*IMPLEMENTATION OF GOVERNMENT POLICIES IN DEALING WITH LIVESTOCK FOOT AND MOUTH DISEASE (FMD) OUTBREAKS IN ACEH BESAR DISTRICT[[1]](#footnote-1)*

IMPLEMENTASI KEBIJAKAN PEMERINTAH DALAM PENANGANAN WABAH PENYAKIT MULUT DAN KAKI (PMK) TERNAK DI KABUPATEN ACEH BESAR

Asridiana2, Muhammad Ammar3 and Hendra Koesmara4

Email: asridosen369@gmail.com

*ABSTRACT*

*Foot and mouth disease (FMD) is one of the most feared livestock diseases in the world. Clinical symptoms in infected cattle include fever and lesions on the lips, tongue and mouth. The emergence of FMD cases, especially in Aceh, has affected the trade in live cattle and goats in Aceh Besar Regency as one of the districts with the largest population of large livestock (cattle) in Aceh Province. The efforts made by the Aceh Besar District government in dealing with the FMD outbreak through implementing policies issued by the central government have been successful in reducing the spread of FMD to the point of zero cases. The research method used was a literature review approach and data observations in 21 sub-districts spread across the Aceh Besar Regency government area as one of the areas most affected by FMD in Aceh Province. This literature study aims to look at the government's role in handling and preventing the spread of livestock foot and mouth diseaseFrom In all this case, 12,180 livestock were successfully recovered, 24 were conditionally slaughtered, and 28 livestock died due to FMD. Aceh Besar Regency has 21 sub-districts affected by the FMD outbreak. Montasik District recorded the highest number of cases, namely 186,754 cases. As of August 2022, there were 2,189 animals infected with FMD. when the FMD outbreak started to occur, another obstacle felt by farmers was the minimal stock of cattle. This was caused by the closure of cattle entry routes between provinces and districts to prevent the increasingly massive transmission of FMD from cattle to cattle.*

*Keyword: Policy strategic, Government policy, Handling the FMD outbreak*

ABSTRAK

Penyakit mulut dan kuku (PMK) merupakan salah satu penyakit ternak yang paling ditakuti di dunia. Gejala klinis pada sapi yang terinfeksi antara lain demam dan timbul luka pada bibir, lidah, dan mulut. Munculnya kasus PMK khususnya di Aceh berdampak pada perdagangan sapi dan kambing hidup di Kabupaten Aceh Besar sebagai salah satu kabupaten dengan populasi ternak besar (sapi) terbesar di Provinsi Aceh. Upaya yang dilakukan pemerintah Kabupaten Aceh Besar dalam menangani wabah PMK melalui penerapan kebijakan yang dikeluarkan oleh pemerintah pusat telah berhasil menekan penyebaran PMK hingga mencapai titik nihil kasus. Metode penelitian yang digunakan adalah pendekatan literatur review dan observasi data di 21 kecamatan yang tersebar di wilayah pemerintahan Kabupaten Aceh Besar sebagai salah satu wilayah yang paling terdampak FMD di Provinsi Aceh. Kajian literatur ini bertujuan untuk melihat peran pemerintah dalam penanganan dan pencegahan penyebaran penyakit mulut dan kuku ternak. Dari keseluruhan kasus tersebut, ternak berhasil sembuh sebanyak 12.180 ekor, potong bersyarat 24 ekor, dan mati akibat PMK sebanyak 28 ekor. Kabupaten Aceh Besar memiliki 21 kecamatan yang terdampak wabah PMK. Kecamatan Montasik mencatatkan jumlah kasus tertinggi yakni 186.754 kasus. Hingga Agustus 2022, terdapat 2.189 hewan yang terjangkit FMD. Saat wabah PMK mulai terjadi, kendala lain yang dirasakan peternak adalah minimnya stok ternak. Hal ini disebabkan oleh ditutupnya jalur masuk sapi antar provinsi dan kabupaten untuk mencegah semakin masifnya penularan PMK dari sapi ke sapi.

