Foot-and-mouth disease (FMD) is a transboundary animal disease (TAD) notorious for its ability to severely affect, and indeed disrupt, regional and international trade in animals and animal products. It is also feared due to the enormous financial damage it can cause in FMD-free countries hit by an outbreak.

However, the burden FMD imposes on developing countries – entailing the loss of animals, biological diversity and production efficiency – is generally much less known. In FMD-endemic countries, which are usually developing countries, the disease threatens food security and the livelihoods of smallholders, and prevents animal husbandry sectors from developing their economic potential.

In this context, workforce development of veterinary services and animal health professionals is key for early detection, effective management and progressive control of FMD.

Many FMD-endemic countries on the Progressive Control Pathway for the Control of FMD (FMD-PCP) have limited resources to organize and manage training programme on FMD preparedness and control, and to arrange the logistics involved.

To overcome these obstacles, the European Commission for the Control of Foot-and-Mouth Disease (EuFMD), building on the extensive experience in virtual training to support the progressive control of FMD and involving animal health professionals from over 100 countries, is now promoting the establishment of regional Virtual Learning Centres (VLCs), in collaboration with FAO Regional and Subregional Offices.

**VIRTUAL LEARNING CENTRES**

The VLCs decentralize the expertise and competences required to develop and manage virtual training. By using Communication Technology to deliver and cascade courses and resources, VLCs allow ample and geographically disparate audiences to be trained at a low cost, for example without need to travel from their duty stations. This enhances the capacities of public and private veterinary services to prepare for, detect and respond to outbreaks of FMD and other TADs.
**KEY FACTS**

**FOOT-AND-MOUTH DISEASE (FMD)**

FMD IS A HIGHLY CONTAGIOUS VIRAL DISEASE OF CLOVEN-HOOFED ANIMALS

ALTHOUGH NOT ALWAYS LETHAL IN ADULT ANIMALS, IT CAUSES SERIOUS PRODUCTION LOSSES AND IS A MAJOR CONSTRAINT IN INTERNATIONAL TRADE

FMD IMPACT IN ENDEMIC COUNTRIES INCLUDE DIRECT PRODUCTION LOSSES, SUCH AS REDUCED MILK YIELD, GROWTH RATES AND DRAFT POWER. THE INDIRECT LOSSES INCLUDE COSTS OF CONTROL AND TRADE RESTRICTIONS

**THE FMD SITUATION HAS IMPROVED MARKEDLY IN RECENT YEARS, ESPECIALLY IN EUROPE AND SOME COUNTRIES IN SOUTHEAST ASIA AND SOUTH AMERICA**

**THE DISEASE REMAINS ENDEMIC AND AT A HIGH PREVALENCE IN MANY COUNTRIES IN AFRICA, THE MIDDLE EAST, ASIA AND SOUTH AMERICA**

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The first VLC opened in December 2019, in collaboration with the FAO Subregional office for Southern Africa (SFS). It has already offered virtual training programmes on FMD field investigation and vaccination monitoring to over 360 veterinarians from 16 countries in the region. These courses are suitable for veterinarians working at field, regional, laboratory or central level. The courses involved live online webinars and an online discussion forum, where participants were able to discuss and share experiences with regional colleagues as well as international experts.

In particular, the tutored course on FMD field investigation provided participants with the knowledge and skills required to investigate outbreaks of FMD, including clinical diagnosis, laboratory sampling, outbreak investigation, biosecurity, vaccination and aspects of disease control.

In 2020, three more virtual courses will be conducted online for public and private veterinary services in the region, focusing on Public-Private Partnership for FMD Control, FMD Risk Analysis along the Value Chain and Simulation Exercises for Animal Disease Emergencies.

The VLC is also promoting additional networking and collaboration opportunities with regional and national stakeholders, on wider issues related to FMD and TADs control.

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**INNOVATIVE DIGITAL SOLUTIONS TO SUPPORT CONTROL OF FOOT-AND-MOUTH DISEASE**

**FAO-EUFMD**

**E-MAIL**
Food-Chain-Crisis@fao.org
Eufmd@fao.org

**WEBSITE**
www.fao.org/food-chain-crisis
http://www.fao.org/eufmd

Food and Agriculture Organization of the United Nations

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Applications such as WhatsApp and Telegram are now used regularly by the EuFMD and the VLC to manage and improve audience engagement through discussion forums and chatbox. The applications are also used to complement the delivery of training resources. WhatsApp™ is used to send training resources to participants who do not have access to a laptop or sufficient bandwidth. Trainees can thus become part of a regional network and exchange information with one another, ask for advice and receive updates long after the actual training ends. The use of Telegram™ chatbots is being piloted for course surveys and final assessments.

Similarly, an application for mobile devices has been developed in collaboration with the University of Rome “La Sapienza” to assist virtual training on FMD lesion ageing and sampling procedures during FMD field investigation, enabling the tracing of contacts, the development of infection timelines and provision of guidance during FMD outbreak field investigations.

**THE WAY FORWARD**

The VLC in Southern Africa is the first such centre to be established. Two similar centres are planned to be created over the next two years in another region of Africa and in Asia, in collaboration with FAO Regional and Subregional Offices and other regional stakeholders. The FAO VLCS and networks will provide an opportunity to broaden the scope of virtual training programmes to encompass other TADs, and possibly other thematic areas of specific relevance to each region. Thus, it will be possible to support a progressively wider audience and a broader variety of capacity development initiatives.

The mention of specific companies or of their products and services, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned.