One Health & Well-Being: Toward Human – Nature Sustainability

George Lueddeke PhD
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CORE Group One Health Webinar Series
One Health & Well-Being: Toward Human – Nature Sustainability

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One Health Commission & One Health Initiative
January 30, 2020
One Health & Well-Being:
Toward Human – Nature Sustainability

Webinar Main Aims

Challenges facing the planet and all species

Approaches for mitigating risks

Ways of striving toward global sustainability and well-being.
ONE HEALTH & WELL-BEING: TOWARDS HUMAN-NATURE SUSTAINABILITY

Putting things in perspective

Existential challenges

Global responses

New mindset!
Main hurdles

Possible ways forward

Queries
Putting things in perspective
Putting things in perspective
Earth Evolution

13.7 billion years ago (YA): matter, energy, time, space
13.2 billion YA: atoms and molecules
3.8 billion YA: organisms
2.0 billion YA: unique symbiosis: archaea (eukaryotic cell) + bacterium + energy = rise to complex life
c. 2.5 MYA...animals like humans but just another species
c. 200,000 YA modern Homo sapiens – African continent

Revolutions Shaping the Course of History

C. 70,000 YA: Cognitive Revolution
c.12,000 YA: Agricultural Revolution
c.500 YA: Scientific Revolution
c. 80 YA: first antibiotic (1935!)
c. 30 YA: Information Revolution – internet-social media-robotics...?

Present
Global Sustainability Revolution?
(Saving the World from itself?)
WEF 2020 - Main Global Risks

Short-Term Risk Outlook
Percentage of respondents expecting risks to increase in 2020

Global Shapers

- Extreme heat waves 88.8%
- Destruction of ecosystems 87.9%
- Health impacted by pollution 87.0%
- Water crises 86.0%
- Uncontrolled fires 79.8%
CO₂ = We emit c. 34 gigatons of CO₂ a year – roughly 50% remains in atmosphere for thousands of years – rest absorbed by oceans or by land (terrestrial carbon sink (TCS))

Paris Climate Accord 195 Nations – Dec 2015

Intergovernmental Planet on Climate Change (IPCC)
UN 2018 Report (5) – 133 authors, 40 countries, 6000 papers
1.5°C vs 2°C
Global carbon dioxide emissions – halve within 12 years – now 10?
“to avoid catastrophe”
“in less than two human generations, population sizes of vertebrate species have dropped by half.

These are the living forms that constitute the fabric of the ecosystems which sustain life on earth and the barometer of what we are doing to our planet, our only home.”

Marco Lambertini, Executive Director, WWF 2014
The threat of viral outbreaks will grow rapidly. 

- **EID**: emerging infectious disease; only diseases with zoonotic emergence are included. Reference for graph: Allen et al. (2017) Nature Communications.
“Core public-health systems have been underfunded because powerful healthcare stakeholders tend to dominate policymaking and budget decisions.”

Olga Jonas

“Humanity does not have the universal coverage by core veterinary and human public-health systems that it needs to protect itself and its livestock from permanent microbial threats.”

“Most economic losses (c.60%) to an outbreak are due to avoidance behaviour.”

Illness – 28%
Mortality/medical-12%

Core Public-Health Systems

Very high economic and health returns:

• Annual economic benefits: c.US$80 billion
• Investment: c.US$ 3.4 billion

Benefit Cost Ratio of 24 : 1

Preventing noncommunicable diseases

• Annual economic benefits: c.US$25 billion
• Investment (prevention!): c.US$8 billion

Global Net gain=US$ c. 90.4 bill

Total Global budget 2017

US$117 trillion!
(The World spends c.US$ 17 trillion on war and 6 US$ billion on peace)
% Change in Consumption of Animal Products: 2000 - 2030

Global Food Security in an Urbanizing World

By 2050, **2/3** of the world’s population will live in urban areas.

In the next 20 years, **95%** of the world’s population growth will occur in developing nations.

**80%** of food for cities comes from domestic sources in rural areas.

The poorest households in the developing world spend **60-80%** of their income on food.

@GlobalAgDev | #GlobalAg

thechicagocouncil.org/globalag
Despite the evidence, what is the main reason for general global apathy about the need for societal change regarding the sustainability of the planet and all species?

1. Lack of political will?
2. Vested interests?
3. Lack of clear understanding of the need for change at the local level?
4. Complexity of the issues?
5. Information overload?
6. Other? _____________________________
Global Responses
AIM- TO END POVERTY, PROTECT THE PLANET AND ENSURE THAT ALL PEOPLE ENJOY PEACE AND PROSPERITY BY 2030.  

