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# FIELD EVALUATION OF A SAFE AND COST-EFFECTIVE SHIPMENT OF FMDV SUSPECTED SAMPLES TO DIAGNOSTIC LABORATORIES USING LATERAL FLOW DEVICES

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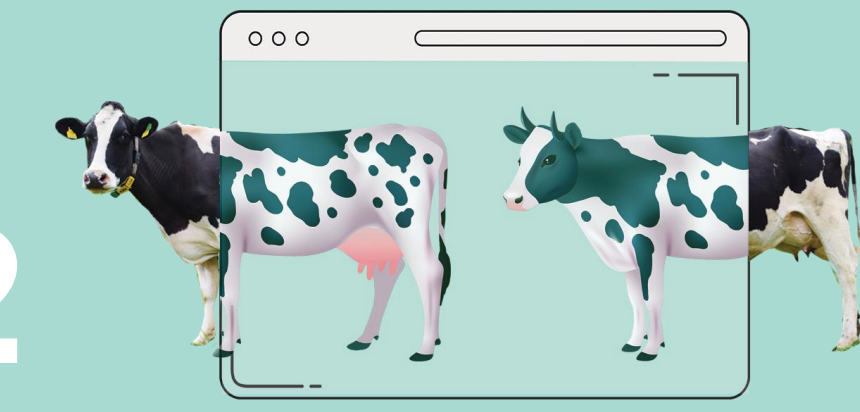
**<https://anses.hal.science/anses-04527886v1>**

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# Field evaluation of a safe and cost-effective shipment of FMDV suspected samples to diagnostic laboratories using lateral flow devices

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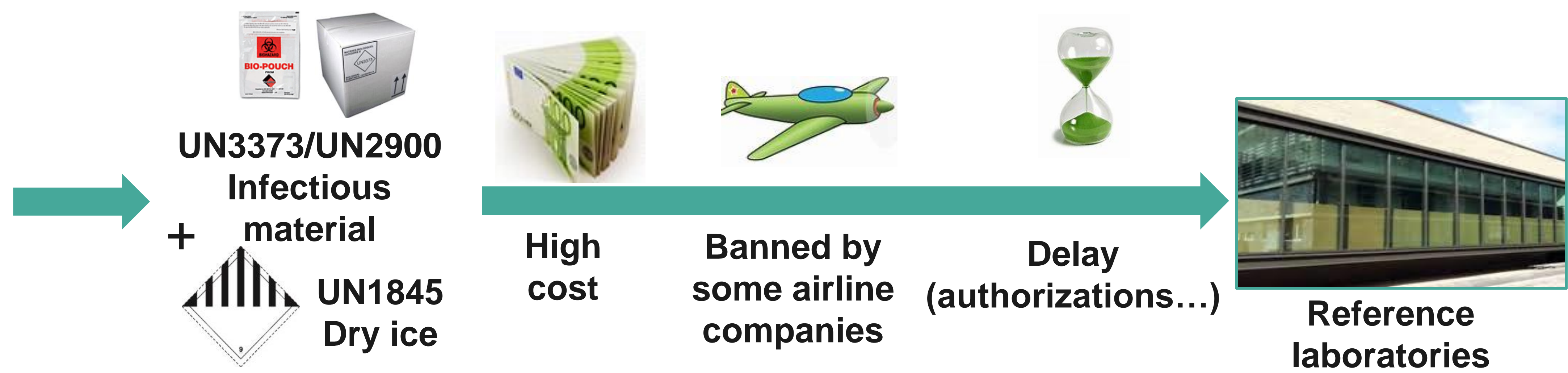
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## INTRODUCTION

