

# Aquatic Health Information Brief: Mozambique



## Summary information

### Customs and borders

#### 1. International airports (12):

- Maputo International
- Beira International
- Tete International Chingozi
- Nampula
- Quelimane f. Chimoio
- Lichinga
- Pemba
- Vilankulo
- Cuamba
- Nacala
- Ulongwe

#### 2. Official Land border crossing points (23):

- RSA: Ressano Garcia, Kosi Bay - Ponta do Ouro, Pafuri, Giriyonda.
- Zimbabwe: Machipanda, Chiqualaquala, Chitombo Nyamapand, Cuchamano, Espangabera, Mukumbura
- Eswatini: Lomahasha, Chiqualaquala, Chitombo, Cuchamano, Mount Selinda, Espangabera, Mecumbura.
- Zambia: Cassacatiza Chaninda Border.
- Malawi: Biri, Dedza Calomue, Mandimba, Milange, Villa Nova de Fronteira, Zobue.
- Tanzania: Matchedje Border post (de Fronteira - Marka), Mtambaswala Unity Bridge.

#### 3. Bordering countries (6):

RSA, Zimbabwe, Eswatini, Zambia, Malawi, Tanzania.

#### 4. Coastal customs ports (7):

Maputo, Beira, Nacala, Xai xai, Inhambane, Quelimane Pemba.

## Key contacts supporting national aquatic health management

### Fisheries and Aquaculture Department

INIP  
(National Institute of Fishery Inspection); and

IDEPA  
MIMAIP  
Ministério do Mar, Águas Interiores e Pescas  
(Ministry of Sea, Inland Waters and Fisheries)

**1. Lúcia Sumbana Santos, Director, National Institute of Fishery Inspection (INIP), Maputo:**

[lucysantosmz@gmail.com](mailto:lucysantosmz@gmail.com)  
[lucia.sumbana@inip.gov.mz](mailto:lucia.sumbana@inip.gov.mz)

**2. Carlos Riquixo, Vice-National Director, INIP:**

[carlos.riquixo@inip.gov.mz](mailto:carlos.riquixo@inip.gov.mz)

Tel: +258 21315226  
or +258 844011060  
or +258 829876829

[info@inip.gov.mz](mailto:info@inip.gov.mz)

<http://www.inip.gov.mz/index.php/en>

**1. Lídia de Fátima da Graça Cardoso, Minister, MIMAIP:**

Tel: +258 21357 100

<http://www.mimaip.gov.mz>

**IDEPA:**

Tel: +258 21357 100

<http://www.mimaip.gov.mz>

### Veterinary Services

MADER  
(Ministry of Agriculture and Rural Development)

**1. Dr Américo Da Conceicao, National Director Veterinary Services, Ministerio de Agricultura y Seguridad Alimentaria Praça dos Heróis Moçambicanos, PO Box 1406 Maputo:**

Tel. +258 21468200

[geral@agricultura.gov.mz](mailto:geral@agricultura.gov.mz)

<https://www.agricultura.gov.mz>

### Universities

UEM  
(Eduardo Mondlane University)

**1. Prof. Manecas Baloi, Lecturer, Faculty of Veterinary Science, UEM (Eduardo Mondlane University):**

[cmbaloi@gmail.com](mailto:cmbaloi@gmail.com)

Tel: +258 21430239

<https://www.uem.mz/index.php/faculdades-e-escolas/faculdades/faculdade-de-veterinaria>

**2. Joaquim Saide, Diagnostic lab: Center of Biotechnology, UEM, Av Julius Nyerere, 3453 Maputo:**

[jaosaide@gmail.com](mailto:jaosaide@gmail.com)

<https://www.uem.mz/index.php/sobre-a-uem/idades-organicas/investigacao/centro-de-biotecnologia>

**3. Inácio Mateus Assane, Lecturer, Faculty of Agrarian Science University Zambeze:**

[inacio.m.assane@unesp.br](mailto:inacio.m.assane@unesp.br)

### Private sector and other support

**1. Riaan Welman (Lagoa Mar Feeds):**

[welmanriaan@gmail.com](mailto:welmanriaan@gmail.com)

Tel: +258 872892853

**2. Riaan Crous (Lagoa Mar Feeds):**

[riaancrous@croubroers.com](mailto:riaancrous@croubroers.com)

Tel: +278 45825618

**3. Japie Engelbrecht, Specialized Aquatic Feeds:**

[japie@safefeds.co.za](mailto:japie@safefeds.co.za)

Tel: +278 13708167

## Main fish pathogens and health conditions detected in Mozambique

**Parasitic:** Gyrodactylids, Dactylogyrids, *Trichodina spp.*, Digenian gill infection (*Centrocestus*), *Ambiphrya spp.*, *Lernaea spp.*, *Mutela zamhesiensis larvae*, *Corbicula fluminalis larvae*, Bubble snail, *Bulinus* species larvae.

