



# AASA2024

## CONFERENCE PROGRAMME



9 - 13 September 2024  
Stellenbosch, South Africa

### MONDAY, 9th SEPTEMBER 2024

Time TBC	<b>Aquaculture Investment Seminar - Lecture Room A201, JC Smuts Building</b>	(Free entry) Hosted by DFFE
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#### REGISTRATION AND WELCOMING FUNCTION

18:00 - 20:00 Welcoming function at DeWarenmarkt (20 Ryneveld Street)

### TUESDAY, 10th SEPTEMBER 2024

07:30 - 09:00 Conference Registration

#### OPENING SESSION - Room 3010

08:30-09:00 **Welcoming Addresses - (Chair: Prof Niall Vine)** Presenter

08:30 - 08:35 **Introduction and announcements** : AASA2024  
Conference Chair Henk Stander

08:35 - 08:40 **Conference overview:** Chairman of the Aquaculture Association of Southern Africa Niall Vine

08:40 - 08:50 **Welcome to Stellenbosch University**  
(Dean of the Faculty AgriSciences) Prof Danie Brink

08:50 - 09:00 **Opening Remarks** from the Western Cape Provincial Dept of Agriculture – Head of Department Dr Mogale Sebopetsa

09:00 - 09:10 **Fostering Partnerships: South Africa's Role in Supporting Aquaculture Growth in Africa:**  
Department of Forestry, Fisheries and the Environment - Deputy Minister Mr N Singh

**09:10 - 10:00 Plenary Session - Keynote Addresses (Chair: Dr Khalid Salie) - Room 3010**

09:10 - 09:50 **Keynote Address 1:** African continental free trade: Exploring the opportunities for enhanced policy directions, certification, youth, and women entrepreneurship for promoting economic activities Foluke Areola

09:50 Conference Photo

10:00 - 10:30 Tea & Coffee Break

<b>MORNING PLENARY SESSION - 10:30 to 13:00</b>		
10:30 - 11:00	<b>Country &amp; Industry Overviews (Chair: Prof Niall Vine) - Room 3010</b>	
10:30 - 10:45	Aquaculture in Southern Africa: Are we driving innovation and sustainability?	Niall Vine
10:45 - 11:00	Aquaculture in the Seychelles: An overview of opportunities, challenges and ongoing research	Bas De Vos
11:00 - 12:00	South African industry overviews	Industry chairpersons
12:00 - 13:00	<b>Keynote Address 2: A Tribute to Thierry Chopin &amp; Keynote address (Chair: Prof John Bolton)</b>	
12:00 - 13:00	Pathways for Aquaculture to Radically Transform Food Production - (virtual)	Barry Antonio Costa-Pierce
13:00 - 14:15	Lunch & Poster viewing	
<b>EARLY AFTERNOON PARALLEL SESSION: 14:15 to 15:15</b>		
14:15 - 15:15	<b>Integrated Aquaculture (Chair: Dr Pauline O'Donohoe) - Room 3010</b>	
14:15 - 14:30	Benefits of growing <i>Ulva</i> in land-based partially recirculated IMTA systems	Brett Macey
14:30 - 14:45	Circularity assessment in Atlantic IMTA – Open water, landbased pump ashore and biofloc systems - The ASTRAL project	Daniel Checa
14:45 - 15:00	Collector- and Cape sea urchins: Key findings for cultivation in IMTA systems	Marissa Brink-Hull
15:00 - 15:15	Suspended bivalve mollusc culture in an open water low-trophic aquaculture system on the west coast of Scotland	Kati Michalek
14:15 - 15:15	<b>Ranching &amp; Stock Enhancement (Chair: Prof Niall Vine) - Room 3013</b>	
14:15 - 14:30	It is time to recognize that South Africa is resource scarce for commercial scale aquaculture and the potential to utilize developed skills for stock enhancement will play a larger role in the future of aquaculture and fishery management	Greg Stubbs
14:30 - 14:45	Assessing the short-term success of larval seeding of abalone larvae ( <i>Haliotis midae</i> ) in the ocean	Ziyanda Mzozo*
14:45 - 15:00	Feasibility of seeding cultured larval abalone ( <i>Haliotis midae</i> ) on depleted reefs in the Eastern Cape province, south africa	Montagu Benjamin Du Toit*
15:00 - 15:15	A deep dive into the status of the freshwater aquaculture sector of South Africa	Khumo Morake-Makhalemele
15:15 - 15:45	Formal Poster Session	Presenters to stand next to posters

