



EcoHealth Alliance



Opportunities and challenges for disease eradication

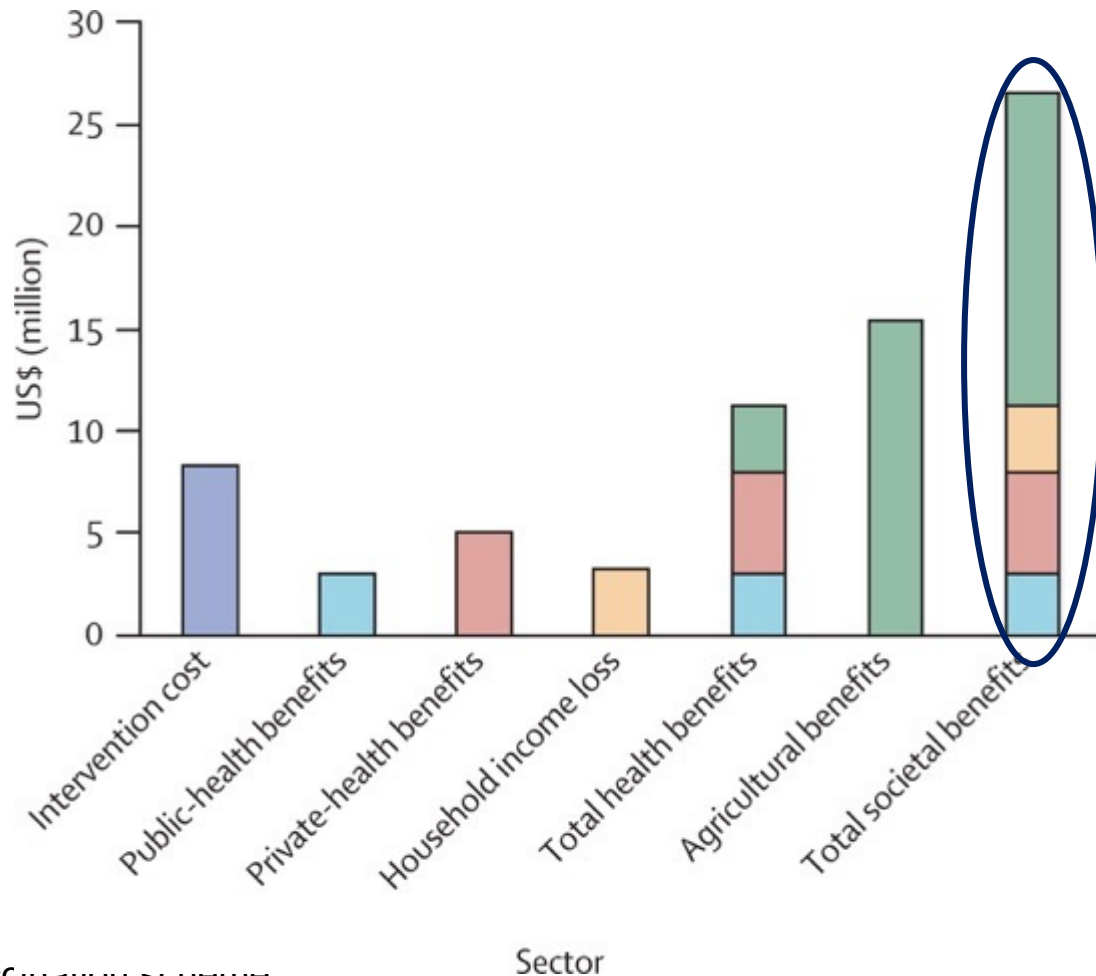
Catherine Machalaba

Lessons learned from human and animal disease eradication programmes to help inform the peste des petits ruminants global eradication programme (PPR GEP)

21 February 2022

Costs and Benefits to Different Sectors

A societal perspective can broaden the value



Proposed Brucellosis vaccination scheme,
Mongolia (Zinsstag et al. 2005, *The Lancet*)

Resilience

Opportunities to reduce disease risk and burden on the way to eradication

Prevention

Detection

Response

Recovery



PPR Global Control and Eradication Strategy (PPR GCES)

