Original: English November 1998

# REPORT ON THE MEETING OF THE OIE WORKING GROUP ON INFORMATICS AND EPIDEMIOLOGY

Teramo, Italy, 6 - 8 October 1998

The OIE Working Group on Informatics and Epidemiology met at the Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise 'G. Caporale' (IZSAM)<sup>1</sup>, Teramo, Italy from 6 to 8 October 1998.

The agenda and list of participants are given in Appendices I and II, respectively.

Dr G.K. Brückner served as Chairman and Dr. S.C. MacDiarmid as Rapporteur.

#### Introduction

Professor V. Caporale, Director of IZSAM, welcomed participants to the IZSAM Collaborating Centre. Dr Brückner welcomed the representatives of the Working Group and the representatives of the OIE Collaborating Centres of Montpellier<sup>2</sup> (France), Onderstepoort<sup>3</sup> (South Africa) and Fort Collins<sup>4</sup> (United States of America). He advised the Working Group of the need to evaluate progress since its last meeting to confirm that the strategic objectives of the Group were still relevant, to consider the best way in which the Collaborating Centres can be used, and the relationship of the Group with other OIE Working Groups and Ad hoc Groups.

Dr T. Chillaud of the OIE Central Bureau conveyed the greetings of the Director General of the OIE, Dr J. Blancou. He advised the meeting of the need for dialogue between Collaborating Centres and the need for harmonisation of training procedures.

# 1. Objectives of the Working Group

The Working Group reviewed its objectives and its terms of reference and found its agenda to be consistent with these.

# 2. Matters arising from the previous meeting of the Working Group

#### 2.1 Diseases of non-traditional livestock species

The Working Group concluded that the issue of trade-sensitive diseases of farmed Cervidae needs to be addressed with urgency and reiterated that four diseases of deer (epizootic haemorrhagic

<sup>&</sup>lt;sup>1</sup> IZSAM has been designated as OIE Collaborating Centre for Epidemiology and Organisation of Veterinary Services in Developing Countries.

<sup>&</sup>lt;sup>2</sup> CIRAD-EMVT: OIE Collaborating Centre for Diagnosis and Control of Animal Diseases in Tropical Regions.

Onderstepoort Veterinary Institute: OIE Collaborating Centre for Surveillance and Control of Animal Diseases in Africa.

<sup>4</sup> Centers for Epidemiology and Animal Health: OIE Collaborating Centre for Animal Disease Surveillance Systems and Risk Analysis.

disease, cervine herpesvirus, malignant catarrhal fever and *Elaphostrongylus cervi* infestation) should be included in OIE List B. More important however, is the need to develop criteria by which diseases of non-traditional livestock species can be included in the *International Animal Health Code* (the *Code*) and the *Manual of Standards for Diagnostic Tests and Vaccines* (the *Manual*). The Working Group will draft a document proposing criteria for inclusion of such diseases and will submit this document to the International Animal Health Code Commission and the Foot and Mouth Disease and Other Epizootics Commission for their consideration.

#### 2.2 OIE Regional Collaborating Centres

After the Working Group had discussed the roles of these Centres and their relationships with the OIE and with each other, the representatives of the OIE Regional Collaborating Centres convened as a subgroup.

The Working Group supported a proposal by the subgroup that the Central Bureau should encourage annual training courses and/or pilot projects related to information quality, information systems, and epidemiological surveillance methodologies. Training programmes should be tailored to regional language and culture patterns and this should be primarily the responsibility of the OIE Regional Commissions, in cooperation with training institutions and OIE Regional Collaborating Centres. The OIE Central Bureau should coordinate the training activities and provide expertise and materials. Efforts should be made to collaborate with the FAO<sup>5</sup> and WHO<sup>6</sup>.

The Working Group recommends that:

- 1. The Collaborating Centres continue to provide training in areas of epidemiology, disease surveillance and risk analysis in accordance with their capabilities, and coordinate and standardize their activities in this field.
- 2. The Collaborating Centres develop training and reference materials (including clinical/histological slides) similar in format and congruent with the *Code*, which should be made available to Member Countries and periodically updated. Such materials should be indexed on the OIE Web site. The training initiatives need not to be specifically endorsed by the OIE after review by the Working Group to ensure consistency with the *Code*. Translation of such documents into the working languages of the OIE should be the responsibility of the Central Bureau, OIE Regional Commissions or OIE Collaborating Centres as the needs dictate.
- 3. The Collaborating Centres should communicate with each other to facilitate a coordinated effort to provide appropriate training.
- 4. The Collaborating Centres should, in order to improve accessibility by all OIE Member Countries to relevant animal disease information, stimulate an increased awareness and interest amongst those Member Countries which currently do not use the Internet. The FAO should coordinate efforts to provide training and Internet access. This activity must be sustained to ensure continued access and enable the further development of electronic reporting of disease occurrence information.
- 5. The OIE and FAO should reach a technical agreement on training in epidemiology, surveillance, risk analysis and Internet access.
- 6. The Director General of the OIE should approach Coordinators of Regional Representations, Bureaux of Regional Commissions, OIE Collaborating Centres and appropriate regional organisations to identify the respective regional needs with respect to training in epidemiology, disease surveillance, risk analysis and information quality.
- 7. The Director General should analyse the skills on offer from the Collaborating Centres and, in close cooperation with the funding agencies, identify the appropriate Centre to conduct any new project.

<sup>6</sup> WHO: World Health Organization.

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<sup>&</sup>lt;sup>5</sup> FAO: Food and Agriculture Organization of the United Nations.

#### 2.3 General guidelines on animal disease epidemiological surveillance

Professor Caporale reported on the electronic conference hosted by IZSAM to evaluate the draft general guidelines on animal disease epidemiological surveillance. The draft guidelines had been circulated by electronic mail to a group of invited experts. The report of the electronic conference is attached as <u>Appendix III</u>.

The Working Group endorsed the conclusion that the draft guidelines are a good basis for discussion but need further revision. It was clear that this kind of document is needed but because of the need to consider the different approaches developed in various countries, such revision can hardly be done by a single author.

The Working Group recommends that:

• The revision of the guidelines on epidemiological surveillance should be carried out by a specific Ad hoc Group.

#### 2.4 Progress at the OIE Central Bureau with electronic mail and the Web site

The Working Group proposed that the Director General should invite Member Countries to provide the Central Bureau with the addresses of their official Web sites. The Central Bureau will then provide links from the OIE Web site to the Web sites of Member Countries to facilitate the exchange of information on matters such as risk surveillance, animal health matters and risk analysis.

The Working Group recognised the constraints on further expansion of, or changes to, the OIE Web site and noted with concern the fact that approximately a third of Member Countries do not yet have Internet access. The Group considered that assistance in gaining such access should be seen by the OIE as a priority. The Group discussed the respective roles of the FAO, the Collaborating Centres and IICA<sup>7</sup> in assisting Member Countries to gain Internet access.

The Working Group recommends that:

• The Chairman request the Administrative Commission to examine resource, information and documentation needs within the Central Bureau. A needs assessment and a strategic planning exercice should be carried out as soon as possible, in view of the increasing demands being placed on the Central Bureau in the area of electronic reporting and document handling.

# 2.5 Revision of the *Code* chapters on import risk analysis

The Chairman of the Ad hoc Group on import risk analysis reported on progress in revising the *Code* chapters.

# 3. Matters arising from the 66th General Session of the International Committee

## 3.1 Fish Diseases Database

The Working Group proposed that a member of the Fish Diseases Commission be invited to participate in its next meeting. This would provide an opportunity for the Working Group to see and evaluate the Fish Diseases Database with a view to considering whether a similar database is feasible and desirable for diseases of terrestrial animals. A joint meeting with the Fish Diseases Commission would also be an opportunity to explore where harmonisation between the *International Animal Health Code* and the *International Aquatic Animal Health Code* is possible.

<sup>&</sup>lt;sup>7</sup> IICA: Inter-American Institute for Cooperation in Agriculture.

#### 3.2 Resolution No. XIII

The Working Group discussed the recommendations of the International Committee regarding forecasting systems using laboratory and epidemiology information to prevent outbreaks of existing and emerging diseases.

In 1997, the Working Group resolved that the development of a simplified mapping system was desirable but, in view of resource limitations, implementation thereof should be delayed until electronic compilation and dissemination of the monthly and emergency reports has been fully implemented. It is clear that there are very significant resource implications involved in any move towards the geo-referenced reporting of disease outbreaks recommended in Resolution No. XIII.

The Working Group agreed in principle with the recommendations of Resolution No. XIII and took note of developments to date.

The Working Group recommends that:

• The full implementation of electronic reporting needs to be completed first, and that a careful assessment of the information needs of the OIE and the resource demands on the Central Bureau should be carried out before considering the implementation of Resolution No. XIII.

# 4. Matters arising from the September 1998 meeting of the International Animal Health Code Commission

The Working Group was formally requested to comment on a draft *Code* chapter on zoning and regionalisation. To do justice to the text, members of the Group agreed to evaluate the draft chapter and provide comments to the Chairman by the end of November 1998. The Chairman will collate the Group's response and forward it to the Central Bureau.

#### 5. Animal health information systems

The FAO Representative reported on the development of the TADInfo<sup>8</sup> component of the FAO EMPRES<sup>9</sup> project. This project, applied initially to rinderpest, but planned to embrace all List A diseases, covers the incorporation of field surveillance data captured at national level into regional and eventually global reports. The FAO system complies with the information requirements of the OIE.

The Representative of the OIE Collaborating Centre at Montpellier reported on CIRAD-EMVT's epidemiology programmes, and a representative of IZSAM demonstrated the epizootic management system developed at Teramo.

The Working Group also noted with interest the recent publication *Active Surveillance for Livestock Diseases: Practical Techniques for Developing Countries*, written by Dr A. Cameron and published by the Australian Centre for International Agricultural Research. The publication is downloadable free of charge, with accompanying epidemiological software, from: http://www.pnc.com.au/~angus/

The Working Group recommends that:

- 1. The FAO continue to collaborate closely with the OIE to ensure that disease information recording and reporting systems remain compatible.
- 2. The FAO provide a progress report on the TADinfo project at the next meeting of the Working Group.

<sup>9</sup> EMPRES: Emergency Prevention System.

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 $<sup>\</sup>frac{8}{6}$  TADInfo: software development for the Transboundary Animal Disease Information System.

#### 6. HandiSTATUS

#### 6.1 Progress with the transition plan for an integrated OIE information system

The Representative of the Central Bureau reported on the proposed HandiSTATUS version II. It is not certain when this will be completed. The Working Group discussed the contents of the current version of HandiSTATUS, the OIE Web site and the proposed HandiSTATUS II.

#### 6.2 Progress with the emergency and monthly animal health reports computer application

The full implementation of the electronic automated compilation and display of these reports is likely to be ready by March 1999.

# 6.3 Criteria for recognizing countries as free of specific animal diseases as a mandatory subsystem within HandiSTATUS

It is proposed that HandiSTATUS II include information on which countries have been recognised as free of specific diseases by the International Committee. The issue of data quality was discussed. At its next meeting, the Working Group proposes to consider the issue of data quality. The Collaborating Centres will be invited to forward comments on this issue for incorporation into the working documents.

#### 7. Risk analysis

# 7.1 Guidelines for the establishment of risk analysis units within the Veterinary Services of Member Countries

The Working Group recognised the need for such guidelines but concluded that the limited time available for the meeting did not allow a detailed discussion. This item will be incorporated into the agenda for the next meeting of the Group.

#### 7.2 Risk analysis frameworks for Member Countries

The Working Group recognised that there is a need for measures to help Member Countries achieve consistency in risk analysis methodology. The sharing of experiences gained from conducting risk analyses should be part of these measures. There is a pressing need for actual risk analyses to be made available to Member Countries. Given the bulk of documented risk analyses already available, the Working Group concluded that placing such analyses on the OIE Web site in the form of PDF files, would be the most efficient means of making them available.

The Working Group examined two documents considered useful for Member Countries carrying out risk analyses. Both are available on the Internet. The documents, and the Web sites from which they can be obtained, are:

- Animal Health Risk Analysis Framework. Canadian Food Inspection Agency. http://www.cfia-acia.agr.ca
- *The AQIS Risk Analysis Process Handbook.* Australian Quarantine and Inspection Service. http://www.dpie.gov.au/aqis/homepage/aqishome.html

The Working Group recommends that:

- 1. The Chairman of the Working Group propose to the Director General that Member Countries be invited to forward PDF files of official animal health import risk analyses, to be placed on the OIE Web site. Where such analyses are available on Member Countries' Web sites, Member Countries should be invited to forward to the Central Bureau the address of these analyses so that linkages can be made to them from the OIE Web site.
- 2. As a further measure to introduce consistency in risk analysis methodology and to assist Member Countries develop the ability to carry out risk analyses, an Ad hoc Group be

convened to draft a basic import risk analysis handbook (suggested title: *Introduction to conducting risk analysis in animal health for international trade purposes*). The Ad hoc Group should comprise persons with experience in conducting import risk analyses and persons with experience in teaching the discipline.

