

Wildlife health surveillance activities in Rwanda

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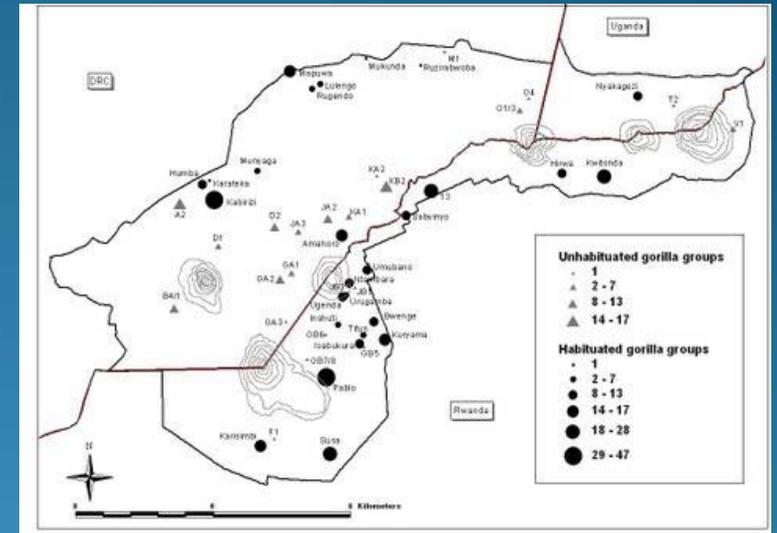
2016

Rwanda

- 4 National Parks (VNP, NNP, ANP & Gishwati-Mukura NP) and others protected areas
- 3 NPs bordering with protected areas in neighboring countries
- Transboundary management effective just in the Virunga massif
- Not in Akagera Park neighboring with protected areas in Tanzania
- In good progress in Nyungwe National Park neighboring with the Kibira Park in Burundi

Virunga Massif

- Transboundary management
- High density; 500 to 600 habitant/km square
- Augmentation of interaction between wild animal with people through tourism and illegal activities, encroachment...
- Augmentation of exposure



Non Human Primate surveillance

- Daily monitoring of the small NHP population by well trained parks rangers and veterinarians
- Clinical case care provide on human-induced and/or life threatening illness or injury
- Perform research to help and ameliorate health threats
- Post mortem examination necessary to confirm both mortality and morbidity
- Dissemination of health information



IMPACT- Surveillance system

- Most health problem among wildlife animal involve individual cases of illness or injury. The potential exist, however for a disease outbreak, IMPACT was designed to help identify this situation
- The system is a “clinical Decision Tree” model to assess the level of risk in view of the number of animal affected
- If risk low, vet give appropriate measure
- When risk high, coordination with outside technical and logical support- contingency plan

Program to prevent cross contamination disease

- Bats, rodents... capture and virology study
- Health center disease information around national parks (respiratory infection disease, herpes virus, HMPV...)
- OHAC Health education program with students around protected areas (Hygiene, ecotourism...)
- Meetings and refresh course with park staff
- OHAC education and awareness program



Program to prevent cross contamination disease

- Annual EHP
- NHP tourism visitation rules
- Annual rabies vaccination
- Rabies control program around National parks
- Ongoing disease surveillance at the interface Wildlife/livestock around national parks



Non Human Primate 1

Sample collection



Health check up



Non Human Primate 2

- TB test
- Routine Physical examination
- Parasite control
- Behavior monitoring
- Biosecurity (Interim Quarantine facility, EHP...)
- Vaccination for NHP: rabies, polio, tetanus, measles...

HPAI

- HPAI surveillance participation of wildlife vets
- HPAI table top simulation done with 28 participants from different background: livestock and Wildlife vets, farmers, journalists, epidemiologist, disasters management
- Training and capture of birds in the Akagera National Parks with different stakeholders
- Short course on the HPAI in the Nyungwe National Park

