

CURRICULUM VITAE

PERSONAL CONTACTS

Names: David Oersted Mirera

Date of Birth: 24th August 1975

Nationality: Kenyan

Marital status: Married

Civil status: Kenya Marine and Fisheries Research Institute (KMFRI)

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- Field of competence: Fish ecology and Aquaculture/Mariculture

FORMAL EDUCATIONAL BACKGROUND

- **PhD in science (*Mud crab “S. serrata” fisheries and aquaculture*):**
Linnaeus University, Kalmar, Sweden -February 2014
- **MSc in Natural resource management (*significance of mangroves as a nursery ground for fish*):**
Egerton University, Nakuru, Kenya – July 2007
- **BSc Fisheries (Primary productivity as a function of phosphorus input rates in fish farms):**
Moi University, Eldoret, Kenya – December 2000

WORK EXPERIENCE

Current: Research Scientist: Since 2009: Kenya Marine and Fisheries Research Institute (KMFRI)

Previous: Part time Lecturer- 2009, 2014, and 2016: Pwani University, Mombasa, Kenya

Part time Lecturer- 2014 and 2016: Kenyatta University, Mombasa Campus, Kenya

Part time Lecturer – 2015, Nairobi University, Kabete Campus, Nairobi, Kenya

Previous: 2004 to 2008: Mariculture Project Coordinator: Kwetu Training Centre Sustainable Development

CONSULTANCIES AND COOPERATE EXPERIENCE

FAO: 2016: Expert in Fisheries and Aquaculture in the Evaluation of FAO's Country Programme in the United Republic of Tanzania

IOC biodiversity proposal funded by EU: 2015-2016: Contracted to undertake evaluations of concept notes and full proposals under the 2nd call for proposals.

Adam Smith International, Mombasa, Kenya; 2015: Managing/coordination of short courses trainings in aquaculture in the Mombasa Youth Fish Farming Project.

TECAFILI: 2012: Consultancy to undertake training of fishers in mariculture under the funding from Lighthouse foundation.

Government of Kenya: 2011: Selected Expert in the task force set to develop the National Aquaculture Policy for Kenya

ReCoMaP Funded by EU: 2009: Assessor for the ReCoMaP concept notes and full proposals under the 2nd call for proposals on the theme of Mariculture as a component of Integrated Coastal Management.

NEMA; 2008 – 2016: EIA registered Associate Expert under National Environment and Coordination Act.

Wetlands International, Ugandan Wildlife Education Centre: 2007: Mentor for the Wetlands and Poverty Reduction Project on 2nd Anglophone Regional Practitioner Training Course.

CORDIO East Africa, Mombasa, Kenya: May 2008: Consultancy to plan and coordinate an exchange visit by mariculture communities and experts from Kenya, Tanzania and Australia to different mariculture sites in Kenya and Tanzania.

WIO mariculture network: 2008: Author of the Kenyan chapter of the WIO mariculture forum www.wiomsa.org/maricultureforum

Anglican Church of Kenya's Pwani Community Church Services (ACKPWANICCS): 2007-2008: Contracted to undertake mariculture trainings and develop community milkfish farming along the Kenyan coast under Tsunami funding through **Diakonie**.

CISP: 2007-2008: Contracted to undertake mariculture capacity building as an empowerment for BMUs at Ngomeni under FAO funding.

CORDIO East Africa: 2007: Contracted to undertake an Environmental and Social Impact Assessment of Mombasa EASSy (East African Submarine System) Landing Station by Telecom Kenya.

Tsunza Conservation and Development program: 2003: Contracted to develop an Environmental Impact Assessment (EIA) for Civicon LTD trailer assembling plant at Kibarani Mombasa.

SHORT TRAINING

WIOMSA and University of Goterberg in Zanzibar; 2015: Workshop on capacity building for impact in mariculture development.

Wageningen University Centre for Research Innovation; 12th – 30th November 2012: Training course on Ecosystem Approach to Fisheries Management.

