



## Indonesia Market Watch

June 2022

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# How ready is the market to contain Foot and Mouth Disease in Indonesia?

The Australia-Indonesia Partnership for Promoting Rural Incomes through Support for Markets in Agriculture (PRISMA) is a development partnership between the Government of Australia (Department of Foreign Affairs and Trade, DFAT) and the Government of Indonesia (Bappenas).

# Introduction



Foot and Mouth Disease (FMD) is a highly contagious viral disease acute in cloven-hoofed animals like cattle. FMD has a significant economic impact due to its high morbidity<sup>1</sup> (up to 100%) in susceptible populations. The disease is widely considered the most economically destructive livestock disease in the world. Although Indonesia was declared FMD-free in 1986, the country has just recently experienced a new wave of the disease. This is significant for PRISMA livestock interventions in East and Central Java, and the program has undertaken a rapid assessment to determine the readiness of the market actors to effectively respond to the outbreak.

## Current Spread of FMD Outbreak in Indonesia as of 15 May 2022



The current outbreak of FMD was reported for the first time in East Java between the 28<sup>th</sup> of April and the 3<sup>rd</sup> of May 2022. The provincial government of East Java stated that around 1,247 cows in four districts<sup>2</sup> showed clinical signs of FMD. In just 3 weeks, the FMD outbreak systematically spread across the country. About 15 provinces with more than 70 districts and municipalities are suspected of having FMD cases<sup>3</sup>, and more than 13,000 animals were reported positive for FMD, about 96.6 percent of which were cattle. Most FMD cases are concentrated in Java and Sumatera Islands, which

account for almost 80 percent of the national beef production. The rapid spread of FMD poses a significant threat to the livestock industry in Indonesia and its neighboring countries.

The cattle with FMD eat less and lose weight resulting in lower incomes for farmers. Farmers are unable to sell the infected animals and hence, do not invest in critical inputs like concentrate feed. Farmers also need to invest in biosecurity products such as disinfectants, vitamins, and medicines for symptomatic treatments.

<sup>1</sup> The term 'Morbidity' (of infectious disease) refers to the incidence of disease (number of occurrence) within a specific population.

<sup>2</sup> Gresik, Lamongan, Sidoarjo, and Mojokerto.

<sup>3</sup> As of the 2<sup>nd</sup> June 2022, the provincial government reported that the FMD has spread in 18 provinces with 127 districts and municipalities suspected of FMD, and 57,732 animals have already reported positive for FMD.

PRISMA, a market systems development program aimed at improving the incomes of smallholder farming households in Indonesia, conducted a rapid assessment of the FMD outbreak in East Java and Central Java. The assessment aimed to assess the awareness, knowledge, preparedness, and response of key players

in the beef and dairy sector to the FMD outbreak. PRISMA interviewed farmers, experts, and government officials and triangulated the findings with desk research undertaken in mid-May 2022. The results were also triangulated with government and media monitoring reports.



## The potential impact of FMD

Most studies into FMD outbreaks state that impacts occur in many forms, from complete stock loss due to animal death or part stock loss. In all cases, there is an impact on farm revenue. In addition to stock loss, there is a reduction in farm income due to reduced animal weight gain or milk production and increased cost of treatment and cash flow risk due to delayed sales. According to a case study in Cambodia (Shankar et al., 2012), it was known that FMD reduced the annual income of farming households by about 4 percent to 12 percent. In other cases in Laos, the loss was as high as 60 percent (Nampanya et al., 2013).

Ripple effects from FMD can also occur at a broader level throughout the livestock value chain, including costs related to compensation, surveillance, vaccination,

cold chain, field officer training, and outbreak control management. Other Industry-wide spillover effects could also disrupt growth in various industries such as the food and beverage, tourism, animal feed, and wider supporting agricultural industries. An OIE<sup>4</sup> report in 2017 estimated a potential loss in a year for Indonesia due to FMD at IDR 9.9 trillion (US\$ 761.3 million)<sup>5</sup>.

