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**“Reality and Potential of Food Security and Agricultural Diversification in Small Island  
Developing States”**

**“Realidad y Potencial de la Seguridad Alimentaria y la Diversificación Agrícola en  
Pequeños Estados Insulares en Desarrollo”**

**"Sécurité alimentaire et diversification agricole dans les petits états insulaires en  
développement: réalisations et perspectives".**

**United States Department of Agriculture,  
T-STAR Sponsored Invasive Species Symposium**

**INVASIVE SPECIES SAFEGUARDING: IMPERATIVE FOR CARIBBEAN  
REGIONAL AGRICULTURAL DIVERSIFICATION AND FOOD SECURITY**

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## **CaribVET: THE CARIBBEAN ANIMAL HEALTH NETWORK - A TOOL TO FACILITATE CONTROL OF EMERGING AND EXOTIC ANIMAL DISEASE THREATS**

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### **INTRODUCTION**

CaribVET is the name given to a Caribbean Network of Animal Health (Gongora *et al.*, 2008). It is a tool to facilitate the surveillance and control of emerging and exotic animal diseases, and of other diseases of importance to the region (Molia *et al.*, 2005).

It is a collaboration network among national veterinary services, veterinary diagnostic laboratories, research institutes, universities, farmers' associations, and regional and international organisations, working to improve animal health in the Caribbean.

All of the Caribbean countries are members of CaribVET, both CARICOM member states and associate member states as well as the non-CARICOM states such as Cuba, the Dominican Republic, and the French West Indies. This fact is extremely important, given the transboundary nature of many pests and diseases.

Several international and regional agencies and organisations are also full members of CaribVET, not simply providing a supportive or observer role in the network.

The specific objectives of the network are:

1. To foster exchange of information and collaboration between people involved in animal production and health in the Caribbean,
2. To promote a regional approach for disease control and emergency preparedness,
3. To develop and harmonize regional veterinary diagnostic capabilities, and
4. To strengthen national epidemiological surveillance networks through training and skills building.

### **ORIGIN OF CaribVET**

CaribVET has its origins in three separate sanitary events:

- a regional disease control project,
- an animal disease crisis, and
- a laboratory network project.

In the first case, the regional eradication project of the Tropical Bont Tick *Amblyomma variegatum* (Caribbean Amblyomma Program) in the English speaking Caribbean made it

possible to establish collaboration between the veterinary services in the region. This program, initiated in 1995 was coordinated scientifically by the French Agricultural Research Centre for International Development (CIRAD) in Guadeloupe because of their expertise in ticks and tick-borne diseases.

The second event was the reintroduction of Classical Swine Fever in Hispaniola (Haiti and Dominican Republic), diagnosed with the help of CIRAD. This outbreak showed that there was a need for a regional approach to animal diseases within the Caribbean, since it was transboundary in nature and threatened several neighbouring islands.

Thirdly, the establishment of a French Interdepartmental Fund (FIC) project 1998-99 obtained by CIRAD Guadeloupe and IICA, for the evaluation of the veterinary diagnostic capacities in the Caribbean, termed "BUILDING AN INTER-CARIBBEAN EPIDEMIOLOGICAL SURVEILLANCE NETWORK", made it possible to connect the laboratories and to propose technology transfers in particular for the diagnosis of Salmonella. It made it possible to start to structure a network of laboratories of the Caribbean.

### **ACTIVITIES OF CaribVET**

The network then developed between 2001 and 2005 on the basis of projects and research activities on specific diseases, control programmes, the sharing of information through technical meetings and the creation of a website.

All of these activities made it possible to reinforce the bonds among all the players in animal health and veterinary public health in the Caribbean.

Some specific activities included

- Collaboration on the control of priority diseases such as:
  - Control and monitoring for CSF in Cuba, Hispaniola, Jamaica and Belize
  - Tropical Bont Tick surveillance strategies in participating English speaking Caribbean countries
  - West Nile Virus diagnosing and monitoring throughout the region
- Conducting training workshops on laboratory diagnostics, epidemiological surveillance, Geographical Information Systems
- Holding of technical meetings
- Facilitating communication and exchange of information.

So now all of the elements of a regional approach to disease surveillance were in place. Such a regional approach allows for

- Harmonisation of surveillance strategies (countries have similar objectives and employ similar methodologies, therefore allowing for the easy comparison of data and the sharing of information)
- Sharing of human resources and expertise
- Such harmonisation requires the use of common tools and it implies common choices.

Such a regional approach requires an organisational structure in the form of a Steering Committee to make policy decisions and to coordinate the activities of the network and the establishment of working groups to tackle individual diseases or issues. There is also a need for efficient and rapid exchange of information such as through a website with online reporting of surveillance data.

In 2005, the global threat of Highly Pathogenic Avian Influenza (HPAI and in particular H5N1) was a major catalyst for full organisation and recognition of the network.

It was during a joint regional meeting on disease surveillance and preparedness for HPAI that the proposal for an Organisational Structure for the CaribVET network was presented. The Chief Veterinary Officers of the Caribbean territories discussed, and agreed to, the proposal. Upon the recommendation of the CARICOM CVOs, the CARICOM Ministers' Council for Trade and Economic Development (COTED) endorsed the network and its organisational structure as the recognised tool for animal health surveillance in the region.

