



# Aquatic Resources and Animal Nutrition Welfare in a Changing Climate

## AU-IBAR's Perspective

Presentation by  
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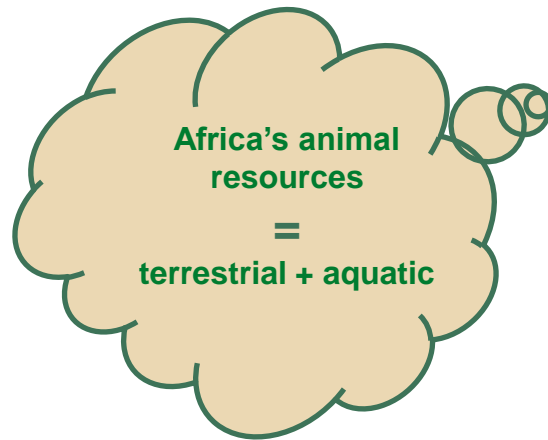
**The 7th Africa Animal Welfare Conference - Action 2023**  
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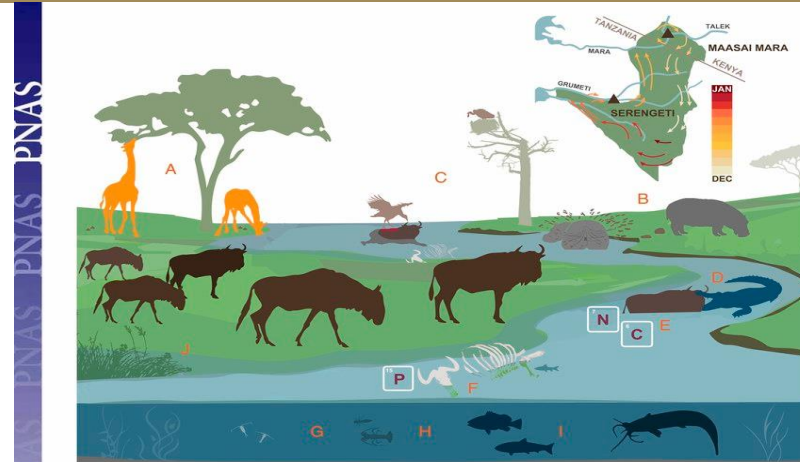
*A good environment and the right  
food of the right quality at the  
appropriate time are essential for  
the well-being and productivity of  
animals*



# All Creatures, Great and Small *(James Herriot)*



**AU-IBAR's perspective**



Pringle, R. 2017. How large herbivores subsidize aquatic food webs in African savannas. <http://www.pnas.org/cgi/doi/10.1073/pnas.1708571114>



*food, animal feeds, environmental services, medicinal purposes, cultural uses, work animals, companions, other purposes*

