After much anticipation, the Emerging Pandemic Threats (EPT) 2 programme has finally kicked off in Indonesia, bringing together cross-sectoral stakeholders to pre-empt or combat, at their source, newly emerging diseases of animal origin that could threaten human health.

Indonesia has been identified as one of the “hotspots” for emerging infectious diseases (EIDs) in Asia. As globalisation has accelerated cross-border movement of animals and people, farming intensification, increasing global demand for livestock and transforming ecosystems is no longer a matter of “if” the next zoonotic outbreak or pandemic will occur, but rather, “when”. The urgency of this situation requires the Government of Indonesia to take actions in the prevention, detection and response to diseases, as well as the mitigation of their impacts. Under the USAID-funded programme that will be rolled out over the next four years, the FAO Emergency Centre for Transboundary Animal Diseases (ECTAD) will support the Government of Indonesia to detect diseases early, rapidly respond, and mitigate the impacts on health of people and animals, food security and food safety.

“My hope is that the EPT-2 Programme in Indonesia can work well, because the possibility of a pandemic is influenced by many factors, so cross-sectoral coordination is needed,” said drh. I Ketut Diarmita, MP, Director of Animal Health at the Ministry of Agriculture.

The project is aligned with the Indonesia National Medium-Term Development Plan (RPJMN) 2015-2019 on Improving Disease Control and Environmental Health and the MOA Directorate of Animal Health Strategic Plan (2015-2019) on the control of new emerging and re-emerging diseases and strengthening disease surveillance and national information systems.

Nearly 75 percent of all new, emerging, or re-emerging diseases affecting humans at the beginning of the 21st century are zoonotic, or originate in animals. Notable reminders of how vulnerable the increasingly interconnected world is to the global impact of new emergent diseases include HIV/AIDS, severe acute respiratory syndrome (SARS), the H5N1 strain of avian influenza, the 2009 pandemic H1N1 influenza virus and most recently Zika virus.
“The speed with which these diseases can emerge and spread presents serious concerns for public health, the world economy, and global development. The EPT-2 Programme assists Indonesia to prepare for these emerging and re-emerging diseases,” said Dr. James McGrane, Team Leader of FAO ECTAD Indonesia.

6 priority areas of the FAO EPT-2 programme:
- Surveillance and laboratory diagnostics
- One Health-focused disease control and prevention
- Risk reduction on commercial poultry farms
- Risk reduction along the poultry value chain
- One Health capacity building
- Emergency preparedness and response

Pilot Areas Designated for ‘One Health’ Implementation

Vowing to support the implementation of the EPT-2 Programme, the Government of Indonesia has designated Bengkalis of Riau Province, Ketapang of West Kalimantan Province, and Boyolali of Central Java Province as pilot areas where training will be implemented to prevent and control targeted zoonoses and emerging infectious diseases (EIDs) under the One Health approach.

Bengkalis, Ketapang and Boyolali were selected based on several factors: drivers of disease emergence and potential spill-over of diseases from animals to humans; the potential for amplification and spread of diseases; and strong interest and support from local governments. The One Health approach envisages engagement of stakeholders at national and sub-national levels to obtain deeper and more sustainable political and operational support for integrated prevention and management of emerging and re-emerging diseases.

Under the One Health approach which works at the health interfaces of humans, animals and the environment, stakeholders are synergised for multi-sectoral action, with field disease outbreak investigations being conducted jointly among the Ministry of Agriculture, the Ministry of Health and the Ministry Environment and Forestry.

The designation of the three pilot areas was the result of a workshop in April 2016 that brought together stakeholders from the Coordinating Ministry of Human Development and Culture, the National Commission for Zoonoses Control, the Ministry of Agriculture, the Ministry of Health, the Ministry of Home Affairs, and the Ministry of Forestry and Environment; the National Disaster Management Agency, the local government administrations of Riau Province, Central Java Province, West Kalimantan Province, FAO, USAID, and the World Health Organization (WHO).
With Indonesia being one of the hotspots for EIDs and zoonotic diseases, drh. I Ketut Diarmita, MP, Director of Animal Health (DAH) at the Ministry of Agriculture, identifies some challenges lying ahead of us.

In dealing with these diseases, Diarmita underlines the availability of budget, especially ready-to-use funds for disease outbreak control, as one of the main challenges. Responding to this challenge, the DAH has involved the National Disaster Mitigation Agency (BNPB) in their activities.

"In addressing EID and zoonosis, which is part of our joint duties, field officers must immediately report to the Director of Animal Health if they discover suspicious animal diseases, and coordinate with other related institutions," Diarmita said.

Another challenge is to find appropriate reagents and diagnostic kits, especially for exotic diseases. Local institutions that oversee the function of animal health also need to be strengthened. Therefore, Diarmita says there has been a great effort to accelerate the establishment of the national Veterinary Authority.