**Bacterial:** Suspected *Flavobacterium columnaris*.

**Viral:** Tilapia Lake Virus (TiLV), White spot syndrome virus (WSSV).

**Fungal:** Epizootic Ulcerative Syndrome (EUS) - Manika Province, *Saprolegnia spp.*

## Private sector background

**Shrimp:** By 2011 the shrimp farming industry along the Mozambique Channel comprised a dozen relatively large-scale farms, widely spaced and coordinated through a strong national shrimp producer association. The production systems were relatively extensive, with considerable water exchange to maintain good growth rates of high-value *Penaeus monodon* for European markets. In September 2011, a shrimp farm in Quelimane experienced an outbreak of whitespot disease (WSD) caused by white spot syndrome virus (WSSV). The disease is believed to have come via ballast water from previously infected areas along the Arabian Peninsula, causing the industry in Mozambique to virtually shut down. Stocks were destroyed and sites disinfected, but upgrading of filtration and disinfection systems and wider farm infrastructure proved too expensive for many. Aquapesca is now the only remaining commercial shrimp company, with significantly improved biosecurity measures including:- more controlled production systems, control of post-larvae source, sub-unit sectioning/isolation, avoiding stocking during winter months, and operational protocols for staff. Health risks are further reduced by reducing water needs through recirculation and filtration, but filtering any incoming seawater using 200-micron screens, chlorinating ponds after initial filling, and installing predator fences and bird netting.

**Finfish:** Since finfish aquaculture production is still low, primarily in small-scale farms, there are no significant fish disease issues. Several larger tilapia cage sites and hatcheries are developing. The use of antibiotics and probiotics is unrecorded and probably still limited in finfish. No record yet of fish vaccination. Two feed companies – LFL from Mauritius and Specialized Aquatic Feeds (SAF) from South Africa – bring some level of aquatic animal health and biosecurity expertise, also several specialist fish vets from South Africa have worked in the country. Considerable funding over the years from Norway trying to develop small- to mid-scale financially viable tilapia/catfish aquaculture.

## Infrastructure and Legislation: FAQs

### 1. Does the government have a specialised unit for aquatic health?

No. An adequately-funded regulatory agency and a national reference laboratory are needed. National aquatic health plans should be developed to clearly identify the role of each stakeholder and set out strategies for responding to disease outbreaks. A disease surveillance program should be set up, consistent with WOAHA standards.

### 2. Are aquatic health diagnostics laboratories accessible and affordable to the majority of aquaculture farmers?

Center of Biotechnology, Eduardo Mondlane University, has a diagnostic research laboratory but it is unclear as to its specialisation in terms of crustacean or finfish pathogens, or its accessibility and affordability to private farmers. The National Institute of Fishery Inspection has overall authority for aquatic animal health (AAH).

### 3. Does the government have any bans or limitation on introducing live fish into the country – or moving live fish within country?

There are close controls on importation of any live penaeids (shrimp). No permitted import of any species listed on CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). Banned import of fish from the Malawian district of Ntchisi following EUS detection (from 02.09.2020 Fishery Law).

### 4. Does the government have any specialist legislation on aquatic health?

Yes, but limited. There is a national Fishery Law. PESAAQUA (Plano de Sanidade dos Animais Aquaticos) [Aquatic Animal Health Plan] is the general regulation for hygiene control of food products of aquatic origin. <http://www.inip.gov.mz/index.php/pt/legislacao/decretos>

## Further reading

**1. World Bank, 2014. Reducing disease risk in aquaculture. World Bank Report No 8825-GB257-GLB.**

[https://www.researchgate.net/publication/280858443\\_Reducing\\_disease\\_risk\\_in\\_aquaculture\\_-\\_WORLD\\_BANK\\_REPORT\\_NUMBER\\_88257-GLB](https://www.researchgate.net/publication/280858443_Reducing_disease_risk_in_aquaculture_-_WORLD_BANK_REPORT_NUMBER_88257-GLB)

**2. Republica de Mocambique, 2020. Estratégia para o Desenvolvimento da Aquacultura 2020 – 2030. Ministerio Do Mar, Aguas Interiores e Pescas. 57p.**

<https://www.proazul.gov.mz/wp-content/uploads/2021/08/Estretegia-para-o-Desenvolvimento-de-Aquacultura-EDA-27.06.pdf>

**3. Responsible Aquaculture Foundation, 2013. Case Study of the Outbreak of White Spot Syndrome Virus at Shrimp Farms in Mozambique and Madagascar: Impacts and Management Recommendations. This report, prepared by the Responsible Aquaculture Foundation and funded by the World Bank, is Case Study #3 of a series entitled, “Lessons Learned in Aquaculture Disease Management”. November 15, 2013.**

[https://www.globalseafood.org/wp-content/uploads/2017/01/raf\\_wssv-report2.pdf](https://www.globalseafood.org/wp-content/uploads/2017/01/raf_wssv-report2.pdf)

This brief was produced as part of a series across a selection of sub-Saharan African countries. It was produced by a small team from ThinkAqua and Casammak Aquaculture and reviewed by local experts. Support for the data collection survey was provided by the Food and Agriculture Organization of the United Nations.

Contact [info@thinkaqua.org](mailto:info@thinkaqua.org) or [william.leschen@gmail.com](mailto:william.leschen@gmail.com) for further information.

**THINKAQUA**