SEAFDEC, Philippines; 14th April – 5th May 2009: Training course on Crab Hatchery and Grow-out.

WIOMSA, Bagamoyo, Tanzania; 2nd -8th 2007: Training on dissemination of mariculture results in Milkfish and seaweed farming.

Institute for Environment and Sustainability Global Environment Monitoring Unit European Commission and ReCoMaP; September and October 2007: Ocean Colour course on “Methods and Applications of Ocean Colour Remote Sensing in African Coastal and Regional Seas”.

Wetlands International, Naivasha, Kenya: November and December 2006: Training of trainers’ course on Wetlands and Poverty Reduction: Wetlands and water resource management, Wetlands Valuation (Financial Mechanisms), Policy Setting and Advocacy, Learning and Training Skills and Curriculum Development.

East African Water Association and Australian government, Egerton University: September and October 2006: Course on Tropical Limnology and Aquaculture.

WIOMSA and University of Rhode Island, Zanzibar; June and December 2005: Extension methods in mariculture and coastal management.

WIOMSA and University of Eduardo Mondrane, Mozambique; December 2004: Course on Methodologies in marine Ecology (Practical approach to setting up field experiments, data analysis and proposal development).

PROJECTS DEVELOPED AND FUNDED

- **Department of Foreign Affairs and Trade in Australia (DFAT)-IORA:** Sustainable aquaculture technologies for IORA member countries (Prawns and marine tilapia): **2015-2016.**
- **WIOMSA-Marg 11:** Assessment of mud crab populations using intra-muscular tags **(2013)**
- **IFS:** Population dynamics and culture of mud crab (*Scylla serrata*) –**(2011 – 2012 and 2015-2016)**
- **NCST:** Enhancing food security among coastal fisher communities; promoting small scale mariculture technologies in Kilifi creek **(2010- 2015)**
- **WIOMSA-MASMA Program:** “Small-scale, community-based, grow-out aquacultures of mud crabs *Scylla serrata* as a sustainable livelihood in East Africa” **(2009 – 2012)**
- **IFS:** Grant to attend a short course on mud crab hatchery and grow-out at SEAFDEC in the Philippines **(2009)**
- **CDTF:** Advocacy for Community Participation in Mangrove Forests Conservation **(2008 – 2009)**
- **UNDP:** Enhancing the Coastal Community Participation in conservation and sustainable use of mangrove forests through silviculture innovations **(2008-2010)**
- **ReCoMaP:** A Sustainable Management of Mangrove Ecosystems through Small Scale Mariculture as an alternative Livelihood for Coastal communities in Kenya **(2008 – 2010)**
- **WIOMSA-Marg 1:** Stocking density and feeding in milkfish **(2007-2008)**
- **Rufford Small Grants Fund for Nature Conservation:** Community Silvofisheries innovation for mangrove conservation **(2007-2010)**
- **Toyota environmental activities program:** Silvofisheries and community mariculture along the coast of Kenya **(2008-2010)**
- **Commission for Higher Education (CHE):** Improving mariculture for coastal communities **(2007)**

- **World Wildlife Fund for nature conservation (wwfefn):** Community training on silvofisheries as a mangrove conservation and livelihood strategy **(2007 and 2010)**
- **IOC:** 2005: Tematravel grant to attend a training short course
- **WWFefn:** Professional development grants to attend scientific workshops **(2007, 2013 and 2015).**

