

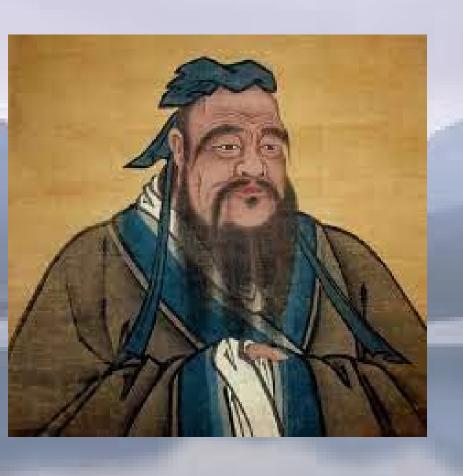


a partnership hosted by WHO

One Health, One World Structures for survival in a dangerous world

Martin McKee Taipei, November 2023





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









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

























Dr Hans Kluge







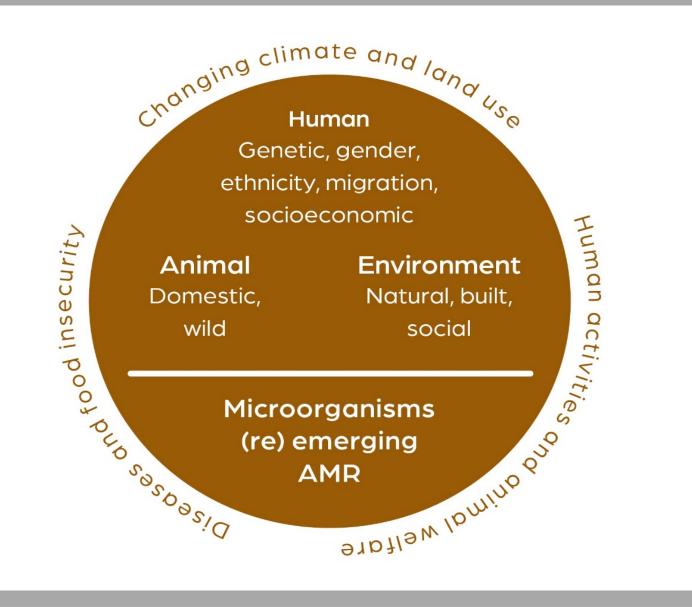






- 2 former Prime Ministers & 2 former **Deputy Prime Ministers**
- 3 former Presidents
- 2 former health ministers
- Senior officials in international banks







THE DETERMINANTS OF HEALTH IN THE 21ST CENTURY

PLANETARY HEALTH (NATURAL)

HEALTH

VOLCANIC ACTIVITY

ASTEROID IMPACT

EARTHQUAKES/TSUNAMIS

GEOMAGNETIC STORM

Peace & security

Cleon air & water

Safe nutritious food

Housing

Educaton

Employment & working conditions

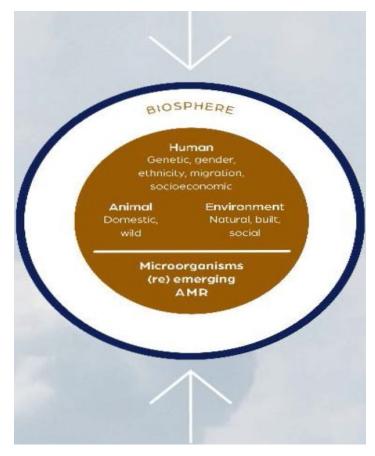
Health care

Social networks/ trust

Digital access

Safe environments

Access to justice



PLANETARY HEALTH (ANTHROPOGENIC)

GLOBAL WARMING

DEFORESTATION

SOIL & WATER DEPLETION

LOSS OF BIODIVERSITY

Conflict & terrorism

Pollution

Food insecuritY

Lack of shelter

Informal. irregular & unsafe employmeni:

> Harmful com modities

Hostile artificial intelligence

Disinformation

Crime & corruption

Racism & xenophobia

ILLNESS

TOXIC WASTE

"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

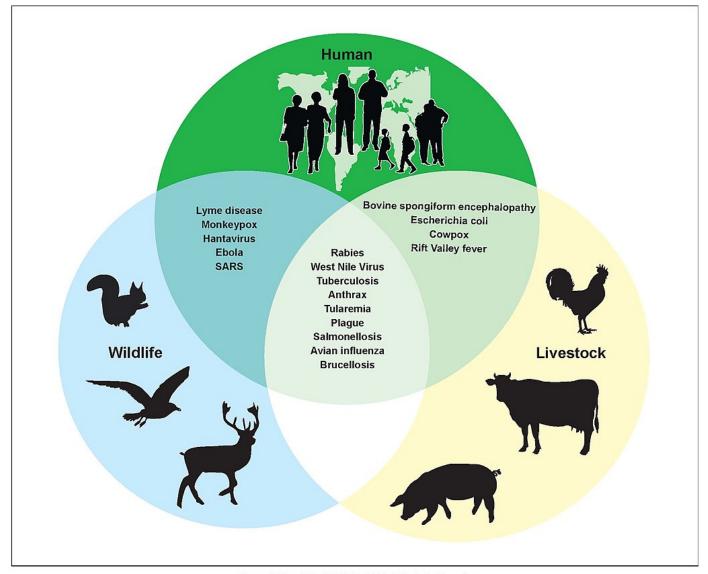


Manhattan Principles

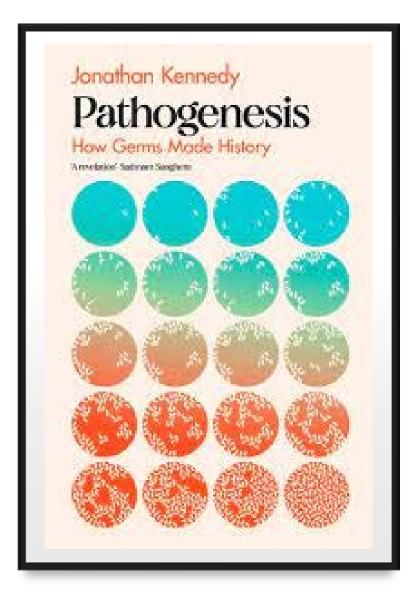
- 1. Recognize the essential link between human, domestic animal and wildlife health and the threat disease poses
- 2. Recognize that decisions regarding land and water use have real implications for health
- Include wildlife health science as an essential component of global disease prevention, surveillance, monitoring, control and mitigation
- Recognize that public health programs can greatly contribute to conservation efforts
- 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

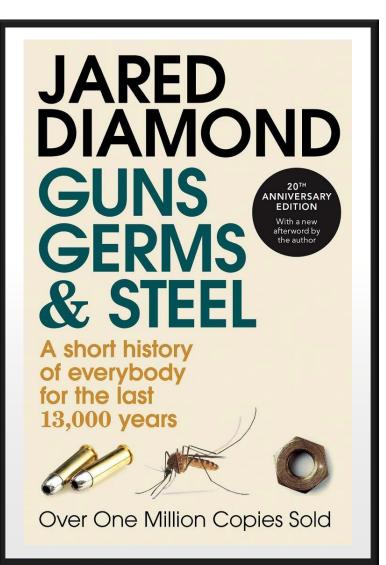


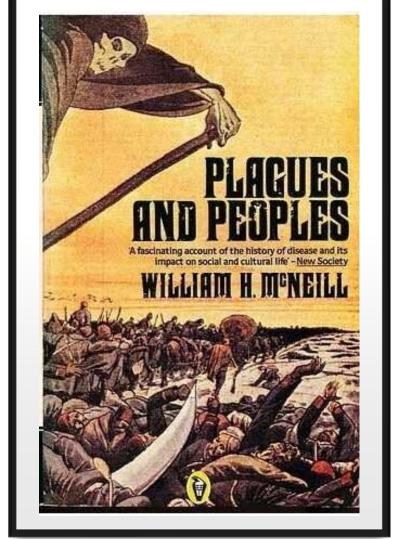
Zoonosesinfectious agents transmitted from nonhuman animals to humans



