

THE HEALTH PARADIGM AND DISEASE CONTROL

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Issues at the Interface: People, Livestock, Wildlife and
Natural Communities (marine and terrestrial)-making the link
between Health and Conservation





What are the issues in the developing world in 2003:

- Food on the table,
- Health for all,
- Good governance,
- Environmental Issues,
- Balancing needs and expectations-interface issues.



Boundaries between Protected Areas and People have historically created resentment in Africa-the Hard Edge of protectionism.

With colonialism ending attempts have been made to soften the Hard Edge through:

- CBNRM-pioneering CAMPFIRE program,
- Ecotourism ventures linked to CBNRM,
- Sustainable harvesting-grass and veld products,
- Promotion of cultural aspects of rural livelihood including crafts.

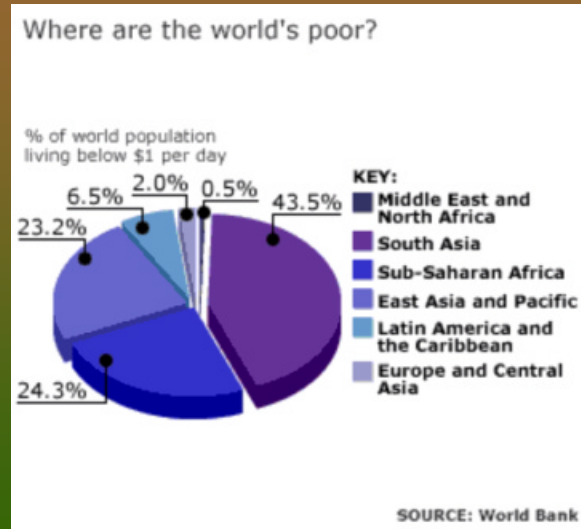
BUT little attempt has been made to go beyond boundaries and link HEALTH issues with Protected Area development and conservation practices.

Human Health Issues

Poverty=Ill health

Poverty is probably the single most important constraint to the future of Protected Areas in the developing world.

Poverty is an integral part of the **Health** paradigm



"To successfully reconcile the needs of people with challenges of saving wildlife in an increasingly human dominated world, we must develop a keen understanding of how disease interactions influence human, livestock, and wildlife health."



Wildlife Conservation Society

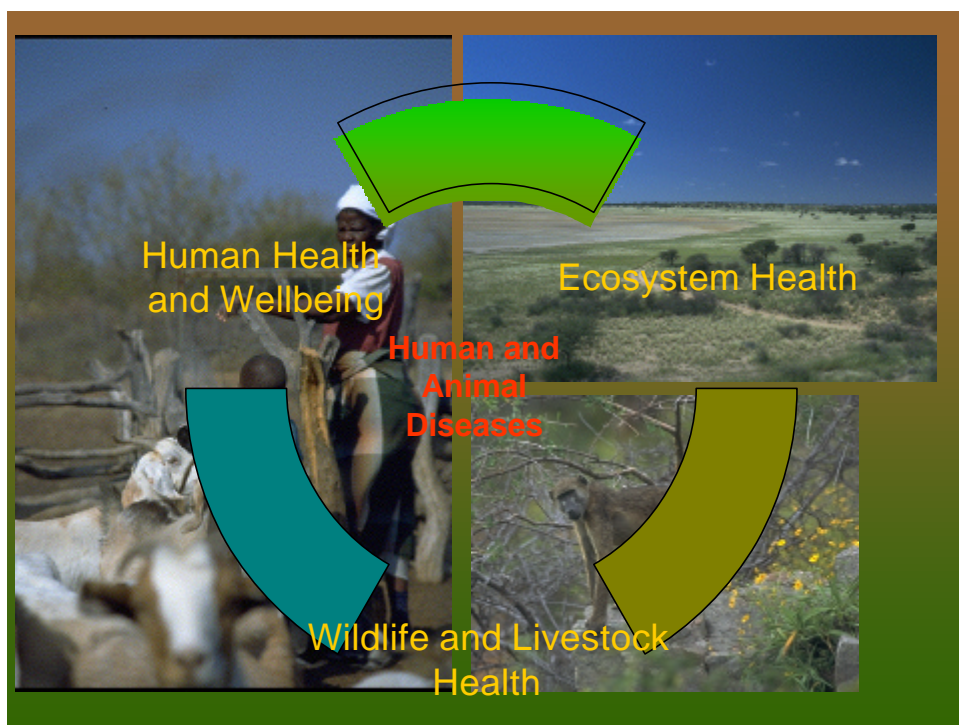
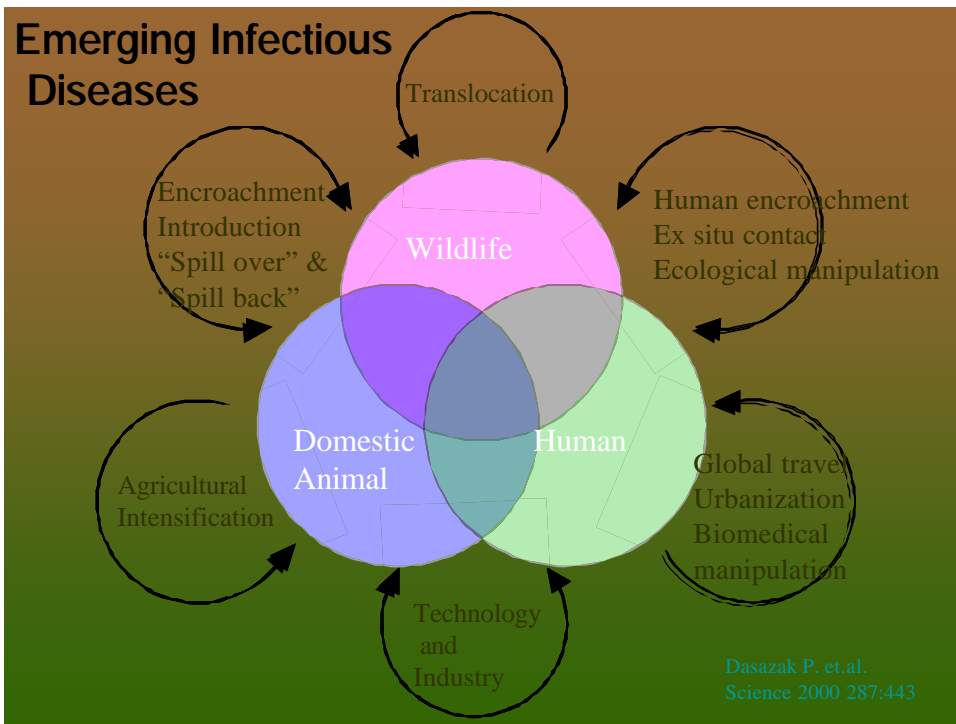