PEER REVIEWED PUBLICATIONS

- Moksnes P, Mirera O. D, Lokina R, Ochiewo J, Mahudi H, Jiddawi N, Hamad M and Troell M. (2015). Feasibility of extensive, small-scale mud crab (*Scylla serrata*) farming in East Africa. WIO journal of marine science, 14 (1&2): 23-38.
- Moksnes, P-O, Mirera, O. D, Bjorkvik, E, Hamad, I. D, Mahudi, H. M, Nyqvist1, D, Jiddawi, N, Troell, M. (2015). Natural growth of *Scylla serrata* in East Africa: A valuable tool for assessing growth of mud crabs in aquacultures. Aquaculture research, 46: 2938–2953
- Mirera, O. D., and Moksnes, P-O, (2015). Comparative performance of wild juvenile *Scylla serrata* (Forsskal) in different culture systems: net cages, mangrove pens and earthen ponds. Aquaculture international, 23:155–173
- Mirera, O. D., Ochiewo, J., Munyi, F. 2014. Social and economic implications of small-scale mud crab (*Scylla serrata*) aquaculture: the case of organised community groups. Aquaculture International. 22:1499–1514
- Mirera. O. D and Moksnes. P-O (2013). Cannibalistic interactions of juvenile mud crabs (*Scylla serrata*): The effect of habitat and crab size. African Journal of Marine Science 35: 545-553
- Mirera, O. D, Ochiewo J, Munyi F, Muriuki T. (2013). Heredity or tradiional knowledge: Fishing tactics and dynamics of artisanal mangrove crab (*Scylla serrata*) fishery. *Ocean & Coastal Management*. 84: 119-129
- Mirera O. D. (2012). Mariculture development in Kenya-an overview In Troell, M., Hecht,T., Beveridge, M., Stead, S., Bryceson, I., Kautsky, N., Mmochi, A., Ollevier, F. (eds) (2011) Mariculture in the WIO region – challenges and prospects. WIOMSA Book Series No. 11. viii+59pp.
- Mirera, O. D. (2011). Trends in exploitation, development and management of artisanal mud crab (*Scylla serrata*-Forskall-1775) fishery and small-scale culture in Kenya: An overview. Oceans and Coastal Management. 54: 844 – 855
- Mirera H. O. D. (2011). Experimental polyculture of milkfish (*Chanos chanos*) and Mullet (*Mugil cephalus*) using earthen ponds in Kenya. Under review- WIO Journal of marine science. 10(1): 59-71
- Mirera, O. D., Kairo, J. G., Kimani, E, N and Waweru, F. K. (2010). A comparison in fish assemblages in mangrove forests and on intertidal flats at Ungwana bay, Kenya. *African Journal of Aquatic Science*, 35 (2): 165-171.
- Mirera, O. D. (2009). Mud crab (*Scylla serrata*) culture, undertanding the technology in a silvofisheries perspective. WIO Journal of Marine science. 8 (1): 127-137
- Mirera, O. D. and Mtile, A. (2009). A preliminary study on the response of mangrove mud crab (*Scylla serrata*) to different feed types under drive-in cage culture system. J. Ecol. Nat. Environ. Vol 1 (1), 7 – 14.

TECHNICAL REPORTS AND MANUALS

- Mirera, O. D. 2015. A gap between small-scale community mariculture and mariculture as a business: Can KCDP bridge the gap? In Mees, J. et al (Eds) (2015). Proceedings of the VLIR-UOS International conference “ Sustainable use marine and coastal resources in Kenya: from research to societal benefits” Kikambala, Kilifi County, Kenya, 27-29th October 2014. VLIZ Special Publication 72- Flanders Marine Institute (VLIZ). Oostende, Belgium. 124p.
- Mirera, O. D. 2014. Capture-based mud crab (*Scylla serrata*) aquaculture and artisanal fishery in East Africa – Practical and ecological perspective. Ph.D thesis. Linnaeus University Dissertations No 159/2013, ISBN: 978-91-87427-70-1. Written in English.
- Mirera O. D and Ngugi C. C. (2009). Sustainability and income opportunities of farming milkfish (*Chanos chanos*) to local communities in Kenya: assessment of initial trials of earthen ponds. EC FP7 Project SARNISSA. www.sarnissa.org
- Arriescado, E. M. and Mirera, O. D. (2008). Mwongozo Rahisi kwa ufugaji wa kamba. ACIDI/VOCA. 13pg.

