

# The World We Need

A Global *One Health and Well-Being*  
Education Funding Initiative

Preparing Society to Create the World We  
Need through One Health Education

**The broadcast will begin momentarily**



Education Task Force



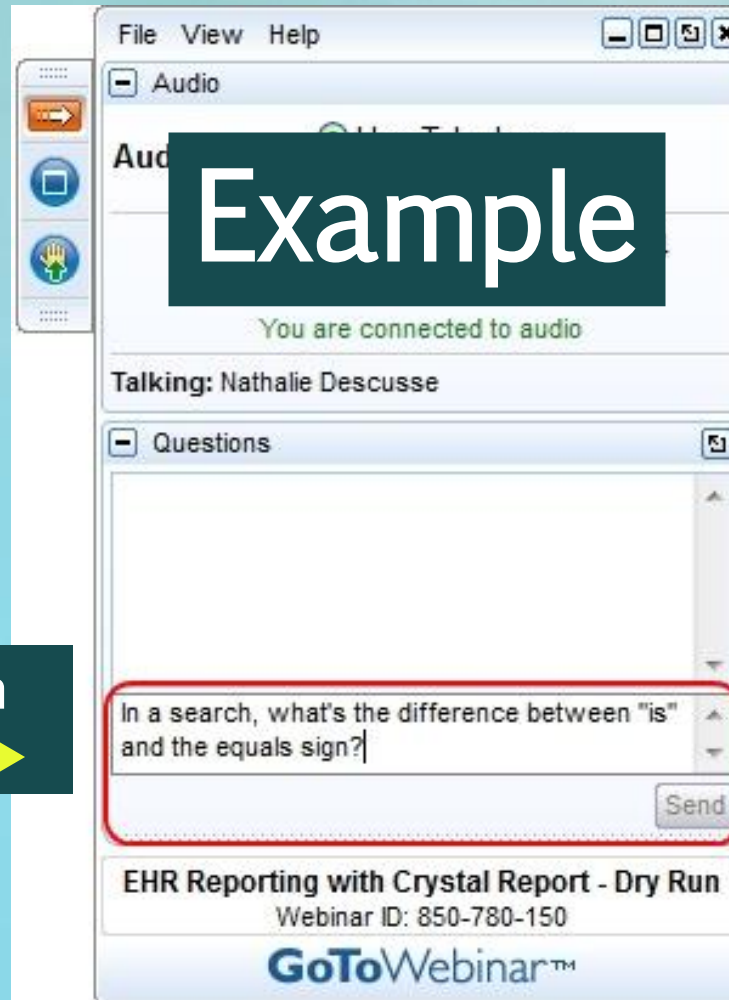
Pre-proposal Web Conference on One Health K-12  
Education 18 November 2016

# Conference Instructions



Peter Costa, MPH, MCHES  
Associate Executive Director, One Health Commission  
Moderator

# Asking Questions



Type your question  
here →

# Technology



# Welcome!



George Lueddeke, PhD  
Chair, One Health Education Task Force

# Purpose of Conference

- Share findings of survey;
- Produce clear framework/skeleton for a funding proposal ;
- Gain consensus and further input around key questions ;
- Provide information on next steps.



# Task Force Members\*

- **Laura H. Kahn, MD, MPH, MPP.** Co-founder, global One Health Initiative team. Research Scholar Program on Science and Global Security, Woodrow Wilson School of Public and International Affairs, Princeton University. Columnist, Bulletin of the Atomic Scientists.
- **Bruce Kaplan, DVM.** Co-founder, global One Health Initiative team. Manager/editor, One Health Initiative website. Former CDC EIS officer and USDA/FSIS food safety staff officer. Small animal veterinary medicine practitioner; retired.
- **Gretchen E. Kaufman, DVM.** Adjunct Faculty (Paul G. Allen School for Global Animal Health, Washington State University, Tufts Center for Conservation Medicine, Tufts University). Co-Founder and Associate Director, Veterinary Initiative for Endangered Wildlife.
- **Rosina C. Krecek, FRSSAf, BS, MS, PhD, MAP.** Interim Assistant Dean of One Health, Office of the Dean. Visiting Professor, Department of Veterinary Pathobiology, College of Veterinary Medicine & Biomedical Sciences, Texas A&M University, Texas, USA. Visiting Professor, University of Johannesburg, South Africa.
- **Joann M. Lindenmayer, DVM, MPH.** Chair, Board of Directors, One Health Commission. Previous Senior Manager of Disaster Operations and Director, Haiti Program. Department of Companion Animals and Engagement, Humane Society International.
- **George R Lueddeke, MEd, PhD,** Task Force Chair. Consultant Education Advisor in Higher and Medical Education. United Kingdom.
- **Cheryl M. Stroud, DVM, PhD.** Executive Director, One Health Commission. Previous chair of North Carolina One Health Collaborative.
- **A. Lee Willingham, BSc, DVM, PhD.** Associate Dean for Research and Postgraduate Studies. Director of One Health Center for Zoonoses and Tropical Veterinary Medicine. Professor of One Health. Institutional Officer, Ross University School of Veterinary Medicine, St Kitts and Nevis, West Indies.