So called emerging infectious diseases are those that are newly appeared in the population, or are rapidly increasing their incidence or geographic range

Stephen Morse 1998

Emerging and Re-emerging Zoonoses, 1996–2000 (Source: WHO)





What is an ECOSYSTEM?

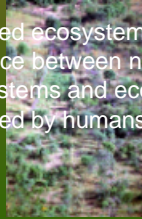
Ecosystem *n* a biological community of interacting organisms and their environment



Ecosystem-pristine and natural



Modified ecosystems-the interface between natural ecosystems and ecosystems changed by humans



Ecosystem based on human communities

Ecosystem *n* a biological community of interacting organisms and their environment



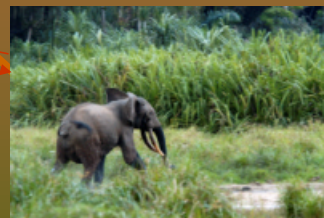
Human Communities



Disease vector



Human livelihoods
Livestock



Wildlife



Natural communities

Can we define ECOSYSTEM HEALTH?

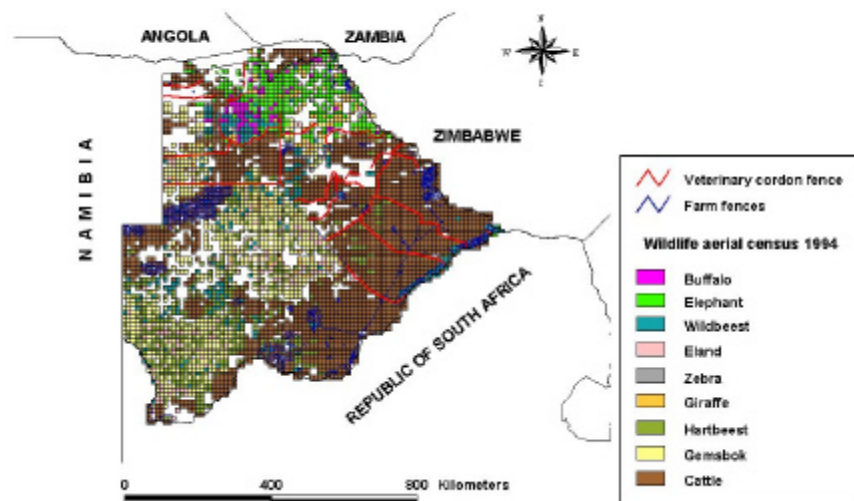
View the ECOSYSTEM as a patient-evaluate function in terms of objective standards that relate to systems capacity for:

1. Organization, 2. Vigor, and 3. Resilience

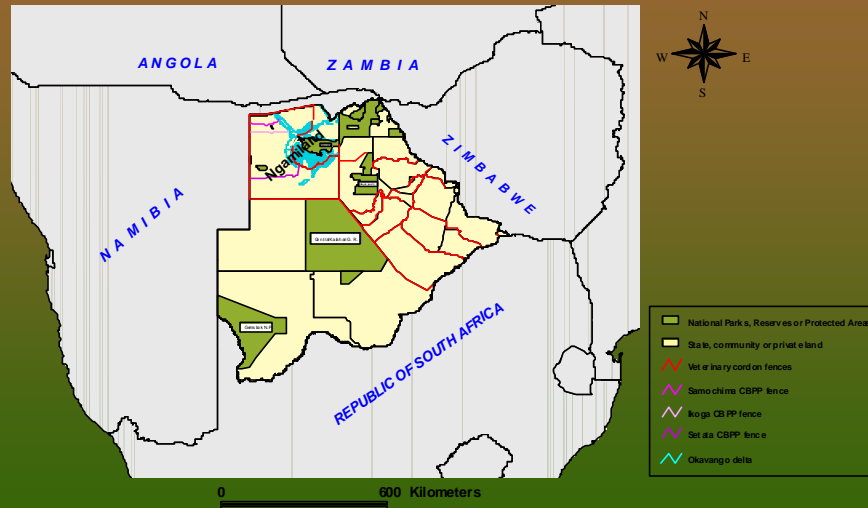
Health of an ECOSYSTEM and that of a HUMAN or a WILD ANIMAL are very similar when viewed through biomedical eyes:

1. Homeostasis-have balance between system components,
2. Absence of disease,
3. Diverse and complex,
4. Stable and resilient,
5. Vigor and scope for growth

Case Study: Botswana



National Parks, Game Reserves and Protected Areas of Botswana



THE HEALTH PARADIGM AND DISEASE CONTROL

Let us move away from the classic approach to disease control, adopt a **HOLISTIC** approach and think in terms of **ECOSYSTEMS** and their **HEALTH** across **LANDSCAPES**. We need to adopt a concept of **AGRICULTURAL ZONING** rather than **GEOGRAPHIC ZONING**, i.e. designate agricultural (export) areas, identify key ecosystems, fence the agricultural areas but maintain or re-establish ecosystem integrity through corridors, conservancies etc.

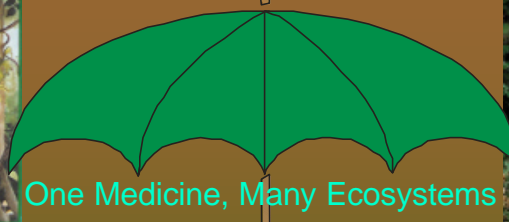
BUT this requires “Out-of-the-Box” thinking....



By examining the HEALTH of a mosaic of ECOSYSTEMS and their components-issues related to COMMUNITY BASED ANIMAL (livestock) HEALTH SERVICES can be integrated with issues related to COMMUNITY BASED NATURAL RESOURCE MANAGEMENT programs.

Currently these community based programs have developed in parallel to each other and need to come together to address issues at the INTERFACE.

The Health Umbrella



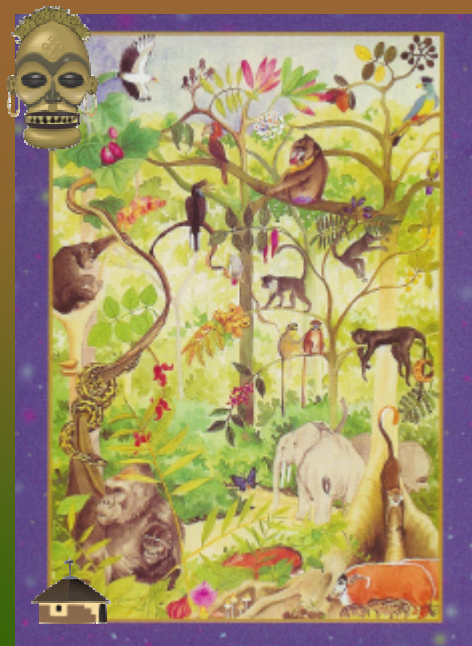
Ecosystem Health

Human and Livestock Health

Wildlife Health

People, Wildlife and Natural Communities

Balancing Needs and Expectations



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Ecosystem Health is a societal goal and should be part of any Disease Control and Veterinary Intervention program

Adopt a holistic approach to multiple and varied ecosystems-natural and human derived and consider the Health of ALL:

- People,
- Livestock,
- Wildlife, and
- Natural Communities.



HEALTH is everyone's business in relation to Protected Areas and the human and natural communities surrounding these areas.