3. That the following specialists be considered to be invited to serve on the proposed Ad hoc Group: Dr Noel Murray (New Zealand), Dr Marion Wooldridge (United Kingom), a representative of the Collaborating Centre at Fort Collins (United States of America), a representative of OIRSA<sup>10</sup>, Dr Roger Ruppanner (Switzerland) and Prof. Bernard Toma (France).

# 8. Training in epidemiology, surveillance and risk analysis

The Working Group reiterated that the implementation of recommendations on training in epidemiology, surveillance and risk analysis is best carried out within the framework of the Collaborating Centres.

#### 8.1 USDA/APHIS Programmes on List A diseases

The representative of the Collaborating Centre at Fort Collins outlined the project to produce a set of CD-ROMs covering clinical signs, pathology, response measures, etc., for ten OIE List A diseases. CD-ROMs on other major animal diseases are planned.

## 8.2 The Manual for Teaching Basic Veterinary Epidemiology

The Working Group re-examined the *Manual for Teaching Basic Veterinary Epidemiology*, produced jointly by the IZSAM, WHO and FAO. This resource is intended for the training of teachers of epidemiology. The Working Group believes that this document should be promoted as a means of enhancing epidemiological skills in Member Countries. The Working Group supports the inclusion of a chapter on animal health risk analysis and reiterates the view expressed at two previous meetings that the future development of the teaching manual should be supported, that it should be translated into the other working languages of the OIE (to enhance its accessibility to trainers of epidemiology in a wider range of Member Countries) and that it should be published on CD-ROM.

#### 9. Other matters

#### 9.1 Year 2000 compliance

Mr M. Hayworth, of the Central Bureau, reported that all OIE's computer systems will be Year 2000 compliant. Given the potential significance of Year 2000 failure, the Working Group recommended that the Director General write to all Delegates of Mermber Countries alerting them to the importance of insuring that national computer systems are Year 2000 compliant.

#### 10. Next meeting of the Working Group

The Working Group proposed that the next meeting take place at the Laboratorio Nacional de Sanidad y Producción Animal, Algete (Madrid), Spain, from 5 to 7 October 1999 and that a representative from each of the Collaborating Centres be invited to attend the meeting.

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 $<sup>^{\</sup>rm 10}$  OIRSA: Regional International Organization for Plant Protection and Animal Health.

#### MEETING OF THE OIE WORKING GROUP ON INFORMATICS AND EPIDEMIOLOGY

#### Teramo, Italy, 6-8 October 1998

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# Agenda

### 1. Objectives of the Working Group

- Evaluation of progress since the last meeting of the Working Group
- Update of objectives

# 2. Matters arising from the previous meeting of the Working Group

- Report of the Central Bureau on previous recommendations of the Working Group
- Inclusion of diseases of farmed deer into OIE List B (OIE Central Bureau)
- Using OIE Logo in publications (OIE Central Bureau)
- General guidelines on animal disease epidemiological surveillance report back on Electronic Conference (Collaborating Centre/Teramo)
- Progress at OIE Central Bureau with Web site (OIE Central Bureau)
- Revision of Chapter in the *International Animal Health Code* on Risk Analysis (Chairman OIE Ad hoc Group)
- Establishment of OIE Collaborating Centre for Epidemiology and Risk Analysis at Fort Collins, USA

# 3. Matters arising from the 66th General Session of the International Committee of the OIE, Paris, May 1998

- Report of the Chairman to the International Committee
- Resolution No. XIII: Forecasting systems using the laboratory and epidemiology to prevent outbreaks of existing and emerging diseases
- Fish diseases database cross-linkages with need for similar database for animal diseases

# 4. Matters arising from the September 1998 meeting of the Code Commission

Zoning and regionalisation

## 5. Animal health information

- EMPRES and FAO mapping systems (FAO)
- Animal disease data capture facilities/systems for developing countries

