



Asset mapping for One Health: a problem-oriented approach

Siobhan Mor, Alison Robbins, Linda Jarvin,
Gretchen Kaufman, Joann Lindenmayer

Tufts University, Boston MA

Emerging Pandemic Threats Program

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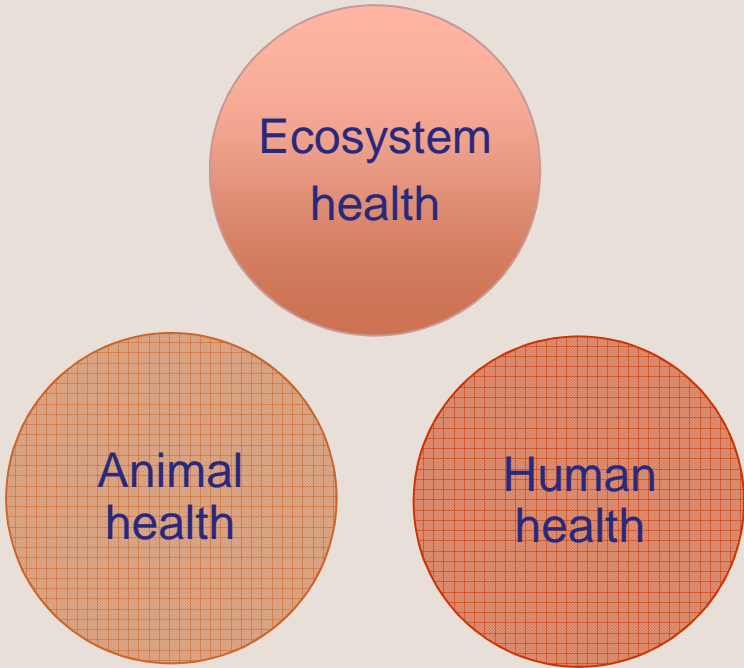


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Health education

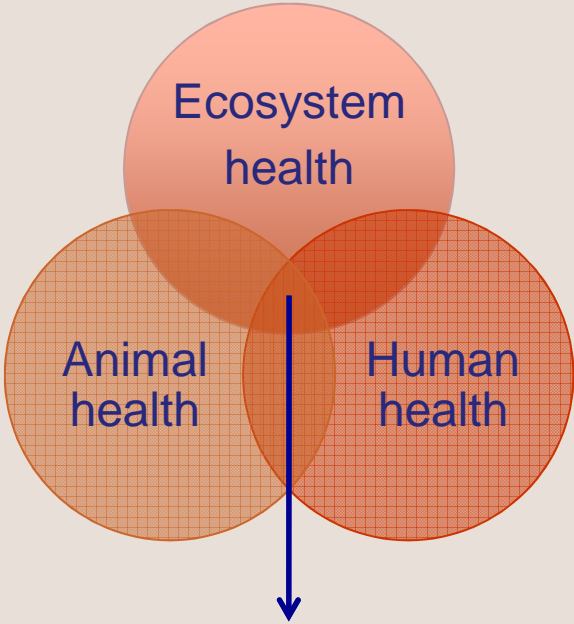


Now (disciplinary “silos”)



Separate curricula
Separate competencies
Separate resources

Future (“One Health”)