- adopted by 193 UN Member States on 25 September 2015  
- 17 SDGs, 169 targets, 225 indicators  
- Slow uptake—even reversing

Missing Link?
UN-2030 Sustainable Development Goals
Need for a *unifying common cause or purpose* to which people can readily relate!\(^1\)

**One Health & Well-Being**

– a collaborative approach to achieve optimal health and well-being of all animals, people, plants and their shared environment.\(^{11} \ 12\)

One Health is at the intersection of human health, animal health, and environmental health.\(^{13}\)
Animal-human connections, “one health,” and the syndemic approach to prevention

One Health & Well-Being Applies to the Planet and All Species

Transdisciplinary

All Policies & Strategies

Animal Science

Evolutionary and Comparative

Environmental and Ecological

Medical

Biomedical

Communication Studies

Public Policy

Political

Economic

Historical

Sociological

Physical Environments

Psychological

Public and Population Health

Veterinary Medical

Governance

Humans

Animals

Social Environments

Anthropological

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One Health & Well-Being Applies to the Planet and All Species

Animal-human connections, “one health,” and the syndemic approach to prevention
Linking One Health and Well-Being to the 17 UN -2030 Sustainable Development Goals

What can be done to raise awareness of the critical importance of the UN-2030 SDGs at global, national and local levels (!)?

1. Global message that is credible and clear regarding the planet’s future prospects and our individual responsibilities?
2. Social media campaigns across communities?
3. Education programs – formal and non-formal?
4. Community information sessions?
5. Other ____________________?
Toward a New Mindset
Main Challenges?
To adopting a new paradigm – a new worldview that is compatible with our needs as human beings but also an outer world that is compatible with the needs of our ecosystem.

Biggest Hurdle?

From seeing the world as a place made especially for humans and a place without limits– our task is to subdue and exploit the earth.
“For a start, we need to accept that business and finance are the servants of our civilization, not its masters.” (14)

Edward Lucas
(former senior editor at The Economist)
Economy serving society

"It is difficult to get a man to understand something when his job depends on not understanding it.”
—Upton Sinclair

From Azote Images for Stockholm Resilience Centre
“I don't want you to listen to me. I want you to listen to the scientists.” (16)
How can we make the sustainability and well-being of the environment our top priority in this decade?

1. National policies and strategies based on the SDGs?
2. Local priorities based on national strategies?
3. Funding projects that can make a difference?
4. Holding decision-makers to account?
5. Other?___________________________
Top Priorities?(1)

Engage local communities – find common ground!

Evolve policies and practices that will sustain the planet and its people...

• lifelong learning
• multi-sectoral collaboration
• respecting ‘community of life’
• prevention
• commitment
• compassion
• future consciousness
• accountability – to people and to nature...
INTERNATIONAL ONE HEALTH FOR ONE PLANET EDUCATION INITIATIVE (1 HOPE)¹⁶

VISION
A world where people of all ages embrace a One Health & Well-Being (OHWB) approach recognising the interdependencies among humans, animals, plants and their shared environment.

AIM
Build global capacity for promoting and valuing the OHWB concept and approach as the foundation for achieving the UN-2030 Sustainable Development Goals (SDGs).

CONTRIBUTORS
Individuals/organisations from education and community groups invited from global regions.

MOTIVATION
Striving to create a “more just, sustainable and peaceful world” (UN-2030 Global Goals): adopting the OHWB concept and educating the next generation of global citizens about the fragile and interconnected nature of the health and well-being of all living organisms at this time of unparalleled planetary change.

WORKING GROUPS
Drawn from and targeting Primary/Secondary/Tertiary education sectors and Community/Civil Society, Corporate and Government (intergovernmental/non-governmental) organisations.

COMMON 1 HOPE QUEST
To foster learning about the OHWB approach and the SDGs at all levels of formal and non-formal education and to raise awareness of the long-term value of OHWB and SDG strategies in all sectors of our global community.

FOCUS
Explore possibilities (local, country, regional, global) and develop draft project proposals (e.g., curricula, resources, conferences, policy) by mid 2020 – seeking funding from national/regional/global organisations to accomplish 1HOPE stated aims.

