

Sustainable Aquaculture 2018, Hai Faisal I., Visvanathan Chettiyappan, Boopathy Ramaraj (Eds.), Series Title *Applied Environmental Science and Engineering for a Sustainable Future*, Springer International Publishing, Series ISSN 2570-2165, 1st Edition, 327 pp., 19 b/w illustrations, 71 color illustrations

This book contains 10 chapters dealing with important topics of nowadays aquaculture. The first two chapters: *Aquaculture and the Environment: Towards Sustainability* and *Sustainable Aquaculture: Socio-Economic and Environmental Assessment* offer a comprehensive description of the importance and relevance of aquaculture for mankind and environment/our planet. These first two chapters offer a clear view on the main topics linking productivity to environmental protection with special emphasis on fish health, aquaculture hazards and risk analysis. Two other important chapters of the book are focused on aquaponics *Aquaponics Production, Practices and Opportunities* and *Aquaponics: A Commercial Niche for Sustainable Modern Aquaculture*, the first one giving a good introduction to aquaponics whereas the second one is more focused on commercial aspects of aquaponics. Following the description of Aztec facilities (XVIth century) and Chinese achievements [dick pond systems (mid XIVth century) to modern recirculating aquaculture systems (RAS)], the book offers a living history of sustainable aquaculture being also an invitation to personal innovation and creative thinking. The comparison between the efficiency of food conversion by cold blood animals (e.g. fish) and warm blood animals further argue some advantages of fishes as compared with mammals. Again, these advantages are strongly related to the practice of recirculating aquaculture systems, in which the net consumption of fresh water is strongly diminished, with a concomitant significant reduction of environmental pollution. The chapter *Sustainable Aquafeed* discusses different trends in the production of good food for aquaculture, containing natural ingredients that offer functional benefits which allow optimal nutrient composition at a competitive price. Two other chapters, *Sustainable Fishing Methods in Asia Pacific Region* and *Sustainable Production of Shrimp in Thailand* deal with achievements done in specific/given geographical areas, but relevant for the whole domain of aquaculture. The attention done on sustainable fishing and industrial fishing is a very good example of responsible analysis concerning different aspects of this activity and mutual effects between environment and society, which could be important not only for those geographical areas, but also at global level. The last three chapters

focuss on very important aspects of aquaculture. The chapter called *Impact of Pharmaceutically Active Compounds in Marine Environment on Aquaculture* offers a critical discussion on the effect of the use of pharmaceuticals to prevent fish disease, whereas the chapter *Estimating Carbon Footprint Under an Intensive Aquaculture Regime* concerns the fate of greenhouse gases emission and cumulative energy demand during turbot cultivation in Spain under superintensive regime. Essential activities of any recirculating aquaculture systems are discussed in the chapter *Waste Treatment in Recirculating Shrimp Culture Systems*. Special attention is devoted to the use of pilot (500L) sequencing batch reactors (SBR) operating in aerobic and anaerobic conditions for 3 and 6 days, respectively strongly linking basic and applied microbiology with modern aquaculture techniques. Starting from lab scale SBFR (19L) to pilot ones (500L), the authors argue the usefulness of this technology in decreasing the carbon oxygen demand, ammonia, nitrite and nitrate.

The editors and contributors are well known personalities in the field, belonging to a rather limited (as compared with the spread of aquaculture around the world) number of countries. The book is well illustrated, thus helping the readers to understand it more easily.

In my opinion, this book is an essential read for advanced students, experimental researchers as well as policy makers and other professionals working in the field of aquaculture.

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