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Background

Following the introduction and further spread of African swine fever (ASF) in Asia and the Pacific, there has been increasing concern over this disease in the region. The ASF situation is continuously evolving in the region and has also been impacted by COVID-19 and associated restrictive measures.

The [Standing Group of Experts on ASF for Asia Pacific \(SGE-ASF Asia Pacific\)](#) identified several priority topics relating to ASF. Laboratory diagnostic capacity development was one of the identified priorities. Much work has been done across the South East Asia region to build capacity over the past years, however there is still a need to further enhance the laboratory and the field diagnostic capacity, harmonize laboratory diagnostic techniques, facilitate the sharing of information and coordinate laboratory activities amongst national laboratories, Reference Laboratories and laboratory experts to strengthen ASF control.

Jointly organised by OIE Sub-Regional Representation for South East Asia (OIE SRR SEA) and FAO Regional office for Asia and the Pacific (RAP) under GF TADs' umbrella, the meeting was held virtually on 25 August 2021. A total of 56 participants from 13 countries including 10 ASEAN countries, plus PR China, Timor-Leste and Papua New Guinea, experts from the OIE Reference Laboratories of the region [Australian Centre for Disease Preparedness (ACDP) and China Animal Health and Epidemiology Center (CAHEC)], and donors (Australia, China, New Zealand and DTRA) attended the meeting.

Objective

The objectives of the 3rd ASF co-ordination meeting were:

- to provide an update on available laboratory diagnostic tools for ASF diagnosis;
- to share experiences and challenges in ASF diagnosis;
- to understand the current laboratory diagnostic capacity of the MC and discuss measures to strengthen ASF control in the region;
- to provide update on the discussions of the Global Network of ASF Laboratories and Regional Laboratory Expert Group on ASF and other pig diseases in Asia and the Pacific;
- and to strengthen collaboration and coordination between the OIE Reference laboratories for ASF and the national laboratories.

The meeting provided a platform to share experiences and challenges in ASF diagnosis, assess laboratory capacity and discuss measures to enhance laboratory diagnostic capacity, harmonize diagnostic techniques and coordinate laboratory activities to strengthen ASF control in the region.

Opening session

The meeting was opened by Dr. Ronello Abila, Sub-Regional Representative for South East Asia, by welcoming all the participants. He stressed on the importance of laboratory diagnostics, as a foundation for surveillance and subsequently for prevention and control of ASF. He expected that the meeting would be insightful for all participants, with updates on ASF diagnosis from experts. He also thanked the participants for responding to the questionnaire survey sent beforehand, which will provide insights to the current status of laboratory capacity in ASF diagnosis.

Session II: Update on ASF Diagnosis chaired by Dr Filip Claes, FAO

The first session of the meeting started with a presentation on available laboratory and field diagnostic tools for ASF diagnosis from Dr David Williams, OIE Expert at the OIE Reference Laboratory for ASF at ACDP. Importance of ASF diagnosis through laboratory tests using virus or antibody detection methods were highlighted including field diagnostic (pen-side) tests. Also included were procedures on prioritizing tests for use according to situations ('fit for purpose' table) for both virus and antibody detection.

The second presentation from Dr Xiadon Wu, CAHEC, on detection of novel ASF variant focused on an in-house triplex PCR method used to detect the variant. Discussions were made on this test being validated by reference and clinical samples.

The third presentation from Dr Caitlin Holley, OIE RRAP, was on global and regional laboratory networks, their importance, objectives, membership criteria and on the current activities.

The final presentation was on the description of the inception and planning of the OIE Laboratory Twinning Project between Pirbright, UK and Bureau of Animal Industry (BAI), Philippines by Dr Edna Felipe, BAI Philippines.

Session III: Plenary Session chaired by Dr Ronello Abila, OIE

Presentation on the review of ASF laboratory diagnostic capacities

The second session of the meeting opened with presentation on the update on the ASF laboratory activities and diagnostic tests used by members in OIE SRRSEA. This was based on a questionnaire survey sent to members before the meeting, with the objectives to understand the current situation of ASF diagnosis in terms of availability and use of diagnostic tests, to understand the challenges faced by countries in ASF diagnosis, to identify areas of support required by member countries to enhance ASF diagnosis from OIE/FAO/RLs/other partners and finally to seek recommendations to enhance diagnostic capacity of the members and to strengthen ASF control in the region. The online questionnaire was completed by 13 Members. A rapid analysis conducted and presented by Dr. Karma Rinzin, OIE SRR SEA, showed most countries have and used the Real-time PCR test for agent identification while antibody ELISA was the most common test for immune response. Most countries (12) have received technical support from reference laboratories, but they would still request for more technical support especially in proficiency testing, reference materials and SOPs. Most countries would like more hands-on training focused on virus isolation, sequencing and molecular diagnosis of ASF.

