

# Mr Steven Clarke, Aquaculture Subprogram

## SARDI AQUATIC SCIENCES

SARDI



SOUTH AUSTRALIAN  
RESEARCH AND  
DEVELOPMENT

### Areas of expertise

Aquaculture, Environment.

### Countries of work experience

Australia, Malaysia, Singapore, Vietnam.

### Overview of experience and qualifications

Mr Clarke has over 25 years post-graduate experience in aquatic sciences research, management, and industry and government liaison, including more than 15 years in aquaculture research and development.

Mr Clarke has experience in most aspects of research and development associated with the culture of a wide range of taxa, including algae, crustaceans, finfish and molluscs. He has led or been involved in aquaculture projects associated with the development and optimisation of manufactured feeds, culture system design, propagation, and the development of animal husbandry and farm management practices that optimise sustainable production of high quality products.

Mr Clarke has been responsible for environmental assessment and monitoring projects associated with the oyster and tuna industry in South Australia.

Mr Clarke has experience in aquaculture resource allocation, including the development of tender specifications for aquaculture management plans, preparation of background bio-geographic reports for management plans, the preparation of aquaculture management plans, and the provision of technical site assessments for aquaculture development applications. His 6 years experience in algal and seagrass community dynamics provides an important knowledge base for community mapping studies and the assessment of impacts on benthic communities.

Mr Clarke was the scientific leader for R&D of southern bluefin tuna aquaculture from 1990 to 2008, including the development of manufactured feeds for this species in Australia.

Mr Clarke was the leader for the production and value adding research programs for the Aquafin CRC from 2001 to 2008.

Mr Clarke has extensive knowledge of the international issues associated with aquaculture and with the operational needs of particular aquaculture industry sectors (e.g. finfish and shellfish culture).

As a member of various state and national committees Mr Clarke has provided scientific, technical and policy advice to government.

Mr Clarke has published extensively on aquaculture in the popular and scientific literature, as well as presented at many community, industry and scientific forums.

Mr Clarke has experience in teaching aquaculture subjects to Adelaide and Flinders University and Technical and Further Education students.

### Professional appointments

**2006-present:** Principal Scientist, Aquaculture, SARDI Aquatic Sciences.

**2001–2008:** Leader, Aquafin CRC (Australian National Cooperative Research Centre for Sustainable Aquaculture of Finfish), Production Program and Value Adding Program.

**1997–2008:** Leader, Australian National Fisheries Research and Development Corporation, Southern Bluefin Tuna Aquaculture Subprogram.

**1993–2006:** Aquaculture Program Leader, SARDI Aquatic Sciences.

**1987–1993:** Aquaculture R&D Manager, South Australian Department of Fisheries.

**1986–1987:** Abalone Research Officer, Eyre Peninsula.

**1984–1987:** Research Officer – Community Dynamics.

### Research and consulting

Numerous consultancies in South Australia, associated with the assessment, monitoring and management of environmental impacts.

Numerous consultancies in South Australia associated with the development of new aquaculture sites, species and technologies, as well as the reduction of risk and enhancement of competitiveness of existing aquaculture businesses.

Development, participation in and/or management of international aquaculture consultancies in India, Malaysia, the Middle East, Singapore and Vietnam.

### Selected recent publications

Allan, G.; Booth, M.; Mair, G.; Clarke, S., Biswas, A., (2009). Sustainable aquaculture of the bluefin and yellowfin tuna – closing the life cycle for commercial production. Proceedings of the 2nd Global COE Program; Symposium of Kinki University. 92 pp.

Chai, X., Li, X., Lu, R., Clarke, S.M., (2009). Karyotype analysis of the yellowtail kingfish *Seriola lalandi lalandi* (Perciformes: Carangidae) from South Australia. *Aquaculture Research* 40, 1735-1741.

Carter, C.G., Nowak, B.N., Clarke, S., (2010). The Tunas (Family: Scombridae). In: Species Selection for Diversification of Marine Aquaculture. Edited by Le Francois, N., Jobling, M., Brown, J., Blier, P., Carter, C. CAB International, Wallingford UK. p. 432 – 449.

Chen, B.N., Qin, J.G., Kumar, M.S., Hutchinson, W., Clarke, S., (2006). Ontogenetic development of the digestive system in yellowtail kingfish *Seriola lalandi* larvae. *Aquaculture* 256, 489-501.

Chen, B.N., Qin, J.G., Kumar, M.S., Hutchinson, W.G., Clarke, S.M., (2006). Ontogenetic development of digestive enzymes in yellowtail kingfish *Seriola lalandi* larvae. *Aquaculture* 260, 264-271.

Chen, B.N., Qin, J.G., Carragher, J.F., Clarke, S.M., Kumar, M.S., Hutchinson, W.H., (2007). Deleterious effects of food restrictions in yellowtail kingfish *Seriola lalandi* during early development. *Aquaculture* 271, 326-335

### Contact

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of South Australia