\*Note: 3 students to be added shortly



# Conference Overview



- WELCOME (5 min.) – George Lueddeke
- SURVEY SUMMARY (15 min.) – Joann Lindenmayer
- DISCUSSION
  - 1) Strategies for K-12 One Health Curriculum Innovation (20 min.) – Gretchen Kaufman
  - 2) Funding considerations (20 min.) – George Lueddeke
  - 3) Meeting the needs of the diverse global community (20 min.) – Joann Lindenmayer
  - 4) Open Panel Discussion (20 min.)
- WRAP UP & NEXT STEPS 10 min. – Cheryl Stroud





# Project Purpose

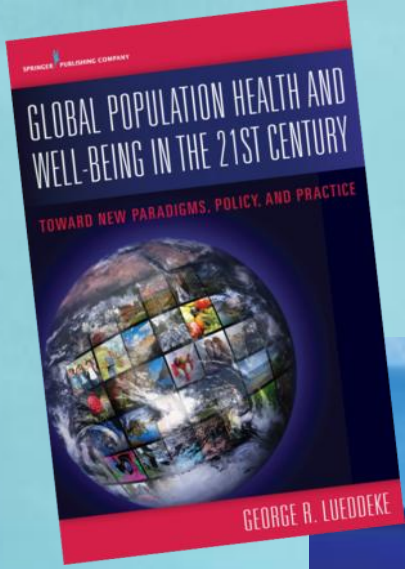
Address perhaps the most important social problem of our time:  
*‘how to change the way humans relate to the planet and each other to ensure a more sustainable future for all life.’*



# Project Rationale

Raise awareness about the social determinants of human-animal-environment interactions as well as the limitations presented by an unbridled human population expansion in the face of finite natural resources.

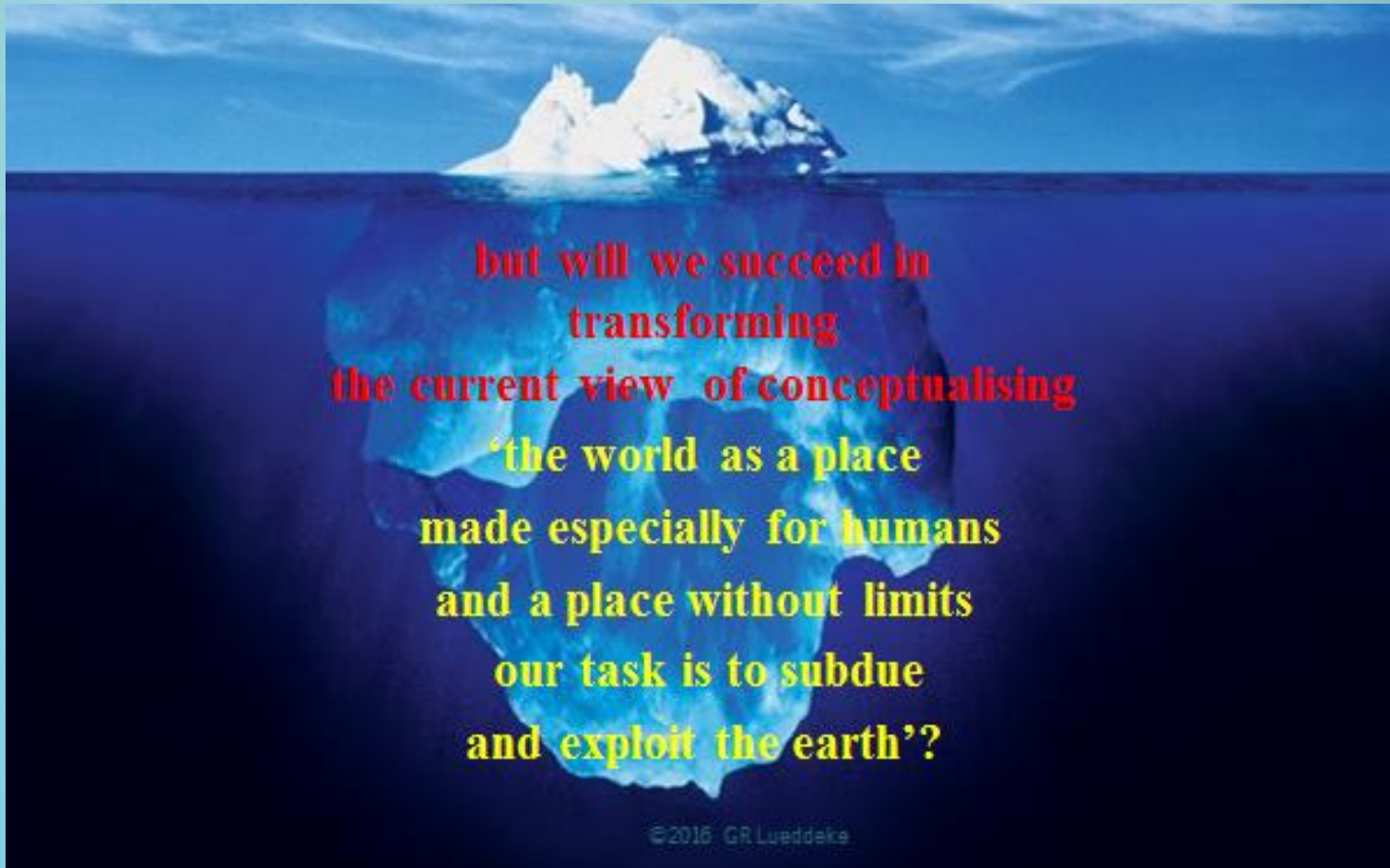




# Needed Paradigm Shift



# Needed Paradigm Shift



# Needed Paradigm Shift



# Summary of Responses to the K-12 One Health Education Survey



Joann Lindenmayer, DVM, MPH  
Chair, One Health Commission Board of Directors

# Summary of Responses to the K-12 One Health Education Survey\*

- Cooperation, health, animal, environment, education, disease and humans were the most frequently cited words related to One Health
- Ecological and cultural/social sustainability were ranked as most important to One Health
- Zoonotic disease, environment, antimicrobial resistance, food security and availability and climate change were suggested most frequently as illustrative of the need for a One Health approach

*\*As of November 8, 2016; N=61 responses;  
not all respondents answered every question*



# Summary of Responses to the K-12 One Health Education Survey\*

- The most important factors contributing to One Health challenges were compartmentalization of health services and policies, lack of knowledge/understanding, lack of funding streams that encourage collaboration, overemphasis of treatment of individuals at the expense of populations, poverty/distribution of wealth/inequity, and political systems that support individual and corporate interests above all else

*\*As of November 8, 2016; N=61 responses;  
not all respondents answered every question*





# Summary of Responses to the K-12 One Health Education Survey\*

- One Health K-12 education relates best to the following Sustainable Development Goals:
  - 3: Ensure healthy lives and promote well-being for all ages
  - 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development
  - 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and biodiversity loss
  - 6: Ensure availability and sustainable management of water and sanitation for all

*\*As of November 8, 2016; N=61 responses;  
not all respondents answered every question*



# Summary of Responses to the K-12 One Health Education Survey\*

- One Health K-12 education relates best to the following Sustainable Development Goals (cont.):
  - 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture
  - 11: Make cities and human settlements inclusive, safe, resilient and sustainable
  - 13: Take urgent action to combat climate change and its impacts
  - 12: Ensure sustainable consumption and production patterns
  - 4: Ensure equitable and inclusive quality education and promote lifelong learning opportunities for all

*\*As of November 8, 2016; N=61 responses;  
not all respondents answered every question*



# Summary of Responses to the K-12 One Health Education Survey\*

## Preferred Graphical Representations of One Health Values and Principles



Venn Diagram



Triad



# Summary of Responses to the K-12 One Health Education Survey\*

- Values essential to One Health (> 60% response) are: cooperation, sustainability, diversity/biodiversity, responsibility, vision, understanding, leadership and competence

*\*As of November 8, 2016; N=61 responses;  
not all respondents answered every question*



