The tilapia farming industry is under threat from an emerging and highly contagious viral disease, Tilapia lake virus.

**Symptoms**
- Sluggishness
- Fish paleness
- Lesions of the skin, scale protrusion and ulcers
- Eye abnormalities and lens opacity
- Loss of appetite
- Reduced schooling behaviour
- Red color around operculum

**Causes / fish to gather at the bottom of the pond**

**Mortality rate of up to 90%**
**Causes serious livelihood losses for farmers**
**Transmission of virus from parent fish to offspring highly likely**
**No commercial vaccine, treatment or disinfection protocols available**

Diseases including the rapidly spreading Tilapia lake virus threaten both a multi-billion dollar global industry, the livelihoods and food security of millions of small-scale tilapia farmers, and an affordable food source for consumers.

**$USD 9.8 billion — estimated market value of farmed tilapia**

**2nd most farmed fish worldwide**

**100 countries where tilapia is farmed**

Since its detection in 2014, the pathogen has spread to 16 countries across 3 continents, including:
- Tanzania and Uganda
- Chinese Taipei, India, Indonesia, Israel, Thailand, Malaysia and the Philippines
- Ecuador, Colombia and Peru

**A globally important fish in danger**

**Containing and minimizing the impact of Tilapia lake virus is possible**

The risk of disease spread is high where there are shared water sources and active trade between countries.

**What’s needed to prevent the spread of Tilapia disease:**
- Better surveillance and early detection
- Early reporting of disease
- A stronger culture of reporting suspected disease
- Improved biosecurity and quarantine measures across the value chain
- Compliance with regional and international guidelines for responsible transboundary movement of live aquatic animals
- Tighter control of international trade of tilapia for breeding and farming
- Special attention is needed for small-scale farmers
- Strengthened governance of veterinary and aquatic animal health services (e.g. more investment and resources)

**Actions and recommendations**

The CGIAR Research Program on Fish is managing and mitigating the spread of Tilapia lake virus:

- Understanding the basic biology of the virus and disease transmission pathways
- Developing innovative rapid diagnostic tools with partners
- Creating practical and improved fish health management practices for small-scale farmers
- Producing educational manuals, guidebooks and resources
- Conducting regular biosecurity audits
- Designing disease surveillance programs with competent authorities
- Ensuring research and tools are made publicly available
- There is no evidence of fish viruses causing disease in humans and there have been no reports of any human health-related issues related to the consumption of fish affected by Tilapia lake virus.

For further information, please see:
- Identification of a novel RNA virus lethal to tilapia: https://doi.org/10.1128/IO9.00027-14
- Characterization of a novel Orthomyxo-like virus causing mass die-offs of tilapia: https://doi.org/10.1128/mBio.00431-16
- Tilapia lake virus (TiLV): What to know and do?: https://hdl.handle.net/20.500.12348/717
- Tilapia lake virus: a threat to the global tilapia industry? https://hdl.handle.net/20.500.12348/717
- Experimental infection reveals transmission of tilapia lake virus (TiLV) from tilapia broodstock to their reproductive organs and fertilized eggs: https://hdl.handle.net/20.500.12348/3796