15:15 - 15:45	Tea & Coffee Break	
<b>LATE AFTERNOON PARALLEL SESSION: 15:45 - 17:15</b>		
15:45 - 17:15	<b>Integrated Aquaculture (Chair: Dr Brett Macey) - Room 3010</b>	
15:45 - 16:00	The AquaVitae project – Leaving a legacy for the South African aquaculture industry	Cliff Jones
16:00 - 16:15	Effect of IMTA <i>Gracilaria gracilis</i> on the growth and behaviour of farmed abalone, <i>Haliotis midae</i>	Njabulo Madlala*
16:15 - 16:30	Assessing the potential of the unexploited South African Cape sea urchin, <i>Parechinus angulosus</i> as a new aquaculture species.	Aimee Cloete*
16:30 - 16:45	Results of a farm-scale model assessing the feasibility of a commercial scale recirculating aquaculture system integrating sea urchins ( <i>Tripneustes gratilla</i> ) and seaweed ( <i>Ulva</i> )	Bas De Vos
16:45 - 17:00	Under the ASTRAL EU project: A microbiome voyage: Increasing recirculation in abalone- <i>Ulva</i> IMTA systems	Marina Martin Sandoval
15:45 - 17:00	<b>The Aquaculture Environment (Chair: Dr Dale Arendse) - Room 3013</b>	
15:45 - 16:00	Climate Information Ssystems (CIS) for aquaculture: Development of a temperature-based early warning alert system for fish farmers in Zambia and Malawi.	Henk Stander
16:00 - 16:15	Gasping for air: the impact of differing CO <sub>2</sub> levels on hatchery and nursery phase Nile tilapia, <i>Oreochromis niloticus</i> , systems	Mari-Lou Zaayman*
16:15 - 16:30	Investigating the environmental suitability of the Vanderkloof and Nandoni dams in South Africa for cage culture	Koena Ramoroka
16:30 - 16:45	Assessment of biofouling discard during the harvesting of mussels in Saldanha Bay	Dale Arendse
16:45 - 17:00	The value of poultry waste as fertiliser for carp fingerling culture	Justice Maluleke
18:30 - 19:30	<b>AASA Annual General Meeting</b>	
17:30 - 19:30	<b>AASA Student function</b>	
<b>WEDNESDAY, 11th SEPTEMBER 2024</b>		
08:00 - 09:00	Conference Registration	
08:30 - 09:30	<b>Plenary Session - Keynote Address and Sponsor's presentation (Chair: Dr Brett Macey) - Room 3010</b>	

08:30 - 09:15	<b>Keynote address 3: Challenges, opportunities and bottlenecks of a growing industry, a socioeconomic perspective of aquaculture development — The need for a better understanding of sustainability in the light of past developments and the frantic succession of concepts targeting sustainable aquaculture</b>	Pascal Raux
09:15 - 09:30	Sponsor's presentation - TBC	Nick Loubser
<b>EARLY MORNING PARALLEL SESSION: 09:30 - 11:00</b>		
9:30 - 11:00	<b>Development, Financing &amp; Planning (Chair: Andrea Bernatzeder) - Room 3010</b>	
09:30 - 09:45	Innovating together: Developing a research roadmap to unlock growth of the aquaculture sector in South Africa	Andrea Bernatzeder
09:45 - 10:00	Another aquaculture Centre of Excellence: Can it provide the impetus for growth?	Khalid Salie
10:00 - 10:15	Sustainable seafood – A perspective from one of the world's most responsible retailers	Gert le Roux
10:15 - 10:30	Digitalising Africa's aquaculture sector, lessons learnt from piloting Buna Africa	Qurban Rouhani
10:30 - 10:45	An ecological, social and economic contribution of aquaculture to economic growth and development within King Cetshwayo District Municipality, South Africa	Innocent Nojiyeza
10:45 - 11:00	Aquaculture's contribution to poverty reduction in the King Cetshwayo District Municipality, Kwazulu Natal	Khonzile Mthiyane
9:30 - 11:00	<b>Breeding, Genetics &amp; Genomics (Chair: Prof Clint Rhode) - Room 3013</b>	
09:30 - 09:45	High-density linkage map and QTL mapping for sex and growth-related traits of South African abalone ( <i>Haliotis midae</i> )	Thendo Tshilate
09:45 - 10:00	Examining growth in dusky kob ( <i>Argyrosomus japonicus</i> ) via differential transcriptomic analysis of gill tissue	Samantha Joao*
10:00 - 10:15	Genetic variation in key developmental genes and its association with growth in dusky kob	Joshua Sampson*
10:15 - 10:30	Characterisation of transposable elements in the dusky kob ( <i>Argyrosomus japonicus</i> )	Marie Roux*
10:30 - 10:45	A draft reference genome of yellowtail, <i>Seriola lalandi</i> for aquaculture production	Stephan Jenkins*
10:45 - 11:00	Assembly and annotation of the genome of the sea urchin ( <i>Tripneustes gratilla</i> )	Christine Van der Westhuizen*

