



One Health, One World

Structures for survival in a dangerous world

Martin McKee

Taipei, November 2023



@martinmckee



Let the states of equilibrium and harmony exist in perfection, and a happy order will prevail throughout heaven and earth, and all things will be nourished and flourish.

均衡和諧的狀態完美存在，天地就會秩序井然，萬物得以滋養、繁榮。



Professor Mario Monti



Professor Martin McKee

Pan-European Commission on Health and Sustainable Development (09 February 2021)



Elias Mossialos



Rosa Otunbayeva



Tarja Halonen



Professor Luise Hölscher



Oleg Salagay



Dr Hans Kluge



Professor Beata Javorcik



Professor Beatrice Weder di Mauro



Lord Jim O'Neill



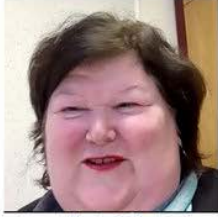
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Maggie De Block



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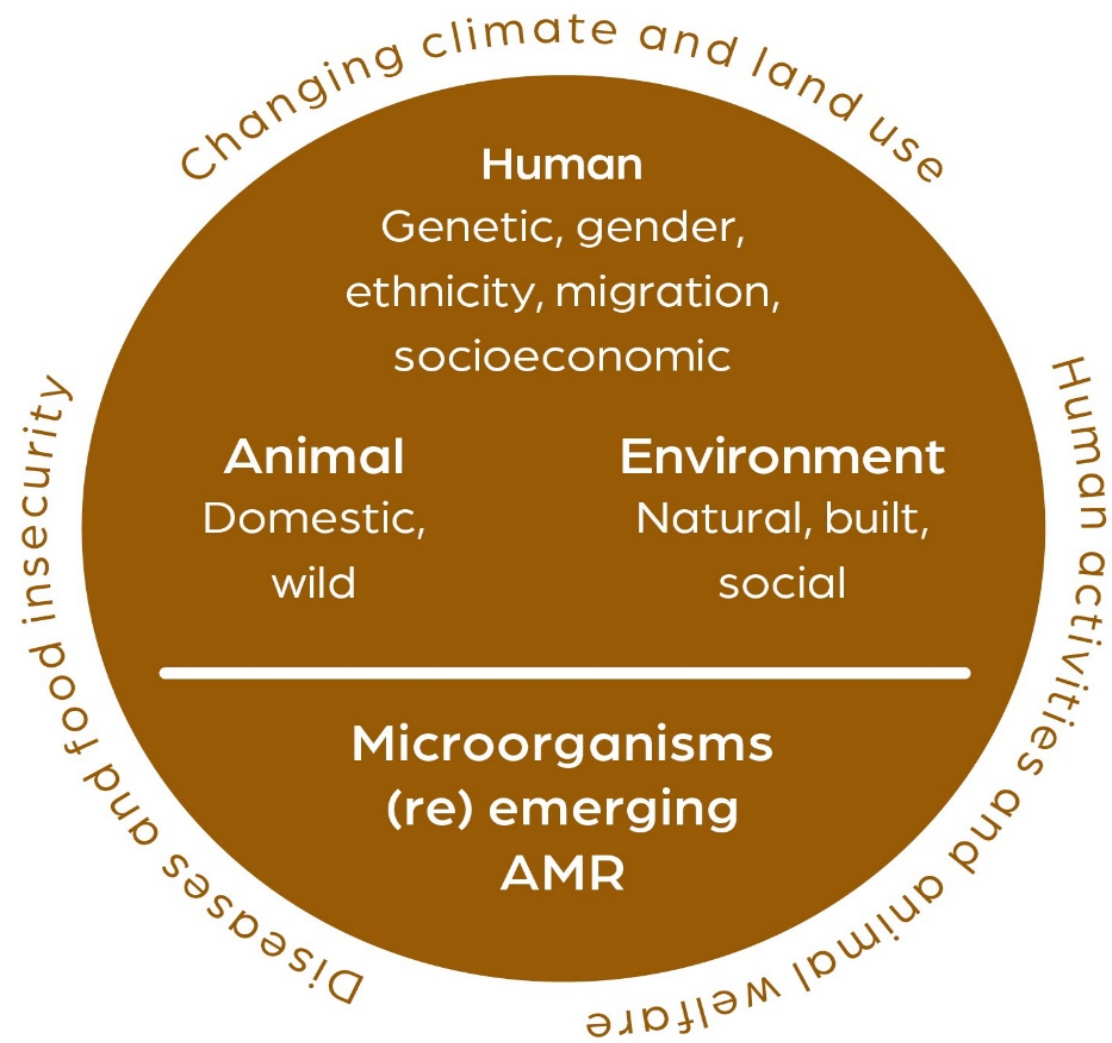
Dr Anna Stavdal



Professor Willem Van Lerberghe

- 2 former Prime Ministers & 2 former Deputy Prime Ministers
- 3 former Presidents
- 2 former health ministers
- Senior officials in international banks





What comes next?