Plenary discussion

The plenary discussion focused on the Challenges in ASF diagnosis in member countries, initiatives to enhance laboratory diagnostic capacity and ideas to strengthen collaboration and coordination between ASF Reference and National Laboratories was moderated by Dr Ronello Abila. In the first round of panel session three member countries provided insights on the challenges faced in ASF diagnosis. This was followed by some response and further insights by the Experts/ members from Reference Laboratories and partners.

Challenges and issues faced by the Member countries in ASF diagnosis

Three countries (Malaysia, Philippines and Vietnam) participated as Panellists in the round table discussions and provided highlights of the challenges faced during the initial incursion of ASF, at the time of COVID restrictions and in the era of new developments of ASF vaccine. Main challenges are summarized below:

- difficulties in collecting and transporting specimen to laboratories in time due to movement restrictions,

- difficulties in proper storage of samples,
- unavailability of enough PCR machines hindering timely diagnosis and sustainability of reagents,
- lack of skills in advance laboratory diagnosis such as virus isolation and sequencing,
- low sensitivity and specificity of the currently available field tests,
- Since the development of ASF vaccines are making good progress, need of a diagnostic test to differentiate the vaccine strain and field strain and
- concerns of risks of environment contamination through use of live attenuated vaccines were raised.

Recommendations from the Reference Laboratories and Partners

The ACDP proposed means to strengthen collaboration and support from OIE Reference Laboratories to national laboratories which could be done by way of inclusion of laboratories working on ASF diagnosis in networks with reference laboratories through which proficiency testing, provision of reagents, SOPs and trainings could be possible.

CAHEC further added that support could now be provided virtually to demonstrate most laboratory procedures. They advised members to upgrade laboratories to the ISO 17075 level for assured quality control, for which support can be provided also.

Additionally, MCs were advised to be prepared for the vaccine usage in individual countries. MCs should be aware of the type of vaccine candidates used and prepare for establishing tests for differentiation of vaccine and field strains. Apart from that, importance of sharing of epidemiological information at the national and regional levels were stressed upon.

Partners like FAO added that most trainings were moved to a virtual platform due to the sanitary situation, but the preparations were underway to provide hands-on trainings once the sanitary situation improves. Direct support to targeted countries in terms of providing reagents through available projects will also be implemented and they are considering to also providing validated field tests for early diagnosis, especially in remote areas where access to specialized laboratory tests is difficult.

Deliberations were also made on how OIE and ACDP can expand on the training materials from the laboratory twinning project, to be made available for all laboratories in the region (regional e-learning platform), and for OIE to contemplate on creating a platform for repository of SOPs for sharing in the region.

Session IV: Closing and way forward

Dr Filip Claes gave the closing remarks on behalf of FAO. He thanked all the expert speakers for sharing their wisdom and valuable materials. He also thanked all the panellists and participants for sharing their experiences in ASF diagnosis. He emphasized on the fact that ASF is here to stay and will not go away soon although our eventual aim remains the same for elimination and freedom of the disease. He stressed on the importance of preparedness not only on ASF diagnosis but in terms of other aspects of disease control as well. Countries should also explore integrating laboratory into the disease control process to aid in quick control and reduction of the disease and eventual elimination.

On behalf of OIE, Dr Ronello Abila, thanked FAO for their contributions in organizing this coordination meeting. Special thanks were given to colleagues from OIE, who not only worked on this meeting but also on the series of webinars at the onset of ASF incursion in the region. He conveyed that the OIE will continue to work with the Standing Group of Experts on ASF, FAO and other partners in the region and accordingly inform on the topic of interest for the fourth co-ordination meeting. He also informed the meeting that a follow up meeting specifically for Laboratory and ASF diagnosis would be organized next year around the same time.