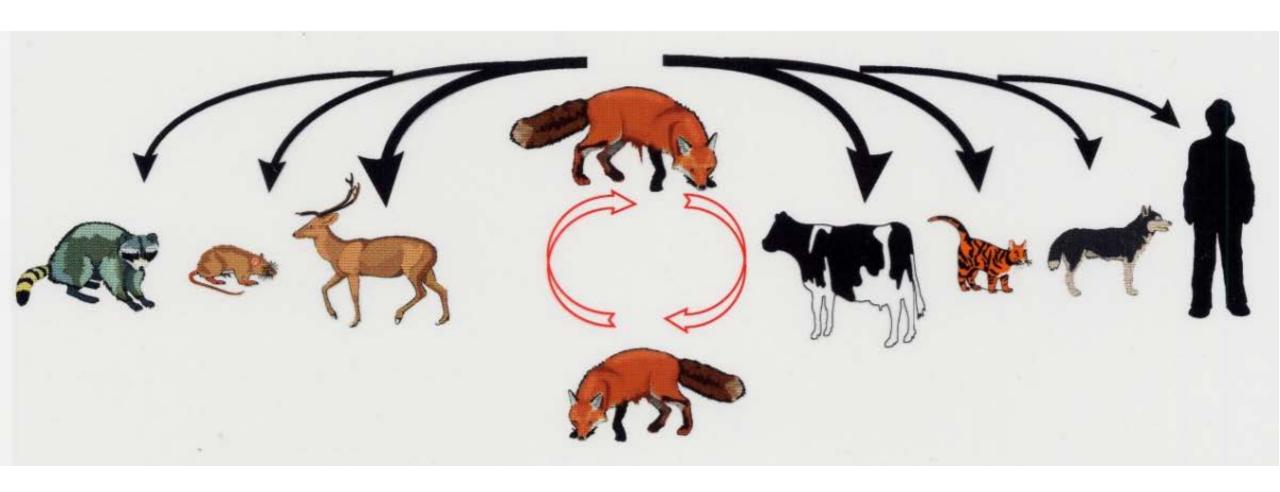
Source: GAO analysis of USGS data (data); Art Explosion (images)



