

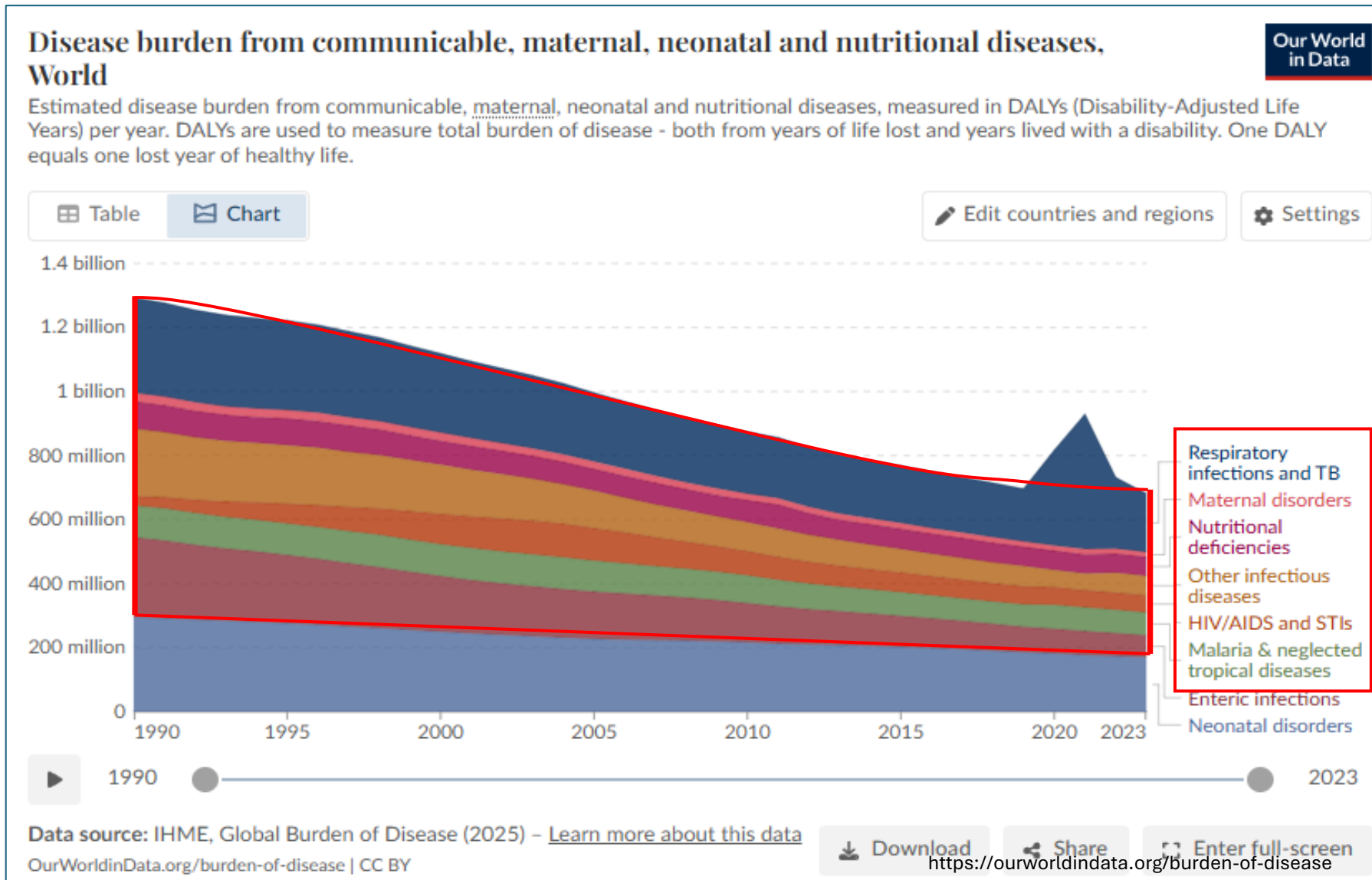
International Health Reform Project (IHRP)



AIP, Brisbane, 26 June 2026

Ramesh Thakur. David Bell

Global burden of infectious disease, 1990 - 2023



Outline

- **REPPARE (University of Leeds)**
 - WHO, World Bank, G20 pandemic messaging
- **IHRP (International Health Reform Project)**
 - Re-booting multilateral cooperation in health



The evidence behind claims regarding pandemic preparation and response.

University of Leeds, with University of Ghent

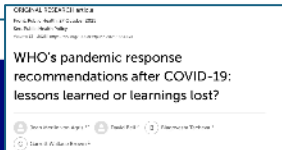
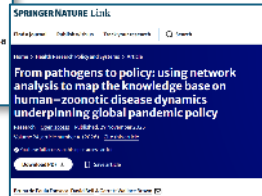


Analysis of major reports of:

- WHO
- World Bank
- G20 Secretariat
- Primary and secondary citations



<https://essl.leeds.ac.uk/directories0/dir-record/research-projects/1260/re-evaluating-the-pandemic-preparedness-and-response-agenda-reppare>

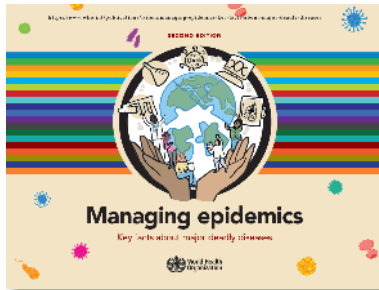


International agency reports to governments on pandemic preparedness and response

“Epidemics and pandemics of infectious diseases are occurring more often, and spreading faster and further than ever, in many different regions of the world.” (WHO, Managing Epidemics, 2023)

“300 – 700 times return on investment” G20 HLIP, 2022

WHO



Managing epidemics: Key facts about major deadly diseases. 2nd Ed. 2023.