The economic impact of the FMD outbreak in Indonesia is yet to be estimated, as the outbreak is still in its early stage. Further analysis is needed to understand the extent and scale of the potential impact, and this rapid assessment is a beginning point for PRISMA. The program will support the provincial governments in carrying out a cost-benefit analysis in addition to this assessment in the coming months.

<sup>4</sup> Office International des Epizooties

<sup>5</sup> Naipospos T.S.P. and Suseno P.P. 2017. Cost Benefit Analysis of Maintaining FMD Freedom Status in Indonesia. Report to the World Organisation of Animal Health. November 2017.

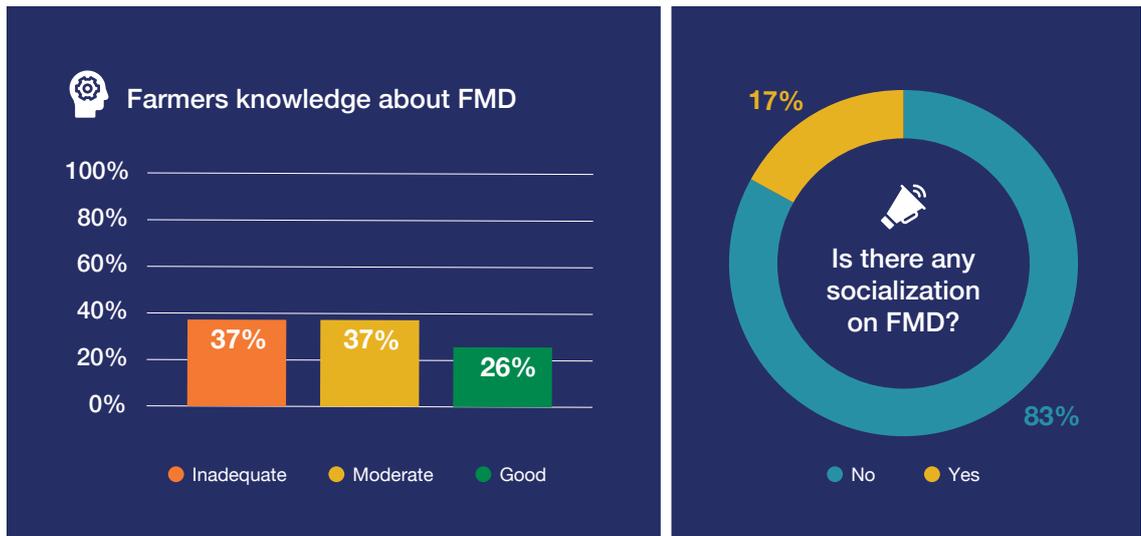
# Key trends

## Knowledge, preparedness, and practices



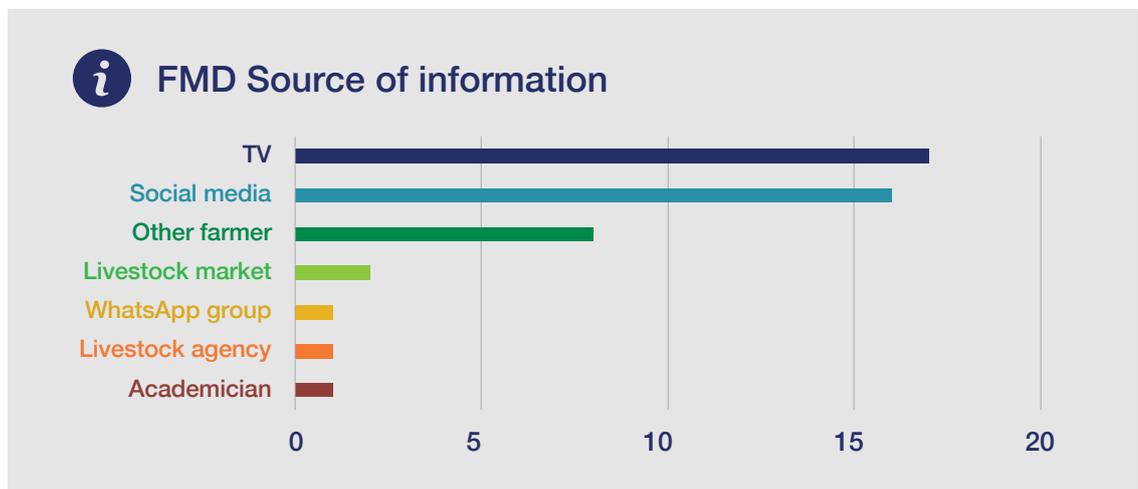
### Most farmers lack adequate knowledge of FMD.