Kata Kunci: Kebijakan strategis, Kebijakan pemerintah, Penanganan wabah PMK

1. INTRODUCTION

**F**

oot and mouth disease (FMD) is one of the most feared livestock diseases in the world. Clinical symptoms in infected cattle include fever and lesions on the lips, tongue and mouth (Buetre et al., 2013). Foot and mouth disease spreads very quickly among livestock. The impact is in the form of economic losses, because it reduces the production of meat, milk and their derivatives, as well as hampering livestock trade. An outbreak of foot and mouth disease was first reported in 1887 following the introduction of cattle to Indonesia via the island of Java by the Dutch East Indies government.

In several developing countries, the FMD outbreak has disrupted the distribution chain and is the cause of reduced food security (Nchanji et al., 2020). The last FMD outbreak was reported in Java in 1983 after strict and planned containment measures. At that time, Indonesia was trying to eradicate the foot-and-mouth disease outbreak through a mass vaccination program. Then Indonesia was declared free from PMK in 1986 through the Decree of the Minister of Agriculture No. 260/Kpts/TN.510/5/1986.

Foot and Mouth Disease (FMD) is a strategic infectious animal disease that has caused quite a stir since early April 2022, which was then designated as an epidemic in Indonesia by the Ministry of Agriculture since May 7 2022. The Indonesian government through the National Disaster Management Agency (BNPB) has determined the status Certain Emergency Conditions for Foot and Mouth Disease (FMD) in livestock through Decree of the Head of BNPB Number 47 of 2022

In the 36 years after Indonesia was declared FMD free, finally in May 2022 FMD reappeared in Indonesia for the first time in Aceh Province and East Java which was determined by Decree of the Minister of Agriculture Number 404/KPTS/PK.300/M/05/2022 concerning Determining Outbreak Areas for Foot and Mouth Disease in Aceh Tamiang Regency, Aceh Province. The emergence of FMD cases, especially in Aceh, has affected the trade in live cattle and goats in Aceh Besar Regency as one of the districts with the largest population of large livestock (cattle) in Aceh Province. The efforts made by the Aceh Besar District government in dealing with the FMD outbreak through implementing policies issued by the central government have been successful in reducing the spread of FMD to the point of zero cases.

1. **LITERATURE REVIEW**

Foot and mouth disease is included in the list of priority diseases by World Animal Health (OIE/Office des Internationale Epizootis). Foot and Mouth Disease has been an exotic disease since 1990, until now FMD has been included in the list of strategic infectious animal diseases (PHMS). FMD has other names, namely Aphthae Epizootica (AE), and foot and mouth disease (FMD), “Aphthous Fever" (Diskanak Blora., 2022). "Aphthovirus is the name of the FMD virus which is very contagious. The FMD virus can survive for one month in water, feed and on surfaces, depending on temperature and soil conditions.

These microbes can survive in the body and in body fluids such as saliva, urine and feces from infected animals. Animals that do not show signs of disease caused by this virus, such as dogs and horses, can be exposed to and transmit the virus to other livestock animals that are susceptible to FMD infection. People who reuse equipment that has been contaminated with the virus can also transmit the FMD virus. There are 7 types of viruses tracked, namely (O, C, A, SAT3, SAT2, SAT1, and Asia1) and more than 60 subtypes of FMD viruses. Immunity to one type does not protect animals against other types or subtypes (Fadli, 2022).

According to the World Organization for Animal Health or Office International Des Epizooties (OIE), the type of virus will influence the severity of clinical signs or symptoms experienced by livestock animals, the age and species of the animal and the host's immunity and how much exposure it has. Cows, buffalo, sheep, pigs, deer, camels and goats as well as other animals infected with FMD initially show signs of symptoms such as fever, reluctance to move and profuse salivation. This virus also causes the formation of fluid-filled bubbles (vesicles) on the tongue, lips, feet, roof of the mouth and nipples of infected animals. Ulcers occur due to blisters on the animal that burst and take 10 days to heal. Common manifestations in animals affected by Foot and Mouth Disease include not wanting to eat, reduced body weight, decreased milk production due to mastitis, lip tremors and foam at the mouth, and gait abnormalities.