THE DETERMINANTS OF HEALTH IN THE 21ST CENTURY

HEALTH

VOLCANIC ACTIVITY

ASTEROID IMPACT

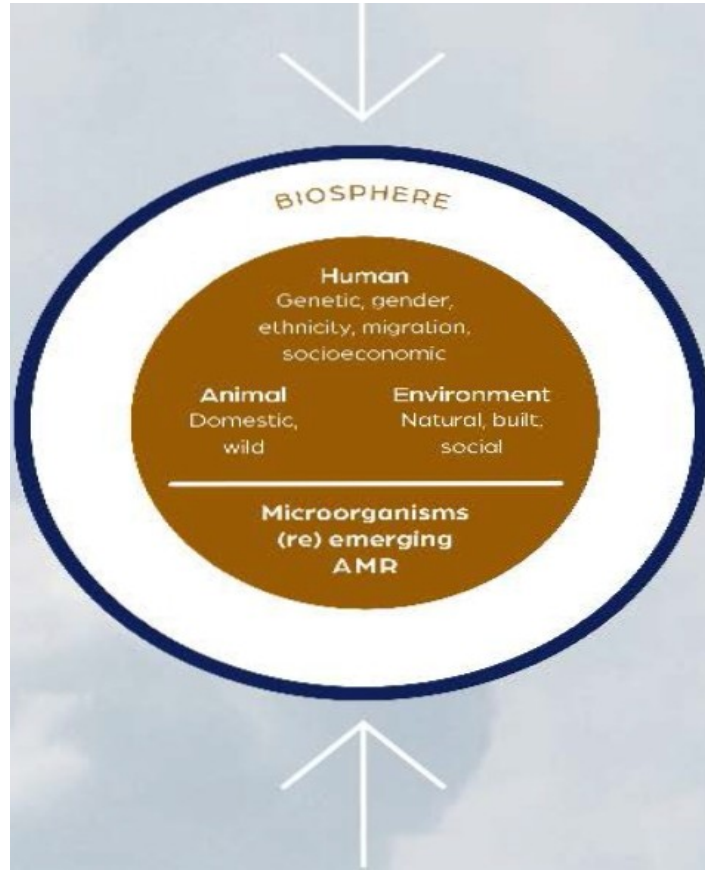
EARTHQUAKES/TSNAMIS

GEOMAGNETIC STORM

PLANETARY HEALTH (NATURAL)



- Peace & security
- Clean air & water
- Safe nutritious food
- Housing
- Education
- Employment & working conditions
- Health care
- Social networks/trust
- Digital access
- Safe environments
- Access to justice



- Conflict & terrorism
- Pollution
- Food insecurity
- Lack of shelter
- Informal, irregular & unsafe employment
- Harmful commodities
- Hostile artificial intelligence
- Disinformation
- Crime & corruption
- Racism & xenophobia



ILLNESS

PLANETARY HEALTH (ANTHROPOGENIC)

GLOBAL WARMING

DEFORESTATION

SOIL & WATER DEPLETION

TOXIC WASTE

LOSS OF BIODIVERSITY

“Between animal and human medicine there are no dividing lines—nor should there be. The object is different but the experience obtained constitutes the basis of all medicine.”

