Recirculating aquaculture-Status and developments

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The cultivation of different aquatic organisms in recirculating aquaculture systems (RAS) is practiced since decades in Europe, USA and in other countries worldwide. Due to different limitations of open aquaculture systems (e.g. ponds or net cages), and restrictive regulations of water supplies and waste, water reuse is becoming more and more relevant. Whereas heated RAS in isolated buildings were already established in the 80s, the increasing use of the recirculation technology in cold water aquaculture (e.g. salmonid farming) is a relatively new development. When compared to traditional aquaculture, both-warm water RAS and cold water RAS are characterized by a comparatively sophisticated technology and high operating effort and capital costs. For successful RAS farming fundamental knowledge in the field of biology, production technology, mechanical and biological filtration, stock management, feeding, health management, controlling, biosecurity, and economics is essential. All this has to be considered for warm water RAS, which accomplish high recirculation rates, and cold water RAS with a higher daily water exchange. Actually, the production of different tropical fish and crustaceans, as well as species cultured under temperate temperature-including freshwater and marine organisms recently is rapidly developing.

Biography
Helmut Wedekind has completed his PhD and Post-doctoral studies on intensive catfish farming from Göttingen University. He is the Director of the Institute for Fisheries, part of the Bavarian States Research Center for Agriculture in Starnberg, which is a research and education center for fisheries and aquaculture. He has published papers in reputed journals and in national fisheries and aquaculture journals. Moreover, he is a Lecturer at the Technical University of Munich and other German high schools in the field of aquaculture.

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