctional lakes – that is, they both serve as an ecosystem and perform economic services. These services some-times – maybe too often – are contradictory. In the EULAKES project (acronym for: European Lakes under Environmental Stressors), four European lakes have been 'delegated': Lake Garda from Italy, Lake Neusiedler from Austria, Lake Charzykowskie from Poland and Lake Balaton from Hungary. They represent different geographical regions and different waterbody types, but they share one important characteristic feature: several anthropogenic stressors have impaired their environmental quality and ecosystems. EULAKES on one hand is aimed at identifying common stressors and problems, and perhaps at working out common tools to cope with them, but on the other hand, each lake runs a pilot study where a lake-specific stressor is addressed.

For Lake Balaton, we have selected the problem of non-indigenous species. Many exotic species, either deliberately or unintentionally introduced, cause vast ecological and economic damage, and sometimes human health impacts (e.g., PIMENTEL *et al*. 2005, SMITH *et al*. 2009). Left unchecked, many invaders have the potential to transform entire ecosystems, by causing changes in the physical or chemical characteristics of the habitat by out-competing native species for available resources or by reducing native populations by predation (SUTER 1993). They might drive disease emergence by 'importing' parasites and pathogens (PEELER *et al*. 2011). Aquatic ecosystems are especially vulnerable to the establishment of non-indigenous species (KOLAR & LODGE 2002), due to intense human use of rivers and lakes.

Many non-indigenous species cause minimal environmental impacts, as predicted by the often cited 'tens rule' (WILLIAMSON & FITTER 1996). This rule holds that approx. 10% of species introduced will become established, and again, approx. 10% of established those species will become invasive, but these 'top ten' will have catastrophic impacts. In general, the introduction of alien species (AS) into aquatic environments is considered a factor of disturbance and these species can be viewed as pollution agents (OLENIN *et al.* 2007); even the terms biopollution and biopollutants have been introduced (BOUDOURESQUE & VERLAQUE 2002). Inva-

sive species, in another context, are regarded as a pressure on biological quality (EUROPEAN COMMISSION 2003).

Having realised the importance of the problem, it was decided to extend the scope of the conference beyond Lake Balaton (both in terms of taxa and habitats). Special thanks go again to the EULAKES (Ref. No. 2CE243P3) program for the supply and the financial support.

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