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Cameroon 2005:

Setting up a National Alert System for Diseases Outbreaks

Great Apes' Die-off as an Early Signal for Ebola Anthrax, and other diseases Outbreaks

Abstract : This paper presents the on-going process concerning the implementation of an epidemiological network in Cameroon. It is based on the problems encountered during a die off of Great Apes (Gorillas and Chimpanzees) in the Dja Reserve. Anthrax has been discovered as the cause of death and the density of Great Apes has decreased dramatically in the area. It is brought into the GRASP context for considering the potential of Great Apes Conservation Community and Officials in relation with deadly health issues. The Cameroonian experience has highlighted the importance of the conservation bodies as one of the first actors of the chain. Discovering the death of great apes is more likely to happen within this community than any other and can be considered as an early signal for Ebola, Anthrax or other anthrozooses outbreaks.

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1- Introduction:

During the past two years only, the Central African sub-region has known three different Ebola outbreaks. In the Congo Republic, a state of national alert has even been declared. Unfortunately, Ebola is not the only virus leading to the death of many human beings and several new threats could be discovered in the next years. New viruses are more likely to appear first here than in any other part of Africa.

An appropriated answer to such outbreaks relies mainly on its early identification. Being sensitive to the first signs can save human lives and unexplained deaths of great apes can be considered as an early warning signal for possible outbreaks.

2- Background:

In Cameroon, within less than 2 months, 5 great apes, Chimpanzees and Gorillas, have been discovered dead within a relatively small area (about 50km²). As a baseline comparison, within 3 years of monitoring in the same zone, only one carcass of a chimpanzee was found. A collaboration of international experts, NGOs and representatives of the Cameroonian government took place. Samples were collected, sent abroad, and analysed. The laboratory results have shown Ebola negative, however, Anthrax was discovered as the cause of the death.

The initiative to investigate the apes' die-off came from NGOs working in Great Apes Conservation that have collaborated with experts from in and out of Cameroon and the government. The national co-ordination at the level of the Cameroonian government was minimised during the first steps of this emergency procedure. It increased during the process as these events have highlighted the importance of a national mechanism, which will determine regulation for emergencies. The concern that NGOs and experts have expressed is encouraging and the role that they should take in the future is essential. But more than that, the government is the one to lead a co-ordinated mechanism between the concerned ministries.

Understanding the importance and the necessity of assisting the government establishing an efficient mechanism, several meetings took place, respectively in CRESAR (Centre pour la recherche sur la Santé des Armées), MINSANTE (ministry of Health) and MINRESI (Ministry of research). These meetings led to an international and inter-ministries workshop in Limbé, in April 05. The work of a panel of international experts and representatives of the concerned ministries resulted in a draft for a **national epidemiological network** in Cameroon.

Moreover, an **action plan** has been defined and the government is awaiting a **Prime-Ministerial decree** to be signed on the base of the recommendations from the workshop.

3- Objectives:

The main objective of the process relies on creating the structure able to implement an efficient network and mechanism to control epidemics.

The first step in the set up of a national epidemiological network in Cameroon is to define a committee co-ordinated by the government and composed of focal points assigned the concerned ministries, as well as national and international experts and scientists.

This committee will be in charge of implementing the network, based on the previous conclusions (e.g. Draft of a possible epidemiological network from the Limbé meeting), knowing that the main objectives are twofold:

- Implementation of an emergency procedure
- Implementation of an epidemiological surveillance network

3.1 Emergency Procedure

The implementation of an **emergency procedure**, based on the experience encountered in Cameroon, will rely on the following specific objectives:

- Information and sensitisation of field personnel (NGOs, local authorities and other field based structures) on the danger of Great Apes and wildlife die-off.
- Creating a reliable network of communication capable of passing the information from the field to the co-ordination and committee and back.
- Creating a mobile squad, available for collecting and storing samples.
- Defining the capacities of national and international laboratories for fast and reliable analysis
- Facilitating the movement of experts and of samples when necessary.
- Setting up a safe and clear health procedures protocol.