The diagnosis made by the veterinarian indicated the possibility of a Foot and Mouth Disease virus infection. However, the FMD virus is often difficult to differentiate from diseases in other animals, therefore laboratory tests are needed to identify this virus. The presence of the Foot and Mouth Disease virus can be proven by cell culture isolation, complement fixation test, ELISA or the newer polymerase chain reaction (PCR) method (Fadli, 2022).

This virus can spread and attack all animals with even-toed hooves, especially cattle, goats and sheep. There are clinical signs associated with foot and mouth disease, namely a tongue filled with fluid or ulcers, infected gums, nose, and hooves of the animal, lameness or inability to walk, excessive drooling, and loss of appetite. This disease may be caused by a virus that causes cell and tissue damage in livestock (Sudarsono, 2022).

In several developing countries, the FMD outbreak has disrupted the distribution chain and is the cause of reduced food security (Nchanji et al., 2020). Food prices at the consumer level are of course directly influenced by the demand and supply of food in the retail market. Food markets in several countries experienced relatively similar disruptions due to the FMD outbreak, especially on the producer side, Laos and Cambodia experienced a 60% decline in income during the 2008 FMD outbreak (Rast et al., 2010). The characteristics of the spread of the FMD virus, which spreads quickly and does not recognize regional boundaries, have also forced the government to make efforts to limit transportation in and out of livestock. The consequence of limiting interaction and distribution of livestock is hampering the movement of products between markets, from the producer level to the consumer level.

In dealing with endemic cases like this, the government is required to make appropriate policies to control these cases. Policy making is a stage in the policy life cycle. The cycle or stages of a policy basically start from problem formulation, alternative identification, policy implementation and returning to problem formulation.

According to Susilowati., et al. (2020) that foot and mouth disease (FMD) in livestock will not be transmitted to humans. Because it cannot be transmitted, beef infected with FMD is safe to consume. FMD is not a zoonotic disease that can be transmitted to humans because humans do not have cell tissue that can host the FMD virus so the FMD virus cannot reproduce in the human body. Law no. 18/2009 concerning Animal Husbandry and Animal Health, as well as Government Regulation no. 22/1983 concerning Veterinary Public Health, food of animal origin in circulation must meet the requirements for safe, healthy, whole and halal (ASUH) in order to guarantee the health and inner peace of the community.

The word ASUH contains 4 (four) meanings, namely: Safe, does not contain biological, chemical and physical hazards or substances that can harm human health. Healthy contains ingredients that are healthy for humans (good for health). Whole, not reduced or mixed with other ingredients. Halal animals and meat are handled in accordance with Islamic religious law (Directorate of Veterinary Public Health, 2003).

The importance of this research is to provide insight and information to the public about the dangers of foot and mouth disease and how important the government's role is in overcoming the endemic problem of FMD. Referring to the existing problems, this research was carried out to review further the impact on society due to the foot and mouth disease virus and the role of the Government in tackling and anticipating the FMD outbreak so that it does not spread more widely.

There has not been much research related to FMD, but there is research that is quite relevant to this research. Several studies that are quite relevant aim to compare the research that will be carried out. The things emphasized by researchers are the concepts used, the methods used, the results of the research, and their relevance to previous research.

.

1. METHOD

The research method used was a literature review approach and field observations in 21 sub-districts spread across the Aceh Besar district government area as one of the areas most affected by FMD in Aceh Province. The research locus in Aceh Besar Regency was chosen on the basis that Aceh Besar Regency is the area with the highest number of reported FMD cases, with at least 7,893 cases recorded based on information quoted from the PMK Crisis Center (2022). This makes Aceh Besar Regency occupy first place in the number of FMD cases in Aceh Province, following Aceh Tamiang Regency with 5,332 and Lhokseumawe City Regency with 3,846 FMD cases. "Literature review" has several objectives: to provide readers with knowledge of the results of other research that is closely related to research conducted at that time, to fill gaps in previous research, and to connect research with existing literature, the literature assessment contains summary, review and author's thoughts on several library sources (Ishtiaq, 2019). This literature study aims to look at the government's role in handling and preventing the spread of livestock foot and mouth disease.