Annexes

Annex 1: Meeting Programme

African swine fever (ASF) Coordination Virtual meeting

Session III: ASF Diagnosis

25 August 2021

13.00-15.00 Bangkok time (GMT+7)

Duration/ [Start Time]	Topic	Responsibility
I. Opening and context		
10 Minutes [13.00]	<ul style="list-style-type: none"> Welcome note Objective of meeting Background and context of the Third ASF Coordination Meeting - Session - 3 	OIE/ FAO
II. Update on the ASF diagnosis (10 Minutes each) – Chair: Filip Claes, FAO		
50 Minutes [13.10]	<ul style="list-style-type: none"> Available laboratory and field diagnostic tools for ASF diagnosis - 15 mts Detection of novel ASF variant - 10 Mts Update on the ASF Laboratory network (Global and regional) - 10 mts ASF Laboratory Twinning Project – 7 Mts Q & A 	David Williams, ACDP Xiaodon Wu, CAHEC Caitlin Holley, OIE Tokyo Edna Filipe, BAI, Philippines
III. Plenary discussions – Chair: Ronello Abila, OIE		
40 Minutes [14.00]	<p>Brief update on ASF laboratory activities and diagnostic tests used by members (based on questionnaire survey)</p> <p>Plenary Discussion</p> <ul style="list-style-type: none"> Challenges in ASF diagnosis in member countries Initiatives to enhance laboratory diagnostic capacity Ideas to strengthen collaboration and coordination between ASF Reference and National Laboratories 	Karma Rinzin, OIE SRRSEA Round table discussion MCs, RLs – CAHEC, ACDP, Myanmar/ Vietnam, Philippines/ Malaysia Moderated by Chair
IV. Way Forward and closing		
10 Minutes [14.50]	<ul style="list-style-type: none"> Discussion and closing of the meeting 	OIE/ FAO

Annex 2: Participants of the meeting

Country/Organisation	First Name	Last Name
Australia	Mark	Schipp
Australia	William	Wong
Australia/ CAHEC	David	Williams
China	Xiaodong	Wu
China/ CAHEC	Zhiliang	Wang
China	Jiao	Xu
China/ CAHEC	Jingyue	Bao
Malaysia	Faizah Hanim	Mohd Saeid
Malaysia	Roynston	Albert
Malaysia	Thenamutha	Muniandy
Malaysia	Jamaliah	Senawi
Malaysia	Norfadzrin	Fadzil
Malaysia	ISMAIL	MOKHTAR
Myanmar	WIN	MYINT
Myanmar	MIN THEIN	MAW
Papua New Guinea	Elaine	Hevoho
Papua New Guinea	Orlando Natera	Mercado
Papua New Guinea	VALENTINA	YAMANEA
Papua New Guinea	Ellenica	Kingal
Papua New Guinea	Tania	Areori
Papua New Guinea	Ilagi	Puana
Papua New Guinea	Bridgit	Fabila-Kavana
Papua New Guinea	Ian Russel	Enriquez
Papua New Guinea	Estelo	Quimbo
Philippines	Edna	Felipe
Philippines	Janice	Garcia
Philippines	Reildrin	Morales
Philippines	Imelda	Santos
Philippines	Rachel	Azul
Philippines	Samuel Joseph	Castro
Philippines	Oscar Jhan	Cabanayan
Philippines	Amanel	Manalo
Singapore	Yifan	Wang
Singapore	Taoqi	Huangfu
Singapore	Wendy	Sng
Singapore	Samyuktha	Balakumar

Thailand	PRAKIT	BOONPORNPRASERT
Vietnam	Chuong Dinh	Vo
Vietnam	Le	Thai Thi Minh
Vietnam	Dung	Nguyen Kim
Vietnam	Trần Quốc	Phong
Vietnam	An	Hà Tấn
Vietnam	Tuan	Tran
Vietnam	Tho	Nguyen
FAO	Filip	Claes
FAO	Yooni	Oh
OIE	Kinley	Choden
OIE	Tikiri	Wijayathilaka
OIE	Karma	Rinzin
OIE	Ronello	Abila
OIE	Laure	Weber-Vintzel
OIE	Ashish	Sutar
OIE	Jing	Wang
OIE	Onsiri	Benjavejbhaisan
OIE	Caitlin	Holley
OIE	Tiangang	Xu

This ASF coordination meeting was organized under the umbrella of the



To know more

<https://rr-asia.oie.int/en/events/african-swine-fever-asf-virtual-coordination-meeting-session-iii-asf-diagnosis/>

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