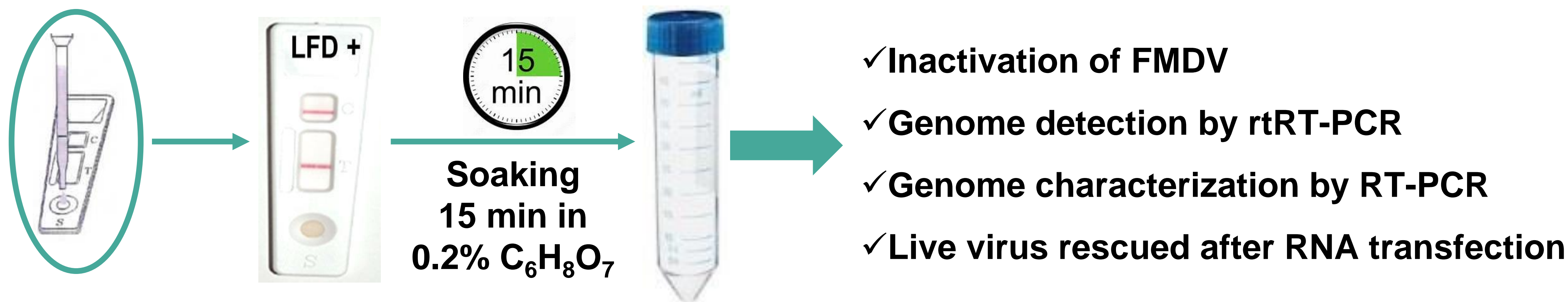
### Context: Clinical suspicion



FMD?  
Serotype?  
Strain characterization?  
Origin?



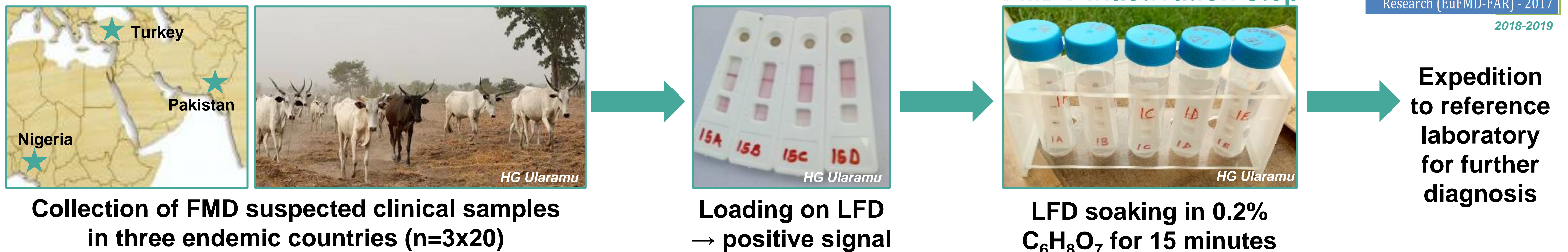
### Evaluation of the inactivation protocol on archival samples



Transboundary and Emerging Diseases Feb. 2018  
ORIGINAL ARTICLE  
Safe and cost-effective protocol for shipment of samples from Foot-and-Mouth Disease suspected cases for laboratory diagnostic  
2013  
EUFMD – Fund for Applied Research (EuFMD-FAR) 2014-2015  
eofmd  
european commission for the control of foot-and-mouth disease

