

Second Meeting  
Geneva, 6-10 December 2004

Meeting of Experts  
Geneva, 19-30 July 2004  
Item 6 of the provisional agenda

**A Procedure for Differentiating Between the Intentional Release of Biological Warfare Agents and Natural Outbreaks of Disease: Its Use in Analyzing the Tularemia Outbreak in Kosovo in 1999 and 2000**

**Submitted by Germany**

1. The events of 11 September 2001 and the subsequent anthrax outbreaks in the USA have opened the world's eyes to the threat posed by terrorist groups, criminal organizations and lone operators who will stop at nothing to achieve their goals. The open or covert use of pathogens and toxins as biological warfare agents can no longer be ruled out. Against this background the appearance of an unusual disease must be studied in order to clarify whether it is a natural or artificially caused occurrence.
2. This issue was raised in discussions with local representatives and relief organizations during a tularemia epidemic in Kosovo from October 1999 to May 2000. Data and findings gathered by routine epidemiological and microbiological investigations often provide no definitive answer to this problem. For this reason a model with various criteria has been developed to calculate the likelihood, using semiquantitative tools, of the artificial genesis of a specific outbreak of disease. The use of this procedure should make it possible to establish with a greater degree of certainty than hitherto whether or not biological warfare agents are involved in any unusual outbreak of disease. In the case of the tularemia epidemic in Kosovo, a study based on this model found that it was unlikely that *Francisella tularensis*, the causative agent of the disease, had been deliberately released as an act of biological warfare.
3. The model incorporates a variety of criteria to which points are assigned on a sliding scale of importance to discriminate between the intentional use of biological warfare agents and natural outbreaks of infectious diseases. The model is flexible and takes into account the political, military and social situation in the region concerned, the specific features of the pathogen and the epidemiological and clinical characteristics of the epidemic.

4. Further details are published in a research paper by *R. Grunow and E.-J. Finke* in *Clin Microbiol Infect* 2002; **8**: 510-521, which is available on the CD-ROM prepared by the Federal Foreign Office as background information for participants at the BTWC Meeting of Experts in July 2004.

---