While the One Health approach calls for strong involvement of national and local authorities that oversee health of humans, animals and the environment, establishing cross-sectoral coordination is also a challenge. For this, Diarmita says that his Directorate supports the activation of the National Zoonoses Commission.

"In our opinion, the One Health approach used in the EPT-2 program is already appropriate," he says.

In dealing with EIDs and zoonosis, the Directorate of Animal Health itself has shown its readiness through various initiatives. First, through the integrated National Animal Health Information System (i-SIKHNAS), which acts as an early warning system using an SMS gateway to receive disease reports from field officers in real time. Second, through the Guidelines for Indonesian Veterinary Emergency Preparedness (KIATVETINDO) for exotic diseases. Third, through the support from eight DAH regional veterinary laboratories (BBVet/Bvet) across Indonesia. Fourth, is through triangulated surveillances in wildlife, livestock and humans with pilot projects in four provinces in Indonesia. The last point is through Rapid Response Units (URC) for strategic animal diseases at the Central, Province and District/City level to perform early detection, reporting and response.

"The Directorate of Animal Health is ready to support the EPT-2 Programme, as long as it adheres to the regulations in Indonesia," Diarmita says.
Flores and Lembata Islands of East Nusa Tenggara Province have proven that dog vaccination not only provides a solution for effective and humane control of rabies, but also helps restore the social, cultural and economic value of dogs in the community. This is one of the highlights of a project recently completed by the Government of Indonesia and the Food and Agriculture Organization (FAO), with financial support from World Animal Protection.

The rabies control project, implemented in Flores and Lembata Islands starting in September 2013, has seen around 410,000 dogs vaccinated in 2014 and 2015 in more than 1,300 villages. Since the start of the project, the number of rabies cases had dropped substantially by mid-2016. In addition, more than 300 animal health officers (veterinarians and paraveterinarians) were trained in rabies control competencies. Five animal health laboratories in Flores also received capacity enhancement support, allowing them to provide effective and efficient diagnostic services to support rabies eradication activities. These accomplishments were revealed during the Workshop on Evaluation and Sustainability of Rabies Control Programme in Flores and Lembata Islands, held in Labuan Bajo, Flores, on 30-31 August 2016.

"Enhancing the capacity of animal health personnel and laboratories in the implementation of rabies control and eradication in Flores and Lembata is very important in the effort to control the disease in these areas," said Drh. I Ketut Diarmita, MP., Director of Animal Health, Directorate General of Livestock and Animal Health at Indonesia’s Ministry of Agriculture. "With competent animal health personnel, it has been proven that mass dog vaccination in Flores and Lembata can really control rabies," he continued.

The first dog rabies case in Flores was reported in Larantuka in East Flores district in 1997, with the first human rabies fatality occurring in March 1998. The outbreak was a severe blow to the local community, as dogs are regarded as a valuable asset – socially, culturally, and economically. Dogs play a number of important roles in East Nusa Tenggara societies; they are used for protection of homes, other properties, farms and crops. They also play an important role in local cultural and ceremonial events. Families may also keep dogs as pets and consider them as part of their social status. During project implementation, efforts to control rabies in Flores experienced some challenges, such as the shortage of vaccinators, the large extent of the area, and the control strategy that was lacking in focus.

To optimise the effort to control and eradicate rabies, the Directorate General of Livestock and Animal Health Services (DGLAHS) at the Ministry of Agriculture,
FAO Indonesia and East Nusa Tenggara local government administrations collaborated to control rabies using a humane approach, with mass dog vaccination being prioritised as the main strategy to reduce rabies cases in animals. This collaboration was fully supported by World Animal Protection.

"It was a great example of how local religious leaders can raise awareness and mobilise the community to participate in efforts to control rabies," said Dr. James McGrane, Team Leader of FAO Emergency Centre for Transboundary Animal Diseases (ECTAD) Indonesia. "Lessons learned from Flores can be used in other areas of Indonesia to fine tune and focus rabies control programmes, and will also contribute to the development of a global framework, currently being finalised, for the progressive control and elimination of rabies," he added.

Since 2014, a National Strategy and Roadmap for Rabies Control and Eradication in Indonesia has also been jointly developed by the Ministry of Agriculture, FAO and World Animal Protection. The Roadmap, which promotes an effective and humane approach, focusing on mass vaccination of dogs against rabies, is currently being finalised.

"For three years, we have been building an understanding on how vaccinating dogs is the most effective way to control rabies," said Joanna Tuckwell, Campaign Manager, Asia-Pacific, for World Animal Protection. "Our hope now is that vaccination against rabies, coupled with humane dog population management, and educating local people on responsible ownership, will continue to be supported across Indonesia - so dogs and people can live in harmony, and Indonesia will ultimately achieve its goal to be rabies-free."