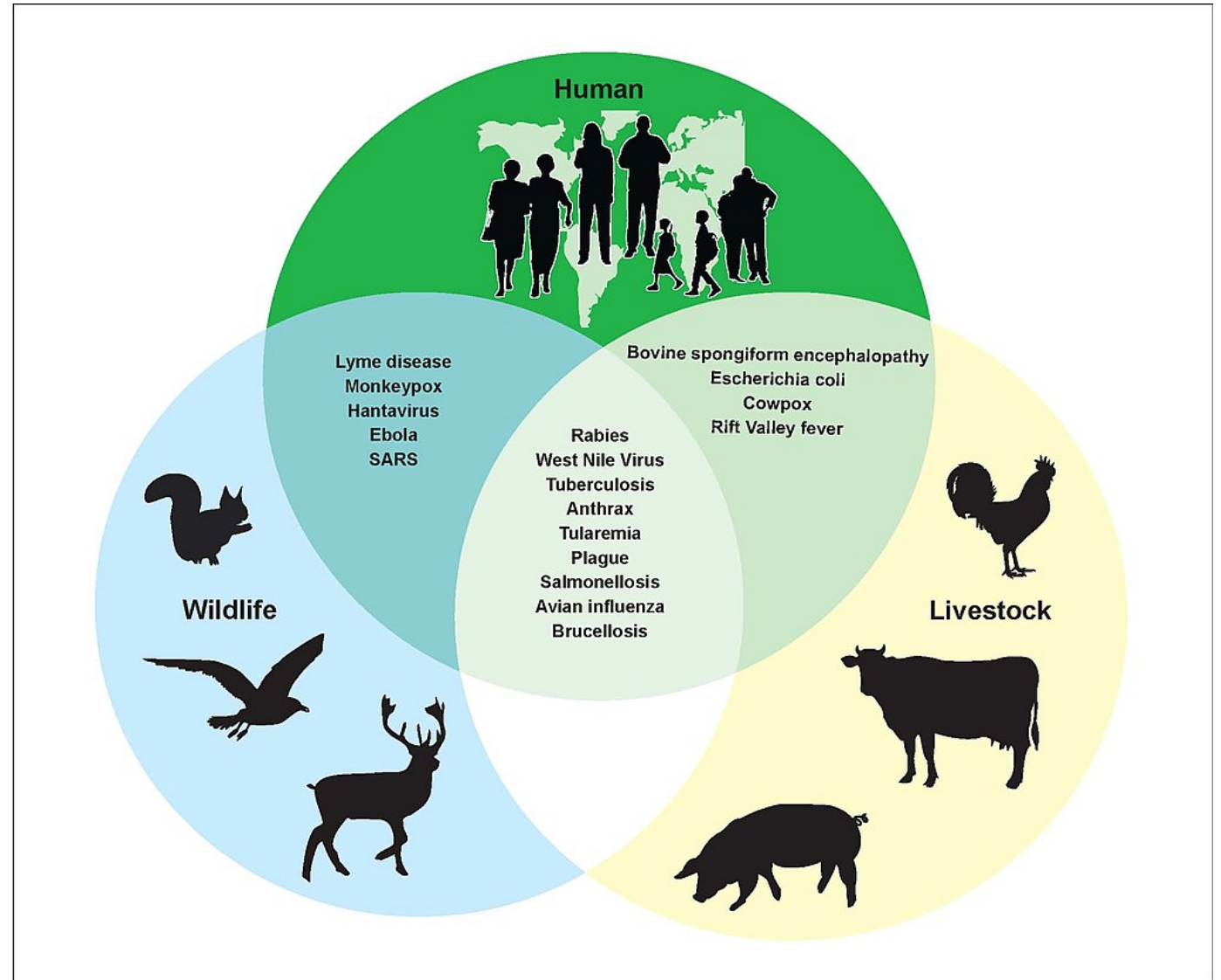
Rudolf Virchow



Manhattan Principles

1. Recognize the essential link between human, domestic animal and wildlife health and the threat disease poses
2. Recognize that decisions regarding land and water use have real implications for health
3. Include wildlife health science as an essential component of global disease prevention, surveillance, monitoring, control and mitigation
4. Recognize that public health programs can greatly contribute to conservation efforts
5. Devise adaptive, holistic and forward-looking approaches to the prevention, surveillance, monitoring, control and mitigation of emerging and resurging diseases that take the complex interconnections among species into full account
6. Integrate biodiversity conservation perspectives and human needs when developing solutions to infectious disease threats
7. Reduce demand for and better regulate the international wildlife and bush meat trade
8. Restrict the mass culling of wildlife species for disease control
9. Increase investment in the global human and animal health infrastructure
10. Form collaborative relationships among governments, local people, and the private and public sectors
11. Provide adequate resources and support for global wildlife health surveillance
12. Invest in educating and raising awareness among the world's people

Zoonoses-
infectious
agents
transmitted
from non-
human animals
to humans

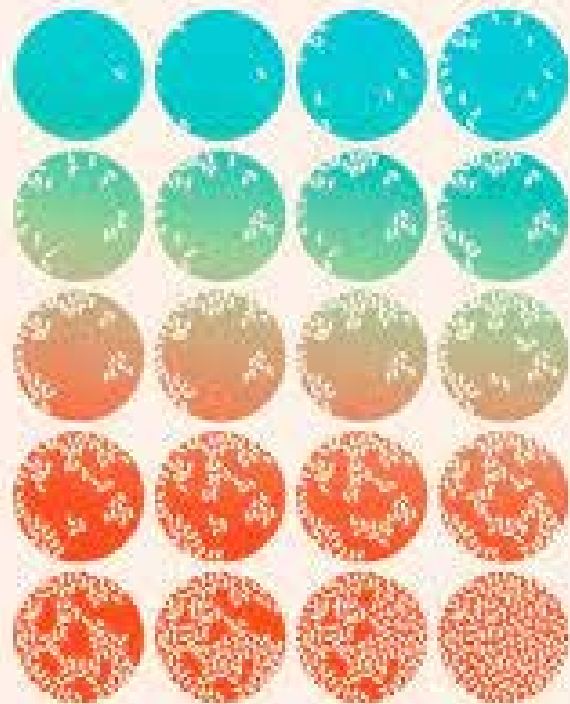


Source: GAO analysis of USGS data (data); Art Explosion (images).