## **ORGANISATION OF CaribVET**

A Steering Committee, a Coordination Unit and several Expert Working Groups on specific diseases or activities form the basic organisational structure of the network. Feeding into this structure are the activities of the many international, public and private sector organisations and agencies.

The Steering Committee can be considered the head of the CaribVET organ. The objectives of the steering committee are:

1. To decide each year on the principal areas of priority for the network (identification of priority diseases, activities, etc)
2. To periodically review the composition of the Coordination Unit
3. To supervise the activities of the working groups and to define the topics, terms of reference and composition of the work groups.

The Steering Committee meets annually, usually in conjunction with the CARICOM CVO meetings, and promotes the regional projects for submission to donor agencies. It is composed of the Chief Veterinary Officers of all of the Caribbean countries and territories and representatives from international and regional agencies which have activities relevant to animal health and veterinary public health.

The Coordination Unit is the engine of the network. Its composition is decided upon by the Steering Committee. This unit coordinates the technical activities of the working groups, facilitates communication within the work groups and the Steering Committee. It is also responsible for presenting an annual report to the Steering Committee, organising the technical meetings and facilitating the collaborative work on the internet through email and website management.

In general, the Chair of the Steering Committee, the chairs of the various working groups and a group of epidemiologists and laboratory scientists at CIRAD, comprise the Coordination Unit. CIRAD also serves as the administrative centre for the network.

The third tier of the Organisational Structure is the Expert Working Groups.

The objectives of these groups are to address the priority technical topics of the CaribVET network as defined by the Steering Committee. The specific terms of reference of the work groups will depend on the subject matter that the work group has been convened to address and will include:

- Development of various protocols for surveillance and monitoring
- Communication systems
- Data management
- Elaboration of harmonised standards.

These work groups are comprised of resource people from both the public and private sectors, who have competencies in the field of the relevant topics and who are available to volunteer their time. The groups operate through remote work, facilitated by electronic communication (internet, email) and through the organisation of meetings as necessary. The idea is to utilise the various areas of expertise within the group, communicating with other resources, both from within and outside of the CaribVET network as appropriate.

A total of nine working groups have been established. Some of these groups deal with specific priority diseases whereas others are more general in nature and deal with capacity building and harmonisation of techniques and protocols.

Some of the significant activities that have taken place within the Working Groups are:

1. Tick and tickborne diseases: Previously under the Caribbean Amblyomma Programme, this working group continues to work on the development of the TickINFO database which uses GIS;
2. Classical Swine Fever: Discussions and reporting on disease surveillance programmes, on inter-laboratory assays, making recommendations on vaccination protocols;
3. West Nile Virus: Developing molecular diagnostic capability (PCR) and surveillance within member countries
4. Avian Influenza: Development of molecular diagnostics capabilities and technology transfer; the development of a harmonised set of performance indicators for epidemiological surveillance.
5. Leptospirosis and Rabies: Reports on the prevalence of these priority diseases such as were presented and discussed
6. The Epidemiology Working Group has developed a tool to evaluate the surveillance capabilities of member countries (SNAT). Several countries have been evaluated using the tool. The Epidemiology working group also serves as an expert advisory committee to a Veterinary Epidemiology Programme underway in several countries, funded by the USDA and facilitated by IICA.



The CaribVET website is a major tool of the network, facilitating the exchange of information. The website contains a database of the veterinary diagnostic laboratories in the region, surveillance system databases and technical information on priority diseases.

## **PERSPECTIVES AND FUTURE PROSPECTS FOR THE CaribVET NETWORK**

The CaribVET network articulates around five principle components which make it possible to ensure the development of epidemiological surveillance and the fight against animal and zoonotic diseases in the Caribbean Region.

- Institutional structure
- Epidemiology
- Emergency Management
- Information Systems
- Laboratory

Under the **Institutional Structure** component, the aim is further consolidation of the organisational structure of the network and continued functioning of the Steering Committee, Coordination Unit and Working Groups. Funding mechanisms for the active functioning of the network are continually being sought, but sustainability will ultimately depend upon the support and commitment of national governments, particularly for the functioning of the Steering Committee.

Not all of the working groups are currently active, and mechanisms need to be sought to activate these. The goal is for each working group to meet at least once a year with e-groups established for continued working between meetings.

For the **Epidemiology** component:

- Reinforcement of the regional surveillance activities through the networking of a group of regional epidemiologists; harmonisation of protocols and the use of performance indicators;
- Continue to provide expert support for the VEP (Veterinary Epidemiologists/Para-epidemiologists) by providing a forum for the sharing of information, advice on surveillance protocols and formulating relevant risk questions;
- Further development of the scientific potential by acquisition of expertise on strategic subjects such as molecular (genomic) studies on tropical disease causing agents, the biology of host-vector-agent interactions and risk analysis and modeling.

Under **Emergency Management**:

- The transition into the development of a true culture of risk assessment, risk management and contingency planning for sanitary crises.
- Exploring the possibility of collaborating with existing regional mechanisms for responding to sanitary emergencies (CDERA).

**For Information Systems:**

- Further reinforcement of the information platform which has been put in place, and the development of new tools for collection and management of data with support from the regional agencies and national veterinary services;
- Increased visibility of the CaribVET network by participation in international seminars, workshops and conferences, journal publications and further development of the website.

**For the Laboratory component:**

- Continuation of regional activities with respect to quality assurance, technology transfer and support for diagnostic capacity building.

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