# Summary of Responses to the K-12 One Health Education Survey\*

- The following statements relate to One Health:
  - The health of humans, other animal species and plants cannot be separated
  - “Environment” includes natural and built environments
  - Humans have a moral imperative to address One Health challenges
  - One Health should be practiced so that there is not net (ecosystem) loss of biological diversity
  - One Health embraces the value of social interaction as a critical component of health and well-being
  - The WHO definition of “health” also applies to other animals and ecosystems
  - One Health recognizes the intrinsic value of life on earth regardless of a direct benefit to humans

*\*As of November 8, 2016; N=61 responses;  
not all respondents answered every question*



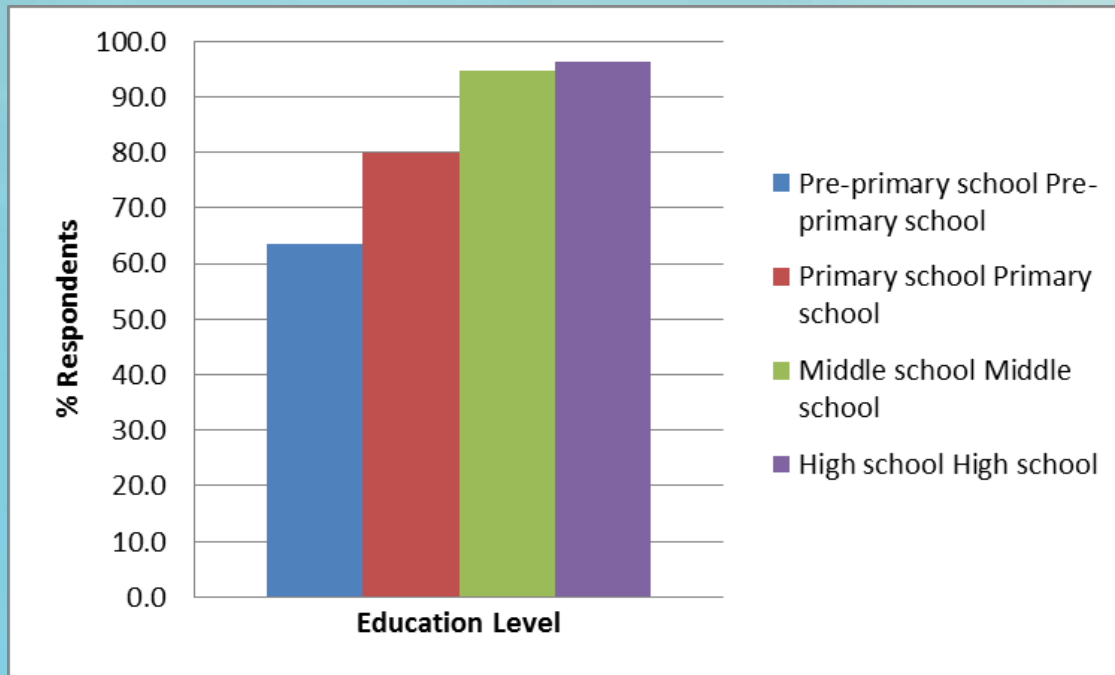
# Summary of Responses to the K-12 One Health Education Survey\*

- Based on experience, fewer than 20% of respondents believed that students were exposed to One Health and well-being concepts in colleges and universities, and fewer than 5% at all educational levels below that

*\*As of November 8, 2016; N=61 responses;  
not all respondents answered every question*



# Summary of Responses to the K-12 One Health Education Survey\*



% Respondents Who Believe Important to Introduce OH Concepts into Curriculum at Different Educational Levels



# Summary of Responses to the K-12 One Health Education Survey\*

- A One Health-themed curriculum should be introduced into publicly-funded schools
- Students should learn collaboration, interdisciplinary thinking, problem-solving, systems thinking, and team-building in a One Health-themed educational program (>75% respondents)

*\*As of November 8, 2016; N=61 responses;  
not all respondents answered every question*





# Summary of Responses to the K-12 One Health Education Survey\*

- Students should be exposed to all of the following concepts:
  - Role of natural and built environments in human and animal health and well-being
  - Respect for natural systems and human responsibility for planetary health
  - The connection between well-being and mental/physical health
  - Personal responsibility -- how individual actions impact One Health
  - Corporate, political and societal responsibility -- how their actions impact One Health
  - Climate change and health of the planet