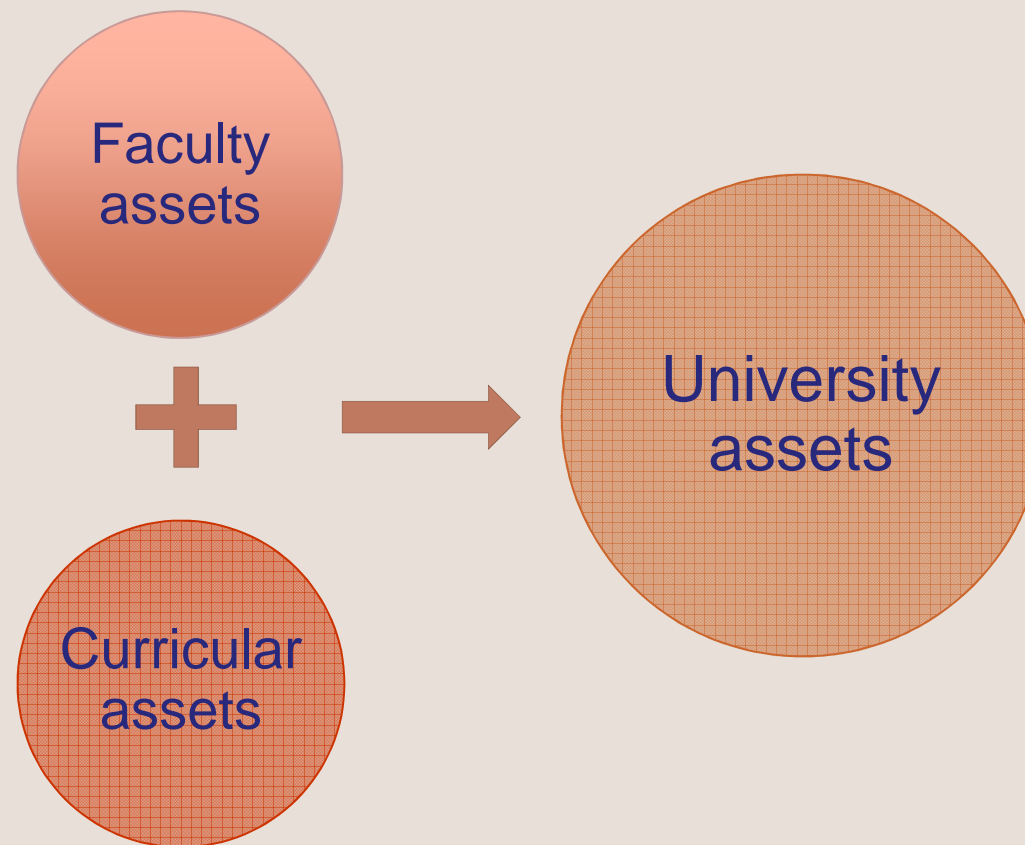


Shared curricula
Shared competencies
Separate resources

Asset mapping



- Inventory of available resources



Approach



Identify the problem

Context



- USAID | RESPOND
 - Part of Emerging Pandemic Threats Program
 - One Health approach to emerging pandemic threats, focusing on outbreak response
 - Education and training mandate

Approach



Identify the problem



Identify relevant teaching areas

Teaching areas



1. Teaching & training effectiveness
2. Project management
3. Program evaluation
4. Health communication
5. Economic methods
6. Social/medical anthropology
7. Community outreach/education
8. Livestock production systems
9. Wildlife ecology/conservation
10. Infectious disease ecology/epidemiology
11. Laboratory methods
12. Epidemiologic/biostatistics methods
13. Outbreak investigation/public health surveillance

Approach



Identify the problem

Identify relevant teaching areas

Identify related competencies

FETP competencies



1. Use epi. practices to conduct studies
2. Respond to outbreaks
3. Analyze epi. data
4. Manage surveillance system
5. Use laboratory resources
6. Develop written communications
7. Deliver oral communications
8. Use computers
9. Manage a field project
10. Manage staff and resources
11. Be effective team leader/member
12. Manage time effectively
13. Apply tools for economic analysis
14. Train PH professionals
15. Mentor PH professionals
16. Evaluate/prioritize diseases