Data collection uses information and data on the development of cases of foot and mouth disease outbreaks in livestock through supporting data sourced from the PMK crisis center task force of the Directorate General of PKH, Ministry of Agriculture of the Republic of Indonesia as well as direct field observations by interviewing farmers, veterinary authority officials (POV) as well as the Aceh Besar Regency PMK task force team.

.

1. RESULT AND DISCUSSION

1. Implementation Theory

 Based on the results of the analysis and discussions that have been carried out on the Implementation of the Policy for Handling Foot and Mouth Disease Outbreaks in Aceh Besar Regency which is contained in the circular letter of the Task Force for Handling Foot and Mouth Disease Number 2 of 2022 concerning Health Protocols for Control of Foot and Mouth Disease, the related implementation has carried out its duties. currently, although there are still several obstacles that could hamper the handling of the foot and mouth disease outbreak. This uses the implementation theory put forward by Merilee S. Grindle, including:

Effect of Interest

 The interests affected by a policy refer to the extent to which the interests of the target group are included in the content of the policy. This has good implications for target groups such as economic actors, because it provides guidelines for dealing with FMD outbreaks that are beneficial for the economy and the interests of society. Apart from that, treatment of foot and mouth disease outbreaks is also carried out in accordance with applicable regulations, namely the alert letter from the task force for Handling Foot and Mouth Disease Number 2 of 2022.

Types of benefits that can be obtained

 The policies taken must have various benefits that show the positive impact of the implementation can be implemented. The implementation of the policy is expected to be beneficial for target groups affected by PMK. The existence of efforts to control foot and mouth disease has an impact on breeders and livestock managers, so care must be taken to ensure that the outbreak of foot and mouth disease does not spread further.

The degree of change to be achieved

 The policy targets in this case are livestock breeders who generally make their living as farmers, so raising livestock is just a side job, but the results are very profitable. The community supports and supports policy implementation. If the community follows the policy, its implementation will run according to the stated goals. Otherwise, the policy will not work according to its objectives.

Location of decision making

 When law enforcement agencies are empowered, public policies can be implemented. To do this, the organizational structure implementing public policy must have detailed Standard Operating Procedures (SOP) that can be applied in handling Foot and Mouth Disease outbreaks. This SOP functions as a guide for organizations and the public to assess the implementation of selected policies. In addition, SOPs must consider ease and simplicity of administration so that they are implemented effectively and efficiently.

Program implementer

 The attitudes of policy makers greatly influence the way policies are implemented; if they have a good attitude, they can implement policies as they wish; conversely, if they do not do so, policy implementation will not go well. To support the development of the livestock subsector in Aceh Province, officers are open and clear in providing outreach about programs, activities and budgets. In addition, the Aceh Provincial Livestock Service is collaborating with several related agencies and the Veterinary Center to take blood samples from infected animals to prevent the spread of the outbreak.

Resources used

 This indicator examines the human resources implementing the FMD outbreak response. The problem of foot and mouth disease has become a public issue which is of course the government's responsibility. The government, in this case the province of East Java, must be present in the community to play an active role in treating foot and mouth problems. Efforts with the PMK livestock service must be completed well, considering that livestock also contributes to East Java's economic growth.

 Due to the lack of available human resources such as experts and inadequate medical personnel, there are a large number of livestock in East Java Province. In the facilities produced for handling PMK, the facilities for testing facilities compared to the number that must be tested are still lacking, they still require lab testing and PCR testing which are used in the context of inter-regional livestock traffic or trade because there is a requirement that the livestock being trafficked must be livestock that If you are healthy, you have to do a lab test first.

