



AFRICAN UNION  
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FOR ANIMAL RESOURCES



AUDA-NEPAD  
AFRICAN UNION DEVELOPMENT AGENCY



## POLICY BRIEF

# Building from Fish Seed Production Best Practices for a Sustainable Aquaculture Development In Africa

This Policy Brief is the consolidation of the outcomes of the deliberations by the stakeholders at the inaugural meeting of the revised African Fisheries Reform Mechanism (AFRM) Think Tanks Executive Committee, held in Abidjan, Côte d'Ivoire, from 9th - 11th March 2022. The Policy Brief has been prepared in collaboration with the AFRM Aquaculture Development Working Group (WG) members and Experts from the region.

### Preamble

- Aquaculture is the fastest growing animal industry and presently accounts for more than 50% of fish production in the world (FAO).
- Expectations in Africa for the next decade are that aquaculture will contribute more than 70% to fish production in the face of declining capture fisheries and increasing population growth (9.2 billion people).
- Despite this huge potential, fish seed has been identified as a critical constraint to achieving success in aquaculture. Additional constraints include fish feed, veterinary services and inadequate skills across the entire value chain.
- However, there are no existing policies at the continental and regional levels on fish seed production.
- This document seeks to develop and harmonize appropriate policies at the regional and continental levels for brood stock/fish seed production technology development and transfer to member states.

### Key issues

The problem statement can be summarized as follows:

- Good quality fish seedlings of known parentage are key to aquaculture development. However, these are lacking/insufficient in the continent. The existing “parent stocks” are from different, often wild sources and are generally managed by human resources that lack the appropriate skills in breeding and hatchery management to produce quality fish seedlings en masse.
- There is inadequate fish seed supply. Wild catch are still sources for many aquaculture candidates such as mullet, tarpon, shellfishes in the continent. The supply of seed for species with already developed commercial aquaculture seed production technologies, such as for the Nile Tilapia and African Catfish, is also inadequate. Consequently, the supply and quality of seed produced on the continent is on the

whole, be described as being unpredictable and unreliable.

- Inadequate knowledge and facilities for brood stock development programs (PCR, markers, sequencing gadgets etc.).
- Absence of certified gene and broodstock banks resulting in poor quality seeds.

## Issues that have hindered development and the need to address them

- Little or no standardization for quality seeds (reference centers for improved brood stock).
- Limited number of seed for different aquaculture species (fin and shell fish etc.)
- High cost of feed beyond the reach of the average fish farmer .
- Limited technical skills to carry our genetic improvement program.
- Weak capacity (financial resources and skilled manpower) to invest in standard hatcheries.
- Limited access to improved species that are available in other regions due to bureaucracy of legislation (quarantine services).
- Lack of organized marketing system and channels e.g. e-marketing.
- Low financial support to private hatcheries (donors support government hatcheries which close when the project ends).

## Main actions to achieve successes

- Establishment of reference centers for high quality broodstock and fingerlings regionally in each of the member countries.
- Promote broodstock development of indigenous fish species.
- Improve private investments in standardized hatcheries operation (exemption from tariffs on hatchery equipment among others).
- Establish hatcheries for marine species to explore mariculture potentials, especially shellfish aquaculture.
- Establish regional research platforms to identify potential species, suitable for aquaculture among AU countries.
- Develop research into utilization of novel/non-conventional feed resources in fish nutrition and develop appropriate feeding regimes.
- Conduct private sector training in biosecurity and biosafety measures in fish farms and hatcheries as well as syllabi of academic institutions offering fisheries in Africa.

## Policy recommendations

- Harmonization of appropriate laws and policies at the regional and continental level on broodstock bank development and fingerling production.
- Develop appropriate breeding technology for indigenous species and transfer it to member states for adoption.
- Establish guidelines and standards for producing quality fish seed and development a mechanism for its enforcement (protection of biodiversity).
- Train and advocate/publicize Best Aquaculture Practices (BAP) among non-state actors and other stakeholders in the industry (create more centers of excellence in the regions).
- Subsidize private investments in hatchery operations.
- Development of entrepreneurship and promotion of private investment in hatchery operation and broodstock production.
- Increase the visibility of regional hatcheries via e-marketing systems to facilitate trade.



## Conclusion

- Due to the ever increasing human population in Africa and stagnation on catch from wild fisheries, creating an enabling environment through regional and continental aquaculture policy to improve fish seed production is of paramount importance. This will enhance aquaculture production to contribute to food security, employment creation and reduce expenditure on fish importation.
- It is an established fact that the quality of seed determines the yield in most cases. Therefore, successful and standardized hatchery operations is a panacea to successful aquaculture development. In view of the aforementioned, successful aquaculture development in Africa must embrace broodstock development and seed production as has been outlined in this text.

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