<https://www.who.int/publications/i/item/9789240083196>



Future surveillance for epidemic and pandemic diseases. 2023

<https://iris.who.int/bitstream/handle/10665/374992/9789240080959-eng.pdf?sequence=1>

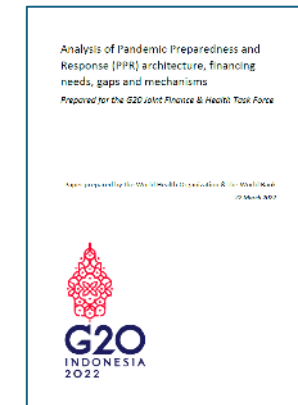
G20 High Level Independent Panel



A Global Deal for a Pandemic Age 2022

<https://pandemic-financing.org/wp-content/uploads/2021/07/G20-HLIP-Report.pdf>

WHO – World bank



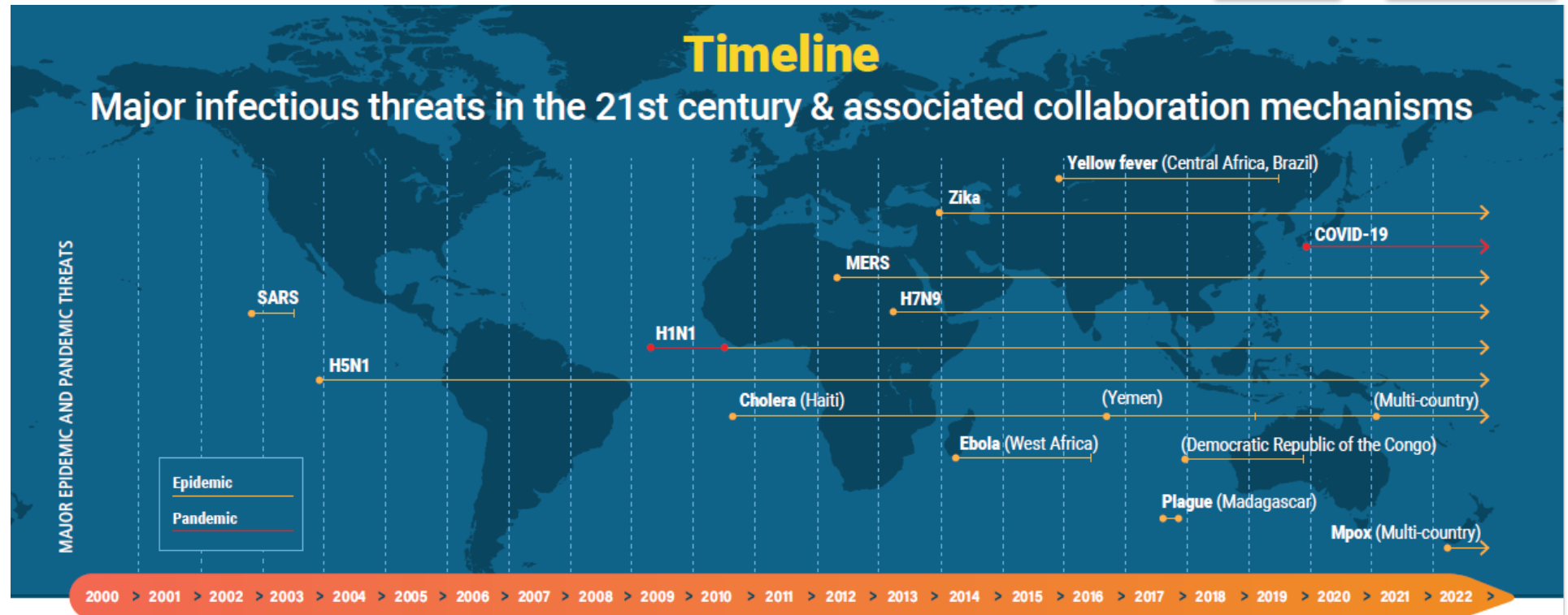
Primary financing analysis for PPR, for G20, 2022

<https://thedocs.worldbank.org/en/doc/5760109c4db174ff90a8dfa7d025644a-0290032022/original/G20-Gaps-in-PPR-Financing-Mechanisms-WHO-and-WB-pdf.pdf>

WHO characterization of epidemic risk

Future Surveillance; Managing Epidemics WHO 2023.

What WHO said.



*i.e.: We have a rapidly increasing threat of outbreaks and pandemics.
The world was much safer before the year 2000.*

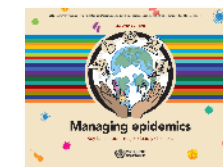
<https://www.who.int/publications/i/item/managing-epidemics-key-facts-about-major-deadly-diseases>

<https://iris.who.int/bitstream/handle/10665/374992/9789240080959-eng.pdf?sequence=1>

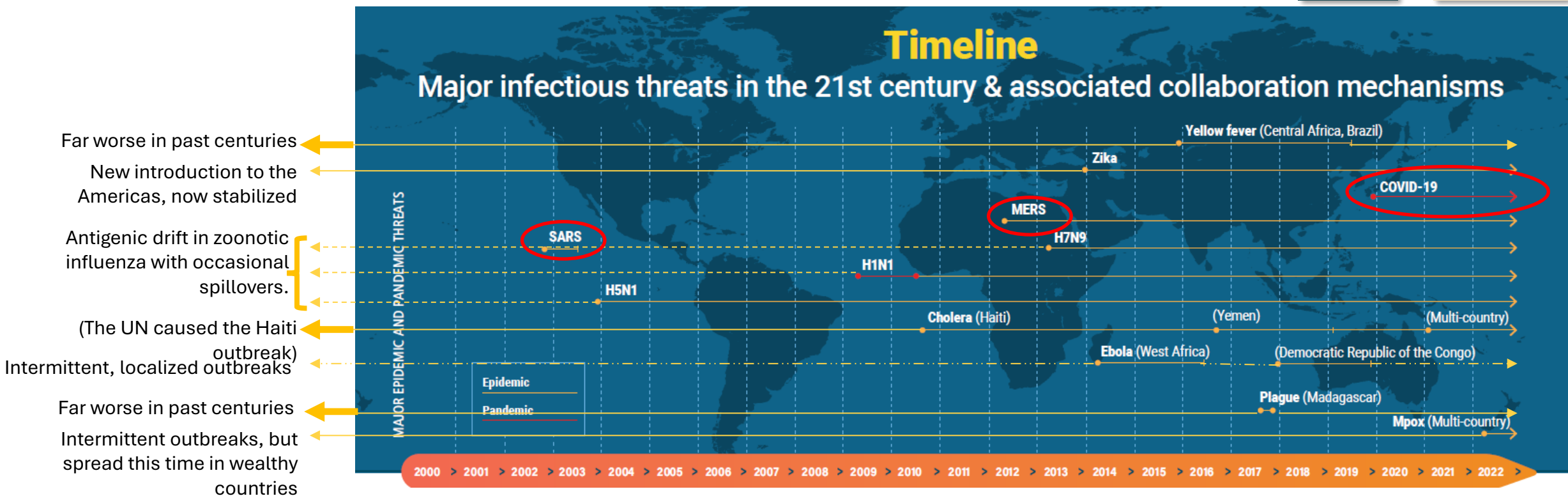


REPPARE

WHO characterization of epidemic risk



What WHO could have said.



i.e.: Outbreaks now kill far less people:

- Once severe, now much milder and intermittent: Plague, Yellow fever, cholera, influenza
- Two coronavirus outbreaks killed less than 1000 people each. The third is of disputed origin.