2. Policy Strategy for Handling FMD

Based on data from the Task Force for Handling Foot and Mouth Disease in Aceh Besar Regency, the number of animals affected by foot and mouth disease reached 12,228 as of July 2022. From In all this case, 12,180 livestock were successfully recovered, 24 were conditionally slaughtered, and 28 livestock died due to FMD. Aceh Besar Regency has 21 sub-districts affected by the FMD outbreak. Montasik District recorded the highest number of cases, namely 186,754 cases. As of August 2022, there were 2,189 animals infected with FMD. To deal with this outbreak, the government has vaccinated 2,837,759 livestock. (Mutia, 2022).

Table 1. FMD Prevalence Data in Aceh Besar Regency (tail)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No. | Sub Discrict | number of vaccines | Total Infected | Healed | Conditional Culling | Dead | First Case | Last Case |
| 1 | Montasik | 6.669 | 2.189 | 2.185 | 1 | 3 | 09-Mei-22 | 24-Sep-22 |
| 2 | Kuta Baro | 5.994 | 1.736 | 1.721 | 6 | 9 | 24-Mei-22 | 08-Okt-22 |
| 3 | Kuta Cot Glie | 9.487 | 1.429 | 1.424 | 5 | - | 28-Mei-22 | 14-Agu-22 |
| 4 | Indrapuri | 7.097 | 1.403 | 1.401 | - | 2 | 10-Mei-22 | 24-Sep-22 |
| 5 | Kuta Malaka | 4.117 | 920 | 919 | - | 1 | 02-Jun-22 | 02-Agu-22 |
| 6 | Mesjid Raya | 21.53 | 799 | 798 | - | 1 | 31-Mei-22 | 02-Okt-22 |
| 7 | Lhoknga | 963 | 589 | 587 | 1 | 1 | 09-Mei-22 | 21-Jul-22 |
| 8 | Lembah Seulawah | 5.804 | 494 | 493 | 1 | - | 20-Jun-22 | 19-Jul-22 |
| 9 | Seulimeum | 7.795 | 449 | 446 | 3 | - | 02-Jun-22 | 28-Jul-22 |
| 10 | Darussalam | 5.695 | 307 | 305 | - | 4 | 24-Mei-22 | 09-Agu-22 |
| 11 | Baitussalam | 6.435 | 280 | 279 | - | 1 | 23-Mei-22 | 14-Sep-22 |
| 12 | Simpang Tiga | 1.745 | 251 | 251 | - | - | 18-Jun-22 | 07-Jul-22 |
| 13 | Kota Jantho | 1.954 | 244 | 243 | 1 | - | 14-Jun-22 | 31-Jul-22 |
| 14 | Krueng Barona Jay | 2.071 | 237 | 234 | 1 | 2 | 24-Mei-22 | 24-Sep-22 |
| 15 | Leupung | 609 | 184 | 182 | 2 | - | 20-Jun-22 | 21-Jul-22 |
| 16 | Peukan Bada | 1.293 | 152 | 151 | 2 | 1 | 19-Mei-22 | 21-Jul-22 |
| 17 | Suka Makmur | 4.656 | 149 | 146 | 1 | 2 | 27-Mei-22 | 23-Sep-22 |
| 18 | Blang Bintang | 3.49 | 136 | 135 | - | 1 | 23-Jun-22 | 13-Sep-22 |
| 19 | Darul Imarah | 1.093 | 126 | 126 | - | - | 09-Jun-22 | 08-Sep-22 |
| 20 | Darul Kamal | 1.2 | 81 | 81 | - | - | 04-Jul-22 | 07-Jul-22 |
| 21 | Ingin Jaya | 3.961 | 73 | 73 | - | - | 11-Mei-22 | 24-Sep-22 |

Source: FMD Crisis Center (2022)

Since the outbreak of foot and mouth disease in Indonesia in May 2022, the Ministry of Agriculture has implemented strategies, including forming a response team, organizing livestock distribution, distributing medicines, carrying out vaccinations, animal exchange and animal exchange. formulated. Providing additional animal feed, training and training of employees.

