One Health and Conservation Strategies
WWF „Green Heart of Africa“ Projects

Congo

Eco-Health

WWF Projects

WWF - Main Offices

City

border

Protected areas

0 100 200 400 Kilometers
Positive Presence through Tourism & Research as most effective Conservation Strategy

Köndgen et al. 2008
Also Tranquilli et al. 2014
Health Monitoring Program:
Four main objectives

I Disease Prevention: Improved Human Health & Reduced Risk of (Inter-species) Disease Transmission

II Routine Health Monitoring: Regular Collection of Samples & Observational Health Data

III Rapid Response: to Disease Outbreaks & Veterinary Emergencies or Interventions

IV Diagnosis and Investigation: of Disease Outbreaks and Wildlife Fatalities & Disease and Pathogen Research
Disease Prevention

- Hygiene Rules
  - Handwashing
  - Sanitizing boots

- Health Rules
  - Medication
  - Needle injection

- Potentially: Vaccination of great apes
Standard Employee Health Programme (EHP)

- Health status baseline at time of hire and annual physical exams
- Ongoing surveillance & response
- Routine Vaccination, deworming
- Extension of EHP to family members
- Health & Hygiene Education
Routine Health Monitoring
Two Main Components:

I  Regular collection & preservation of biological samples
   + Feces
   + Urine
   + Throat swabs from human project staff and visitors
   + Minimally invasive samples from animal carcasses

II Regular observations & recording of observational health data
   + Presence / Absence of disease symptoms, injuries, abnormalities (coughing, nasal discharge, diarrhea..)
Emergency Intervention & Diagnosis and Investigation
Diagnosis and Investigation

+ Disease outbreaks and death: Necropsy/Tissue sampling by full trained and equipped veterinarian

+ Rapid and On-site Laboratory Analysis of samples allows the detection & diagnosis of many pathogens (Ebola, Anthrax, Respiratory viruses, …)

- Portable Field Labs established since 2012 equipped for:
  - sample processing
  - DNA/RNA extraction
  - standard PCR
  - basic parasitology including microscopy
Outbreak Intervention & Investigation

✓ Treatments during respiratory outbreaks

✓ Studied prevalence of pathogens in environment

✓ Sensitized local population to prevent disease transmission and provided alert to health authorities

✓ Vaccination Campaigns against Measals & Anthrax

➢ Need for Rapid Diagnosis & Treatment & Research on:

  oral vaccines, effectiveness of hygiene measures, anthropogenic impacts on disease dynamics, landscape changes…
IMPACT:

- Early warning system for deadly infectious diseases such as Ebola.
- Improved health and hygiene status in local population.
- Main threat to the survival of great apes is significantly reduced.
Wear mask

Be healthy and vaccinated

Collect & monitor

Keep distance (7m)

Health Monitoring Program

One Health Program

Eco health

Employee Health program