3.2 Epidemiological Network:

The implementation of the **epidemiological network** will rely on the following specific objectives :

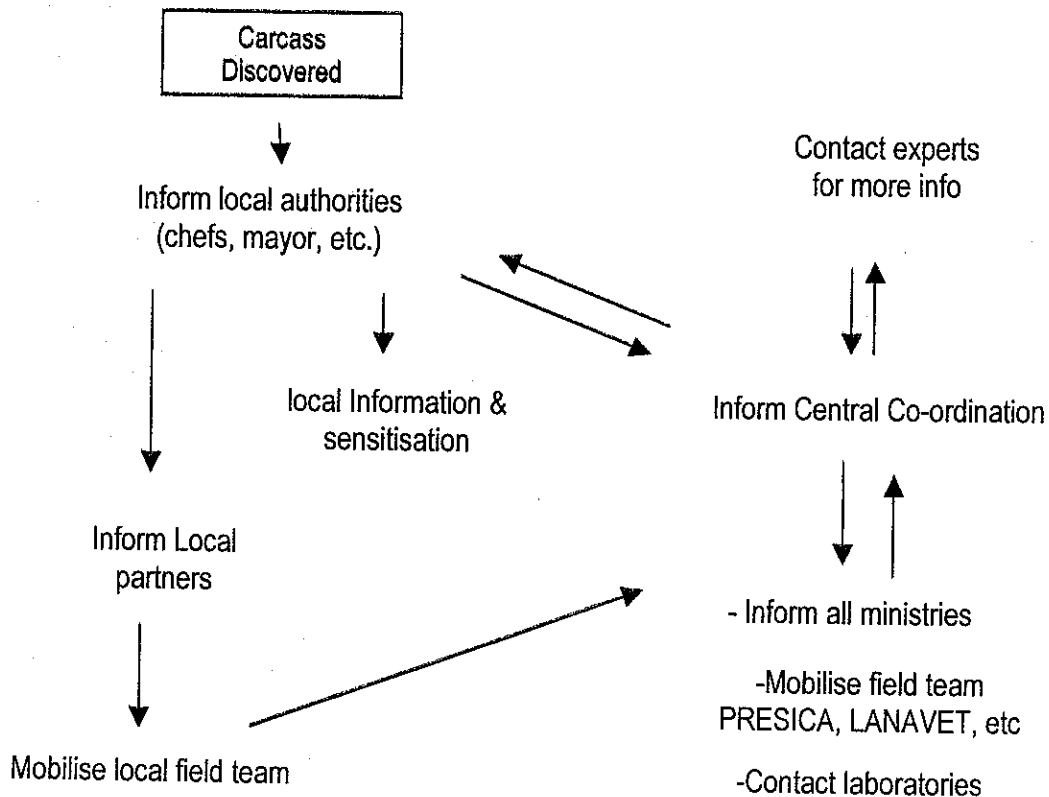
- Creating a network of the existing structures specialised in animals and humans health, especially the field based structures, in order to centralise information co-ordinate efforts and follow up investigations.
- Intensifying the scientific research on pathological, epidemiological and biological factors involved in anthrozoosis.
- Maintaining and activating the biomedical research on new agents in sensitive (high-risk) zones.
- Linking the network to the emergency procedure defined above.

4- Preliminary Results:

4.1 Preliminary Drafts Elaborated in the international Limbé Workshop:

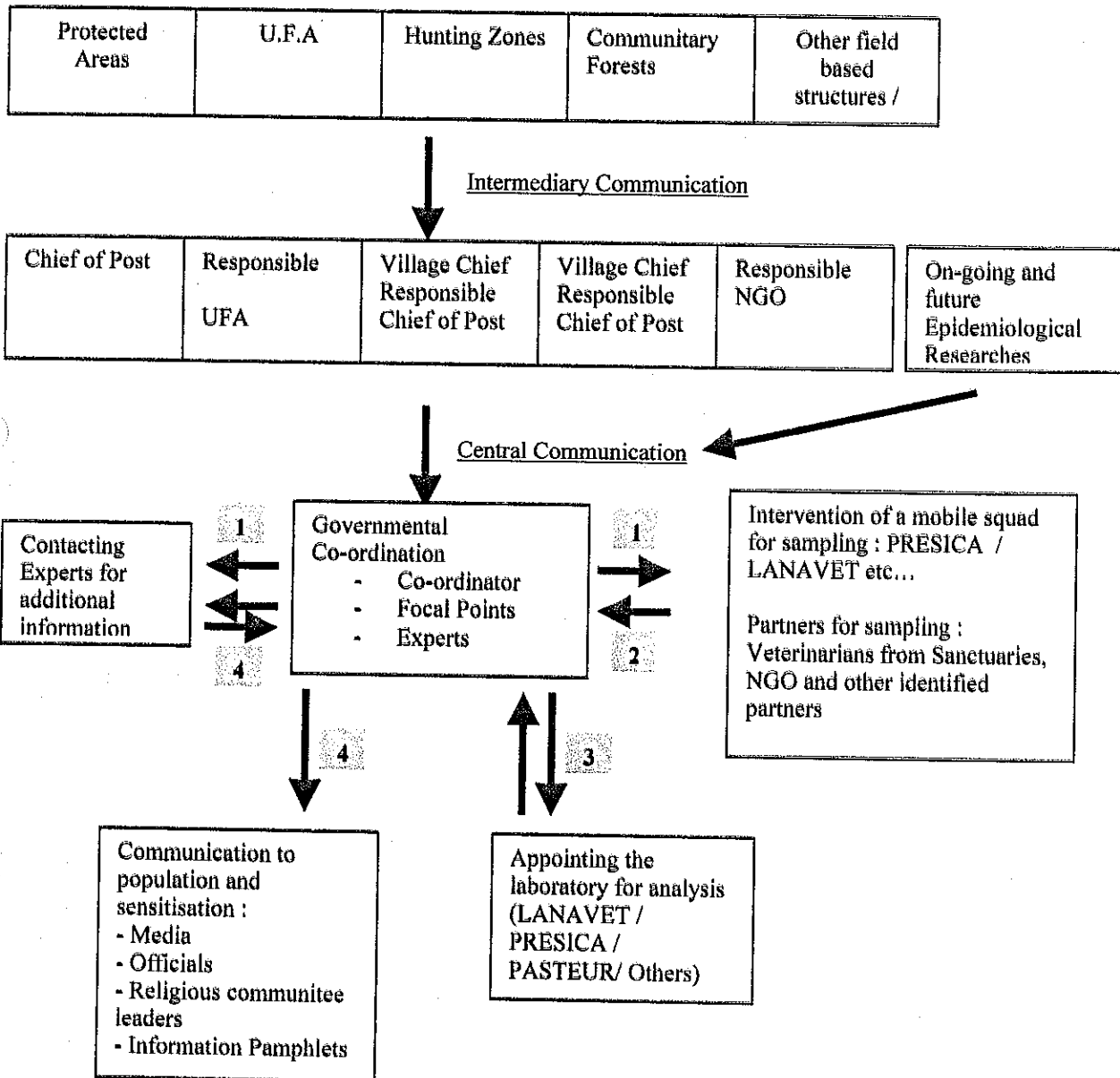
The Limbé Workshop resulted in the first suggested drafts for both the emergency procedure and the epidemiological network and are presented in this papers as they appear on the report of the meeting. Those drafts that are a synthesis of the collaborative work between Cameroonian ministries (MINFOF, MINRESI, MINEPIA, MINSANTE), NGOs (LAGA, WCS, JGI, WWF), Research Institutes (IRD, CRESAR, Presica, John Hopkins University, CRES, GAHMU, CIRMF Gabon, IMPM, MGVP, Mississippi State University, PGS), Sanctuaries (IDA Africa, Limbé Wildlife Centre), and other bodies (Public Health Congo, Program Vaccination Gabon, PACE) *. They still need to be discussed, modified and consolidated but represent, however, a reliable basis for the process.