 Based on data from the Ministry of Agriculture as of April 23 2022, there are 11 provinces in Indonesia that have not reported cases of foot and mouth disease. Apart from 4,444 cases, the number of reported FMD cases decreased by 99.9%. Apart from tackling mouth and mouth disease, the Ministry of Agriculture has succeeded in increasing several achievements in the livestock sector, including export production, ivory, PBD, NTPT and investment. (Sudarno, 2022).

 The Ministry of Agriculture estimates that losses due to PMK are IDR 9.9 trillion each year. The above includes significant management resources, impacts on the processing sector, impacts on primary industries, tourism-related and non-agricultural impacts, as well as the possible loss of trade opportunities and reduced supplies of food beef in Indonesia. Apart from economic losses, there are also concerns about social losses. Currently, rumors are circulating on social media that in East Java, the center of the outbreak, consumption of cow meat and milk is prohibited because they are suspected of being infected. This outbreak has raised concerns among consumers and breeders” (Wahyudi, 2022).

 The central government will continue to communicate with provincial and district governments to overcome the problem of foot-and-mouth disease in livestock, said Director General of Animal Husbandry, Nasrulloh. Here are five multi-level strategies to prevent and treat foot-and-mouth disease outbreaks in cattle:

a. Biosecurity

b. Medicated

c. Observation

d. Vaccine

e. Conditional slaughter

 These five strategies are the government's reference in reducing and preventing FMD cases in Indonesia. Monitoring the prevalence of foot and mouth disease which causes many losses to society. This is the basis for the Regulation of the Minister of Agriculture of the Republic of Indonesia Number 500.1/KPTS/PK.300/M/06/2022 concerning Determining Outbreak Areas for Fever and Mouth Diseases where the transmission rate can reach 100%. Economic, social and political losses are very high so that control and mitigation efforts must be carried out quickly, comprehensively and effectively.

3. Implementation of Government Policy

1. Use of the FMD Vaccine: The government through the Ministry of Agriculture has guaranteed the safety of the FMD vaccine for livestock. This vaccine is used to prevent the spread of disease and reduce losses for farmers and the community
2. Monitoring and Control: The government has taken strict monitoring and control measures for livestock infected with FMD. This is done to prevent further spread of disease and reduce losses for farmers and the community
3. Information System Development: The government has developed an effective information system to monitor and control FMD outbreaks. This system helps in identifying affected areas and taking appropriate steps to overcome the outbreak
4. Developing Partnership Patterns: The government has attempted to increase the competitiveness of farmers and communities by developing effective partnership patterns. This helps increase farmers' ability to deal with FMD outbreaks and reduce losses to society

4. Obstacles Faced by Breeders

 The results of interviews with several marketing actors in animal markets in the Aceh Besar region showed that there were obstacles to the marketing of cattle. Respondents at the farmer and meat seller level stated that generally the obstacles occurred due to reduced demand or interest in buying due to the zoonotic issue of FMD outbreaks which could spread to humans and can harm consumers' health. Then, when the FMD outbreak started to occur, another obstacle felt by farmers was the minimal stock of cattle. This was caused by the closure of cattle entry routes between provinces and districts to prevent the increasingly massive transmission of FMD from cattle to cattle.

 The task force for handling PMK through circular number 6 of 2022 has regulated the movement of livestock susceptible to foot and mouth disease. This regulation is intended to prevent transmission of FMD between regions so that efforts to cure FMD in an area can be complete and not increase. The rules in circular number 6 of 2022 include:

1. Self-quarantine 14 days before travel, under the supervision of local veterinary authority (POV) officials.
2. Have been vaccinated against PMK at least 1 dose, or show a negative PMK result a maximum of 1 week before departure.
3. Have an animal health certificate (SKKH) or veterinary certificate (SV) and an animal health history letter.
4. Implement strict health protocols for transportation equipment, goods, officers and farmers before departure to destination.
5. Furthermore, regarding replacement, especially for animals that are destroyed or forcibly killed, the government will prepare compensation, especially for MSME breeders, around IDR 10 million per cow.