## MATERIALS & METHODS

### Evaluation of the inactivation protocol on field samples

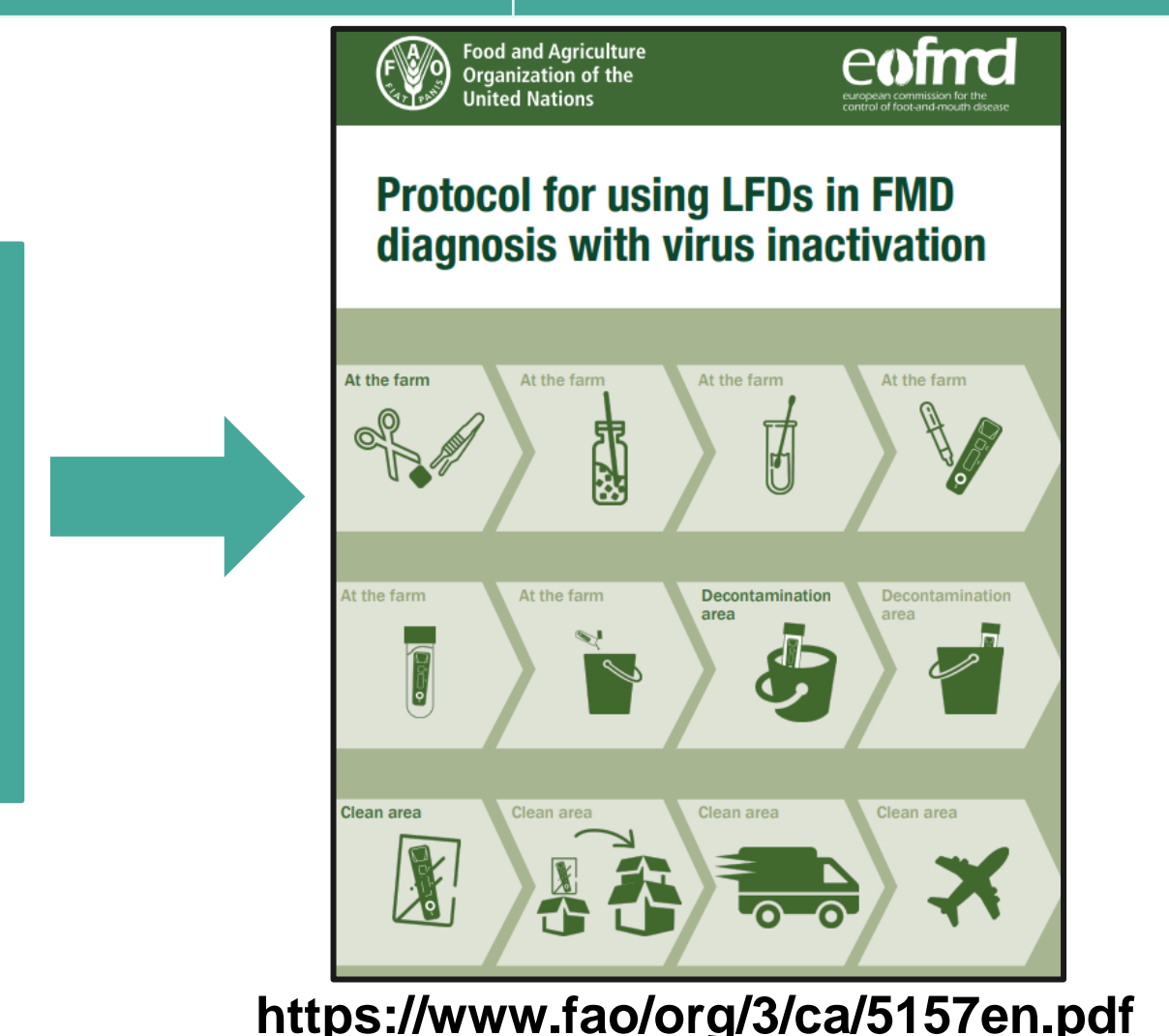


## RESULTS & CONCLUSIONS

| Sample origin          | Number of sample | LFD result  | Inactivation step   | Result of viral isolation on cells after inactivation | Result of rtRT-PCR after inactivation (3D + IRES) | Result of genotyping by RT-PCR (VP1)    | Live virus rescue after RNA transfection |
|------------------------|------------------|-------------|---|---|---|---|--|
| Nigeria                | N=20*            | 20 positive | 15 min in 0,2% C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> | No cytopathic effect after two passages<br>           | Positive<br>                                      | O-EA3 (n=12)<br>SAT2/VII (n=3)          | N=10                                     |
| Turkey                 | N=20*            | 20 positive |   |   |   | O/ME-SA (n=19)                          | No                                       |
| Pakistan               | N=20*            | 20 positive |   |   |   | Asia-1/ASIA (n=4)<br>O (n=6)<br>A (n=5) | No                                       |
| Experimental infection | N=6#             | 6 positive  |   |   | Not done  | Not done                                | Not done                                 |

\*: epithelium tissues; #: vesicular fluid.

- ✓ Confirmation of the biosafety of the LFD-based viral inactivation protocol
- ✓ Detection and typing of FMDV genome by (rt)RT-PCR
- ✓ Complete characterization of FMDV strain involved, from live virus rescued by RNA transfection



<https://www.fao.org/3/ca/5157en.pdf>

A safe and low cost way to submit FMD samples to reference laboratories, directly applicable in the field