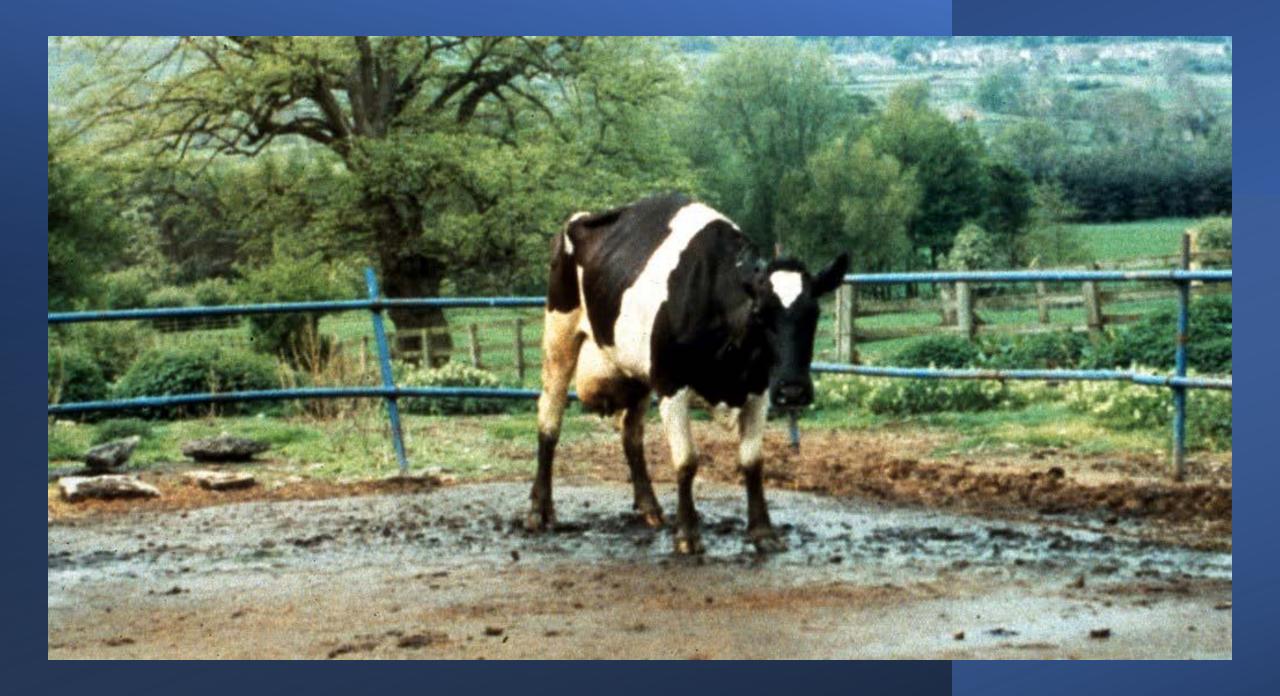




Rabies



https://www.who-rabies-bulletin.org/site-page/epidemiology-rabies

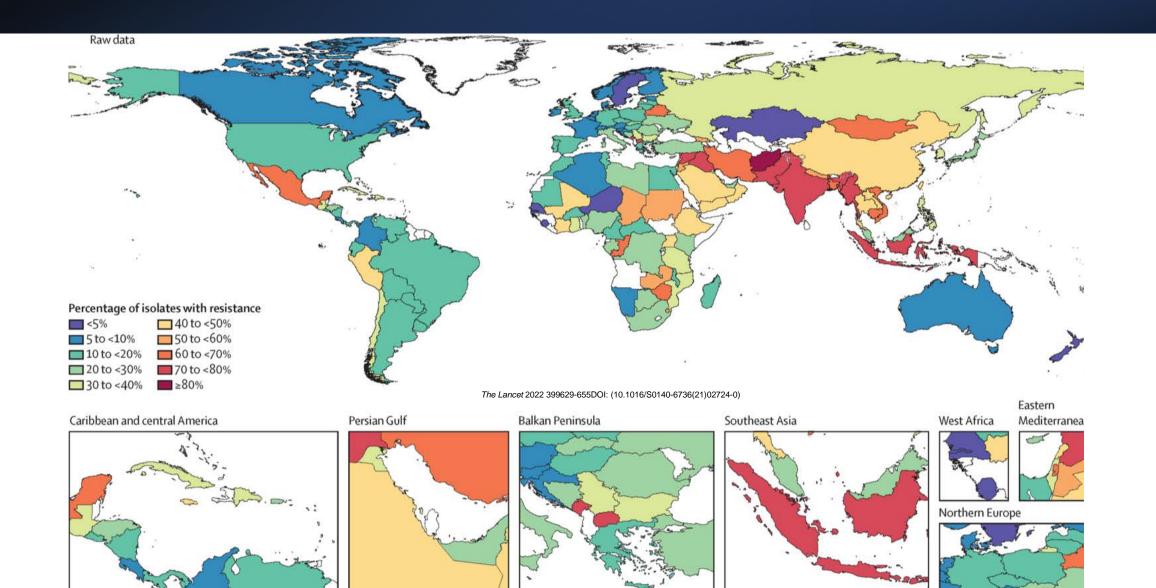




One Health and Antimicrobial Resistance

 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



Policy and strategic planning

Medicines management and prescribing systems

Technological innovation

Context, culture and behavioural research

Two years

Analyse country-level content of national action plans (NAPs) to consider the pace of development and implementation plans.

Align policy interventions with acceptable, feasible, contextual, economic and sensitive recommendations.

Investigate effective combinations of approaches to balance timely access with reducing inappropriate antimicrobial use.

Understand effects of acute limited/reduced healthcare access on antimicrobial use and potential knock-on effects on patient safety.

Engage patients, public and citizens in antimicrobial resistance (AMR) research.

Investigate impact of pandemic on antimicrobial use and antimicrobial stewardship (AMS).

Investigate effects of deprioritising non-pandemic research on infection-related medication safety and wider medicines optimisation.

Identify what patient populations would benefit most from technology supporting antimicrobial optimisation.

Build upon the momentum of mHealth and other electronic technologies being readily adopted in low- and middle-income countries (LMICs) for the purpose of supporting antimicrobial

and infection, to generate the knowledge to promote inclusivity, enable greater participation in health and facilitate capacity.

which these factors intersect with one another in

Five years

Identify the role of stakeholders, including patients/public/citizens in strategy and policy.

Coordinate across NAPs targeting public health.

Identify mechanisms to manage demand generation.

Address public misconceptions and realign public health campaign messages with up-to-date evidence.

Incorporate social science to develop effective communication

Investigate the role of 'nudges' e.g. on drug package redesign, and prescribing architecture to change behaviour.

Understand unintended consequences of reduced travel and socialisation (from external shocks such as a pandemic) on antimicrobial demand and supply.

Accelerate safe and appropriate access of important new antimicrobials in high burden LMICs.

Ten years

Evaluate NAPs (through independent inquiry) and accelerate the learning.

Enhance methods to increase population health literacy.

Establish economic evaluation of interventions.

Develop and enhance antimicrobial usage data capture, linkage and analysis for monitoring

Develop and enhance systematic drug monitoring across primary, secondary and social care sectors (e.g. therapeutic drug monitoring, efficacy and adverse drug events).

Address the data gaps in Watch and Reserve category antimicrobials which impede therapeutic optimisation.

Investigate the scaleup and adoption of technology across high income countries (HICs) and

Develop and repurpose contextually appropriate, economical innovation and technology to optimise disease management.

