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Does control of animal infectious risks offer a new international perspective?

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TEN YEARS OF FMD OUTBREAK IN SADC REGION: AN ANALYSIS OF THE GEOGRAPHICAL STRUCTURE OF EPIDEMICS AS COMPARED TO THE ZONING STRUCTURES IN PLACE TO CONTROL FMD

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ABSTRACT

In SADC, geographical zoning is used since long and based on fencing and application of various control interventions. Nevertheless during the last 10 years, FMD was still occurring there (Zimbabwe, Botswana, South Africa, Swaziland, Mozambique, Tanzania, Malawi, Zambia). Therefore a comparative exploratory spatial data analysis (ESDA) has been carried out. It consists of two folds: firstly the analysis of the spatial patterns of outbreaks, and secondly the analysis of structures (zones) put in place in the region. The poster firstly presents a basic analysis of the spatial structures of FMD epidemics in the SADC, based on 10 years raw data. Besides, a structural analysis of zones (with FMD status) was also carried out based on GIS layers made available by SADC countries ruled under such animal health policy. Additionally, geographical patterns were studied, with first order and second order analysis methods (to respond to the both questions: is space organized? and at which scale is the space organised?), and with various indices. They are firstly analysed independently, and then overlaid and compared to each other. The results disclose the ability of ESDA methods used, to compare scales of interest when dealing with FMD outbreaks, as compared to scales imposed by the zoning patterns. It helps to model several dimensions of the epidemiological and socioeconomic risks.

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