Only 26% of farmers interviewed knew about the recent FMD cases, its symptoms, and prevention steps. Around 83% of farmers surveyed have not received any information from the government agencies despite their efforts to disseminate information and raise awareness of FMD among farmers and market actors.



### TV and Facebook are the two most critical information sources.

Those farmers who were aware of the FMD outbreak acquired most of their knowledge through television and social media. Farmers and local market actors reported checking news reporting on TV and listening to relevant talk shows. Farmers with smartphones also checked updates on social media (primarily Facebook) for FMD-related information.





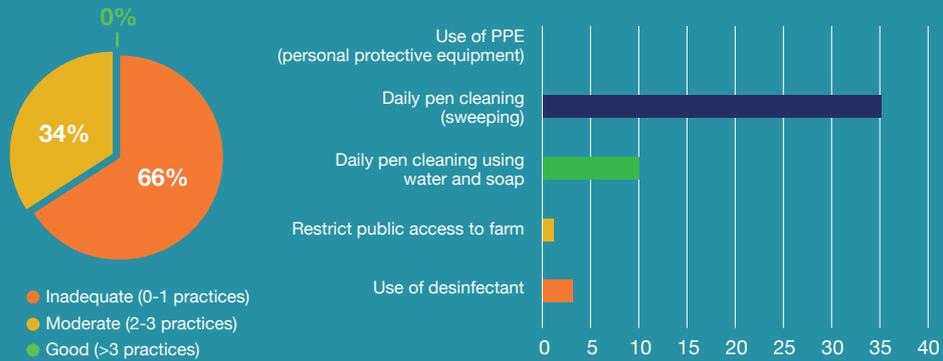
## Preventative and biosecurity measures by farmers are still inadequate.

While farmers generally clean their pens daily and wash their cattle with water, many of these practices remain inadequate as a preventive measure against FMD. Cleaning the pens with soap only is not enough to prevent FMD. Farmers need to follow all five preventive measures mentioned in the chart. However, the assessment found that about 66% of farmers followed only one or no bio-security measure.



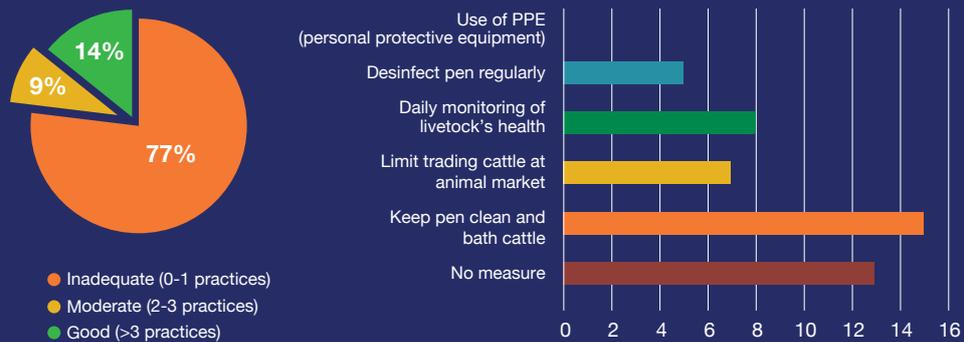
### Biosecurity practices (Before FMD)

Left hand pie chart showing proportion of farmers applying biosecurity practices, while right hand bar chart showing breakdown of biosecurity practices most adopted.