 Prism (2002) stated that the FMD case affected the livestock sector (71%), restaurant and hotel businesses (52%), agricultural areas (58%), trade (47%), transportation (42%), manufacturing industry (42%), services and services (55%), construction (49%) and financial business (23%). Because the loss of milk productivity results in economic losses in livestock business activities, especially the dairy cattle and goat industry (25% per year), a decline in the beef cattle industry (10% - 20%), loss of labor (60% - 70%), decreased fertility (10%) as well as a slowdown in pregnancy, death of livestock calves (20% – 40%), and a very acute reduction in the population of infected animals” (Agropustaka, 2022).

 The Ministry of Agriculture estimates losses of IDR 9.9 trillion per year due to PMK. The above has not been calculated with the large number of control funds, the impact on processing areas, the impact of the primary sector, impacts related to tourism and non-agriculture, as well as the impact of lost trade opportunities and the possibility of a decline in beef food in Indonesia. Apart from the economic losses that occur, the social losses are also quite worrying. Now in the epicenter of the outbreak in East Java, rumors have circulated through social media that people are not allowed to consume cow meat and milk because they are suspected of being infected. This outbreak has caused anxiety among consumers and animal breeders" (Wahyudi, 2022).

E. CONCLUSION

In this case the government has various useful policy strategies tackle FMD (Foot and Mouth Disease) by forming a FMD group team to help responsive in handling and preventing FMD and then providing understanding and improving resources Human Resources to breeders about the dangers of FMD, five multi-level strategies to prevent and treat foot-and-mouth disease outbreaks in cattle: Biosecurity, Medicated, Observation, Vaccine and Conditional slaughter. The handling carried out by the government also has a positive impact on the completion of FMD in Indonesia.

The Aceh Besar government has taken effective steps to deal with red areas that have become FMD hotspots. These steps include the use of vaccines, monitoring and control, developing information systems, developing partnership patterns, and providing stands and tents for MSMEs. These initiatives aim to reduce losses for farmers and the community, as well as increase farmers' ability to deal with FMD outbreaks.

The government has taken strict monitoring and control measures for livestock infected with FMD. This is done to prevent further spread of disease and reduce losses for farmers and the community. Local government of Aceh Besar district also has developed an effective information system to monitor and control FMD outbreaks. This system helps in identifying affected areas and taking appropriate steps to overcome the outbreak. Moreover, local government has attempted to increase the competitiveness of farmers and communities by developing effective partnership patterns. This helps increase farmers' ability to deal with FMD outbreaks and reduce losses to society.

**F. SUGGESTION**

 The government must implement a policy regarding strict implementation of livestock biosecurity, especially in the Aceh Besar Regency area as an area with very high livestock traffic in Aceh Province to prevent the occurrence of FMD outbreaks again.

D. REFFERENCES

Agropustaka. (2022). *Analisis Dampak Penyakit Mulut & Kuku (PMK)*. Agropustaka.Id. Diakses pada 01 November 2022, dari [https://www.agropustaka.id/ pemikiran/analisis- dampakpenyakit-mulut-kuku](https://www.agropustaka.id/%09pemikiran/analisis-%09dampakpenyakit-mulut-kuku) pmk

Buetre B., Wicks S., Kruger H., Millist N., Yainshet A., Garner G., Duncan A., Abdalla A., Trestrail C., Hatt M., Thompson L.J. and Symes M. 2013. Potential socio- economic impacts of an outbreak of foot-andmouth disease in Australia. Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) Research report 13.11.