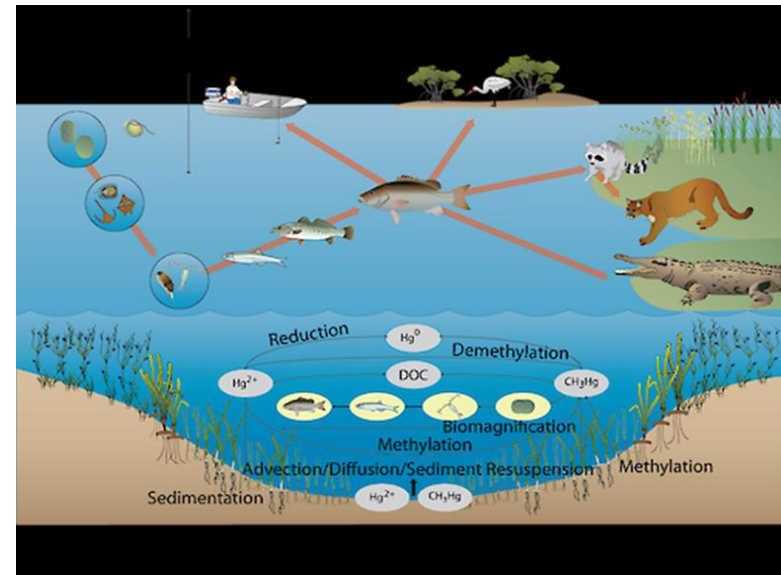
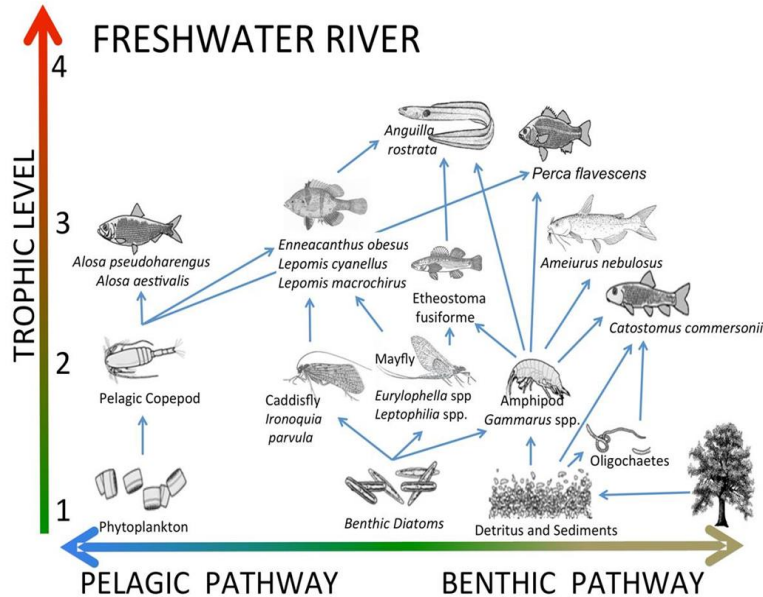


*jobs, wealth, economies, well-being of man, sustainable environments*



# All Creatures, Great and Small *(James Herriot)*

*The ecosystem approach and ecosystem health*



**Conceptual diagram illustrating the biomagnification of mercury within the aquatic food chain.** Source: University of Maryland. Center for Environmental Sciences. Integration and Application Network. Online <https://ian.umces.edu/media-library/biomagnification-of-mercury-within-aquatic-food-chain/>

≈ **AU-IBAR's perspective is to sustainably manage and harness aquatic resources to provide**

- (i) optimum environment for animal production
- (ii) adequate food and nutrition for all Africa's animals
- (iii) adequate and good quality animal drinking
- (iv) safety of aquatic sourced foods and animal feeds



## VISION

Sustainable management and utilization of fisheries and aquaculture resources through the creation of a conducive and enabling environment for equitable, economic and social development in Africa.

