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CRITERIA AND LIST OF ANIMAL PATHOGENS

Working Paper submitted by Portugal

If it is considered that a list of Biological Agents and Toxins provide relevant guidelines for Declaration purposes and/or in a verification regime, there is a general consensus that such list should include some animal and plant pathogens, under the heading of Biological Weapons, in view of their indirect but nonetheless serious socio-economic impacts as well as public health concerns for countries or regions liable to be exposed to them.

In addition to or in conjunction with such criteria as laid down in the Working Paper submitted by France/Germany, the rationale to pinpoint or label animal pathogens as potentially “militarizable” should be based on the following epidemiological considerations:

- a) High morbidity rates (i.e. epidemic spread of infection);
- b) High mortality rates (approaching, in many cases, 100% lethality in non-endemic areas);
- c) Short incubation period (few days, rarely exceeding one week);
- d) Great losses in herds and flocks and consequent social and economic repercussions;
- e) Zoonotic potential (animal pathogens transmissible to human beings).

Points a), b), c) and d) are basic to any epidemiological survey and, furthermore, are measurable in terms of incidence and death rates in a specified period of time.

Point e) is self-explanatory.

Based on the above criteria, the following provisional list of weaponizable animal pathogens is proposed:

A) Specific Animal Pathogens

- African Swine Fever Virus
- Newcastle Disease Virus
- Rinderpest Virus
- Foot and Mouth Disease Virus

B) Zoonotic Agents (as defined above)

- Salmonella enteritidis phage type 4
 - Salmonella typhimurium
 - Campylobacter Jejuni and Pylori
 - Enteropathogenic E. coli (0157) - all these agents cause acute gastro-enteric syndromes in human beings, lethal in untreated cases and have high survival rates in environment
 - Brucella spp. (all biotypes pathogenic for man)
 - Clostridium perfringens toxins of types C and E (epsilon and iota toxins are absorbed through alimentary tract as botulinum toxins do)
 - Ebola Virus
 - Prion Disease Agents (cause transmissible encephalopathy in various animal species such as sheep, cattle, cats, zoo animals etc. - so far no proven record of transmission to man)
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