Diskanak Blora. (2022). *Analisis Dampak Penyakit Mulut & Kuku (PMK)*. Dinas Perikanan Blora. Diakses pada 20 Januari 2023, dari https://diskanak.batubarakab. go.id/web/mengenalpenyakit- mulut-dan-kuku pmk/

Fadli, dr. R. (2022). *penyakit mulut dan kuku*. Halodoc. Diakses pada 25 Januari 2023, dari [https://www.halodoc.com/kes ehatan/penyakit-mulut-dan- kuku](https://www.halodoc.com/kes%09ehatan/penyakit-mulut-dan-%09kuku)

Ishtiaq, M. (2019). Book Review Creswell, J. W. (2014). Research Design: Qualitative, Quantitative and Mixed Methods Approaches (4th ed.). Thousand Oaks, CA: Sage. *English Language Teaching*, 12(5), 40.

Keputusan *Menteri Pertanian Nomor 500.1*/*Kpts*/*Pk*.*300*/. *M*/*06/202 2* Tentang Penetapan Daerah Wabah Penyakit. Mulut Dan Kuku (Foot Dan Mouth Disease).

Mutia, C. (2022). *Jumlah Hewan Ternak Terjangkit Penyakit Mulut dan Kuku (PMK)*. Databoks. Diakses pada 24 Maret 2023, dari https://databoks.katadata.co.id /datapublish/2022/09/22/ satgas-pmk-hewan-ternak- terjangkit-pmk-tembus-538- ribu-kasus-kamis-22-92022

Nchanji, E., Lutomia, C. K., Chirwa, R., Templer, N., Rubyogo, J. C., & Onyango, P. (2020). Immediate Impacts of COVID19 Pandemic On Bean Value Chain In Selected

 Countries in Sub-Saharan Africa. Agricultural Systems, 103034.

Sudarsono, Rahendra Praseta Eko. 2022. “Kajian Epidemiologi Kejadian Diduga Penyakit Mulut Dan Kuku Di Kabupaten Lamongan Epidemiological Study of Suspected Occurrence of Foot and Mouth Disease in Lamongan Regency.” Journal of Basic Medical Veterinary Sudarsono et al. Juni 11(1): 56– 63.

Surat Edaran Satuan *Tugas Penanganan Penyakit Mulut Dan Kuku*. *Nomor 2 Tahun 2022*. Tentang. Protokol Kesehatan Pengendalian *Penyakit Mulut Dan Kuku.*

Surat Edaran Satuan *Tugas Penanganan Penyakit Mulut Dan Kuku*. *Nomor 6 Tahun 2022 Tentang* Pembatasan Lalu Lintas Hewan Rentan Penyakit Mulut Dan Kuku Dan Produk Hewan Rentan Penyakit Mulut Dan Kuku.

Surat Keputusan Kepala BNPB Nomor 47 tahun 2022 tentang Penetapan Keadaan Tertentu Darurat PMK

Surat Keputusan Menteri Pertanian No. 260/Kpts/TN.510/5/1986 mengenai status Indonesia bebas PMK secara nasional.

Surat keptusan Menteri Pertanian Nomor. 404/KPTS/PK.300/M/05/2022 tentang Penetapan Daerah Wabah Penyakit Mulut dan Kuku (Foot and Mouth Disesase) di Kabupaten Aceh Tamiang Provinsi Aceh.

Wahyudi, E. (2022). Kementan Perkirakan Kerugian Ekonomi Akibat PMK Melebihi Rp9,9 Triliun. *Fortuneidn*. Diakses pada 11 februari 2023, dari [https://www.fortuneidn.com/ news/eko-wahyudi/kementan- perkirakan-kerugian- ekonomiakibat-pmk-melebihi- rp9-9-triliun](https://www.fortuneidn.com/%09news/eko-wahyudi/kementan-%09perkirakan-kerugian-%09ekonomiakibat-pmk-melebihi-%09rp9-9-triliun).

1. Diterima 30 April 2024, Direvisi 19 Juni 2024.

2 STISIP Alwashliyah Banda Aceh

3Department of Animal Husbandry, Faculty of Agriculture, Syiah Kuala University

4Aceh Cattle and Local Livestock Research Center, LPPM Syiah Kuala University [↑](#footnote-ref-1)