G20 High Level Independent Panel (HLIP), 2022 (Annex E: Metabiota data)



“Clear exponential increase” in wildlife zoonotic spillover.



ANNEX

Annex E

Increasing Frequency of Wildlife Zoonotic and Influenza Spillover Events

The Panel studied data from Metabiota on historical trends in wildlife zoonotic and influenza spillover events.

Chart 1 shows the frequency of epidemics caused by wildlife zoonoses. (It fits a log-linear model to the observed data.) **There has been a clear exponential increase of such epidemics, which increased in frequency by a factor of about 3 every 20 years.**

Chart 2 shows the number of influenza spillover events. (It applies a linear best fit to the data.) **There have been around 10 influenza spillover events each year in recent years, compared to hardly any 25 years ago.**

Source: Metabiota

<https://pandemic-financing.org/report/foreword/>

Chart 1: Increasing Frequency of Epidemics caused by Wildlife Zoonoses (excluding Influenza) (log-normal scale)

Non-influenza

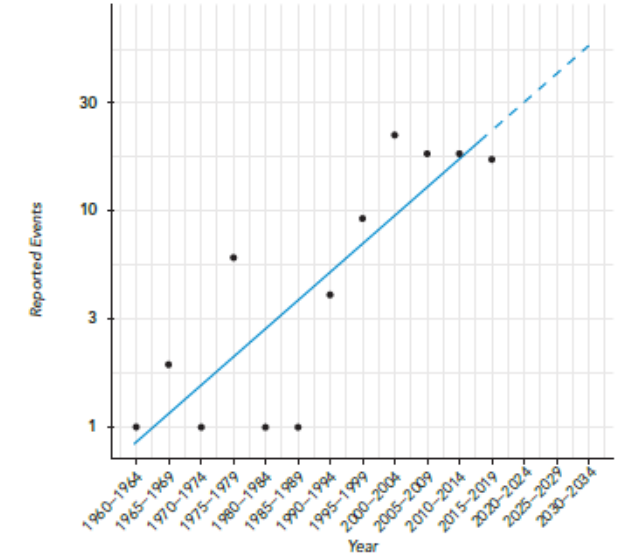
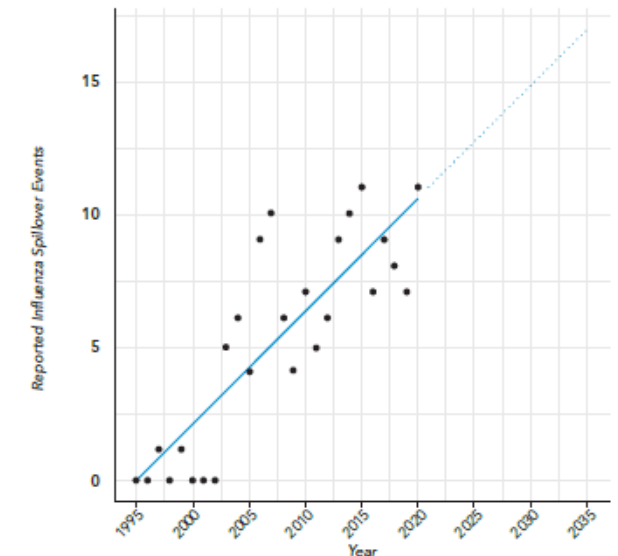
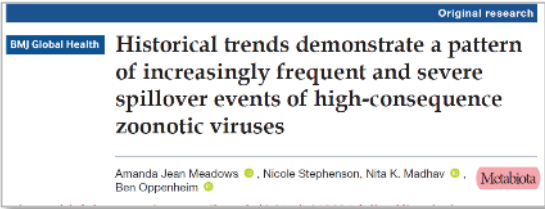


Chart 2: Increasing Frequency of Reported Influenza Spillover Events

Influenza

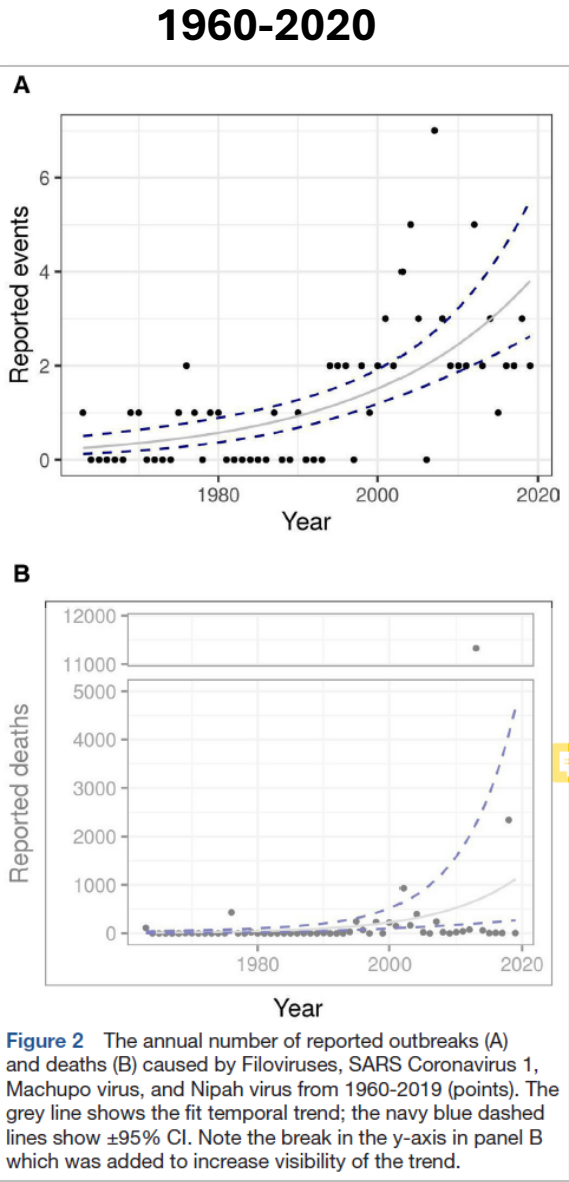


Metabiota - Meadows et al. 2023 (G20 HLIP Annex E)