Other wildlife animals

Lion

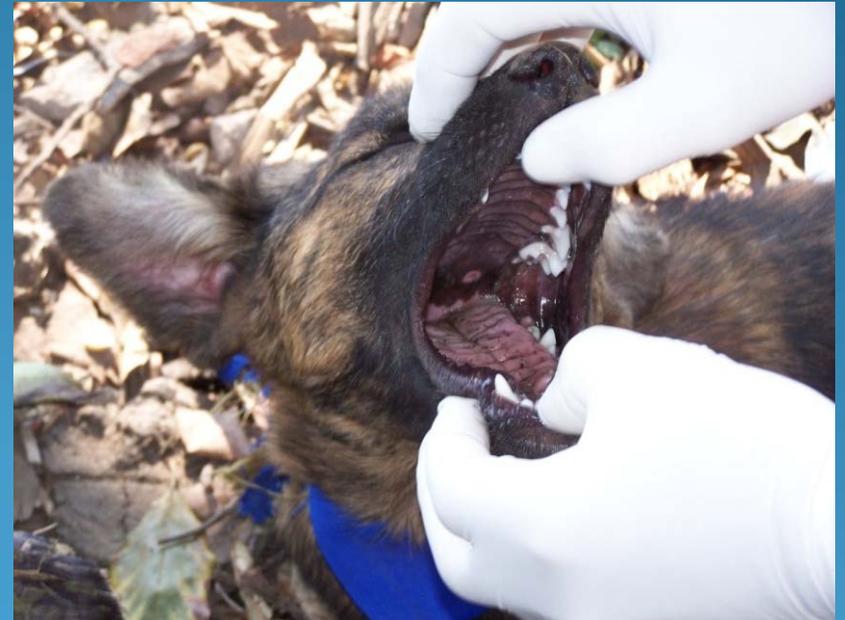


Kob



Rabies

- Vaccination- 85 % around Volcanoes and Nyungwe National park. Project to implement around others National park
- Few human case in Rwanda between 2010 and 2015
- National control program- RAB/ livestock Extension
- Taskforce on rabies control (RAB, RBC & RDB)
- National controls program on stray dogs since 2010 and around the Volcanoes national park since 2006 and vulgarization on pets management around protected areas



Cross border surveillance initiative

- Sample submitted outside of the country, equipment, drugs...)
- MOU with national and international NGOs
- EAC laboratory and Epidemiology network
- EAC wildlife network (wild animal translocation, capacity building...)
- OIE, FAO- ECTAD, AU- IBAR, CDC, USAID

Transfer of illegal wildlife animal



Capacity building



Bio bank for wildlife samples

- Mountain Gorilla Skeleton Project
- Frozen and formalin samples (gorilla, buffalos, monkey, bats, rodent, baboon, giraffe, serval...)
- Previous Bio-bank samples in USA

Wildlife animal virology laboratory



Current structure

1. Rwanda Development Board
2. Tourism and Conservation department
3. Wildlife vet, research and monitoring unit (a second vet position accepted in the new RDB 2016 November' structure)
4. Bio bank
5. Research and monitoring unit at the park level,
6. Partners: wildlife health NGOs

Partnership need within the country

- Health center disease information around national parks (respiratory infection disease, herpes virus, HMPV...)
- Coordination/ partnership between different partners in disease investigation
- Data sharing between experts
- Health check of Grey crowned cranes to be reintroduced

Challenge 1

- Lack of funds – it take time to reach the institution / looking for a shorter bureaucracy device mechanism and long delay ordering and delivery material: Procurement and procedure take so much time
- Poor funding for wildlife surveillance and research in the RDB and /or others institutions
- Less personnel and qualified in wildlife medicine and disease investigators in the field (Only 3 vets position in the wildlife sectors but around 20 involve through NGOs in the sectors
- CITES permit and/or MTA provided before sending samples abroad.
- Easy to get CITES certificate plus the Material Transfert Agreement even we noticed that there a case of individuals who didn't respect the MTA.

Strength

- CITES permit and/or MTA provided before sending samples abroad.
- Easy to get CITES certificate plus the Material Transfert Agreement since 2005 even we noticed that there a case of individuals who didn't respect the MTA.
- Samples are well collected and well identified with special label.
- All samples collected in the field on live or death animal have a copy which remain in Rwanda.
- Rwanda have basic laboratory test and laboratory work are limited to parasitology test and even without PCR test result.
- Lack of personal and researchers in the laboratory for wildlife except NGOs staff.

Wildlife surveillance Partners

- Rwanda Development Board (RDB)
- Rwanda Agriculture Board (RAB)
- Rwanda Biomedical Center (RBC)
- World Animal health Organisation (OIE)
- Mountain Gorilla Veterinary Project/ Predict
- Dian Fossey Gorilla Fund International (DFGFI)
- One Health Approach for Conservation (OHAC), Gorilla Health
- Mountain Gorilla Skeleton Project (MGSP)
- Wildlife Conservation Society (WCS)
- University of Rwanda (UR)

Rwanda Wildlife Health team

1. Dr. Tony Mudakikwa (RDB/ head of the Wildlife Vet Unit)
2. Dr. Julius Nziza (Predict)
3. Dr. Jean Bosco Noeli (Volcanoes National park)
4. Dr. Olivier Nsengimana (Wildlife veterinarian)
5. Dr. Methode Bahizi (Wildlife laboratory)
6. Elisabeth Nyirakaragire (Volcanoes National park)
7. Albert Kayitare(RDB/ Wildlife)
8. Abel Musana (Volcanoes National park/ GIS)
9. Innocent Ndikubwimana (Nyungwe National park)
10. Boudha (person of resource/ GIS)
11. Dr. Providence Wineza (Wildlife Laboratory)
12. Eugene Mutangana (Akagera National park/ MIKE)
13. Therese Umuhoza(Wildlife Laboratory Student)
14. Dr. Adrien Nahayo (wildlife lecturer)
15. Dr. Gaspard Niyonsenga Volcanoes National park)
16. Jean Claude Tumushime (Wildlife laboratory)
17. Dr. Jean Felix Kinani (One Health Approach for Conservation /Gorilla Health)