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#### 6. HandiSTATUS

- Progress with the transition plan for an integrated OIE information system (OIE Central Bureau)
- Progress with Emergency and Monthly Reports application
- Criteria for recognizing countries free of specific animal diseases as a mandatory subsystem within HandiSTATUS

# 7. Risk analysis

- Guidelines for the establishment of risk analysis units within Veterinary Services of Member Countries
- Risk analysis frameworks for the Member Countries

# 8. Training in epidemiology, surveillance and risk analysis

- Progress with recommendations of the Working Group (FAO, OIE, Collaborating Centres)
- Progress with training initiatives at OIE Collaborating Centres
- USDA/APHIS Programmes on List A diseases (Collaborating Centre/Fort Collins)

#### 9. Other matters

The afternoon of Wednesday 7 October 1998 was reserved for demonstrations of software packages and a visit/guided tour of the OIE Collaborating Centre at Teramo.

A separate meeting between the representatives of the four OIE Collaborating Centres (Fort Collins, Montpellier, Onderstepoort and Teramo), took place on the afternoon of Tuesday, 6 October 1998.

# MEETING OF THE OIE WORKING GROUP ON INFORMATICS AND EPIDEMIOLOGY Teramo, Italy, 6-8 October 1998

## List of participants

#### MEMBERS OF THE WORKING GROUP

Gideon K. Brückner

Director Veterinary Public Health

Private Bag X 138 Pretoria 0001

REPUBLIC OF SOUTH AFRICA Tel: (27-12) 319 7679

Fax: (27-12) 329 7218 E-mail: dirvvg@vethq.agric.za

Concepción Gómez-Tejedor Ortiz

Directora

Laboratorio Nacional de Sanidad y Producción Animal

Ctra de Algete Km 5,400

28110 Algete (Madrid)

SPAIN

Tel: (34-91) 629 06 98 or 628 08 81 - Fax: (34-91) 629 05 98

E-mail: cgomez-t@idecnet.com

Randall S. Morley

Chief, Animal Health Risk Assessment Canadian Food Inspection Agency

3851 Fallowfield Road Nepean, Ont. K2H 8P9

CANADA

Tel: (1-613) 228 66 98 - Fax: (1-613) 228 66 75

E-mail: morleyr@em.agr.ca

Khaled El Hicheri

Médecin vétérinaire inspecteur général

Consultant international 9, rue Saint-Augustin

1002 Tunis Tunisia

Tel.: (216-1) 891 964 - E-mail: hicheri@gnet.tn

Stuart C. MacDiarmid

National Manager, Agricultural Security

MAF Regulatory Authority

ASB Bank House

101-103 The Terrace P.O. Box 2526

Wellington

NEW ZEALAND

Tel: (64-4) 474 4100 - Fax: (64-4) 474 4133

E-mail: macdiarmids@maf.govt.nz

stuartmacdiarmid@compuserve.com

#### **OTHER PARTICIPANTS**

Vincenzo Caporale

Director, Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale"

Via Campo Boario 64100 Teramo

ITALY

Tel: (39-861) 332279 Fax: (39-861) 332251

E-mail: caporale@izs.it

J.J. Tulasne

Chef du Programme de santé animale

Cirad-emvt

Campus international de Baillarguet

BP 5035

34032 Montpellier Cedex 1

FRANCE

Tel: (33-4) 67 59 37 13 Fax: (33-4) 67 59 37 98 E-mail: tulasne@cirad.fr D.W. Verwoerd

Director

Onderstepoort Veterinary Institute

Private Bag X05 Onderstepoort 0110 South Africa

Tel: (27.12) 529 9101 Fax: (27.12) 565 4667 E-mail: daan@moon.ovi.ac.za

Kevin D. Walker

Director, Agricultural Health IICA - Sede Central

Apdo. 55-2200 Coronado Costa Rica

Tel: (506) 229 27 18 Fax: (506) 292 78 48

E-mail: kwalker@iica.ac.cr

Stephen E. Weber

Acting Director, Centers for Epidemiology and Animal Health

USDA/APHIS/VS

555 South Howes, Suite 300 Fort Collins, Colorado 80521 United States of America Tel: (1-970) 490 7901

Fax: (1-970) 490 7999 E-mail: steve.weber@usda.gov

Valdir Roberto Welte

Animal Health Officer (Disease Intelligence), Animal Health Service Animal Production and Health Division