*\*As of November 8, 2016; N=61 responses;  
not all respondents answered every question*



# Summary of Responses to the K-12 One Health Education Survey\*

- Students should be exposed to all of the following concepts (continued):
  - Environmental contexts of One Health issues
  - Staying healthy and making good choices for the environment
  - "Cradle-to-grave" thinking

*\*As of November 8, 2016; N=61 responses;  
not all respondents answered every question*



# Summary of Responses to the K-12 One Health Education Survey\*

- The main barriers to incorporating a One Health-themed program into K-12 education are lack of awareness/knowledge, lack of funds, overloaded curriculum, need for teacher training, and curricular issues (siloes topics, other)
  - Other notable responses were
    - The need for simple, concrete examples
    - Lack of innovation/curricular design
    - Lack of validated K-12 One Health curriculum
    - Lack of reference books for use in schools
    - Lack of pedagogical tools

*\*As of November 8, 2016; N=61 responses;  
not all respondents answered every question*



# Summary of Responses to the K-12 One Health Education Survey\*

- Long-term outcomes were categorized as follows:
  - Increase in knowledge, understanding
  - Changes in attitudes
  - Changes in behaviors
  - Changes in skills
  - Products
- Stakeholder sectors that should be represented are government and its educational bodies, teachers and educators at all levels, teachers' associations, business/industry, health (human, animal, environment) institutes and government agencies

*\*As of November 8, 2016; N=61 responses;  
not all respondents answered every question*



# Summary of Responses to the K-12 One Health Education Survey\*

- Potential funders were the Bill and Melinda Gates Foundation, UN agencies (including UNCP and UNESCO), the World Bank, USAID and DFID, the Rockefeller Foundation and a number of other private foundations
- Logistical challenges to scaling up a curriculum to a global level are cultural differences, different education settings and formats, technological changes, the need to demonstrate added value of pilot projects, and having real content, and the lack of a major driving force in One Health (we are now working in clusters)

*\*As of November 8, 2016; N=61 responses;  
not all respondents answered every question*



# Discussion Session Instructions



Peter Costa, MPH, MCHES

# DISCUSSION TOPICS

- 1) Strategies for K-12 One Health Curriculum Innovation (20 min.) – Gretchen Kaufman
- 2) Funding considerations (20 min.) – George Lueddeke
- 3) Meeting the needs of the diverse global community (20 min.) – Joann Lindenmayer
- 4) Open Panel Discussion (20 min.)

# *Strategies* for K-12 One Health Curriculum Innovation



Gretchen E. Kaufman, DVM  
Council of Advisors, One Health Commission



# *Strategies* for K-12 One Health Curriculum Innovation

Curriculum  
Innovation  
Grants

Curriculum  
Development  
Workshops

Teacher Training  
Programs

OH Education  
Network

Knowledgebase  
of OH Curriculum  
Materials



# *Strategies* for K-12 One Health Curriculum Innovation

## Curriculum Innovation Grants for Educators

- Competitive grants to stimulate innovation by teachers or teams of educators
- Annual opportunity with changing One Health themes?
- Designed to meet guidelines that target values, skills and knowledge criteria using One Health approaches
- Emphasizes interdisciplinary engagement
- Forms basis for OH Education Network and mentor system



# *Strategies* for K-12 One Health Curriculum Innovation

## Curriculum Development Workshops For Teachers

- Summer workshops, with summer salary
- Annual opportunity with changing themes?
- Participation by “experts” in One Health and curriculum development to assist teachers in classroom applications
- Emphasizes innovative learning methods that target One Health values, skills and knowledge criteria
- Networking opportunity for sharing and mentoring



# *Strategies* for K-12 One Health Curriculum Innovation

## Teacher Training Programs

- Curriculum development targeting new teachers (Courses, Modules)
- Creates opportunity for innovation from the ground up
- Creates opportunity for broad integration of One Health values across subjects
- Develops One Health skills and knowledge in teachers
- Enables global and regional adaptation to maximize benefits



# *Strategies* for K-12 One Health Curriculum Innovation

## One Health Education Network

- Directory of One Health Educators involved in the Program (and beyond)
- Facilitates communication between educators
- Facilitates collaboration on future projects
- Facilitates mentorship connections between educators and experts
- Acts as a platform for organizing meetings and presentations
- Provides mechanism for achieving Sustainable Development Goals through One Health



