

November 19, 2019

Agricultural Finance and Rural Development Department  
African Development Bank Group (AfDB)  
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We appreciate the many excellent efforts of the African Development Bank (AfDB) Group to fulfill its mission to spur sustainable economic development and social progress in its regional member countries, thus contributing to poverty reduction.

We would be grateful for the opportunity to share with you some thoughts regarding aquaculture that we hope your institution may find relevant when considering financing any projects in that sphere. We are troubled by many of the impacts of animal aquaculture and we believe that plant-based aquaculture has far greater positive potential.

Small-scale aquaculture projects raising fish or arthropods have had an uncommonly high rate of economic failure, while larger projects have failed to provide much economic benefit to low-income community members and often harm coastal environments. Attached is a document, published by the West African Development Bank (BOAD), containing a set of operational guidelines pertaining to both capture fisheries and animal aquaculture. In respect to animal aquaculture, while suggesting potential mitigation measures, the BOAD guidelines point to the following, among many other, potential risks and adverse impacts:

- Clearing or development of coastal wetlands for the construction of fish ponds.
- Erosion and siltation problems during the construction phase.
- Competing demand for water resources and land allocated to breeding ponds.
- Acidification of pond waters due to the formation of hydrogen sulfide.
- Decline in local stocks of larvae and fry.
- Water pollution from effluents (rich in nutrients and containing a variable number of chemicals, depending on the intensity of production ponds).
- Introduction of exotic species likely to harm native species, due to increased competition, predation, and spread of diseases and parasites.
- Spread of diseases among stocks living in ponds and wild stocks when their populations become too numerous.

In April 2019, in [a keynote speech](#) delivered at the quadrennial aquatic animal health conference of the World Organisation for Animal Health (OIE), Dr. Randall Brummett of the World Bank detailed sustainability risks to the animal aquaculture sector's growth, including massive disease outbreaks, declines in water quality and loss of biodiversity (wild genes), stating: "All these things add up to not only a bunch of dead fish but really serious financial losses in some cases. This is not really convincing bankers they need to get into this space..." He emphasized that sustainable operations were usually not new ventures, but rather ones that have been in operation for 20-40 years.

At that same OIE conference, there was considerable focus on animal aquaculture's role in exacerbating antimicrobial resistance (AMR). As [Heuer et al. had warned in the journal Clinical Infectious Diseases](#) ten years ago: "Intensive use of antimicrobial agents in aquaculture provides a selective pressure creating reservoirs of drug-resistant bacteria and transferable resistance genes in fish pathogens and other bacteria in the aquatic environment... Considering the rapid growth and importance of aquaculture industry in many regions of the world and the widespread, intensive, and often unregulated use of antimicrobial agents in this area of animal production, efforts are needed to prevent development and spread of antimicrobial resistance in aquaculture to reduce the risk to

human health.” Last year, [the Editor-in-Chief of World Aquaculture](#) stated that “Up to 75 percent of antibiotics used in aquaculture may be released to the surrounding environment.”

In December 2018, the Independent Office of Evaluation of the UN’s International Fund for Agricultural Development (IFAD) issued a report synthesizing its evaluation of [IFAD’s support to livelihoods involving aquatic resources from small-scale fisheries, small-scale aquaculture and coastal zones](#) concluding that “In general, project designs and approaches were such that [they] did not reach out directly to the poorest households and there was no evidence available that ‘trickledown’ approaches benefited the most vulnerable within IFAD’s traditional target groups.”

The Caribbean Development Bank [has noted](#) that intensified aquaculture is among those factors that can “reduce the level of beneficial ecosystem services such as coastal protection, aquifer recharge and... further exacerbates the vulnerability of large segments of the population to natural hazards such as hurricanes, flooding and coastal erosion.”

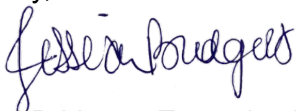
However, in contrast to animal aquaculture, seaweed aquaculture can be a great boon for coastal communities, providing economic benefits for residents of coastal areas while helping reverse major forms of environmental degradation, rather than exacerbating them. A 2016 World Bank report: [Seaweed Aquaculture for Food Security, Income Generation and Environmental Health in Tropical Developing Countries](#) emphasized the potential for long-lasting rapid growth in the sector with vast ancillary benefits including pollution remediation and carbon sequestration. Relatedly, we have attached an additional document, [An Ocean of Opportunity: Plant-based and clean seafood for sustainable oceans without sacrifice](#), published in 2019 by the Good Food Institute (GFI).

