

## IMPLEMENTATION AND ASSESSMENT OF A GEOGRAPHICALLY DISTRIBUTED INFORMATION SYSTEM TO BE USED IN EXOTIC DISEASE OUTBREAKS

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*An automated information system, to be used in case of animal exotic disease occurrence, was developed and tested. Feasibility of the system was assessed using data derived from the national Contagious Bovine Pleuropneumonia (CBPP) surveillance plan. Indicators for the management of the plan were developed following user need assessment as well as data format and information flow analysis. Information feed back was established using Internet standards.*

### INTRODUCTION

In managing an emergency, due to an exotic animal disease, one of the crucial aspects is information. Information on disease pattern and resources deployment and utilization must be collected, analyzed and circulated rapidly. Indicators are useful tools in such situations to allow the system users to manage surveillance/control/eradication activities.

A software to manage a geographically distributed system to collect and circulate exotic animal disease related information was developed. The system was designed and implemented to manage the Italian national surveillance plan for CBPP. Its conception provides for its use also in case of other exotic diseases occurrence.

### MATERIALS AND METHODS

This research has been carried out through the following phases:

- definition and generation of the indicators; indicators were defined, by analyzing the system users information need, with the objective of (i) providing the competent authorities with an adequate tool for the management and evaluation of activities; (ii) monitoring the possible occurrence of unforeseen events;
- standardization of the information flows among the institutions involved in the plan; standard forms were defined both to feed the system and to generate feed-back information to the peripheral data collectors;
- improvement of the efficacy and efficiency of information circulation among the institutions concerned;
- definition of standard and protocols for communication;
- implementation and testing of a client-server system based on a WAN, able to support the managerial tasks and responsibilities of both peripheral and central administrative levels;
- definition and implementation of the information feed back to peripheral nodes and to other parties concerned. A system based on the typical Internet tools has been chosen for the distribution of the information to reach the widest possible users range;
- testing of the system using data of the 1996 CBPP surveillance plan.

### RESULTS

The results obtained were:

- implementation of an application software developed in Windows environment, able (i) to manage all the information derived from official data forms for the CBPP national surveillance plan and (ii) to generate indicators;
- production of Internet pages in the Web site of the Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise «G. Caporale»;
- distribution of the software to all the institutions involved in the system.

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