A- Emergency Procedure:



* : The list of the persons involved in the elaboration the two drafts is available by email to Cécile Néel. Cecileneel2@yahoo.com

B- Epidemiological Network



Remarks :

- 1- Field actors should be sensitised on the action to be taken after the discovery of a carcass.
- 2- It is necessary that the information goes through local authorities before being communicated to the central co ordination.
- 3- For the epidemiological network, monitoring should be based on previous discussions and meeting, following the basis of the existing PACE (Programme Panafricain de contrôle des Epizooties)

- 4- It is necessary that only one person is assigned as the co co-ordinator of the network ; However, (s)he should be assisted by the focal points from the different ministries and experts.
- 5- This person should be responsible and qualified to take emergency decisions:
 - a. Communication with the different actors of the network.
 - b. Consults with experts and focal points.
 - c. Decides on sending the mobile squad.
 - d. Chooses the laboratory for analysis.
 - e. Facilitates the export permits when necessary. (CITES permits)
 - f. Set up the emergency procedures to be followed.
- 6- Mobile squads could be assigned, depending on the geographic situation. Suggestion: :
Laboratory PRESICA for southern provinces, laboratory LANAVET for north and centre.

4.2 Setting up a National Co-ordination:

The principal recommendation of the workshop consisted of assigning focal points within the different ministries and a co-ordinator of the network. The process still continues and the government is awaiting a Prime-Ministerial decree to be signed on the base of this recommendations.

5- Next Steps:

5.1 National Co-ordination :

The co ordination of the network has been suggested by the Cameroonian government to be handled by the MINRESI (Ministère de la Recherche et de l'Innovation) with the help of the IMPM department (l'Institut de Recherches Médicales et d'Etudes des Plantes Médicinales) and in close collaboration with the other concerned ministries (MINSANTE – MINEPIA – MINFOF – MINEP and other to be identified).

A committee will be set up, composed by these government representatives, as well as representatives of National Laboratories (Presica/CRESAR – Lanavet – Centre Pasteur) and research structures (IRAD – and other to be identified).

The Committee is suggested to be organised as following:

- A Standing Committee, Decision Body
- A Central Unit, Executive Body

The set up of the committee will be the first step towards the implementation of a national epidemiological network.

5.2 Identification of Partners:

The Committee will have, as a primary task, to identify the partners for establishing the epidemiological network.

Partners consist in :

- Field based structures : They must be reliable and sensitised into giving the information if, for instance, carcasses of great apes are discovered.
- Biomedical Institutes / organisations / Laboratories : When biomedical data are collected for researches on humans and animal health, information on possible discovery of anthroozoonosis should be centralised.
- National Laboratories : Identifying the capacities of laboratories on the Cameroonian territory, in terms of ability to set up a mobile team, material, human capacities, materiel for analysis of samples, logistics, availability etc....
- International Laboratories : International laboratories should be identified in order to be able to require expertise from partners when it does not exist in Cameroon.
- Other to be identified

5.3 Securing funding:

While a rough budget can be drafted already, the identification of partners will lead to a more details and accurate estimation of the necessary funds.

The identification of bodies interested into funding the process is a major step towards the implementation of the network. Several international donors have already expressed interest in investing in this process.

5.4 Implementation :

The final implementation of the process should be in 2 steps:

- The emergency procedure would be the priority in order to react accurately and quickly to a possible disease outbreak. It will be based on the principle of "Passive Epidemiological Network", meaning that diseases will not be actively monitored but that all actors will be ready in case of emergency. The passive network is based on the principle that the communication concerning the discovery of carcasses by field people is reliably and quickly passing to the co-ordination, who should then, be able to collect and analyse samples, informs the different parties as well as the local population and take the appropriated decisions concerning health issues.
- The more elaborated network of epidemiological surveillance will require a longer period of time to be implemented and be replacing the emergency action plan when concretely set up. It is based on the principle of "Active Epidemiological Network", meaning that the anthroozoonosis will be actively monitored and the data centralised for a better comprehension and preparation to epidemics.