

## White Spot Disease (WSD)

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### Why in News?

*White Spot Disease has been detected in shrimp farms in Andhra Pradesh, but the Government of India reports no severe farmer losses and highlights ongoing surveillance, insurance, and biosecurity measures.*

- **WSD** - It is a **highly lethal viral infection** in **farmed shrimp**, leading to rapid mass mortality in aquaculture farms.
- **Caused by** - A virus called **White Spot Syndrome Virus (WSSV)**.
- This is a double-stranded DNA virus of the genus Whispovirus and family Nimaviridae.
- **Hosts** - It primarily affects penaeid shrimp, but also affects other crustaceans like crabs and lobsters.
- **Symptoms** - Affected shrimp exhibit anorexia, lethargy, reddish discolouration and the presence of circular white spots on the carapace and other exoskeletal parts.
- **Transmission** -
  - **Horizontal** - Through contaminated water, pond sediment, zooplankton, and cannibalism.
  - **Vertical** - From infected broodstock to larvae.
- **Global Spread** - It was **1<sup>st</sup> reported in Taiwan** (1992), and later spread across Asia, Latin America, and other shrimp-producing regions.
- **Environmental Factors** - Stress and water temperature play a role - below 27°C (disease outbreaks are more likely) and above 32°C (viral activity decreases significantly).
- **Mortality** - Shrimp may start 2-3 days after infection and reach 80-90 per cent within 5-7 days of the onset of first mortalities.
- **Prevention & Control Measures**
  - **Pond Preparation** - Dry ponds for 3-4 weeks; disinfect intake water with calcium hypochlorite (30 ppm).
  - **Biosecurity** - Use water filters and fencing to block carriers; quarantine broodstock/post larvae; do PCR tests; register farms.
  - **Other best practices** include avoiding overstocking, maintaining water quality (pH 7.5-8.5, DO optimal), and adopting Biofloc Technology (BFT) or Recirculatory Aquaculture Systems (RAS) to reduce disease risk.
- **Some Government initiatives**
  - **Surveillance Framework** - The Department of Fisheries runs the **National Surveillance Programme for Aquatic Animal Diseases** (NSPAAD) under PMMSY,

with an outlay of ₹33.78 crore.

- An Android app, "*Report Fish Disease*", connects farmers, officers, and fish health experts for early detection and reporting.
- **Insurance Support** - Aquaculture crop insurance is integrated under Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (*PM-MKSSY*).

## References

1. [PIB | Outbreaks of white spot diseases in Andhra Pradesh](#)
2. [CIBA | White Spot Disease](#)