Meadows et al. (2023)
<https://gh.bmj.com/content/bmjgh/8/11/e012026.full.pdf?with-ds=yes>

Potential reasons for rising frequency of emerging infectious disease (EID) events.



Rising total population

(Smith et al (2014) [quoted by Meadows] note increase in new outbreak frequency, but reduction in mortality rate [i.e., individual risk])

Increased surveillance effort:

- Economic growth – more labs, roads
- Rising donor interest in outbreaks
- Rising total donor funding
- Rising emphasis on publication

Development of PCR (1983)

Expansion of PCR use

Development of point-of-care antigen tests

Expansion of access to PoC serology tests

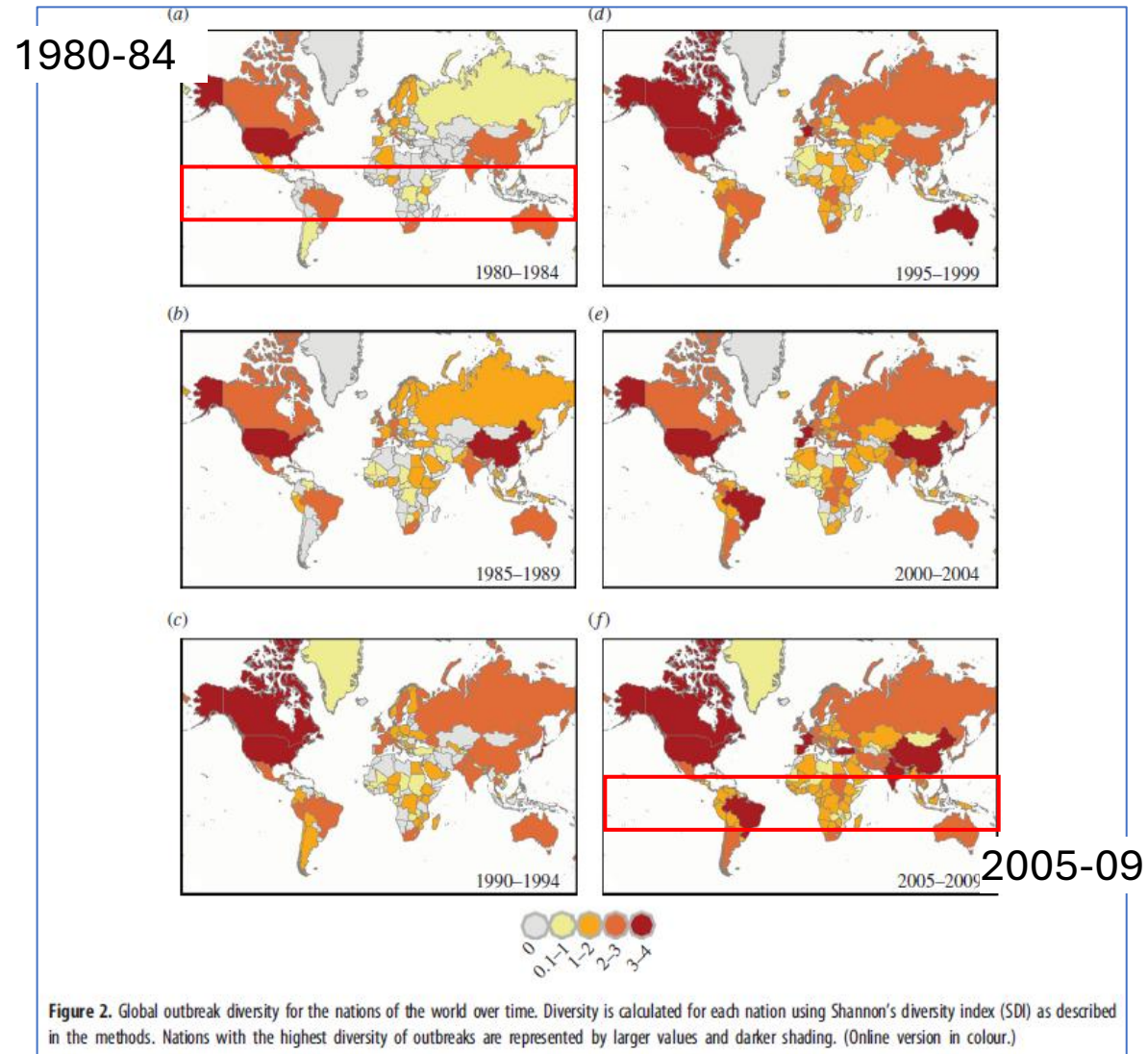
Development of genome sequencing

(distinguish new variants)



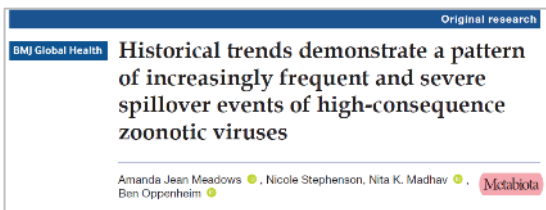
Association of outbreak reporting with development, over time

Smith et al. (2014), illustrating the progression of reporting, increasing alter in less **technologically-developed** geographies (e.g. sub-Saharan Africa excluding South Africa).



https://royalsocietypublishing.org/doi/10.1098/rsif.2014.0950?url_ver=Z39.88-2003&rfr_id=ori%3Arid%3Acrpub++0pubmed