11:00 - 11:30 **Formal Poster Session**  
Presenters to stand next to posters

11:00 - 11:30 Tea & Coffee Break

**LATE MORNING PARALLEL SESSION: 11:30 - 13:00**

11:30 - 12:45 **Seaweed (Chair: Prof John Bolton) - Room 3010**

11:30 - 11:45 Growing Ulva (sea lettuce) in land-based aquaculture – which species to choose and what to call it? John Bolton

11:45 - 12:00 The red seaweed *Gacilaria* as a South African aquaculture species: the past, and a project for the future Bernadette Brown-Webb

12:00 - 12:15 South African kelp farming project – Phase 2: Feasibility study overview and lessons learnt to date Lizeth Botes

12:15 - 12:30 Optimising hatchery methodologies for South African kelp species: *Ecklonia maxima*, *Laminaria pallida* and *Macrocystis pyrifera* Frances Hill\*

12:30 - 12:45 An investigation into epiphytic species that may be associated with farmed kelp in Saldanha bay, South Africa Waqeefa Moosa\*

11:30 - 13:00 **Genomics & Hatchery (Chair: Dr Khalid Salie) - Room 3013**

11:30 - 11:45 Optimising the larval stocking density and use of ethylene diamine tetra acetic acid (EDTA) on the survival, development and feeding activity of the Pacific oyster, *Crassostrea gigas* Thimna Dengana\*

11:45 - 12:00 The effect of ethylene diamine tetra acetic acid (EDTA) and larval rearing density on the swimming speed and water quality of the Pacific oyster, *Crassostrea gigas*. Cyril Mphatsoe\*

12:00 - 12:15 Effect of culture additives on population density and egg ratio of the marine rotifer *Brachionus plicatilis* Samkele Ngcefa\*

12:15 - 12:30 SADC Regional Genetic Improvement Programme Katrina Hilundwa

12:30 - 12:45 Analysis of gene action in full diallel crosses among three strains of *Oreochromis karongae* (Trewavas, 1941) from Lake Malawi Wilson Jere

13:00 - 14:00 Lunch

**EARLY AFTERNOON PARALLEL SESSION: 14:00 - 15:00**

14:00 - 15:00 **Seaweed (Chair: Prof John Bolton) - Room 3010**

14:00 - 14:15 Development of a large-scale offshore kelp cultivation operation in southern Namibian waters: Progress, and challenges of the Kelp Blue pre-commercial phase Hilinganye Andreas

14:15 - 14:30	Introducing the Kelp Forest Foundation (KFF): A non-for-profit that aims to harness new and existing knowledge to evaluate global kelp forests	Michael Mateus*
14:30 - 14:45	The impact of changing environmental factors on three kelp species growing in small bay Saldanha Bay, South Africa.	Nontobeko Xulu*
14:45 - 15:00	Optimising kelp cultivation on the west coast of Scotland	Kati Michalek
14:00 - 15:00	<b>Development, Financing &amp; Planning (Chair: Khumo Morake-Makhalemele) - Room 3013</b>	
14:00 - 14:15	African aquaculture development: the role of World Initiative for Soy in Human Health (WISHH)	John Walakiri
14:15 - 14:30	ACMS and Gatsby Africa: Commercializing the East African tilapia sector through rigorous focus on human capital development	Gavin Johnston
14:30 - 14:45	The role of aquaculture in sustainable development through STEM application	Grace Okuthe
14:45 - 15:00	Action, implementation and performance assessment with continuous improvement and innovation process in sharptooth catfish ( <i>Clarias gariepinus</i> ) small business in South Africa	Matebo Maroasui
15:00 - 15:30	Tea & Coffee Break	
<b>LATE AFTERNOON PARALLEL SESSION: 15:30 - 17:30</b>		
15:30 - 17:00	<b>Aquaponics (Chair: Henk Stander) - Room 3010</b>	
15:30 - 15:45	Saline aquaponics system ideal for halophyte plant production	Henk Stander
15:45 - 16:00	Integrating brewery effluent treatment with hydroponics and fish culture	Richard Taylor
16:00 - 16:15	Incorporating fish production into a constructed wetland system used to treat anaerobically digested brewery effluent for onsite reuse	Ayanda Mogale-kwena*
16:15 - 16:30	Historical price trends of vegetables in fresh produce market as an innovative tool to leapfrog small-scale aquaponics: a case study of Kwazulu Natal	Agnes Molebatsi
16:30 - 16:45	Drain-fill technology and retaining solids in an aquaponics system	Franck Lutili*
16:45 - 17:00	Adoption of aquaponics as a leapfrog technology for farms in the Gauteng Province, South Africa: a feasibility study.	Mokgadi Nthoke
15:30 - 17:00	<b>ASTRAL IMTA Workshop (Chair: Dr Pauline O'Donohoe) Open to everyone - Room 3013</b>	
15:30	Welcome	Pauline O'Donohoe

