PLANETARY HEALTH: Shaping the future of rural and remote health

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Image by Mi Pham on Unsplash
This talk

1. The Rockefeller Foundation–*Lancet* Commission on Planetary Health

2. Human ecology to understand human health

3. So what? What does this mean for the future of rural and remote health?
Safeguarding human health in the Anthropocene epoch: report of The Rockefeller Foundation–Lancet Commission on planetary health

Commissioners:

Prof Chris Beyrer
Dr Fred Boltz
Prof Anthony Capon
Dr Alex Ezeh
Prof Gong Peng
Prof Sir Andy Haines (Chair)
Dr Richard Horton
Dr Sam Myers
Dr Sania Nishtar
Dr Steve Osofsky
Prof Subhrendu Pattanayak
Dr Montira Pongsiri
Dr Agnes Soucat
Dr Jeanette Vega
Dr Derek Yach
Dr Sarah Whitmee
(Commission Researcher)

Builds on previous work including the IPCC, Millennium Ecosystem Assessment, One Health, EcoHealth and the Brundtland Commission
OUR COMMON FUTURE
THE WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT
Hippocrates

circa 400 BC
WAIORA

Promoting Planetary Health and Sustainable Development for All
Promouvoir la santé planétaire et le développement durable pour tous
Promover la salud del planeta y el desarrollo sostenible para todos
Te Hāpai Hauora ā-Ao me te Whanaketanga Tūturu mō te Katoa
By almost any measure, the human population is healthier than ever before (World Bank, 2011)
But in achieving this, we’ve exploited the planet at an unprecedented rate
What is Planetary Health?

“Put simply, planetary health is the health of human civilisation and the state of the natural systems on which it depends.”
Links between environmental change and health
(Millennium Ecosystem Assessment, 2005)
Effects of multiple environmental changes on food availability and quality

- Climate change
- Temperature/extreme events
- \( \text{CO}_2 \) fertilization
- Pests, mold and fungi
- Land degradation and soil erosion
- Water scarcity (from overconsumption, diversion to non-food crops, climate change and changes to ecosystem function)
- Loss of pollinators
- Overfishing/Ocean acidification
Emerging infectious diseases
Meeting the challenges
Multiple approaches for meeting increased food requirements

- Sustainable intensification
- Efficient use of water and fertiliser
- Sustainable aquaculture
- Support for subsistence farmers
- New sources of nutrition + diversification
- Biofortification
- Change of diets and redirect landuse back to food
- Reduced food waste

Tester and Langridge (2010)
Reducing food waste

Nearly 30% of the world’s total agricultural land is used to produce food that is never eaten. Various strategies needed e.g. ---

Reducing aflatoxin through aflasafe


UN World Food Programme’s ‘Training Manual for Improving Grain Postharvest Handling and Storage’
Forest Conservation Reduces Disease Risks: examples from the Brazilian Amazon

Malaria transmission
- fewer vector breeding sites.
- larger vector predator populations and greater diversity of mammalian species (promoting dilution effects)
- microclimate inhibits anopheline mosquitoes.

Acute Respiratory Infections (ARI)
- forests may filter air particulates
- fewer fires and lower smoke emission
- reduced collection and burning of biomass fuel

Diarrhoea
- forest may reduce flooding and filter pathogens from surface water.

Bauch, Birkenbach, Pattanayak and Sills PNAS 2014
Increasing access to modern family planning

More than 200 million women who want to avoid pregnancy are not using effective contraception.

Access to family planning could cut maternal deaths by around 30%.

Meeting the needs for modern contraception in low-income countries would cost only an additional $5.3 billion per year.

Source: UN Millennium Development Goals Report 2012

Image: Globaia
Circular economy

- Raw materials
- Design
- Recycling
- Production remanufacturing
- Residual waste
- Collection
- Distribution
- Circular economy
- Consumption use, reuse, and repair
Solutions lie within reach and require a redefinition of prosperity to focus on quality of life and improved health for all, together with respect for the integrity of natural systems

- Conceptual challenges: failures of imagination (e.g. genuine progress measures)
- Governance challenges: failures of implementation (e.g. wellbeing of future generations)
- Research and information challenges: failures of knowledge (e.g. transdisciplinary research)
http://www.thelancet.com/commissions/planetary-health
‘Human ecology’ as a way of understanding patterns of human health; alongside ‘epidemiology’ as a core method in rural and remote health
Human activities → Health of people
Behavioral risk factors

Human activities

Health of people
Behavioral risk factors

Social determinants

Human activities

Health of people
Behavioral risk factors

Social determinants

Human activities

Environmental impacts of development

Health of people

Health of planet
Behavioral risk factors

Social determinants

Human activities

Environmental impacts of development

Health of people

Ecological determinants

Health of planet
Boyden’s Biosensitivity Triangle


- Health of people
- Health of planet
- Human activities
THE Bionarrative
the story of life and hope for the future

Stephen Boyden

Rural and Remote Health
How should we respond?

1. Intergenerational health equity
2. An eco-social approach: an approach that recognises the ecological, economic and social foundations of health
3. Systems thinking
4. Indigenous and local knowledge (ILK)
5. In sum, we need to bring a ‘planetary consciousness’ to rural and remote research, training, policy and practice