Metabiota - Meadows et al. 2023 (G20 HLIP) data



Meadows et al. (2023)
<https://gh.bmj.com/content/bmjgh/8/11/e012026.full.pdf?with-ds=yes>

Is there really an
 “exponential increase” in
 zoonotic spill-over events

(Basis for G20 High Level
 Independent Panel (HLIP),
 2022 (<https://pandemic-financing.org/report/foreword/>)

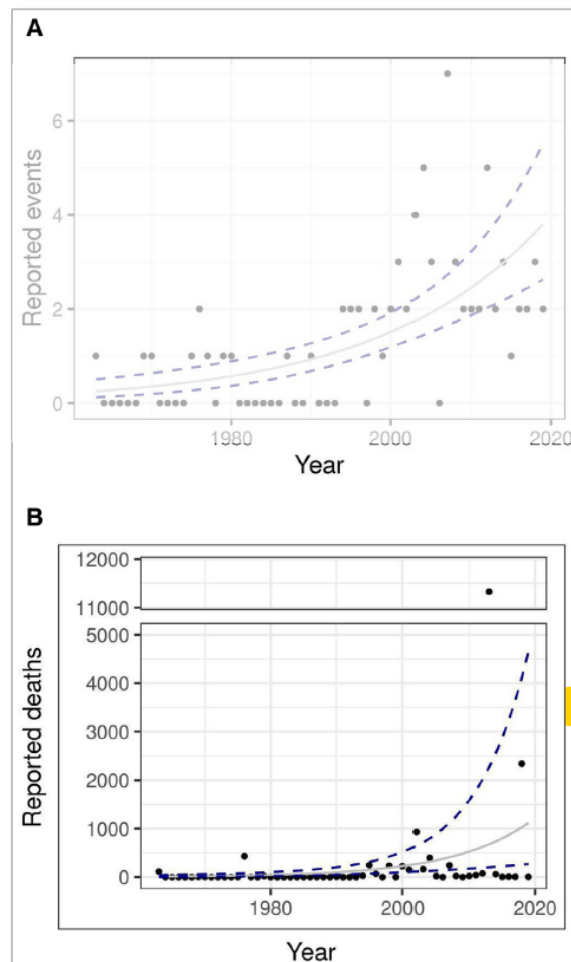
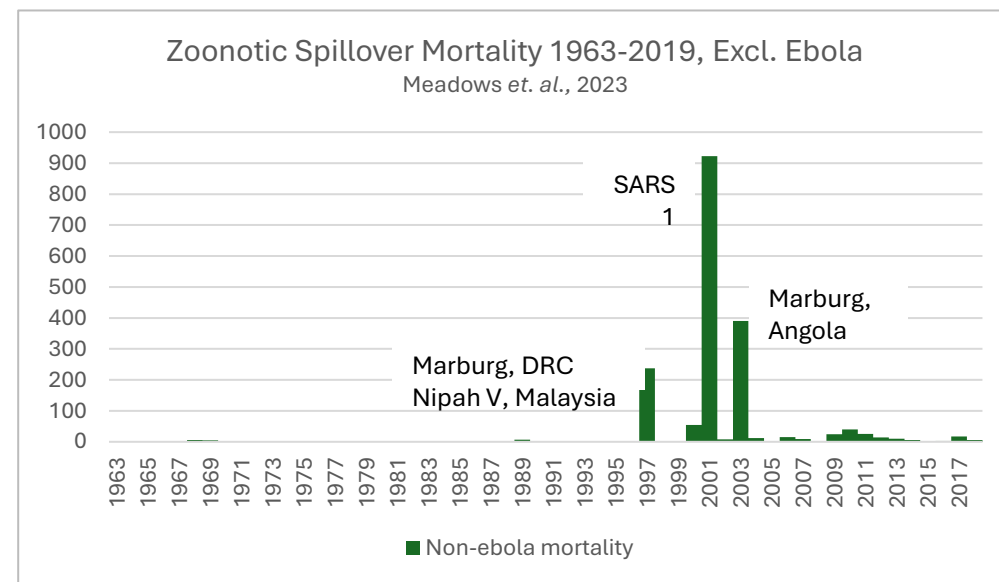
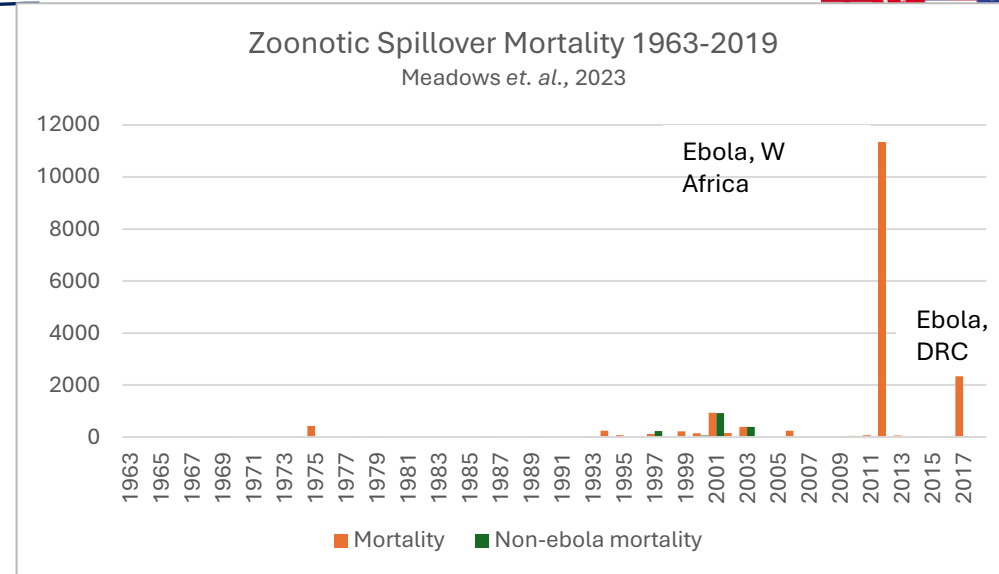


Figure 2 The annual number of reported outbreaks (A) and deaths (B) caused by Filoviruses, SARS Coronavirus 1, Machupo virus, and Nipah virus from 1960–2019 (points). The grey line shows the fit temporal trend; the navy blue dashed lines show $\pm 95\%$ CI. Note the break in the y-axis in panel B which was added to increase visibility of the trend.