1 NO POVERTY



2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



5 GENDER EQUALITY



10 REDUCED INEQUALITIES



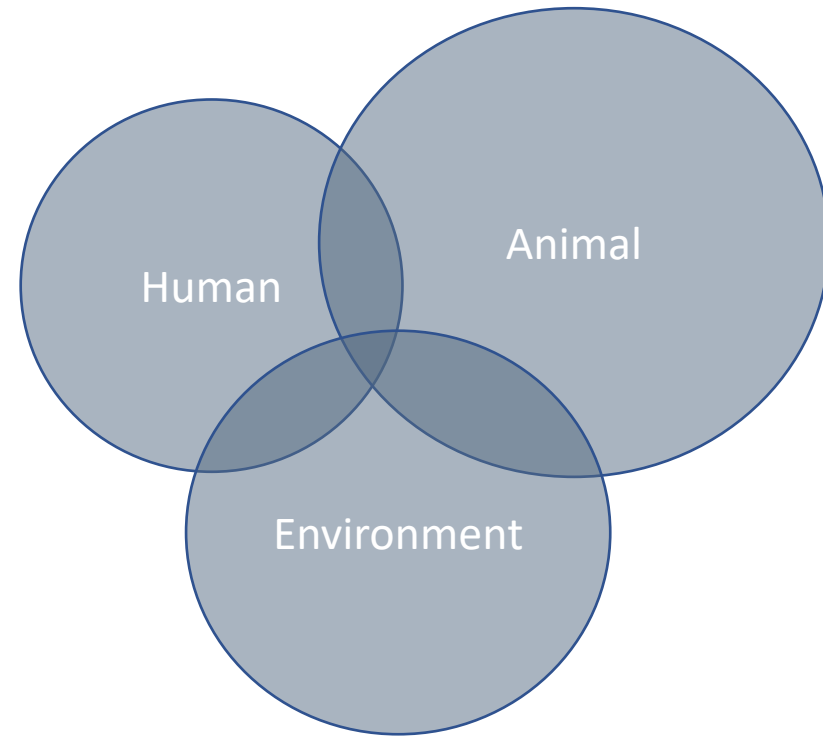
12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Context Matters!

Multi-sectoral solutions needed

- Not everyone working together all the time....
- But strong human, animal and environmental health systems are needed to determine relevant sectors for a given objective, disease, or situation
- Determine appropriate stakeholders and entry points



Insights from Other Diseases

The Guardian

Pig virus turns beauty spot into ghost town

120 people killed and economy ruined in Malaysian village

A beautiful village in south-western Malaysia won an award for being the most beautiful state. Now Sungai Nipah is infamous as the birthplace of the Nipah virus, a deadly virus which is transmitted from pigs to humans.

20 people died here and nearly 1m pigs were slaughtered in what was once the farming area of south-east Asia.

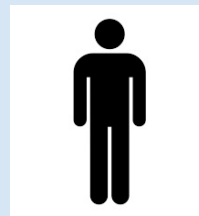
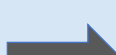
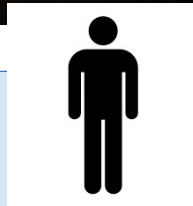
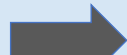
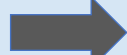
"I live I will remember what happened here," says Lin To Moi, whose husband and she were led by the illness. "Outside this area, every time they eat pork they will remember our village."



Sanjit Das for NPR



EcoHealth Alliance



নিপাহ রোগ বিষয়ে স্বাস্থ্য বার্তা

নিপাহ একটি অস্বাভাবিক রোগ, যা মানুষ থেকে মানুষের মাঝে ছড়ায়। এ রোগের কারণে লক্ষণগুলো হচ্ছে- জ্বর, মাথাব্যথা, মূত্র, প্রাণেশক্তি হারা, অসহন হওয়াসহ বেশ কয়েকটি লক্ষণ।

নিপাহ রোগ প্রতিরোধে সর্বাধিক গুরুত্বপূর্ণ নিয়মগুলি নিম্নোক্ত অনুশাসনের পরামর্শ মেনে চলুন:-