FΔN

Viale delle Terme di Caracalla

I-00100 Roma

**ITALY** 

Tel: (39-06) 570 53531 Fax: (39-06) 570 55749 E-mail: valdir.welte@fao.org

# 0IE

# CENTRAL BUREAU

Thierry Chillaud Head, Information and International Trade

Department

E-mail: t.chillaud@oie.int

Michael Hayworth

Computer Project Development Officer Information and International Trade

Department

E-mail: m.hayworth@oie.int

# **OIE Electronic Conference on Epidemiological Surveillance**

#### Introduction

Comments sent by participants to the OIE Electronic Conference on Epidemiological Surveillance and concerning the "Draft General Guidelines on animal disease epidemiological surveillance" by Dr B. Dufour, may be summarised in two groups: (i) general comments and (ii) specific comments.

#### **General comments**

- 1. The document cannot be considered as a guideline, as stated in the title, since it does not provide a set of rules to follow (or at least a set of examples) for the implementation of a surveillance programme.
- 2. A degree of ambiguity exists about the scope of the document. In fact, the introduction mainly focuses on problems related to international trade in animals and risk analysis, while in the body of the document these topics were not adequately discussed. Because of this ambiguity, some participants' comments were only addressed to risk analysis and they proposed that the paper focused on the points strictly relevant to risk analysis. Since risk analysis is only one of the possible uses of surveillance data, a revision is needed of both the introduction (i.e. less focused on risk analysis) and the body of the document (i.e. it should include some discussion about the use of surveillance data for risk analysis).
- 3. The surveillance envisaged by the author is France-centered, does not consider the approach developed in other countries and introduces concepts that are controversial to say the least. A wider and more international literature and approach appear necessary.
- 4. In summary, the document seems a good start for discussion, but appears incomplete and to reflect more specific author's opinions about epidemiological surveillance than a proposal of norms that can have a wide international consensus.

#### **Specific comments**

- 1. Definitions given in the document appear not completely consistent with each other. A wide variety of opinions seems to exist among the participants. There is some agreement, however, on the definition of surveillance derived from the CDC school. A way of overcoming this problem and of avoiding the introduction of new definitions, suggested by some participants, could be to stick to definitions proposed in the Last's Dictionary of Epidemiology. The diagrams proposed in the document in Figures 1, 2, 3 and Table 1 are not very clear and are misleading.
- 2. In the application of epidemiological surveillance, two different opinions emerge in the comments. Some participants consider surveillance strictly linked to existing control programmes, thus denying either primary prevention or the identification of priorities as possible objectives of epidemiological surveillance. Other comments, in agreement with the document, prefer to give surveillance a more holistic approach than to focus on one disease subject to control programmes, thus including the possible use of surveillance to investigate any emerging or invading condition or disease. Both these views have an intrinsic value. In fact, who would pay for adequate surveillance if the disease is not already subject to control? On the other hand, why not exploit existing organisational infrastructure to investigate any emerging or invading condition or disease? So, one problem is identifying the more effective active procedures based on the concept of using "traps" (e.g. downer cows as a trap for BSE, fibrinous pleurisy as a trap for CBPP, etc.) rather than hoping in fortuitous opportunistic findings that may be uncovered in the course of surveillance programmes in action for specific diseases in specific species. Both aspects of surveillance should be considered in the document.

#### Appendix III (contd)

- 3. In the document, a single centralised surveillance data processing centre is envisaged. Since the age of Internet, e-mail and personal computers, decentralisation showed a number of advantages, pros and cons of centralised vs. decentralised structures should be discussed. In any case the concept of *epidemiological surveillance network* and *research network* seems fairly unwarranted.
- 4. The author did not give specific indications on how to conduct a surveillance programme in the chapter "operating an epidemiological surveillance network". The document should have specific instructions on this subject, but the guidelines must not be too prescriptive or restrictive. They should be applicable to the different organisational structures of the different countries. This could be done presenting a rich set of examples.

# **Conclusions and proposals**

The document seems a fairly good point of start for discussion, but it needs deep revision. Comments provided by the participants to the conference show that this kind of document is indeed strongly needed. Because of the need to consider the different approaches developed in various countries, it appears difficult that the revision can be the work of a single author. The task could be carried out by a specific Ad hoc Group that could be convened in a two-three day workshop.

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