G20 High Level Independent Panel (HLIP), 2022 (Annex D)



“Major outbreaks” of past 2 decades

ANNEX

Annex D

Table 1: Major Infectious Disease Outbreaks in the Past Two Decades

YEAR	OUTBREAK
2019	SARS-CoV-2
2018	Lassa
2017	Zika
2017	Ebola
2014	Chikungunya
2014	Ebola
2012	MERS
2010	Cholera
2009	H1N1 Influenza
2004	H5N1 Influenza
2003	SARS-CoV-1
2001	Enterovirus 71
2001	Nipah

Best fit of actual deaths for past 20 years of outbreaks (excluding Covid):

Outbreak	Mortality
2019 SARS-CoV-2	...
2018 Lassa	114
2017 Zika	362
2017 Ebola	3
2014 Chikungunya	0
2014 Ebola	11,325
2012 MERS	858
2010 Cholera	9,792
2009 H1N1 Influenza	163,000
2004 H5N1 Influenza	32
2003 SARS-CoV-1	774
2001 Enterovirus 71	26
2001 Nipah	54
(2018 Ebola)	33
(2018-2020 Ebola)	2287
TOTAL	189,661
TOTAL Excl influenza	25,629

Malaria, TB & HIV mortality (2000-2020): >60 million

So, what is the annual pandemic burden?

“Average 2.5 million /year”

Madhav et al. 2023. (CGD, Ginkgo Bioworks)



<https://www.cgdev.org/publication/estimated-future-mortality-pathogens-epidemic-and-pandemic-potential>

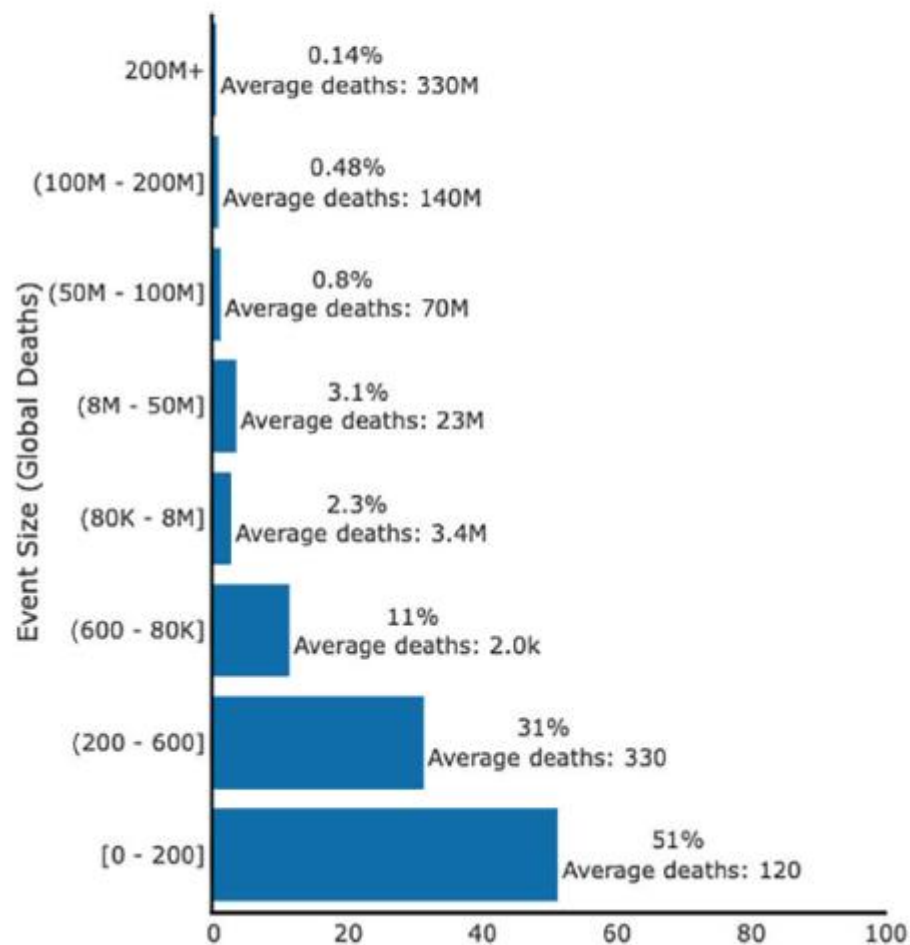


[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(24\)01439-9/abstract](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(24)01439-9/abstract)

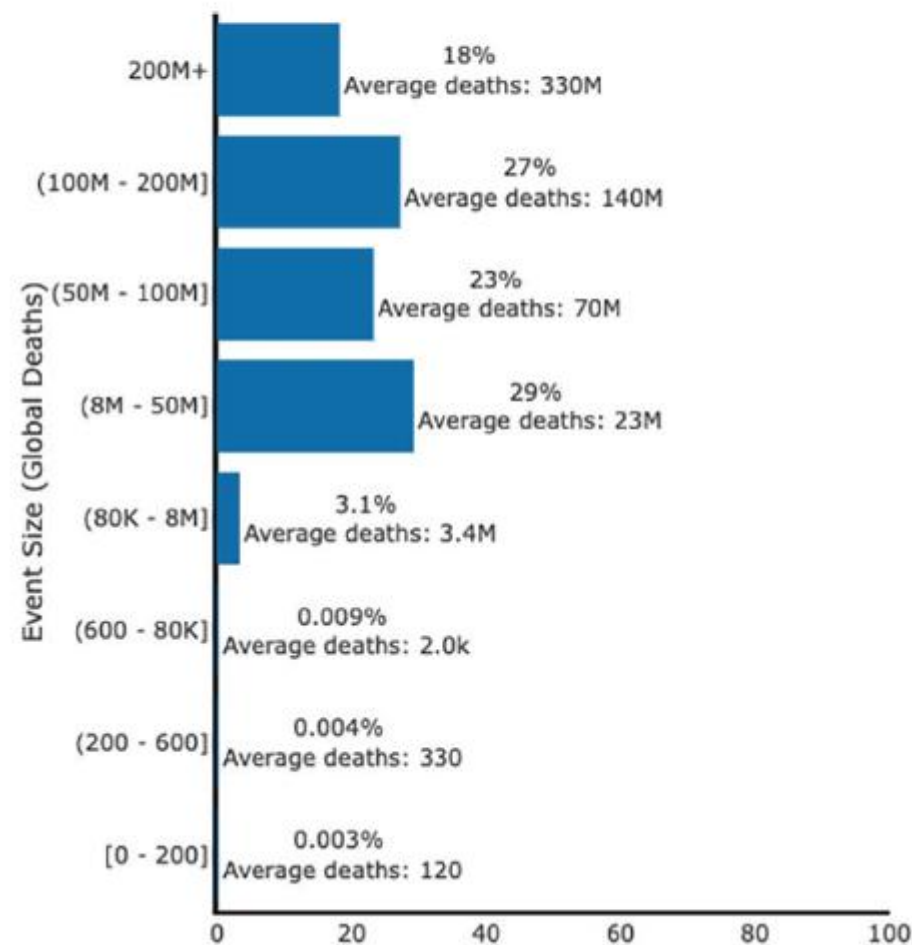
Respiratory disease epidemics and pandemics