If, despite the many hazards, the Bank proceeds with financing animal aquaculture projects, we would appreciate reassurance that any such support would be contingent on:

- No prophylactic use of antibiotics
- Compliance with the World Organization for Animal Health’s Aquatic Animal Health Code, including standards for the welfare of farmed fish during transport, stunning, and slaughter
- Effective documentation regarding health management plans, handling activities, mortality, and water quality within suitable limits for good welfare of the specific species
- Minimised demand for fish-based fish feed other than trimmings
- Breeding programmes that prioritize the robustness of fish, their well-being under farming conditions.

We would welcome any opportunity to discuss these issues with your staff. Thank you for your consideration.

Sincerely,



Jessica Bridgers, Executive Director  
World Animal Net ([worldanimal.net](http://worldanimal.net))



Doug Waley, Fish Welfare Programme Leader  
Eurogroup for Animals ([eurogroupforanimals.org](http://eurogroupforanimals.org))

Also joining in support, and signing this letter, the following organizations:

1. [ACTAsia](#) (UK, AU, NL, US)
2. [Action for Dolphins](#) (Australia)
3. [Africa Network for Animal Welfare \(ANAW\)](#) (Kenya)
4. [ANDA, National Association for the Defense of Animals](#) (Spain)
5. [Animal Concern](#) (Scotland)
6. [Animal Defence League of Canada \(ADLC\)](#)
7. [Animal Friends, Croatia](#)
8. [Animal Law Reform South Africa](#)
9. [Animal People Forum](#) (USA)
10. [Animal Protection Agency \(APA\)](#) (UK)
11. [Animalia](#) (Finland)
12. [Animals International](#) (Australia)
13. [Animals' Angels](#) (Germany)
14. [ARCA BRASIL-Humanitarian Association for Animal Welfare and Protection](#)
15. [Brighter Green](#) (USA)
16. [Catholic Concern for Animals](#) (UK)
17. [Coalition of African Animal Welfare Organizations CAAWO](#) (South Africa)
18. [Compassion in World Farming](#) (UK/USA)
19. [Dierenbescherming - Dutch Society for the Protection of Animals](#) (Netherlands)
20. [Djurens Rätt \(Animal Rights, Sweden\)](#)
21. [Dyrenes Beskyttelse \(Animal Protection, Denmark\)](#)
22. [The Environment & Animal Society of Taiwan \(EAST\)](#)
23. [Essere Animali](#) (Italy)
24. [FAADA \(Foundation for Counseling and Action in Defense of Animals\)](#) (Spain),
25. [FIAPO - Federation of Indian Animal Protection Organizations](#) (India)
26. [Fish Welfare Initiative](#) (USA)
27. [Four Paws](#) (Austria)
28. [Global Animal Law](#) (Switzerland)
29. [Humane Society International \(HSI\)](#) (USA)
30. [In Defense of Animals](#) (USA)
31. [Innovation for the Development and the Protection of the Environment \(IDEP\)](#) (DR Congo)
32. [La Fondation Droit Animal, Éthique et Sciences \(LFDA\)](#) (France)
33. [Lawyers for Animal Protection in Africa \(LAPA\)](#) (South Africa)
34. [Mercy for Animals](#) (USA)
35. [Mundo Azul](#) (Peru)
36. [One More Generation](#) (USA)
37. [ProVeg](#) (Germany)
38. [Rapad Maroc](#) (Morocco)
39. [Sea First](#) (Netherlands)
40. [Society for Animals, CZ](#) (Czechoslovakia)
41. [Suomen Eläinsuojeluyhdistys \(The Finnish Society for the Protection of Animals\)](#)
42. [The Humane League](#) (USA/UK)
43. [Tier im Recht \(The Center of Excellence for Animals in Law, Ethics and Society\)](#) (Switzerland)
44. [Vissenbescherming \(Fish Protection Foundation\)](#) (Netherlands)
45. [WELFARM - Global Protection of Farm Animals](#) (France)

For correspondence with the signatories, please contact Jessica Bridgers at [jessica@worldanimal.net](mailto:jessica@worldanimal.net) and Douglas Waley at [d.waley@eurogroupforanimals.org](mailto:d.waley@eurogroupforanimals.org). We look forward to the possibility of further communication.