# *Strategies* for K-12 One Health Curriculum Innovation

## On-Line Knowledgebase of One Health Curriculum Materials

- Open access technology platform for sharing curriculum
- Repository for products of grant and/or workshop programs
- Enables contributions from a broader audience
- Provides an opportunity for feedback and dialogue
- Provides mechanism for achieving Sustainable Development Goals through One Health



# Strategies for K-12 One Health Curriculum Innovation

Curriculum  
Innovation  
Grants

Curriculum  
Development  
Workshops

Teacher Training  
Programs

OH Education  
Network

Knowledgebase  
of OH Curricular  
Materials

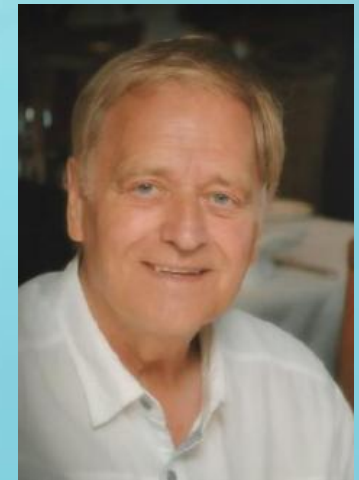
Your Ideas?



# Funding Considerations

George Lueddeke, PhD

- Linking UN 2030 Sustainable Development Goals to *One Health* education initiatives
- Supporting projects through existing development mechanisms
- Possible funding sources



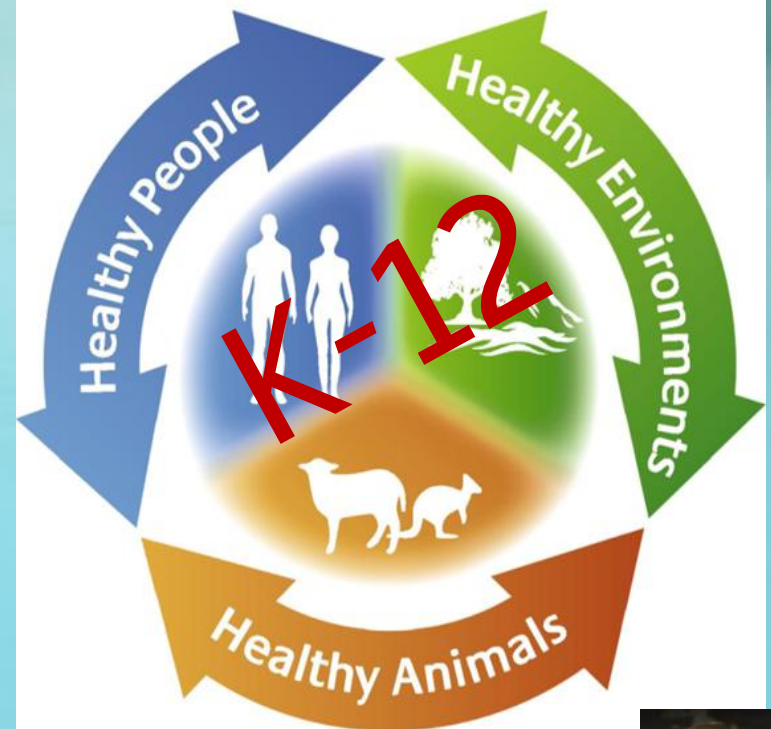


# Linking UN 2030–Global Goals to K-12 *One Health and Well-Being* education

## SUSTAINABLE DEVELOPMENT GOALS



## The One Health Triad



**HABITAT III  
conference:**

**Human-  
centric  
vs Eco-  
centric?**

**ONE  
HEALTH?**



**More  
emphasis  
on**

- **ALL LIVING SPECIES**
- **PREVENTION**
- **ADDRESSING FUTURE CHALLENGES**



Flags of the United Nations - Drapeaux des Nations Unies



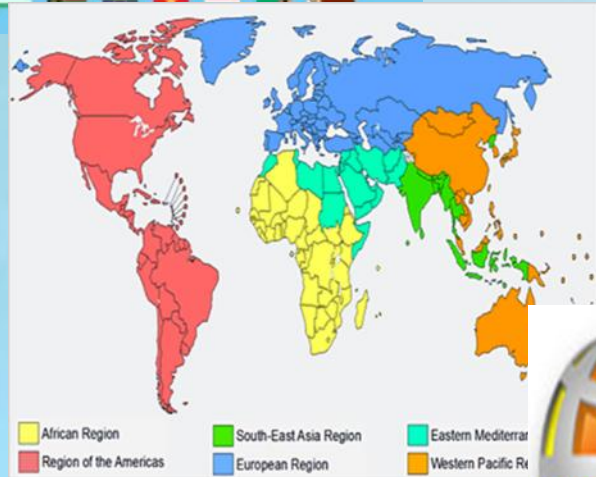
# Global Networks (illustrative):