*emphasizes ecosystem approach for the sector*

## PFRS POLICY PILLARS

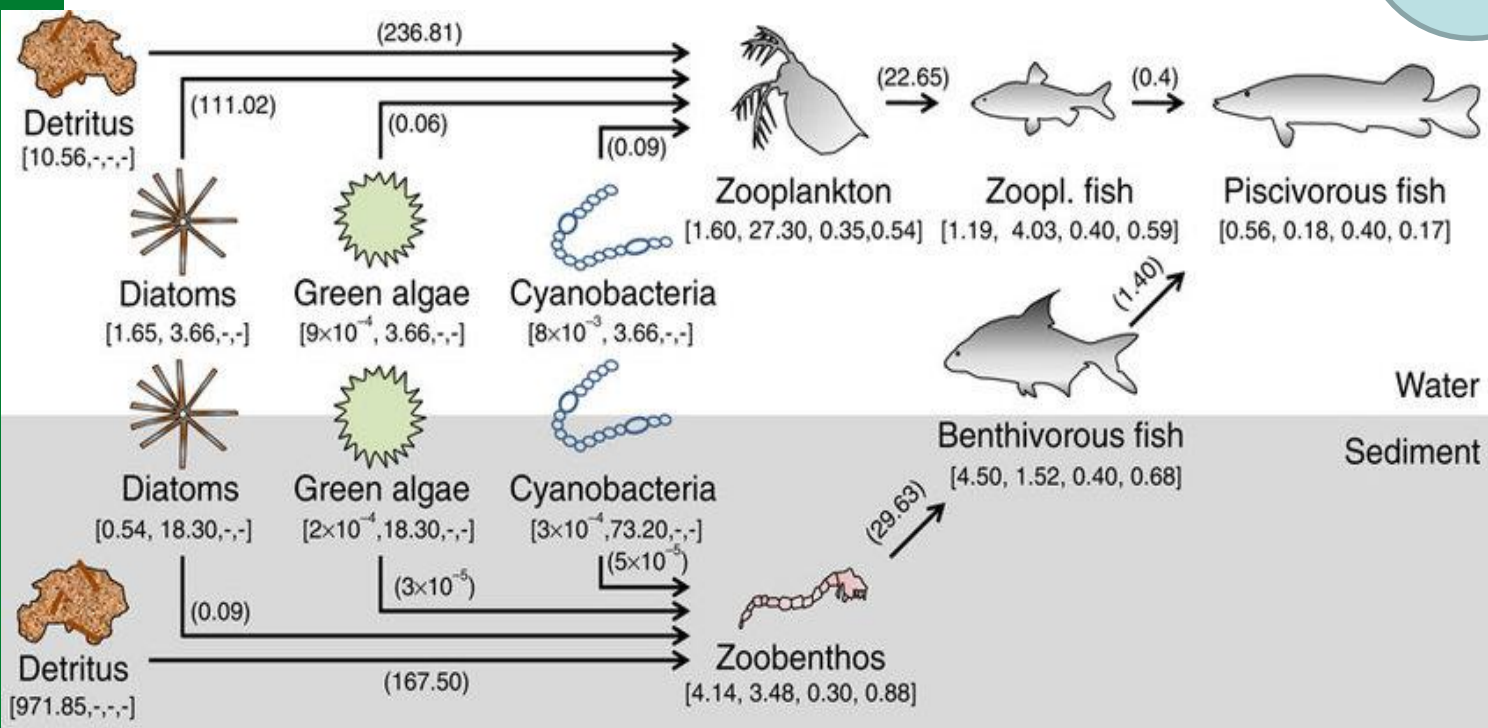
1. Conservation and sustainable resource use
2. Small-scale fisheries development
3. Sustainable aquaculture development
4. Responsible and equitable fish trade and marketing
5. Strengthened regional and sub-regional
6. Cooperation awareness enhancing
7. And human-capacity development
8. High seas fisheries

Create an enabling environment for sustainable management and for generating the potential of the resources



# Continental Policy: The PFRS

The objectives of the PFRS cannot be met unless the welfare (**including food and nutrition needs**) and health of all these animals is guaranteed