15:40 - 16:00	Prospective IMTA	Tomás Chalde
16:00 - 16:30	Land-based IMTA systems	Luis Poersch & Brett Macey
16:30 - 17:00	Open water IMTA systems	Kati Michalek & Pauline O'Donohoe
17:00 - 17:30	Questions and Discussion	
<b>19:00</b>	<b>Conference Dinner</b>	
<b>THURSDAY, 12th SEPTEMBER 2024</b>		
<b>EARLY MORNING PARALLEL SESSION: 08:30 - 09:45</b>		
08:30 - 09:45	<b>Nutrition &amp; Feeds (Chair: Dr Maria Darias) - Room 3010</b>	
08:30 - 08:45	Assessing nutrient supply from South African marine aquaculture	Maria Darias
08:45 - 09:00	Effect of replacing dietary fishmeal with black soldier fly larvae meal on the growth of farmed dusky kob, <i>Argyrosomus japonicus</i> juveniles	Reginah Mdhluvu*
09:00 - 09:15	Partial replacement of commercial feed with food waste: Effects on growth performance in Mozambique tilapia ( <i>Oreochromis mossambicus</i> ).	Noluyolo Vundisa*
09:15 - 09:30	Relative estimation of lysine requirements for two juvenile strains of <i>Oreochromis andersonii</i> .	Peter Chikalema*
09:30 - 09:45	Factors that influence the success of live transportation of South African abalone ( <i>Haliotis midae</i> )	Faith Dlamini*
08:30 - 09:45	<b>Aquatic Animal Health (Chair: Dr Kevin Christison) - Room 3013</b>	
08:30 - 08:45	One food for One health – Delivering climate resilient, biodiverse, safe and sustainable food systems	Jessica Witt
08:45 - 09:00	The validation of a non-lethal method for targeted surveillance of <i>Gyrodactylus</i> species in farmed and wild tilapia populations	Julie Bwoga*
09:00 - 09:15	Carbon dioxide anaesthesia and low pH on recovery, health and feed consumption of abalone <i>Haliotis midae</i>	Siyabonga Mdletshe*
09:15 - 09:30	The effect of water-off events on the survival, growth and health of farmed abalone ( <i>Haliotis midae</i> )	Bongi Mngqushu*
09:30 - 09:45	Seal of quality: Accredited testing for aquaculture success	Mariska Laubscher
09:45 - 10:30	Tea & Coffee Break	
09:45 - 12:30	Remove posters	

10:30 - 10:45	Student Awards and closing of conference	
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**LATE MORNING PARALLEL SESSION: 10:45 - 12:15**

**10:45 - 11:30 Nutrition & Feeds (Chair: Prof Cliff Jones) - Room 3010**

10:45 - 11:00	Determining the optimal pellet dimension of Abfeed® for South African abalone <i>Haliotis midae</i> .	Mantshadi Mdhlalose
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11:00 - 11:15	Assessing the effect of garlic, rosemary, and tumeric dietary supplementation on the growth, survival, and feed utilization of <i>Oreochromis macrochir</i>	Haggai Gondwe
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11:15 - 11:30	Effect of feeding pellets, live earthworms and tilapia on the growth of African catfish fingerlings	Matebo Maroasui
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**10:45 - 12:15 Aquatic Animal Health (Chair: Dr Jessica Witt) - Room 3013**

10:45 - 11:00	Oyster herpesvirus $\mu$ v1: a ticking time bomb for South African aquaculture	Kokie Harris
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11:00 - 11:15	A survey of parasites and pathogens in the aquaculture candidate species <i>Venerupis corrugatus</i> .	Kevin Christison
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11:15 - 11:30	Shell boring polychaetes (polychaeta, spionidae) associated with farmed abalone ( <i>Haliotis midae</i> ) in the Western and Northern Cape, South Africa.	Primrose Lehubye
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11:30 - 11:45	“What’s in a name?” Myxozoan parasites of farmed tilapia from East Africa.	Mariska Laubscher
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11:45 - 12:00	Applications of antimicrobial photodynamic therapy in aquaculture: Effect on fish pathogenic bacteria	Edith Dube
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**12:15 - 14:00 Lunch**

**AFTERNOON SESSION: 14:00 - 17:00**

14:00 - 15:00	<b>AquaSA AGM - Seminar Room 1081, Animal Science Dept, Mike De Vries Building (55) (also online)</b>	
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Delegates are free to co-ordinate other meetings, workshops etc

**FRIDAY, 13th SEPTEMBER 2024**

**WORKSHOPS (Pay to attend) - JC Smuts Building**

08:00 - 16:00	AQUAPONICS WORKSHOP	
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08:00 - 16:00	FISH DISEASES AND HEALTH MANAGEMENT WORKSHOP	
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