- Mirera, H. O. D. Samoilys, A. M. (2008). Natural Resource dependence, livelihoods development: Mariculture exchange between Kenya and Tanzania. IUCN ESARO 2008.
- Mirera, H. O. D. (2008). Community Mariculture Initiatives along the Kenyan Coast. Samaki News. Vol. V. No. 1: Magazine of the Department of Fisheries Kenya.
- Mirera H. O. D. (2007). In the face of poverty mangrove wetlands are lifelines: Viability indicators in assessing polyculture of milkfish (*Chanos chanos*) and mullets (*Mugil cephalus*). CORDIO Status Report. 2008. www.cordioea.org.
- Mirera H. O. D, MSc. Thesis (2007). Effects of mangrove habitat degradation on fish abundance and diversity at Ungwana bay, Kenya. Pp 109. Research was funded by MASMA Program of WIOMSA on Ecological Economics of mangroves through Kenya Marine and Research Institute.
- Mirera H. O. D (2006). Silvofisheries gain momentum in the mangroves of Kenya. WIOMSA Newsbrief (September 2006. www.wiomsa.org)
- Mirera, H. O. D (2005). Fish farming and mangrove conservation activities at Kwetu Training centre. WIOMSA news brief (December 2005, www.wiomsa.org)
- Latest Technology used in mangrove studies. WIOMSA News brief March 2005 (www.wiomsa.org). Researchers: David Mirera, Salomao Bandeira, James Kairo, Edward Kimani, Bernard Kirui, Jacob Ochiewo, and Patrick Ronnback.
- Mirera H. O. D, BSc. Project. (2000). Nile tilapia (*Oreochromis niloticus*) production and primary productivity as a function of phosphorus input rates at Sagana Fish Farm. Project was funded by Pond Dynamics and Collaborative Research Support Project (PD/CRSP) of Oregon University Alabama and through USAID.
- Producing Half Pearls (Mabe) manual (2006). Sustainable coastal communities and ecosystems program (SUCCESS).
- Survey of the small scale community mariculture projects along the Kenyan coast: 1st May to 31st July 2007 (WIOMSA-SUCCESS project)
- Environmental and Social Impact Assessment of Mombasa EASSy (East African Submarine System) Landing Station by Telecom Kenya (March to June 2007-CORDIO East Africa Consultancy)
- Kwetu (2005). Mangrove day and silvofisheries awareness at Kwetu Training Centre on 26th July 2005. Kwetu Report. In the wetlands and livelihood working group discussion forum (www.wetlands.org/wlwg) best and less successful practices).
- Environmental Impact Assessment (EIA). (2003). Report for Civicon LTD trailer assembling plant at Kibarani Mombasa.
- Mirera H. O. D, BSc. Project. (2000). Nile tilapia (*Oreochromis niloticus*) production and primary productivity as a function of phosphorus input rates at Sagana Fish Farm. Project was funded by Pond Dynamics and Collaborative Research Support Project (PD/CRSP) of Oregon University Alabama and through USAID.
- Mirera H. O. D. BSc attachment report (1998). Monitoring the level of pollution in Lake Nakuru wetland as a result of Nakuru Municipal sewage effluents.

PROFESSIONAL AFFILIATIONS

- Wageningen University Centre for Development Innovation; fisheries group
- Western Indian Ocean Marine Science Association (WIOMSA)-Scientific Net working
- Sustainable Aquaculture Research networks in Sub-Saharan Africa/networking aquaculture practitioners and scientist across the world

SPECIAL SKILLS

- Development of Impact based (research and development) proposals
- Participatory research development and implementation (fisheries and aquaculture)
- Research communication and dissemination
- Community mobilization and empowerment
- Artisanal fisheries empowerment and development
- Strong writing skills

- Silvofisheries in relation to livelihood improvement and conservation
- Artisanal fisheries and mangrove fisheries in the East African coast
- Team player and able to work with limited supervision
- Dissemination of mariculture technologies
- Mentor and trainer in Aquaculture and wetlands management
- Methodologies in marine Ecology