

Vietnamese authorities control the spread of African swine fever with the use of nuclear-derived techniques

By Gerrit Viljoen

In 2019, the pork industry in Viet Nam escaped a wave of African swine fever (ASF) and other animal diseases hitting South-East Asia, thanks to quick action by researchers at the country's National Centre for Veterinary Diagnosis (NCVD). The research team used training and equipment obtained through IAEA support, in collaboration with the Food and Agriculture Organization of the United Nations (FAO), to rapidly diagnose diseases like ASF with nuclear-derived and other techniques, controlling the spread of these diseases, protecting the country's livestock industry and ensuring food security.

China, which shares a border with Viet Nam, reported its first case of ASF in August 2018. The disease quickly spread to the southern part of the country and eventually to Viet Nam. Since a vaccine for ASF was still unavailable, early and accurate detection of the disease was essential in order to implement strict sanitary and biosecurity measures to contain and eventually eliminate the disease.

Immediately after the news of the outbreak in China, the IAEA, in cooperation with the FAO, provided a training course to veterinary diagnosticians from South-East Asia, including Viet Nam, on the diagnosis of ASF and other infectious diseases. Armed with this knowledge, Vietnamese experts were able to diagnose ASF early and put in place measures to protect the country's pig farms.

“Being able to proficiently perform testing is a major milestone, not only for our institute but for the entire country,” said Thanh Long To, Director of the NCVD. “With increased trade and travel across the region, we fear that Viet Nam will face transboundary animal and zoonotic diseases at an increased frequency.”

In Viet Nam, home to 30 million pigs, most of which are raised on family farms, pork makes up roughly three quarters of total domestic meat production and consumption. Demand for pork has been increasing by 6 to 8% per year.



(Photo: L. Gil/IAEA)

Before the training course, the NCVD had to send suspected ASF samples to reference laboratories abroad for confirmation. This could take between three and four weeks, which is too long for the timely implementation of control measures. Now, equipped with the knowledge in-house, testing samples can be carried out within a day, To said.

The NCVD now has the capacity to screen around half a million samples per year and to help contain not only ASF, but also foot-and-mouth disease, leptospirosis, rabies and goat pox, among other diseases (see The Science Box on page 29).

The support was provided through an IAEA technical cooperation project to strengthen the NCVD's capacities to use serological, molecular and nuclear techniques for the early and rapid diagnosis and control of transboundary and zoonotic diseases. The NCVD also receives support as one of 19 members in Asia involved in the Veterinary Diagnostic Laboratory (VETLAB) Network of the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture.