



Session on aquaculture genetics, selective breeding and aquatic biodiversity

Theme:

Aquatic Genetic Resource Management for Sustainable Blue Food Systems

The potential for transforming Africa's emerging Aquaculture sector to constitute competitive sustainable yet blue food systems that contributes to the continent's food and nutrition security, socio-economic development, and climate-change resilience is immense. This opportunity stems from the continent's vast aquatic biodiversity, as well as the high genetic diversity within the culturable aquatic species on the continent. Indeed the majority of Africa's commercial aquaculture species are native to the regions where they are farmed and where they demonstrate strong resilience to the regional endemic disease, parasites, and climatic challenges in these regions, thus showing great potential for exploiting these species beyond the current production boundaries with little genetic constraint.

The imperative for aquaculture producers is in the utility and attributed value of genetics towards growth, disease resistance, environmental adaptability and access to markets. Just like in the production of most of the indigenous terrestrial farmed animals, one of the challenges towards constraining the exploitation of these species to full production potential lies in the limited application of genetics and selective breeding tools in the aquaculture production of the different species. The application of genetic tools into selective breeding programs of the different cultured species can provide solutions to Africa's aquaculture industry by enabling the production of strains with increased feed efficiency or growth rate, increased disease resistance, and improved climate change resilience. Genetic tools are also of great importance in monitoring the genetic diversity of wild aquaculture populations and monitoring potential hybridizations between farmed and wild populations to prevent the compromising of the wild populations that can lead to biodiversity loss. Maintaining healthy wild populations is key to the food security of the region and also important for the aquaculture industry as these populations provide replenishing genetics to the farmed population to lower the build-up of inbreeding in the farmed populations.

Given that anchorage for the industry is the genetic integrity and health of the region's wild aquatic flora and fauna, the sustainability of Africa's aquaculture industry and its expansion into the Blue Economy cannot do without safeguarding aquatic ecosystem health and biodiversity. It has consequently become increasingly crucial, that the builds its capacity for quantitatively characterizing and assessing the genetic diversity of aquatic species and populations in the farmed and wild environments in consideration of the provisions of the Convention on Biological Diversity's alongside socioeconomic interests to develop aquaculture systems that foster equity and lend to Africa's Blue Transformation.

A farmers and students side event is also planned along this theme.

This is a call for papers and exhibitors. For more details: <https://www.was.org/meeting>
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Contact : nisyagi@gmail.com