Furthermore, drh. I Ketut Diarmita, MP., stressed that in order to succeed in the rabies control and eradication programme, it is necessary to have the commitment of all stakeholders in implementing the programme. Vaccination is a top priority, followed by other strategies such as integrated bite-case management that allows the follow-up of human and animal bite victims through emergency vaccination and euthanasia of suspect rabid animals.
Bridging the need of poultry farmers to manage their productivity in the digital age, the Food and Agriculture Organization of the United Nations (FAO) Indonesia has launched Petelur.ID, a mobile application for medium-to-small scale layer poultry farmers. The application was launched during the "Healthy Poultry, Increased Productivity" seminar at the Indo Livestock Expo Forum 2016 on 29 July in Jakarta, which gathers together poultry farmers and stakeholders across Indonesia.

The Android-based app, developed in collaboration with the Indonesian Association of Poultry Veterinarians (ADHPI) and Intelligence Dynamics, will help farmers in recording their farm egg production, poultry feed consumption and poultry flock mortalities. By providing the farmers with analyses on Hen-Day, FCR (feed conversion ratio), flock mortalities trend, and other parameters, farmers can monitor the performance of their farms from their own smartphones. In addition, they can consult with experts in a part of the app supported by the Indonesian Association of Poultry Veterinarians.

"The idea to develop the app came from the farmers themselves. As life has become more fast-moving, they expressed the need to be able to manage their farms online," said Dr. James McGrane, Team Leader FAO Emergency Centre for Transboundary Diseases (ECTAD) Indonesia, during the launching. "As farm workers input the data regularly, farm owners and managers can easily monitor their farms’ productivity while on the move," he added.

Since the end of 2010, FAO ECTAD through the Commercial Poultry Health programme has worked together with layer chicken farmers on a study of the cost effectiveness of biosecurity interventions in order to improve productivity and the control of diseases, such as highly pathogenic avian influenza (HPAI), in commercial poultry farms. From this study, targeted recommendations have been made involving improved management of poultry farms.

"Through this study, it was also found that the production data on farms are still not fully used by farmers when making decisions. Decisions made by farmers are influenced by intuition or the advice of private company technical service advisers, while we know that hard data and production parameter analyses actually help them by serving as an early warning of potential problems. By anticipating problems, they can maintain their farm performance and productivity," said Dr. McGrane.

Medium-to-small scale poultry farmers are the target user groups of Petelur.ID because they still use manual documentation. However, to migrate to a more advanced system, they have limited resources. Therefore, as a free application, Petelur.ID is expected to be part of the solution. Poultry farmers are invited to download the application for free at the Google Play Store, and visit www.petelur.id to get more information.
On the MEDIA

On 10 May 2016, FAO ECTAD Indonesia and the Directorate of Animal Health held a media briefing and updating on the current situation of avian influenza in the country. Attended by 27 journalists from print and electronic media outlets, the media briefing featured the Director of Animal Health, drh. Diarmita and FAO ECTAD Indonesia Team Leader Dr. James McGrane as the main information sources. The list of published coverage can be found here.

RCTI station covered on 5 May 2016 activities at the Pulogadung Collector Yard, where FAO ECTAD Indonesia in collaboration with the Ministry of Agriculture and the Jakarta Government introduced biosecurity practices along the market chain. RCTI publicised the theme of “breaking the chain of avian influenza at poultry collector yards”, and interviewed Mr Asrori Gagarin, the recipient of the FAO Anniversary Medal in 2015, who is also the head of the Pulo Gadung Collector Yard. The reportage can be viewed here.

FAO’s booth at the 2016 Indo Livestock Expo drew interest from visitors, where they were invited to experience the journey of poultry products along the value chain from farm to table –through interactive simulations with experts. Watch the coverage by Antara TV here. The list of published coverage can be read here.

“Saving Farmers, Saving Lives,”

New Short Documentary Celebrates 10 Years of FAO ECTAD Indonesia-GoI Partnership

A disease might bring pains to many, but it can also be a blessing in disguise. This is the case with avian influenza outbreaks in Indonesia, which bring together the Government, poultry farmers and FAO in collaborative fights against the deadly disease.

With this spirit in mind, FAO ECTAD Indonesia has released a short documentary, highlighting its ten years of an impactful journey to enhance the GoI’s capacity and ability to sustainably control HPAI. The film depicts the trust built between government animal health officers and local poultry farmers in overcoming HPAI outbreaks. A veterinary and a poultry farmer both shared their stories on how the trust has led them to successfully implement HPAI control activities together. In a crisis where blaming tends to take place, trust and collaboration are indeed the key to survive. Watch the film here.
We'd like to thank our partners, whose support has made it possible for us to publish this PULSE e-Newsletter. We'd like to personally thank drh. I Ketut Diarmita, MP for the insightful interview for this edition. We hope to see you again in future editions!