Jonathan Kennedy
Pathogenesis

How Germs Made History

Annals of the Smithsonian



JARED DIAMOND GUNS GERMS & STEEL

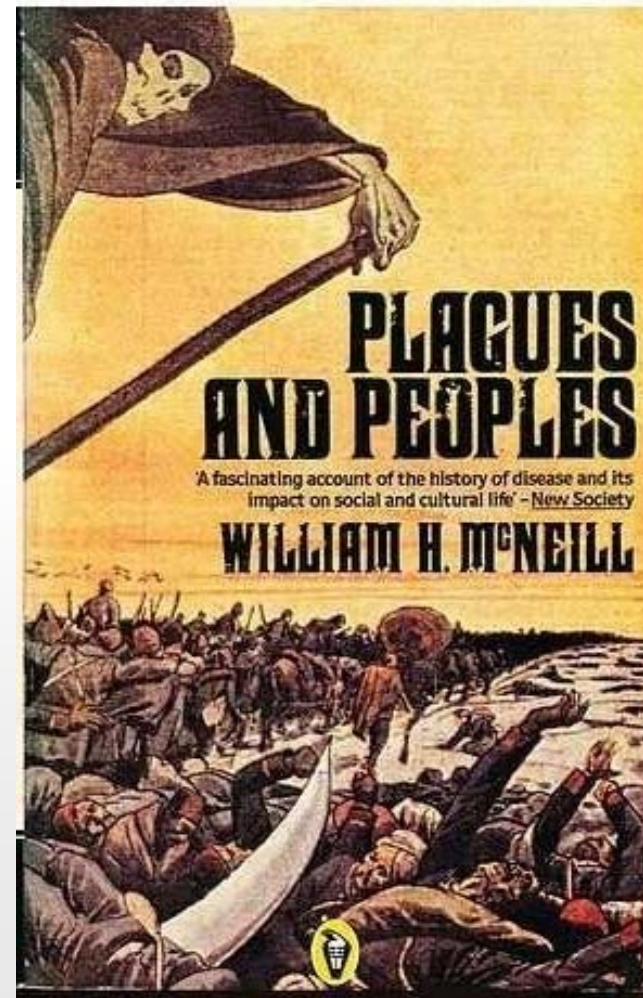
20TH
ANNIVERSARY
EDITION

With a new
afterword by
the author

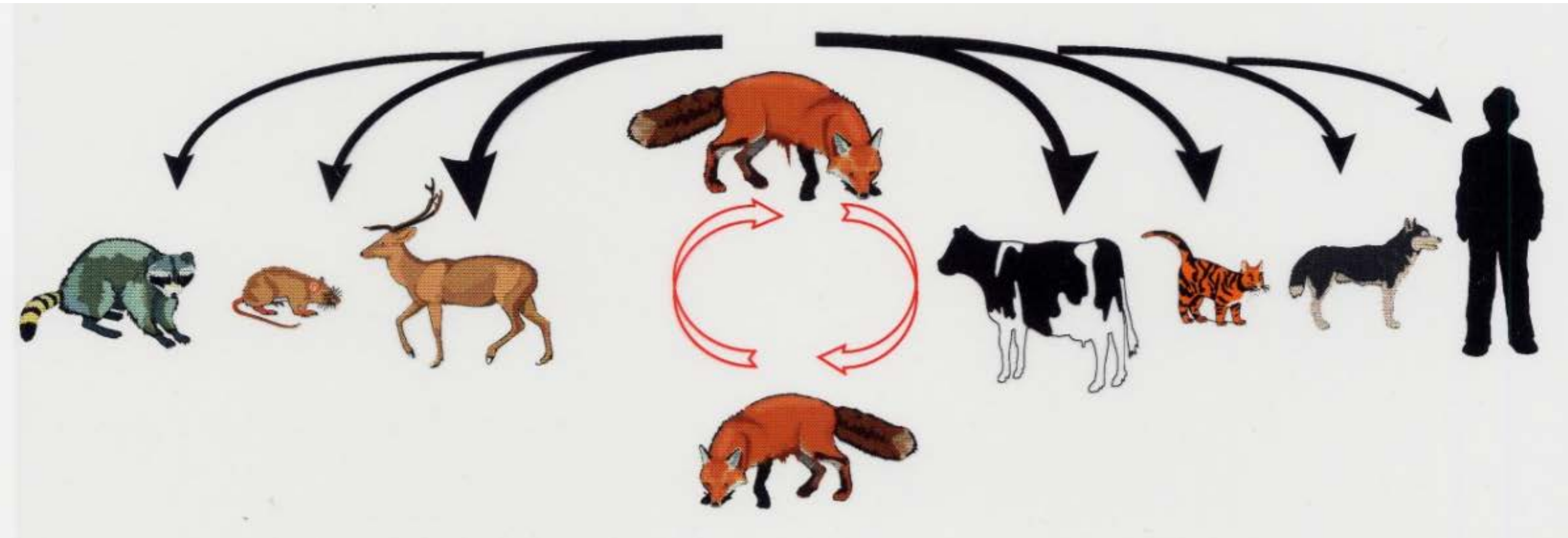
A short history
of everybody
for the last
13,000 years



Over One Million Copies Sold



Rabies



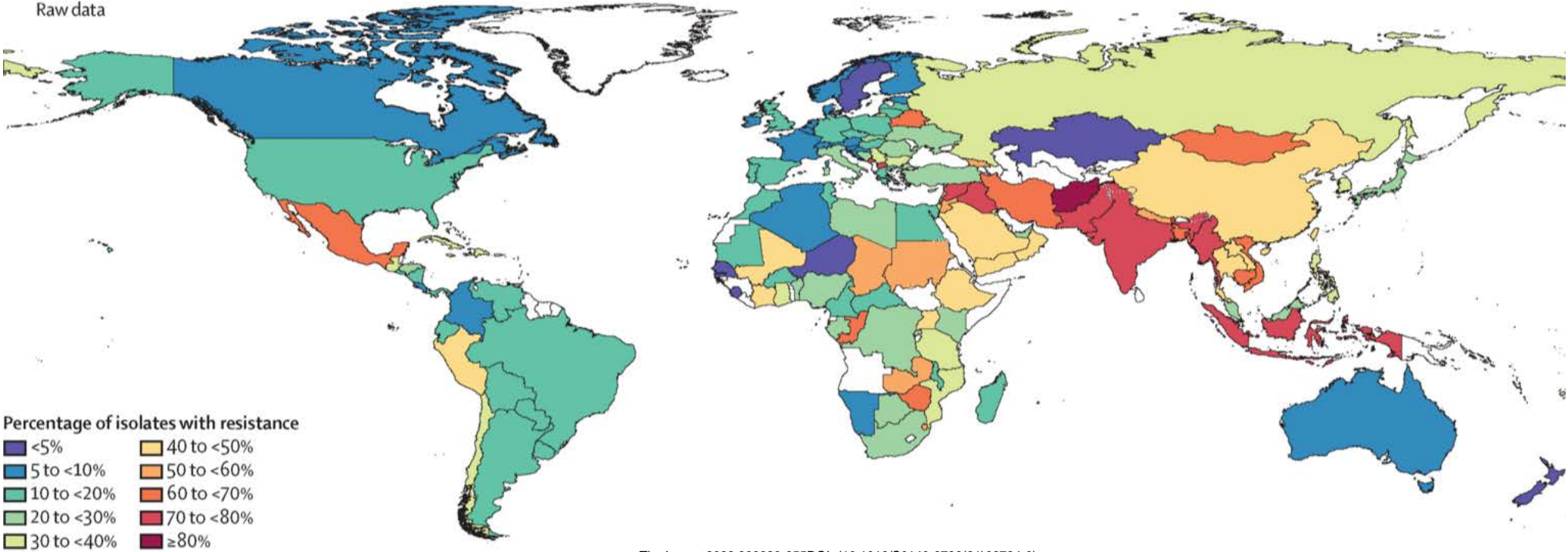




One Health and Antimicrobial Resistance

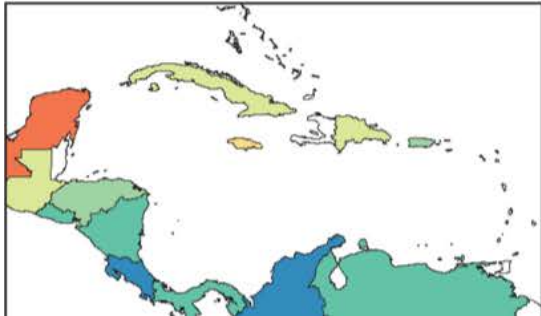
- The misuse and overuse of antibiotics in human medicine, veterinary medicine, and agriculture contribute to the development and spread of drug-resistant bacteria

Third generation cephalosporin resistant e. coli

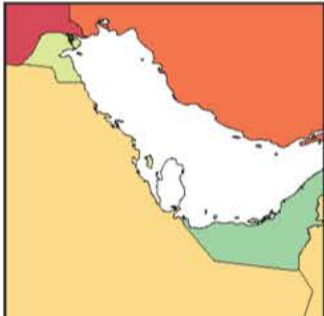


The Lancet 2022 399629-655DOI: (10.1016/S0140-6736(21)02724-0)