- খেয়েদেওয়ার পানীয় জল পরিষ্কার না
- রোগের লক্ষণের আবেগিক পানীয় জল পান করা
- অসহন পরিস্থিতি পানি খাওয়া ছাড়া খুঁচা পানীয়
- রোগের লক্ষণ হলে সবার সতর্কতা সহকারে হাসপাতালে গিয়ে চিকিৎসা
- রোগের লক্ষণের সংস্পর্শে আসার পর সর্বদা ৩ পানি খাওয়া হওয়া উচিত

নিপাহের উপস্থাপক ডাক্তারের পরামর্শ অনুসরণ করে হাসপাতালে চিকিৎসা করা সর্বাধিক গুরুত্বপূর্ণ।

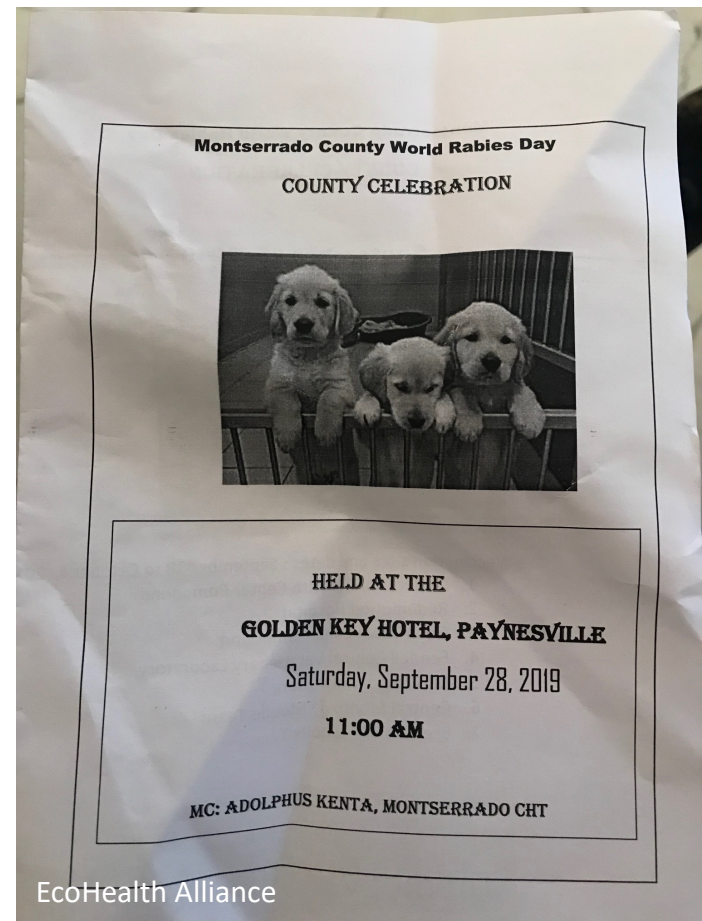
স্বাস্থ্য শিক্ষা বুরো, স্বাস্থ্য অধিদপ্তর
স্বাস্থ্য ও পরিবার কল্যাণ মন্ত্রণালয়

Rabies

- Sylvatic and canine cycles
- 95% of human deaths from dogs
- Several important milestones on the way to elimination/eradication
- Success requires sustained efforts in human and animal health systems
- Think about effects of messaging