FIGURE 5. Respiratory catalog composition: simulated event sizes and their contribution to expected losses

Panel A: % of events



Panel B: % of deaths



Estimates of Return on Investment

Analysis of Pandemic Preparedness and Response (PPR) architecture, financing needs, gaps and mechanisms

Prepared for the G20 Joint Finance & Health Task Force

Paper prepared by the World Health Organization & the World Bank
22 March 2022



WHO & World Bank report on financing for pandemic preparedness and response, prepared for the G20, 2022

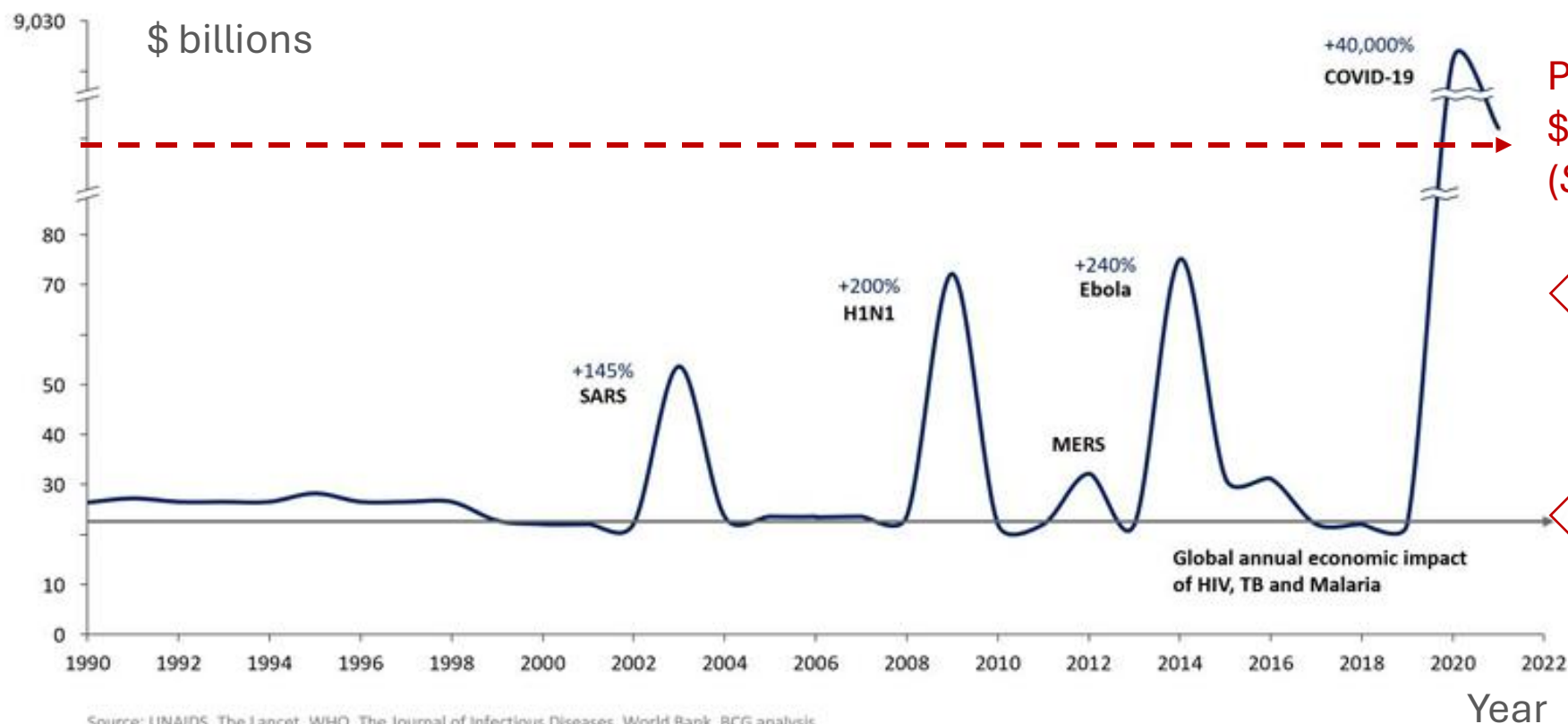
The basis for pandemic costing under the IHR amendments and Pandemic Agreement.

\$31.1 Billion annually
(\$10.5B in new Official Development Assistance)

World Bank recommends a further 10.5B for One Health

WHO and World Bank, 2022: Economic impact of selected outbreaks over past 30 years.