Caribbean and central America



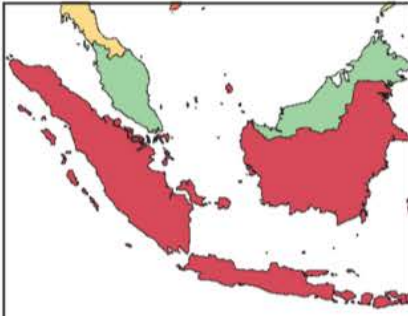
Persian Gulf



Balkan Peninsula



Southeast Asia



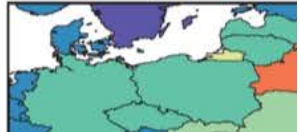
West Africa



Eastern Mediterranean



Northern Europe



Policy and strategic planning





Medicines management and prescribing systems

Technological innovation

Context, culture and behavioural research



Navigating sociocultural disparities in relation to infection and antibiotic resistance—the need for an intersectional approach

Esmita Charani ^{1,2*}, Marc Mendelson², Diane Ashiru-Oredope ³, Eleanor Hutchinson⁴, Manmeet Kaur⁵, Martin McKee ⁴, Mirfin Mpundu⁶, James R. Price⁷, Nusrat Shafiq ⁵ and Alison Holmes¹

...we consider the current evidence and call for a need to broaden the study of culture and power dynamics in healthcare through investigation of relative power, hierarchies and sociocultural constructs including structures, race, caste, social class and gender identity as predictors of health-providing and health-seeking behaviours.

... investigating how social constructs and gender hierarchies impact clinical team interactions, communication and decision-making in infection management and the role of the patient and carers will support better engagement to optimize behaviours.



‘A masterpiece of evocative scientific storytelling.’

BRIAN COX

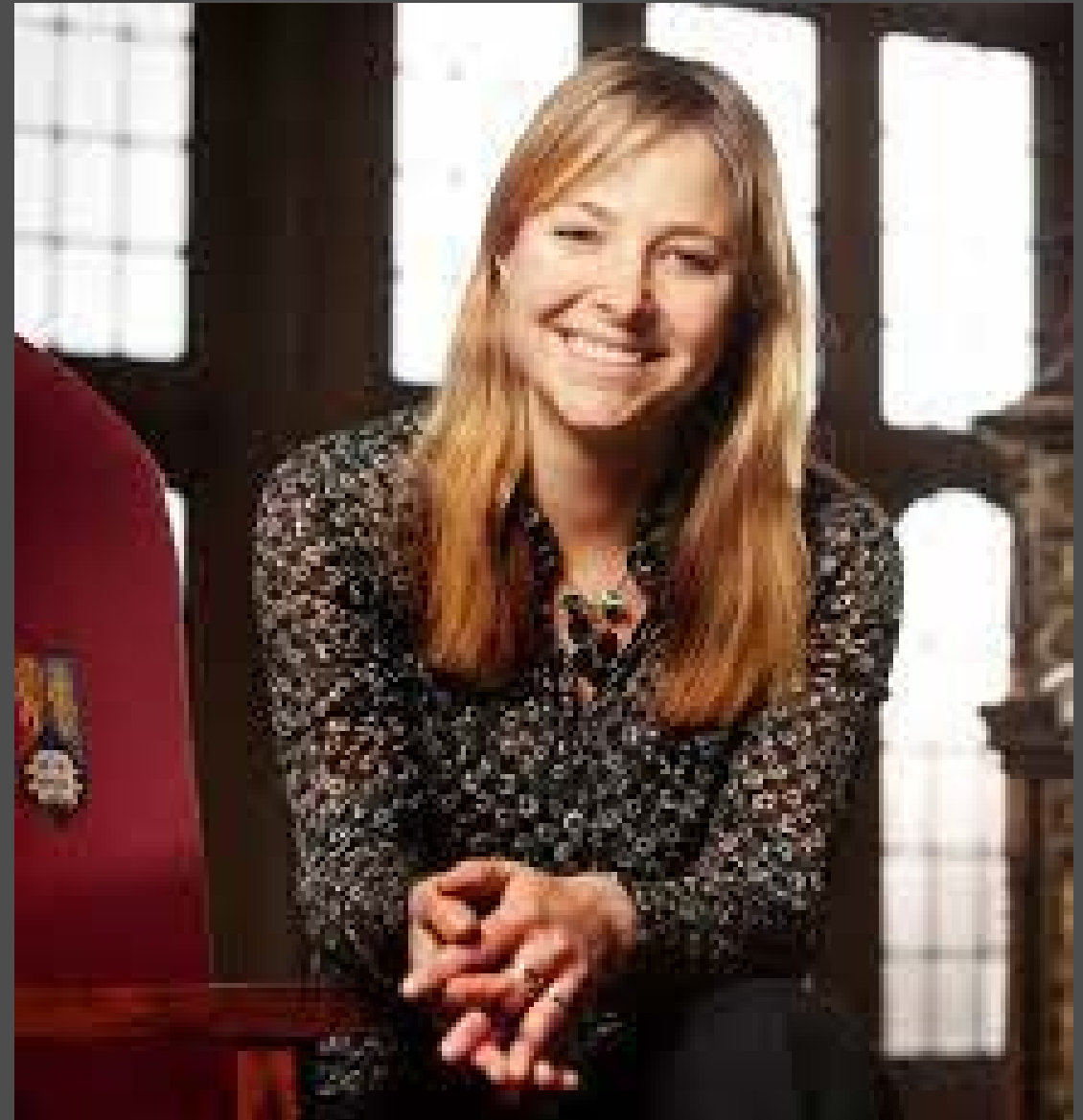
‘Epic and joyous, a landmark in the story of us.’