Assess the mechanisms for scale-up through analysis of strategic and cultural contexts, improvements in the health and welfare of people in HICs and LMICs.

Take affirmative action in including individuals from minority groups in decision and policy making, as well as disaggregation of key health indicator data by ethnicity.

Investigate how new technologies for targeted and optimised

optimisation in parallel to the wider adoption of technology.

Define appropriate, standardised outcome measures for the assessment of success of technological interventions.

Investigate power dynamics in the context of AMR

Develop a better understanding of the extent to high, low- and middle-income countries.

Characterise the ways in which relative power and hierarchies across social constructs (e.g. race, gender and class) determine health-seeking and health-provision behaviours.

antibiotic use can be implemented with least disruption to existing patient pathways.

Identify mechanisms for the linkage of technology with non-communicable healthcare problems and chronic infections (such as TB and HIV) that can complicate acute infection management.

Identify contextually and culturally sensitive and responsive interventions that account for inequalities to effectively optimise health-seeking and health-provision behaviours.

Apply pathway approach to research promoting better understanding of individual, teams, organisational, national and global infection prevention and antibiotic prescribing challenges and potential

Create structural change in the framework of global health organisations to ensure agency and representation for populations vulnerable to be being excluded.

Understand and account for variation in health seeking and health providing behaviours to guide community, public, patient and citizen engagement in AMR.

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

Esmita Charani (a) 1,2*, Marc Mendelson², Diane Ashiru-Oredope (b) 3, Eleanor Hutchinson⁴, Manmeet Kaur⁵, Martin McKee (b) 4, Mirfin Mpundu⁶, James R. Price⁵, Nusrat Shafiq (b) 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

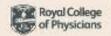
ALICE ROBERTS





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



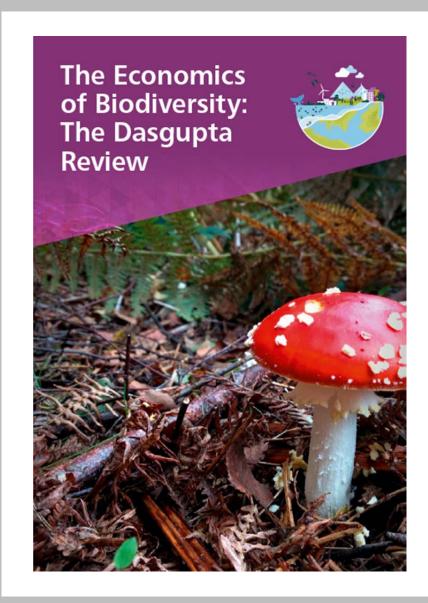
Modern medicines from plants



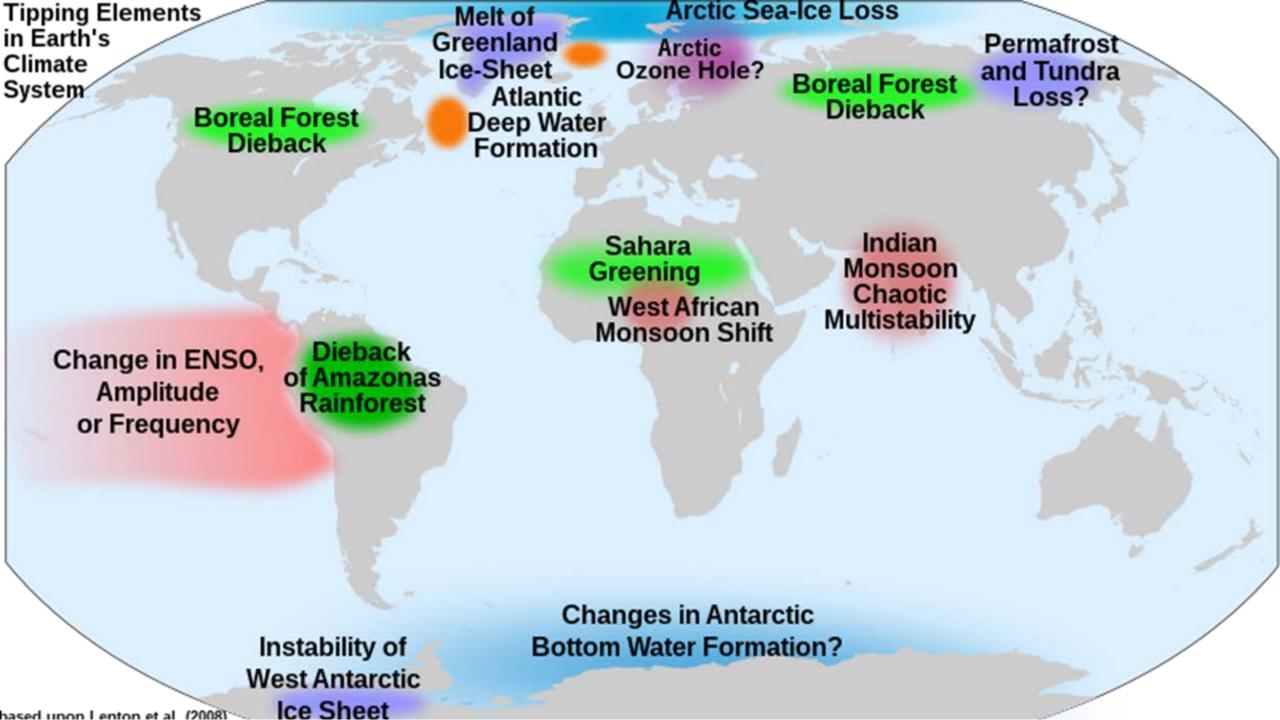
Botanical histories of some of modern medicine's most important drugs