### FMD Prevention measure

Left hand pie chart showing proportion of farmers applying biosecurity practices, while right hand bar chart showing breakdown of biosecurity practices most adopted.



**The cattle trading continues with minimum impact.**

Despite the government's restrictions on cattle trading, some animal markets continue operating with no effect on the price or volume of cattle traded. This was more common in areas not currently infected with FMD. Some traders, however, have begun to worry about FMD's potential impact on their business. In a few cases, it was observed that traders had sold their cattle for as much as 20 percent below their average value. This may be due to misleading information in the media and in peer networks, which increases fear and leads to panic selling.

**Input companies (pharmaceutical and feed companies) see the outbreak as a business opportunity to promote their products and improve their engagement with farmers.**

Feed and pharmaceutical companies have already started sharing FMD-related information with their distribution networks and farmers. Feed companies are particularly motivated to maintain sales. So, feed companies like UD. Munir is promoting concentrated feed to enhance cattle immunity. Pharmaceutical companies see a potential market opportunity for medical and biosecurity products such as disinfectants and vitamins.

**Key trends**  
Trading, treatment, and containment

**National and sub-national governments recognise the emergence of the FMD outbreak and have taken measures to contain its spread.**

The government's response tends to focus primarily on policy and technical approaches. The formal declaration of the FMD outbreak zone has been slow and conservative, with only six districts declared from 127 districts with suspected FMD cases.<sup>6</sup> Moreover, the implementation of the sub-national responses varies between areas, indicating a lack of coordination. The containment efforts are primarily focused on awareness-building.

**The containment efforts have not been effective at stopping the spread of FMD.**

The East and Central Java provincial governments face challenges regarding adequate and skilled human resources, sufficient budget, and effective coordination between government agencies. In some districts, the veterinary authority is active in symptomatic treatment, monitoring, and quarantine policies. However, in most infected areas, no such response has been implemented due to the lack of the appropriate implementing bodies (Veterinary Authority) to initiate action on the ground.

<sup>6</sup> According to the MoA case report of June 2, 2022, a total of 57,732 animals reported positive FMD in 127 districts and municipalities in 18 provinces in Indonesia.