ADAM RUTHERFORD

TAMED

Ten Species
That Changed
Our World

ALICE ROBERTS





Biodiversity

- For over 10,000 years, human life has been changed by its interactions with animals and plants
 - Domestication of dogs, cattle, horses, pigs, chickens
 - Cultivation of wheat, maize, rice, barley, apples
- These changes enabled the emergence of the first cities, and the political structures that accompanied them
- They also enabled the industrial revolution and population growth
- But as they are threatened by climate change and environmental degradation, they are in turn posing new and complex challenges

Modern medicines from plants

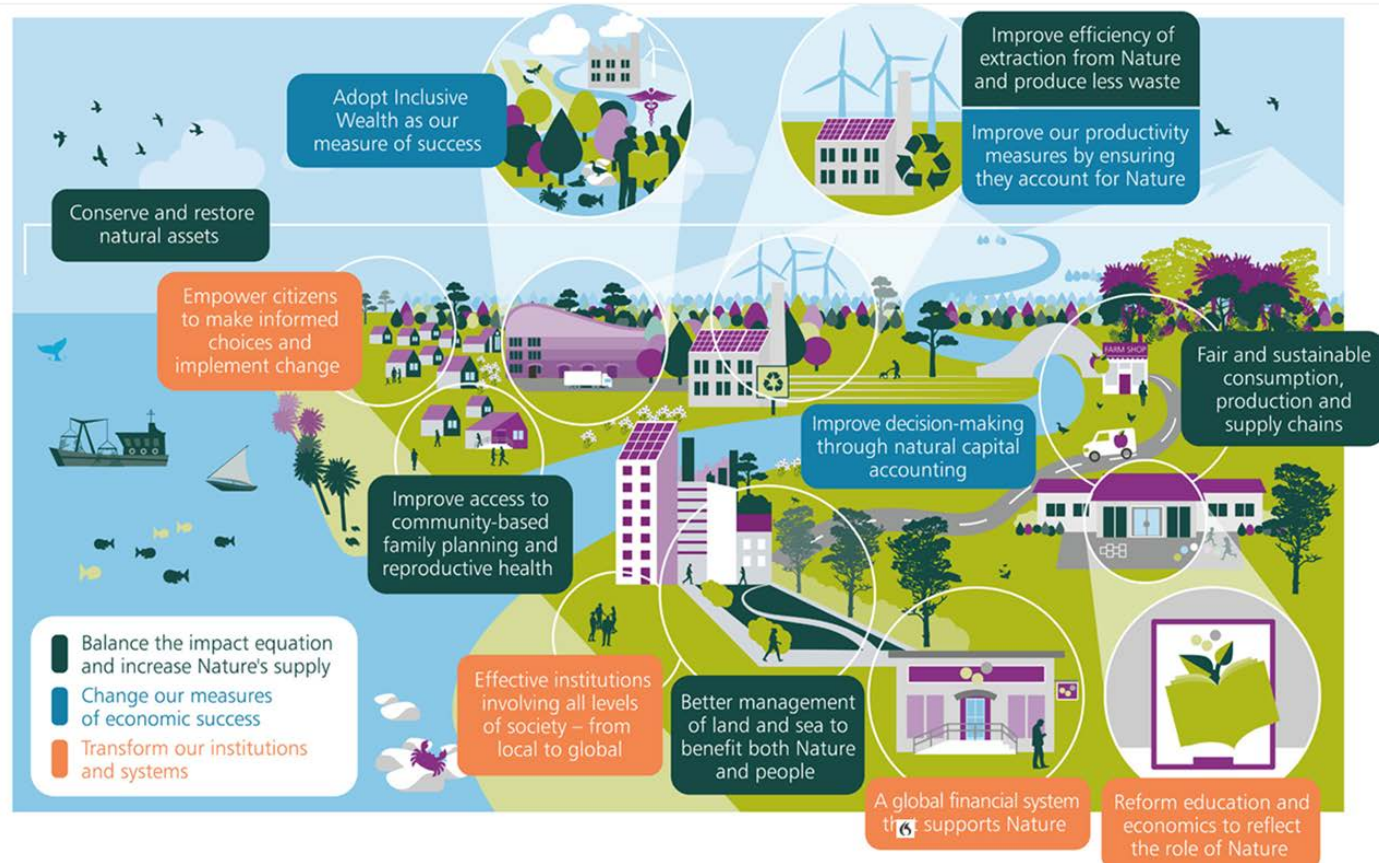


Botanical histories of some of modern medicine's most
important drugs

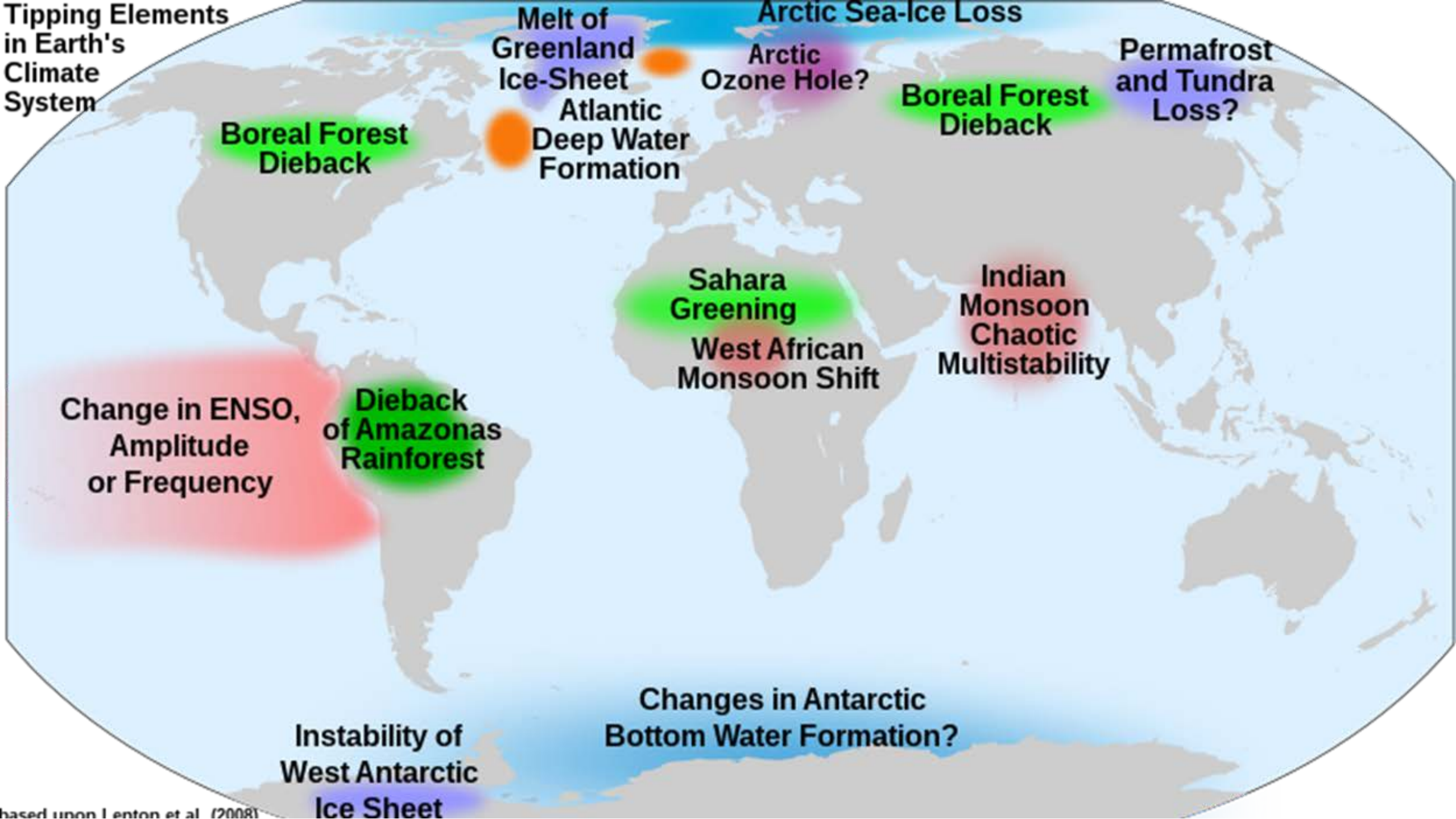
Editor: Henry Oakeley
Royal College of Physicians
London



The Economics of Biodiversity: The Dasgupta Review



**Tipping Elements
in Earth's
Climate
System**





Food security implications of the Ukraine conflict

The Russian invasion of Ukraine has major implications for food security across the world as well as the region, given both countries' major roles in global food markets and Russia's prominence in global energy trade.