Approach



Identify the problem



Identify relevant teaching areas



Identify related competencies



Survey the faculty



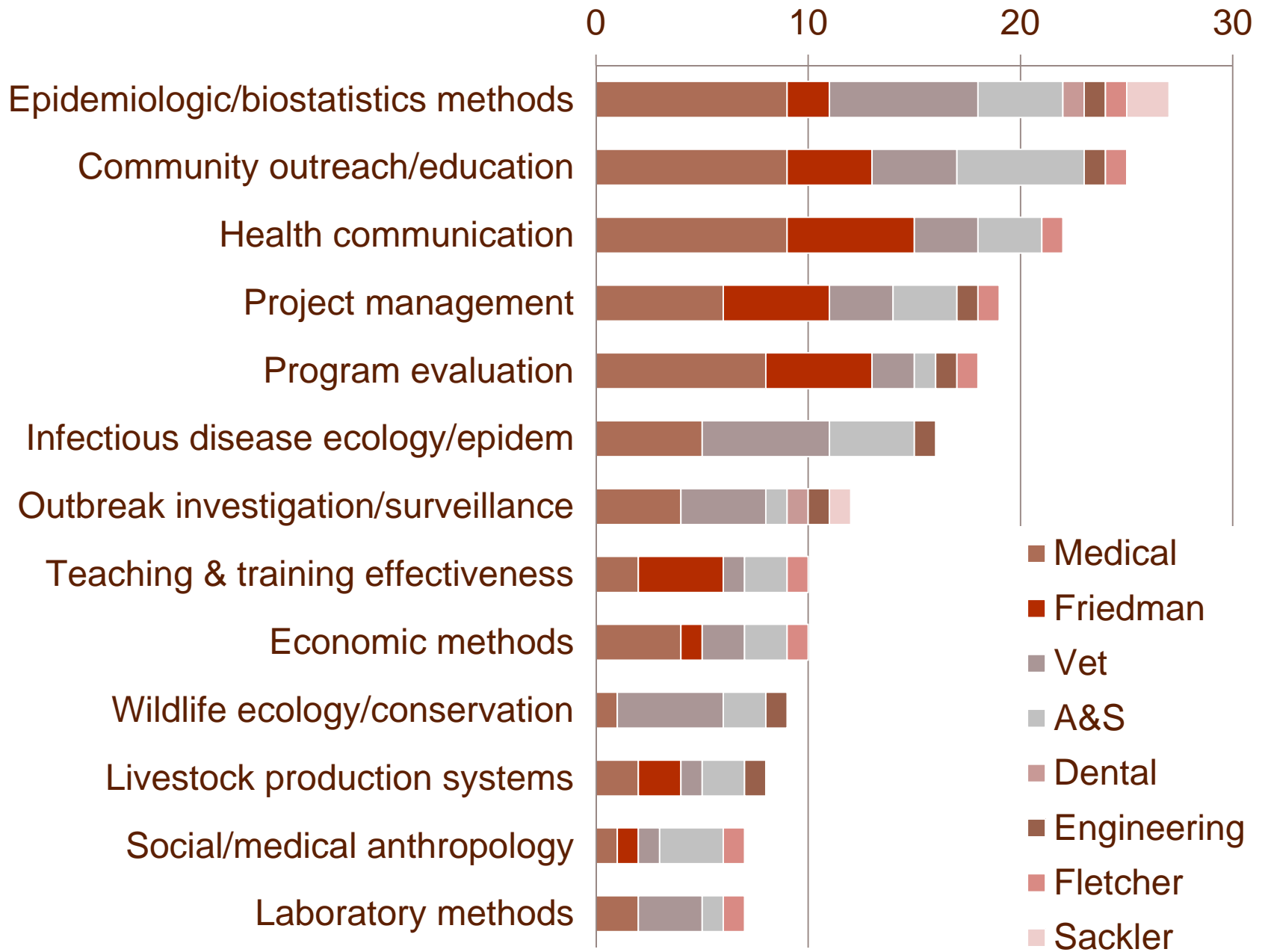
Develop a database

Findings



- Response to the survey
 - Survey sent to 143 faculty members
 - 72 responses (response rate: 50.3%)
 - **Arts and Sciences: 31.4%**
 - Dental: 66.7%
 - Engineering: 40.0%
 - **Fletcher: 21.4%**
 - Friedman: 59.1%
 - **Medical: 75.9%**
 - Sackler: 50.0%
 - **Veterinary: 90.9%**