# Outlook



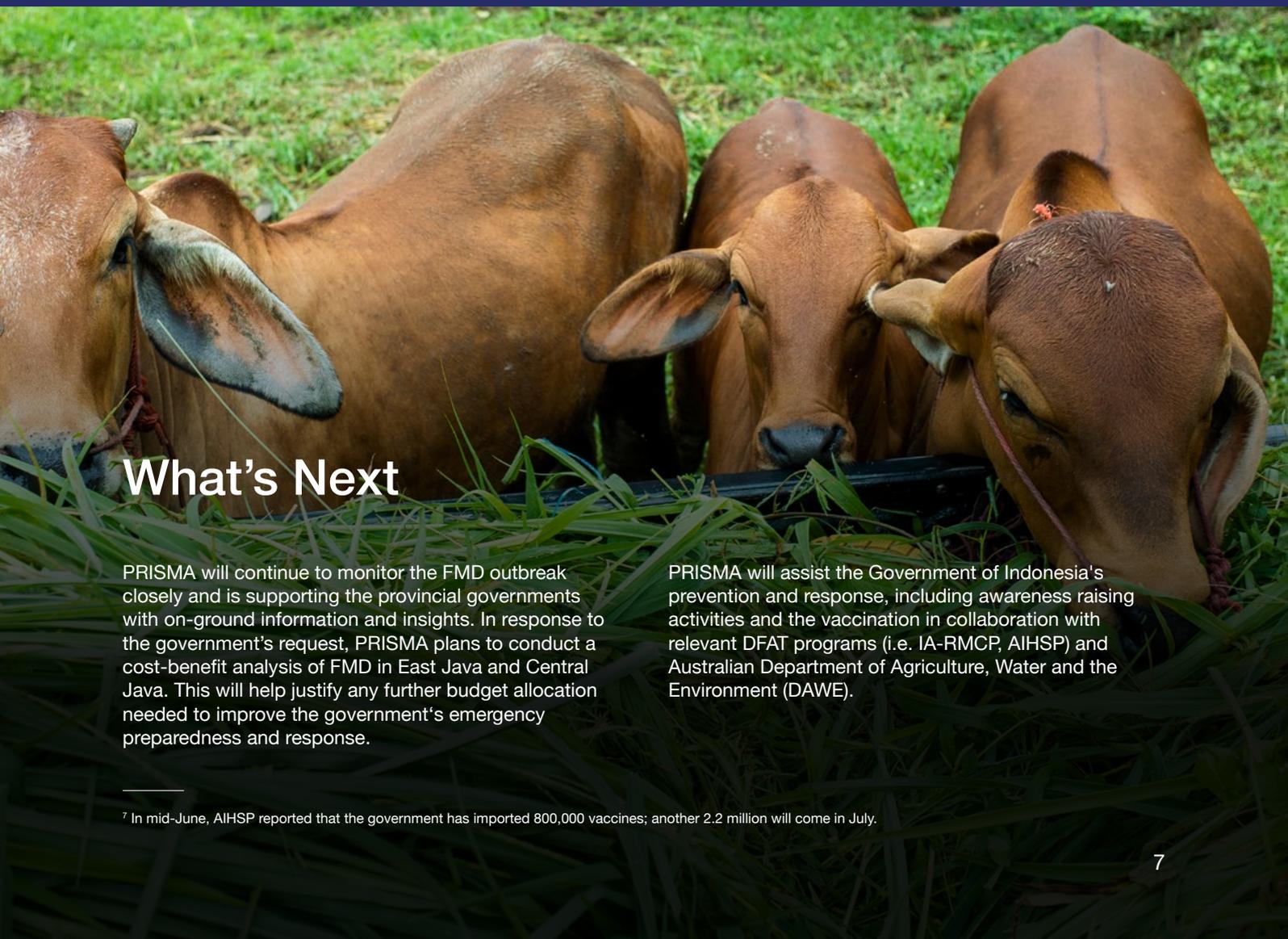
## The number of FMD cases will continue to rise until mass vaccination starts.

Indonesia is not a member of the world vaccine bank for FMD. With DFAT's support, the Ministry of Agriculture (MoA) plans to import 3 million doses of vaccines by the end of June 2022.<sup>7</sup> However, the country needs many more doses to contain the outbreak. East Java alone has estimated the need for nearly 10.5 million doses of the FMD vaccine by 2022. Delayed implementation of vaccination and other eradication measures may increase the number of cases. The government's late declaration of infected zones will worsen the situation further.



## The upcoming religious festival might put fresh pressure on the FMD cases.

The demand for cattle during the upcoming Eid al-Adha ceremony will increase significantly. The cattle movement will likely increase following the festival despite government restrictions. The lack of adherence to movement protocols may result in a country-wide spread of FMD.



## What's Next

PRISMA will continue to monitor the FMD outbreak closely and is supporting the provincial governments with on-ground information and insights. In response to the government's request, PRISMA plans to conduct a cost-benefit analysis of FMD in East Java and Central Java. This will help justify any further budget allocation needed to improve the government's emergency preparedness and response.

PRISMA will assist the Government of Indonesia's prevention and response, including awareness raising activities and the vaccination in collaboration with relevant DFAT programs (i.e. IA-RMCP, AIHSP) and Australian Department of Agriculture, Water and the Environment (DAWE).

<sup>7</sup> In mid-June, AIHSP reported that the government has imported 800,000 vaccines; another 2.2 million will come in July.



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