The conflict comes at a time of unprecedented humanitarian needs, as a ring of fire circles the earth with climate shocks, conflict, COVID-19 and rising costs driving millions closer to starvation.

A total of 44 million people in 38 countries are being on the edge of famine and overall global needs for humanitarian assistance are higher than ever.

As funding levels off due to donor nations' treasuries being stretched, and in the face of rising food costs, WFP has already had to reduce rations for refugees and other vulnerable populations across East Africa and the Middle East. This includes Yemen, where 16.2 million people are food insecure and there are pockets of famine-like conditions.

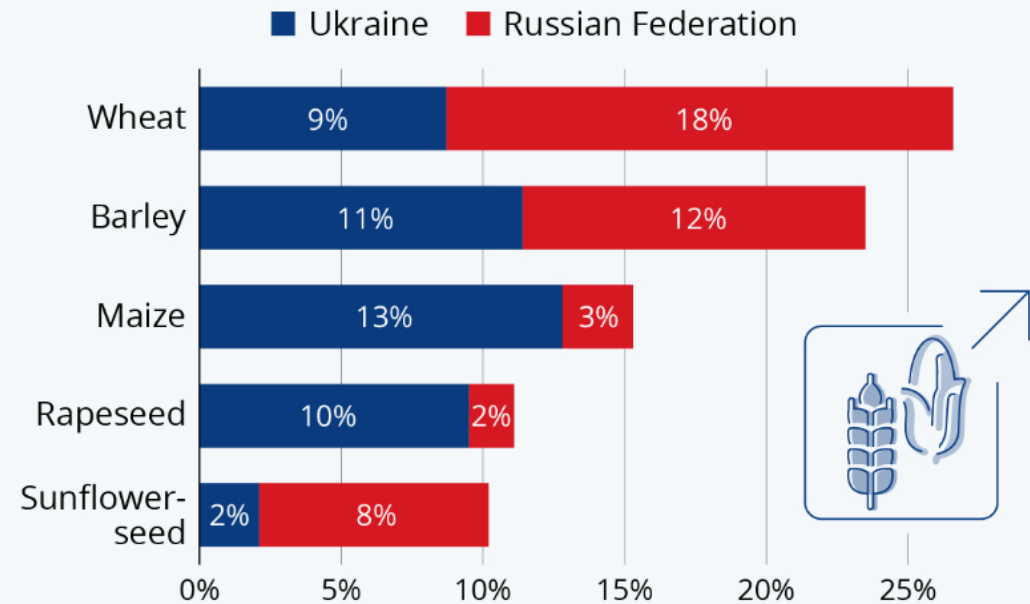
The conflict in Ukraine has plunged global food and energy markets into turmoil, raising high food prices even further. These increases, once passed onto domestic markets, will limit people's access to food. They will simultaneously increase operational costs for WFP, constraining its response at a time when people need it most.