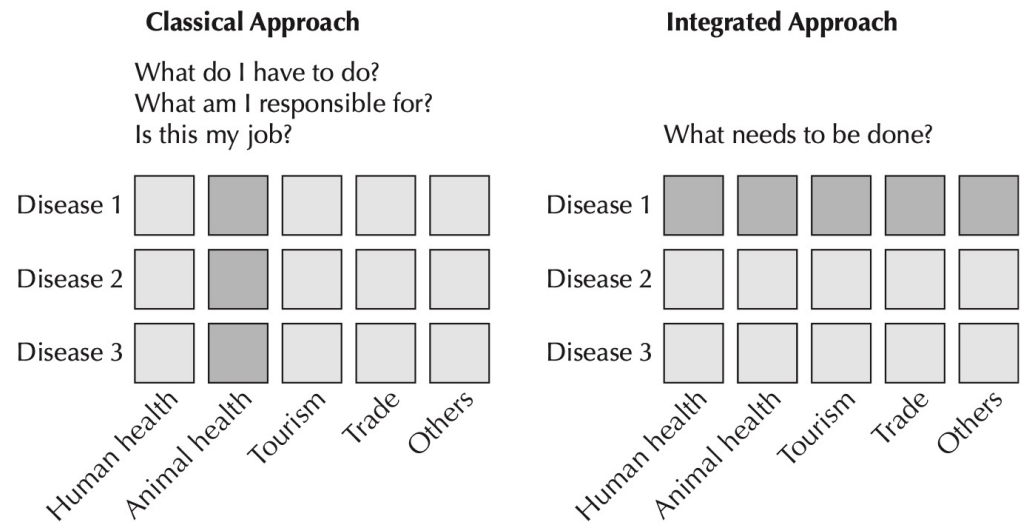


Smith Collection/Gado/Getty Images



Strengthening Systems

- Single-disease efforts do not automatically lead to multi-hazard preparedness
- The cycle of panic and neglect limits long-term system strengthening
- Coordination in public sector and effective partnerships can help bridge silos



World Bank 2010. People, Pathogens, and Our Planet.

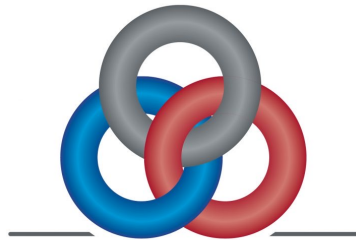
Partnerships



Rotary International



empres
watch



National Animal Health Forum

Linking Animal Health



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Food and Agriculture Organization of the United Nations (FAO); World Organization for Animal Health (OIE); World Health Organization (WHO)



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First signs of the disease were recorded in livestock and humans. This facilitated strategy preparedness and significantly enhanced field response (FAO, 2006; WHO, 2006; Anyamba et al., 2011). In contrast, accurate, climate-based early warning systems have not yet been fully elucidated for West Africa because drivers of RVF emergence and spread are not as well known for that region. Outbreaks of RVF in Senegal and Mauritania are associated with different patterns of precipitation anomalies and the effect of El Niño or other climate-affecting phenomena are still poorly understood.

The Goddard Space Flight Center, FAO, WHO, OIE and other partners have been monitoring climatic conditions to forecast the risk of RVF vector amplification in East Africa for the past few years, and have provided recommendations and early warning messages for countries at risk of RVF outbreaks on several occasions. During the past twelve months there has been an increasing concern about the predicted

with periods of heavy rains and prolonged flooding, which increase habitat suitability for vector populations. These factors can drive vector abundance and population dynamics, thus influencing the risk of disease emergence, transmission and spread (Anyamba et al., 2012). In East Africa, RVF epidemics take

have you seen a dead bird?

Help track West Nile virus.

If you have seen a dead bird in Vermont, call 1-800-913-1139 or call your local office of the Vermont Department of Health and make a report between 8:00 a.m. and 4:30 p.m. Monday through Friday.

C. Machalaba

- Reach key stakeholders
- Leverage resources
- Expand information, expertise and solutions
- Work together to tackle needs of communities



We Under-Invest in Our Best Assets



- Incentivize contributions to strong and resilient systems
- Ensure vibrant career opportunities
- Promote context-specific approaches
- Support long-term engagement with communities for overall awareness and animal husbandry

Uncertainty

- Establishment (and impact) in other species
- Climate and weather effects
- Human and animal migration
- Trade patterns
- Other priorities or disruptions (e.g. COVID-19)

Ensure systems are prepared to adapt as needed



Andrey Giljov/Mongabay



Key messages

- Technological solutions are necessary but insufficient alone
- Context-specific approaches are essential
- Resources, expertise, and engagement can be leveraged from diverse sources
- Need to invest in systems and workforce
- External factors and other priorities mean success may take many forms