## AU-IBAR Actions

1. FishGov
2. Aquatic biodiversity
3. Blue economy

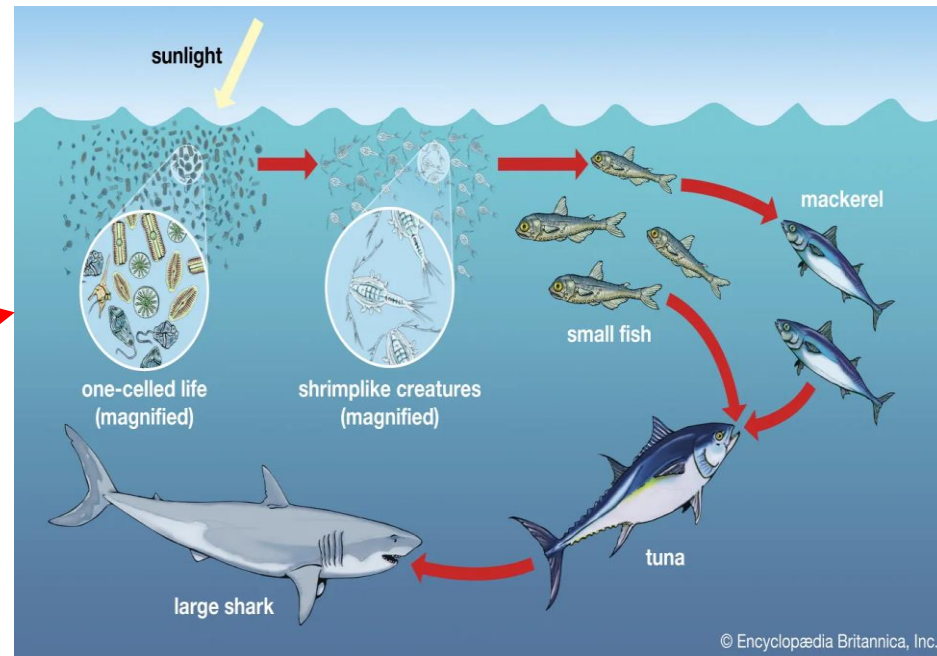
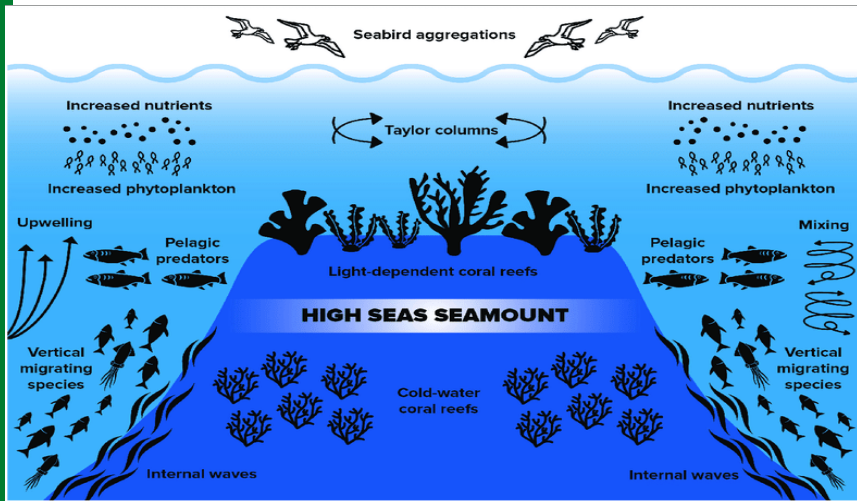


*aquatic animal health and welfare component*

Adapted from Kuiper et al, 2015. Online: [https://www.researchgate.net/figure/Schematic-representation-of-the-aquatic-food-web-and-the-feeding-relations-The-food-web\\_fig1\\_280103754](https://www.researchgate.net/figure/Schematic-representation-of-the-aquatic-food-web-and-the-feeding-relations-The-food-web_fig1_280103754)



# The relevance of this approach



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Online: <https://www.britannica.com/science/food-chain>

Corals are animals

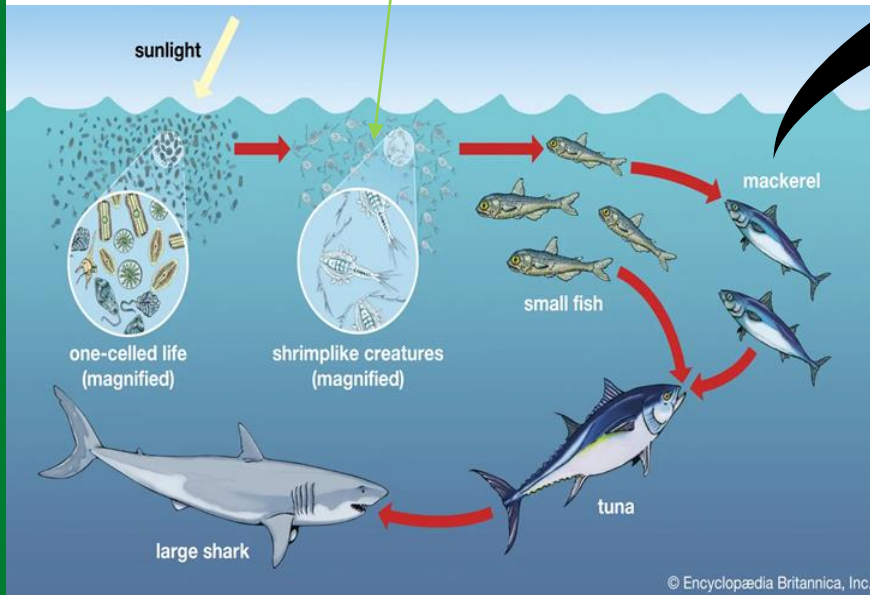




# The relevance of this approach

For example Nigeria:

- 1 million tons catfish
- USD 2,6 billions
- $\approx \leq 5-10$  tons artemia
- $\approx$  USD 1 million



- Over 100 commercial fishery species
- Food and other uses (aquatic animal and plant) for humans
- Terrestrial animal feeds  $\Rightarrow$  fish + bone meal, shells, oils, etc.
- Live feeds (farmed artemia, daphnia, etc.)

*Potential and emerging prospects for expanding human and animal food and nutrition through fisheries and aquaculture*



...the true face of Africa's Aquaculture .....  
..... its not just fish



[www.aqfbar.org](http://www.aqfbar.org)

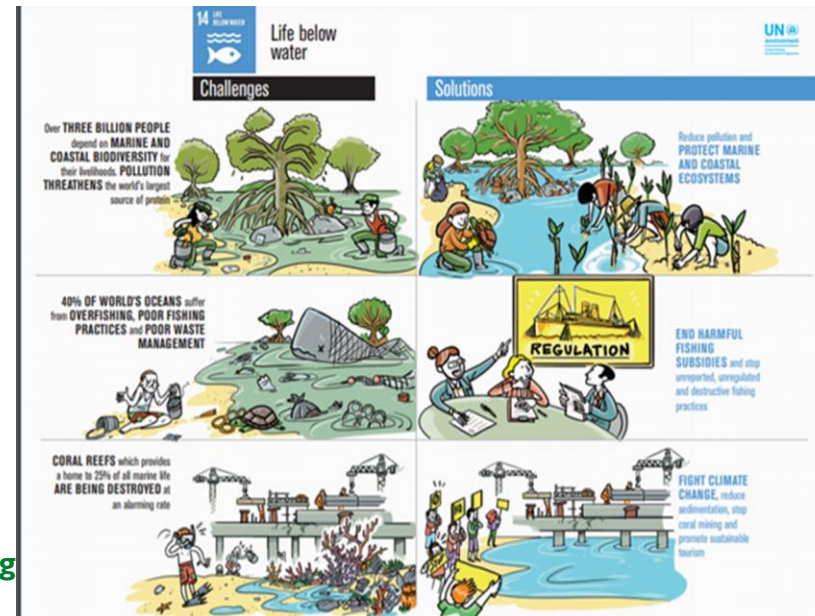
# Some of Africa's aquaculture products





# The greatest threats to aquatic animal welfare and the ability of Africa's aquatic resources expand into producing high quality ingredients for animal feeds

- Environmental degradation and pollution
- Climate change (as a result of impacts on water quality and volume)
- Terrestrial animals also benefit from good quality 'natural wholesome water' => sustaining water cycles is important





**To ensure the benefits continue to accrue from Africa's aquatic resources and Blue Economy water resource management practices in Africa need to be expanded to cater for the needs of aquatic living resources and the use aquatic resources additionally optimized for animal feed and fodder production**

Data, information and knowledge needs

aquaponics and hydroponics in arid area and backyard fodder for small livestock like rabbit production)



**Aquatic Animal Health, Welfare and Ecosystem Health**

[www.au-ibar.org](http://www.au-ibar.org)

WORLD AQUACULTURE Society

2023 AFRAQ AQUACULTURE AFRICA

AFRICAN CHAPTER WORLD AQUACULTURE SOCIETY

Hosted by the Government of Zambia

**Aquaculture Africa 2023 Conference**

Mulungushi Convention Centre Lusaka, ZAMBIA

*Upcoming continental forum whose establishment supported by AU-IBAR/AUDA-NEPAD under FishGov 1 that will further be deliberating these issues*

**ALL ARE WELCOME**

# Thank You



**AU-IBAR: Providing leadership in the development of animal resources for Africa**