March 2022



Why the War in Ukraine Threatens Global Food Security

Ukraine's and Russia's share in global exports of selected crops (2016-2020 average)



Source: Food and Agriculture Organization of the United Nations



statista

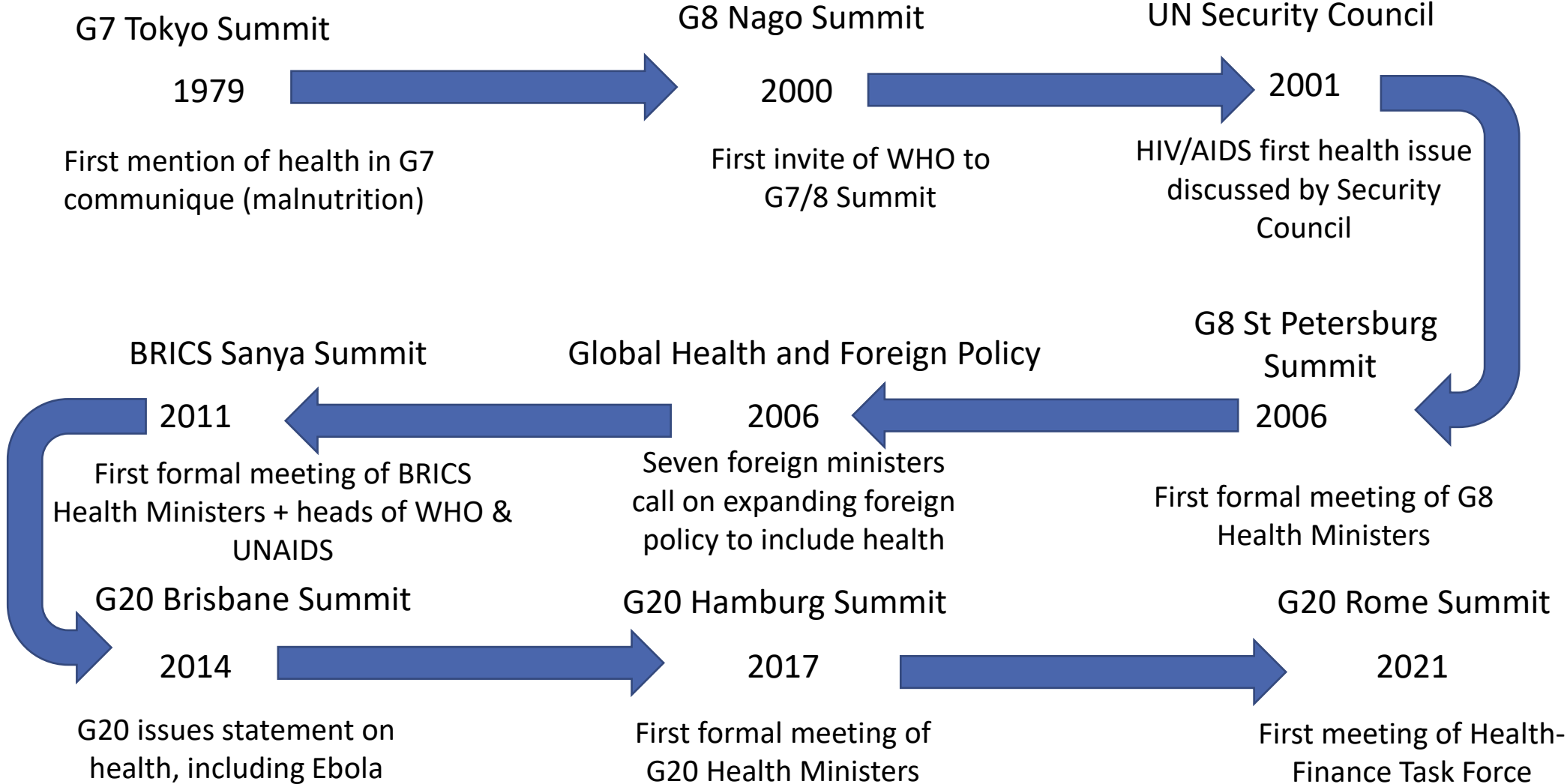
Global health

“health issues whose causes or redress lie outside the capability of any one nation state”



Taylor S. 'Global health': meaning what? *BMJ Global Health* 2018;**3**:e000843.

Health on the global agenda



Updated following McBride B et al, BMC Public Health, 2019; 19: 815

Quadripartite alliance for One Health



**Food and Agriculture
Organization of the
United Nations**



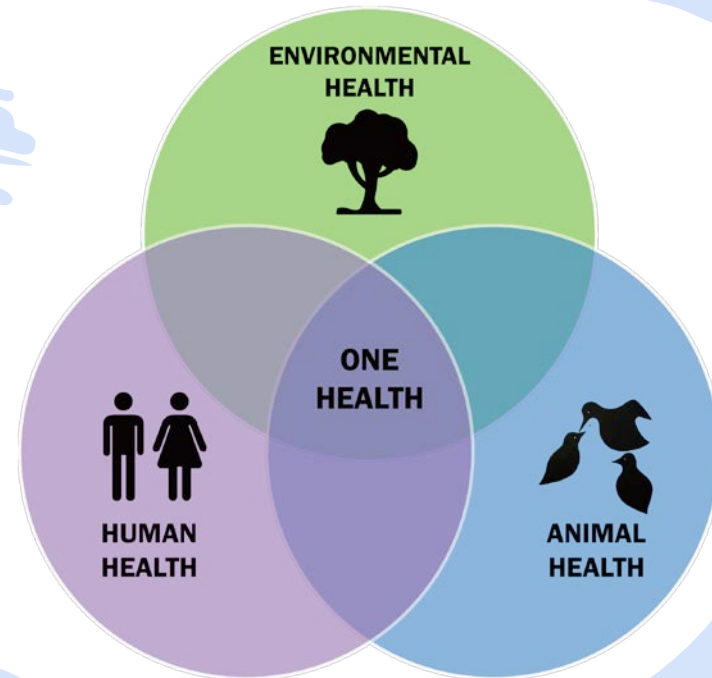
**World Health
Organization**



**World Organisation
for Animal Health**
Founded as OIE

Conclusion

- Human, wildlife, domestic animal, plant and environmental health are the pieces of the One Health puzzle
- As the COVID-19 pandemic has made patently clear, when one part of One Health is at risk, the other pieces are also in danger
- One Health issues — such as antimicrobial resistance, food security and climate change — transcend national, ministerial, organisational and professional boundaries
- So too must our approach to tackling them



Thank you



@martinmckee

謝謝