Number of faculty teaching in area



Arts & Sciences

Food, Culture, and Nutritional Status
Current Topics - Evolutionary Medicine
Human Evolution
Environmental Biology
Microbiology
Biostatistics
Conservation Biology
Seminar in Conservation Biology
Teaching Biology: Pedagogy and Practice
Introduction to Hazardous Materials Management
Health Effects and Risk Assessment
Internship Seminar
Community Health Education: Community Based
Participatory Research
Environment and Technology
Health economics
Corporate Management of Environmental Issues
Writing & Public Communication
Climate Change Policy Planning and Action
Economics for Policy and Planning
Program Evaluation
Quantitative Reasoning

Engineering

Public Health
Public Health Engineering
Environmental Epidemiology
Project Management
Engineering Leadership
Business and Technical Communications

Fletcher

Public Health
Public Health Engineering
Environmental Epidemiology

Dental

Epidemiology
Biostatistics IA
Biostatistics IB
Biostatistics and Epidemiology II

Sackler

Introduction to Clinical Epidemiology
Introductory Biostatistics
Advanced Biostatistics
Intermediate Biostatistics
Advanced Epidemiology
Special Topics in Genetic Epidemiology
Host-Pathogen Interactions

Medical

Social and Behavioral Science in Public Health Practice
Biostatistics
Health Care Organization: Budget and Management
Health Information Technology
Introduction to field research and qualitative methods
Outbreak Investigations
Writing about Health and Medicine
Health Communication and Health Behavior: Theory to Practice (1)
Health Communication and Health Behavior: Theory to Practice (2)
Health Communication and Health Behavior: Theory to Practice (3)
Risk Communication in Public Health Practice
Technology and Health Communication
Introduction to Epidemiology
Principles of Epidemiology
Principles of Biostatistics
Intermediate Biostatistics (1)
Intermediate Biostatistics (2)
Health Politics, Policies and Programs
Health and Health Services
Health Organizations; Budgeting and Management
Research Methods (1)
Research Methods (2)
Disease Epidemiology
Methods in Public Health
Health Economics
Fundamentals of Biostatistics
Introduction to SAS Programming
Delivery of Health Services
Epidemiology and Biostatistics
Population Health
Epidemiology of zoonotic infections
Epidemiology of biodefense
Water and Health
Epidemiology/Biostatistics
Microbiology and Infectious Diseases