**United Nations** 193 Member States - 2 observer States

**WHO** Collaborating Centers (>700)

**World Bank** Global Learning Development Network (>120 institutions - 80 countries)

**The Commonwealth** (53 nations)....

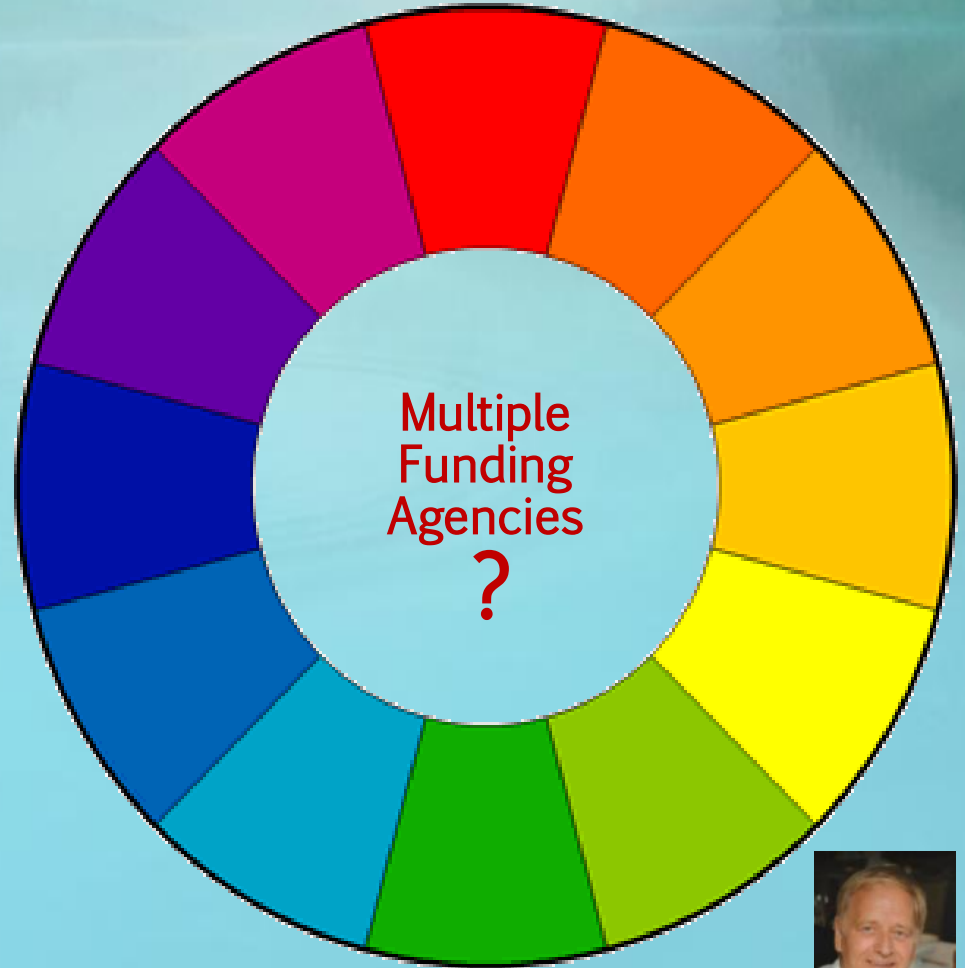


FLAGS OF THE COMMONWEALTH OF NATIONS



# Possible Funding Sources

- Bill and Melinda Gates Foundation
- UN Agencies (WHO, UNDP, UNESCO, UNICEF)
- World Bank
- Rockefeller Foundation
- Department for International Development (UK)
- USAID
- European Union
- Wellcome Trust
- Other ?





