

1. Epidemiological comments:

(Comments should include: 1) Origin of the disease or pathogen (history of the disease); 2) Species affected; 3) Disease characteristics (unusual clinical signs or lesions); 4) Pathogen (isolated/sero-typed); 5) Mortality rate (high/low; decreasing/increasing); 6) Death toll (economic loss, etc); 7) Size of infected areas or names of infected areas; 8) Preventive/control measures taken; 9) Samples sent to national or international laboratories for confirmation (indicate the names of laboratories); 10) Published paper (articles in journals/website, etc). and 11) Unknown diseases: describe details as much as possible.)

Comment No.	
1	<p>Koi herpesvirus disease (KHV) 1) Reported from DOF Active Surveillance. 2) Species affected: <i>Cyprinus carpio</i>. 3) Disease signs: No significant sign 4) Pathogen: Koi herpesvirus 5) Mortality rate: No mortality reported. 6) Economic loss: Unknown 7) Names of infected areas: Perak (July and August) 8) Preventive/control measures taken: Early harvest, farmer was advised to implement biosecurity measures and stocking with KHV negative fry in the next cycle; 9) Laboratory confirmation: Kedah Fisheries Biosecurity Center; 10) Publications: None Koi herpesvirus is known to occur previously in the states of Perak (last reported 2019).</p>
2	<p>Viral encephalopathy and retinopathy (VER) (VNN) 1) Reported from DOF Active Surveillance. 2) Species affected: <i>Lates calcarifer</i> 3) Disease signs: None 4) Pathogen: Viral Nervous Necrosis virus 5) Mortality rate: Unreported 6) Economic loss: Unreported 7) Names of infected areas: Terengganu 8) Preventive/control measures taken: Traceability of fish fry is undergoing. 9) Laboratory confirmation: Kedah Fisheries Biosecurity Centre 10) Publications: None VNN is known to occur previously in the states of Perak (last reported 2015). The disease is known to occur previously in the state of Perak (2015) and Kelantan (May 2015).</p>
3	<p>Tilapia lake virus (TiLV) No positive case was detected (PCR) during DoF active surveillance programme The disease is known to have occurred previously in Kedah (June 2017), Perlis (July 2017), Sarawak (July 2017), Negeri Sembilan (October 2017), Kedah and Sarawak (March 2018), and Terengganu (July 2018).</p>
4	<p>Infection with Perkinsus olseni No positive case was detected (PCR) during DoF active surveillance programme. Infection with Perkinsus olseni was suspected to occur in 2016, but not confirmed in a zone.</p>

5	<p>Infection with infectious hypodermal and haematopoietic necrosis virus (IHHNV)</p> <p>1) Reported from DOF Active Surveillance. 2) Species affected: <i>Penaeus vannamei</i> and <i>Penaeus monodon</i>. 3) Disease signs: No significant sign 4) Pathogen: infectious hypodermal and haematopoietic necrosis virus 5) Mortality rate: Unknown 6) Economic loss: Unknown 7) Names of infected areas: Kedah Pahang on 14 February, 19 September and 7 October, 8) Preventive/control measures taken: Early harvest, drying of ponds, cleaning and disinfection of infected ponds and farming tools, farmer was advised to implement biosecurity measures and stocking with IHHNV negative seeds in the next cycle. 9) Laboratory confirmation: Kedah Fisheries Biosecurity Centre; 10) Publications: None IHHNV was known to occur previously in several states (last reported 2021).</p>
6	<p>Infection with Infectious myonecrosis virus (IMNV)</p> <p>1) Reported from DOF Active Surveillance. 2) Species affected: <i>Penaeus vannamei</i>. 3) Disease signs: Whitish necrotic in distal abdominal segments and tail fan. 4) Pathogen: Infectious myonecrosis virus 5) Mortality rate: Unreported 6) Economic loss: Unreported 7) Names of infected areas: Johor and Pahang 8) Preventive/control measures taken: Early harvest, drying of ponds, cleaning, and disinfection of infected ponds and ming tools, the farmer was advised to implement biosecurity measures and stocking with IMNV-negative seeds in the next cycle. 9) Laboratory confirmation: Kedah and Johor Fisheries Biosecurity Center; 10) Publications: None IMNV was known to occur previously in several states (last reported in 2018).</p>
7	<p>Acute hepatopancreatic necrosis disease (AHPND)</p> <p>1) Reported DOF Active Surveillance. 2) Species affected: <i>Penaeus vannamei</i>. 3) Disease signs: No significant sign 4) Pathogen: <i>Vibrio parahaemolyticus</i> (Plasmid) 5) Mortality rate: Unreported; 6) Economic loss: Unreported; 7) Names of infected areas: Sabah; 8) Preventive/control measures taken: Total harvest, drying of ponds, cleaning and disinfection of infected ponds and farming tools, farmer was advised to implement biosecurity measures and stocking with AHPND negative seeds in the next cropping; 9) Laboratory confirmation: Sarawak Fisheries Biosecurity Center; 10) Publications: None AHPND was known to occur previously in several states (last reported 2021).</p>

8	<p>Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)</p> <p>1) Reported from Selangor, Sabah, Sarawak, Melaka, Johor, Negeri Sembilan, Pahang and Perak state from March to December active surveillance;</p> <p>2) Species affected: <i>Penaeus vannamei</i> and <i>Litopenaeus monodon</i>;</p> <p>3) Disease signs: No significant sign;</p> <p>4) Pathogen: <i>Enterocytozoon hepatopenaei</i>;</p> <p>5) Mortality rate: Unreported;</p> <p>6) Economic loss: Unreported;</p> <p>7) Names of infected areas: Selangor, Sabah, Sarawak, Melaka, Johor, Negeri Sembilan, Pahang and Perak</p> <p>8) Preventive/control measures taken: Early harvest, drying of ponds, cleaning and disinfection of infected ponds and farming tools, farmer was advised to implement biosecurity measures and stocking with EHP negative seeds in the next cropping;</p> <p>9) Laboratory confirmation: Kedah Fisheries Biosecurity Center, Sarawak Fisheries Biosecurity Centre, Johor Fisheries Biosecurity Centre and Selangor Fisheries Biosecurity Centre;</p> <p>10) Publications: None</p> <p>HPM-EHP is known to occur previously in the states of Selangor, Sarawak, Kedah, Pahang and Johor(last reported 2021).</p>
2. New aquatic animal health regulations introduced within past six months (with effective date):	