Planning Team Members (reverse side)
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Planning Team Members

One Health Commission (OHC)  https://www.onehealthcommission.org/
One Health Initiative (OHI)  http://www.onehealthinitiative.com/
Earth Charter International (ECI)  https://earthcharter.org
World Assembly of Youth (WAY)  http://way.org.my/
InterAction Council (IAC)  https://www.interactioncouncil.org/
Chatham House (CH)  https://www.chathamhouse.org/
Center for Wildlife (CW)  https://www.thecenterforwildlife.org/
University of Melbourne (UM)  https://www.unimelb.edu.au/
University of Pretoria (UP)  https://www.up.ac.za
International One Health Student Alliance (IOHSA)  https://isohaonehealth.wordpress.com/
Royal Veterinary College (RVC)  https://www.rvc.ac.uk/
London International Development Centre (LIDC)  https://lidc.ac.uk/
Fontbonne University (FU)  https://www.fontbonne.edu/
Boehringer Ingelheim (BI)  https://www.boehringer-ingelheim.at/en
World Veterinary Association (WVA)  http://www.worldvet.org/
Southeast Asia One Health University Network (SEAOHUN)  https://www.seaohun.org/
London School of Hygiene and Tropical Medicine (LSHTM)  https://www.lshtm.ac.uk/
Wildlife Disease Association (WDA)  https://www.wildlifedisease.org
International Veterinary Students' Association (IVSA)  http://www.ivsa.org/
One Health Central and Eastern Africa (OHCEA)  https://ohcea.org/
World Association of Veterinary Laboratory Diagnosticians (WAVLD)  https://www.wavld.org/

*Others to be added as developments evolve*
Proposed Building Blocks for the UN-2030 Transformative Vision

Creating a “more just, sustainable and peaceful world” (UN-2030 Global Goals)
Food for thought?

How can society become more engaged with the realities that face us and ways forward - given what we know?

Begin with dialogue on the *Ten Propositions for Global Sustainability*?
Ten Propositions for Global Sustainability (1)

1. All 193 NATIONS OF THE WORLD collectively embrace the 2030 Agenda for Sustainable Development. Transforming our values into actions.

2. GLOBAL GUIDELINES were evolved and agreed to ensure technology enabling actions.

3. DECISION-MAKERS treated migration as a historical, complex, global human reality that we need to manage collaboratively, compassionately and responsibly, with an emphasis on mitigating root causes (e.g., political, economic, environmental) while enacting integrated, preventative life-sustaining measures.

4. GOVERNMENT, BUSINESS, AND CIVIL SOCIETY collaborated at all levels and adopted a new paradigm—a new world view—to ensure our needs as human beings are compatible with the needs of our outer world.

5. HUMAN VALUES AND MODERN LIFESTYLES—especially national vested interests and overconsumption (energy, water, raw materials...)—were recognized as leading causes of environmental degradation, eventual loss of resource bases threatening the sanckity and sustainability of all life.

6. NATURE was acknowledged as a major source of human thought processes and being a major factor in personal growth and development, thereby contributing to each individual's quality of life, realization of dreams and aspirations.

7. 'THE UNIFYING ONE HEALTH AND WELL-BEING CONCEPT became the cornerstone of our education systems and societal mission, thereby helping to create a 'more just, sustainable and peaceful world' (UN-2030).

8. HUMANITY'S FUNDAMENTAL ROLE as frontline custodians of the planet was recognized and adopted globally, thereby ensuring the true regeneration power of our societies and fostering compassion, trust and goodwill.

9. THE UNITED NATIONS GENERAL ASSEMBLY (UNGA), guided by the human experience over millennia alongside global wisdom, and in a spirit of compassion, kindness, harmony and moral authority, agreed to promote the values of equality, democracy, tolerance and respect to bridge divisions between people and nations together?

10. ALL MEMBERS OF THE UNITED NATIONS SECURITY COUNCIL were held globally accountable for their role in maintaining world peace and security—based on a genuine commitment to shared values, security, justice, population growth and social and economic disparities (e.g., Africa, India, Middle East, SE Asia—i.e., close to 6 billion people vs about 2 billion by 2030).
CHAPTER 13

THE PROMISE OF

GENERATION

The “Fixers”!

Pragmatic
competent
global

educated
social
visual
Personal journal toward One Health & Well-Being

Transforming Medical Education for the 21st Century
megatrends, priorities and change

GLOBAL POPULATION HEALTH AND WELL-BEING IN THE 21ST CENTURY
TOWARD NEW PARADIGMS, POLICY, AND PRACTICE

SURVIVAL: ONE HEALTH, ONE PLANET, ONE FUTURE

Forthcoming Chapter
The University in the early Decades of the Third Millennium: Saving the World from itself?
References


Thank you!

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Queries