Curricular assets

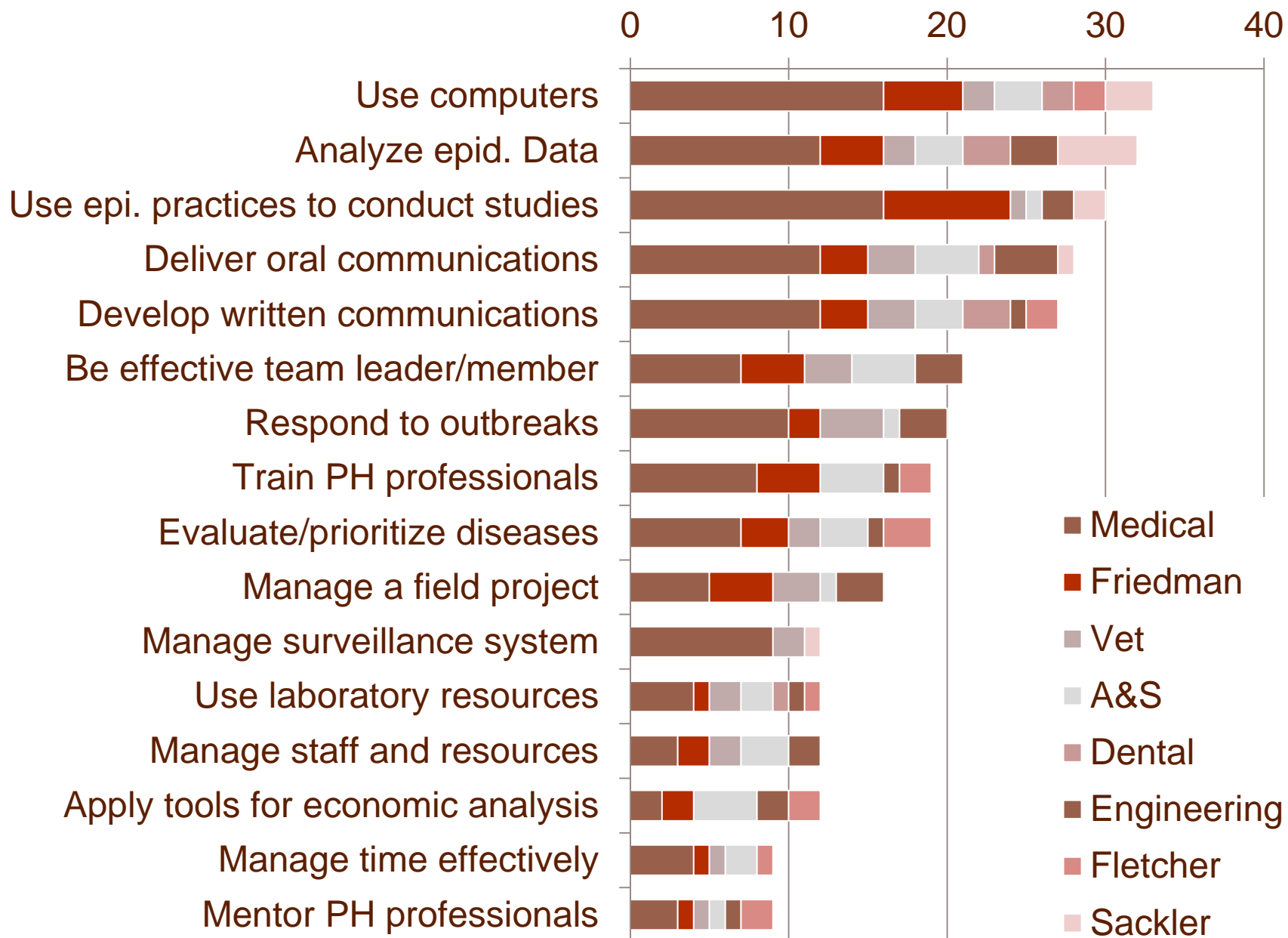
Veterinary

Cert. International Veterinary Medicine
International Veterinary Medicine
Advanced International Veterinary Medicine
Emerging and Exotic Diseases of Animals
Introduction to Zoological Medicine
Microbial Pathogenesis
Microbiology Lab
Parasitology
Wildlife Clinical Rotation
Zoological Medicine
Preventive Med. in Research Animal Facilities
Specialized Research Environments
Disaster Medicine Elective
Human Animal Relationships
Animals & Society: Wildlife policy
Quantitative Methods
Fundamentals of Biomedical Research – Statistics
Shelter Policy Selective/Elective
Masters in Conservation Medicine

Friedman

Predictive Models for Health Outcomes
Biostatistics/Quantitative Reasoning
International NGO Management: Ethics and
Communicating Health Information to Diverse
Survey Research Design
Theories of Behavior Change
Nutrition Program Monitoring and Evaluation
Strategies in health and nutrition communities
Fundamentals of Economics for Food Policy
Food Security, Nutrition and Development
Communicating Health Information to Diverse
Nutrition in Emergencies: policies, practice
Design of epidemiologic studies for nutrition
Positive deviance for behavior change
Statistical Methods for Epidemiology
Humanitarian Studies in the Field

Number of curricular assets addressing competency



Lessons



- Asset mapping is a useful tool for identifying resources for interdisciplinary education
 - Masters in Conservation Medicine (Gretchen Kaufman)
 - One Health seminar (Joann Lindenmayer)
 - Cert. Water: Systems, Science and Society

Lessons



- “One Health” approach is still poorly defined
 - Who is needed?
 - What knowledge and skills do they need?
- More sensitization of “non-traditional” disciplines is needed

Acknowledgments



- USAID | RESPOND
- Ben Hickler (medical anthropology)

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Thank you

siobhan.mor@tufts.edu

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