# Meeting the Diverse Needs of the Global Community

Joann Lindenmayer, DVM, MPH



# Meeting the Diverse Needs of the Global Community

- Recap
  - Survey: respondents want to begin with high school students in publicly-funded schools
  - Main discussion points from this web conference
- Two phases of a proposal
  - Pilot phase
  - Scaling up and out



# Meeting the Diverse Needs of the Global Community

- Pilot phase models
  - Which pilot model to use?
    - Only in a single country, followed by adaptation in a subsequent phase
    - Two (or more) different countries at the same time, independent
    - Two (or more) different countries, twinned
    - Are there others?
  - What conditions are needed to support the success of a pilot program?
    - Country level
    - Institutional level
    - Individual level





# Meeting the Diverse Needs of the Global Community

- Scaling up and out
  - Presumes early measures of success: what might they be?
  - What would be an appropriate timeline for beginning this phase relative to beginning a pilot project?



# OPEN PANEL DISCUSSION



One Health  
Commission

Education Task Force

Pre-proposal Web Conference on One Health K-12  
Education 18 November 2016



Cheryl Stroud, DVM, PhD

# Wrap Up- Next Steps:

## Creating the World We Need through One Health Education





# Wrap Up- Next Steps:

- Anticipated Time Line for proposal development
- Watch for future communications

Cheryl Stroud, DVM, PhD



# Thank You!

For your interest, support and participation as we work

Preparing Society to  
Create the World We Need through  
One Health Education



# Thank You!!

## To the One Health Education Task Force

Team Members:

George Lueddeke (Chair)

Joann Lindenmayer

Gretchen Kaufman

Cheryl Stroud

Laura Kahn

Lee Willingham

Bruce Kaplan

Tammi Krecek

Lisa Conti



## Ego



## Nature



“A lot of people have this ego need that makes them want to believe that Earth is the centre of the universe and humans are the most important species, the supreme expression of creation.” - Ann Druyan



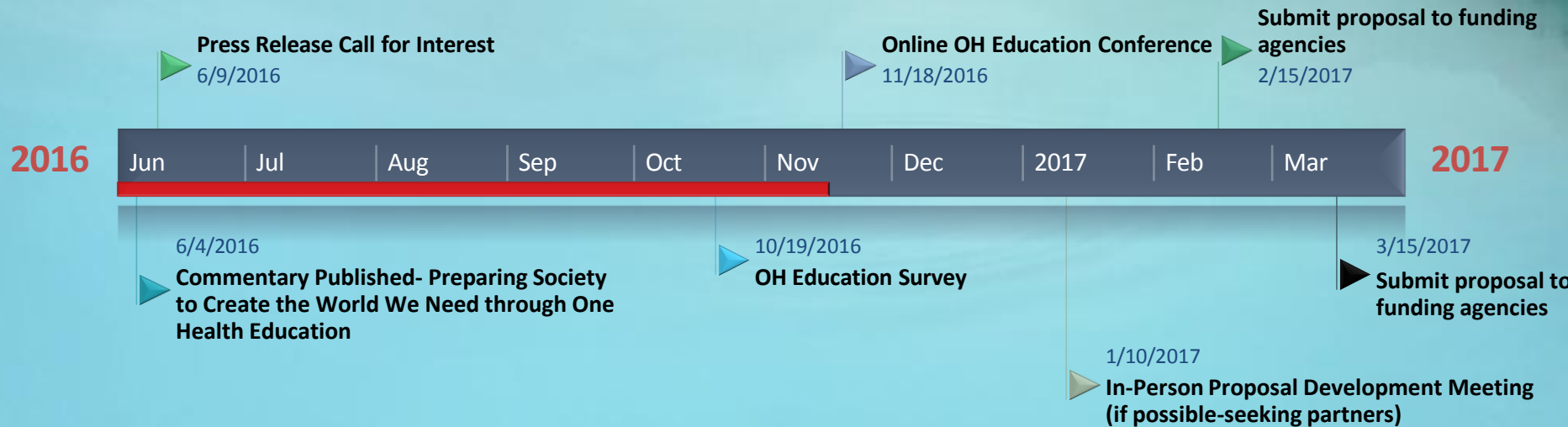


One Health  
is a pathway to  
Planetary Health  
and Global *Security*





# Anticipated Timeline



February/March: Targeted Proposal submission dates



# Watch for future communications

- Let us know of other colleagues / organizations who might like to support and participate in this effort
- Let us know if you have suggestions for an in-person (in-kind) meeting location in early January
- Follow the One Health community at:
  - The One Health Commission
  - The One Health Initiative



There is *Much* work to be done to make One Health the default way of thinking and doing business



# The World We Need

Preparing Society to  
Create the World We Need through  
One Health Education

Online Conference:  
November 18, 2016

**This concludes today's broadcast**