Editor: Henry Oakeley Royal College of Physicians London











Food security implications of the Ukraine conflict

SAMNG LIVES CHANGIN LIVES

The Russian invasion of Ulvaine has major. implications for food security across the world as well as the region, given both countries' major roles. in global food markets and fluisials prominence in gb bal 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 stanvation.

A total 44 million people in 38 countries are tectoring on the edge of famire and overalligibital needs for humanitarian assistance are higher than ever.

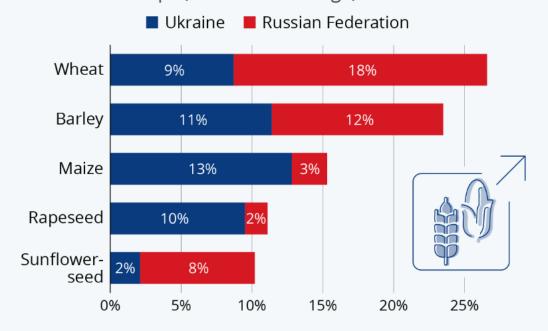
As funding levels off due to do nor nations' treasuries. being stretched, and in the face of rising food costs. WIP has already had to reduce rations for refugees and other vulnerable populations across East. Africa and the Middle East. This includes Yemen, where 16.2 million people are food insecure and there are pockets of famine-like conditions

The conflict in Ukraine has plurged 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's imultaneously 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











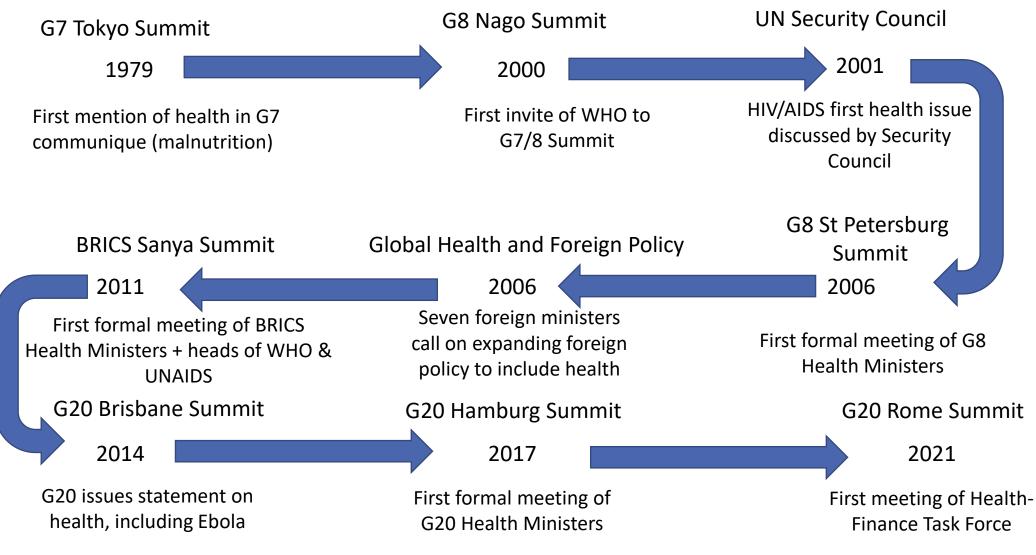
Global health

"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









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