Figure 1. Economic impact of selected outbreaks over past 30 years (in US\$ billion)



Probable true annual TB cost
\$580B in 2018
(Silva et al. Lancet 2021)

Outbreak cost
inflated by cost
of response

Falsely low (\$22B)
malaria/TB/HIV costs
(by orders of magnitude)

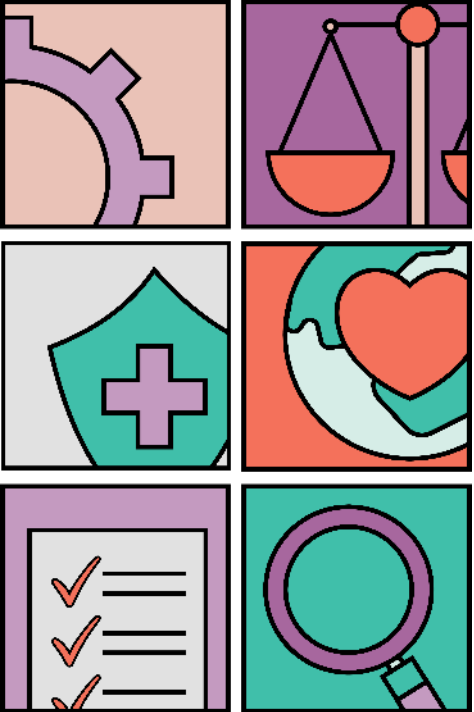
Source: UNAIDS, The Lancet, WHO, The Journal of Infectious Diseases, World Bank, BCG analysis

Comparison of global official development assistance (ODA) proposed for PPPR

Organization/ Initiatives	PPPR Estimated ODA (US\$)	PPPR as % of 2022 ODA	PPPR as % of 2019 Pre-Covid ODA
G20 HLIP (basic)	\$15 billion per year	38.3%	67.6%
McKinsey & Co.	\$9.6 billion per year	24.4%	43.2%
WHO/World Bank	\$10.5 billion per year	27%	47.2%
Tuberculosis	\$1.1 billion in ODA in 2022 (actual)	2.8%	
Malaria	\$2.4 billion in ODA in 2021 (actual)	6.1%	
WHO total budget	\$3.9 billion in ODA in 2022 (actual)		

this represents massive under-investment when compared to PPPR estimates for ODA and relative disease burdens





THE INTERNATIONAL HEALTH REFORM PROJECT (IHRP)

Rebuilding International Health Governance on Ethics, Evidence and Sovereign Responsibility

IHRP Panel

• Ramesh Thakur (co-chair)	Int. Relations; Former UN Asst. Sec Gen.	Australia/India
• David Bell (co-chair)	Global health and biotech, Former WHO.	USA/Australia
• Reginald Oduor	Political Philosophy, Uni of Nairobi	Kenya Garrett
• Wallace Brown	Chair, Glob Hlth Policy, Uni of Leeds	UK /USA
• Wellington Oyibo	Prof. Parasitology, Uni of Lagos	Nigeria
• Héctor Carvallo	Fmr Adj. Prof Medicine, Buenos Aires	Argentina
• Thi Thuy Van Dinh	Int. Law – Fmr UN (UNODC & OHCHR)	USA/Viet Nam
• Harriet Green	Pol theory & Glob Hlth, Uni of Leeds	UK
• Youssoupha Ndiaye	MoH Dir. Planning, Research, Glob Hlth	Senegal
• Elisabeth Paul	Assoc. Prof. Pub Hlth, Uni Lib de Bruxelles	Belgium
• Roger Bate	Economist – Hlth and dev policy	USA/UK

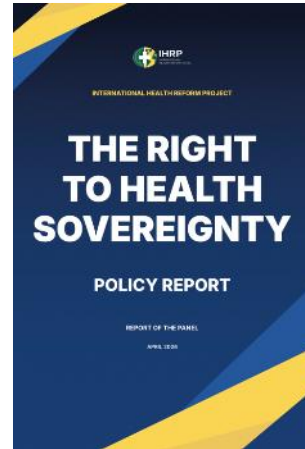
The panel's work is independent, and has been funded by the Brownstone Institute.

The IHRP panel has developed two linked outputs



Technical Report

provides the analytical foundation, examining ethics, institutional history, disease burden, financing, governance structures and legal frameworks.



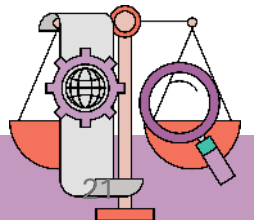
Policy Report

distills these findings into principles and reform pathways for policymakers.



Policy Brief

Summary of findings and recommendations

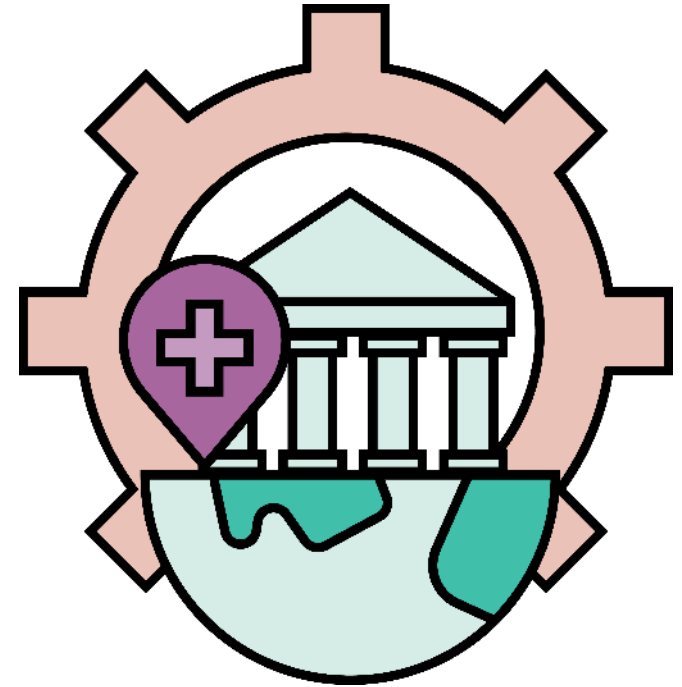


Sovereignty as Responsibility

Individuals have autonomy in medical decisions.

States (as the collective expression of individual sovereignty) **bear primary responsibility** for protecting their populations' health.

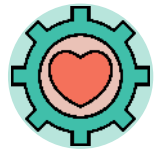
International organisations derive **legitimacy** from **voluntary State participation**.



Ethics as a foundation

Healthcare is not value-neutral. Its legitimacy rests on ethical principles embedded in medical tradition, international human rights law and the UN Charter.

Individual sovereignty – expressed at international level through national sovereignty:



beneficence



non-maleficence



patient confidentiality



voluntary informed consent



13 ethical principles for international public health cooperation:

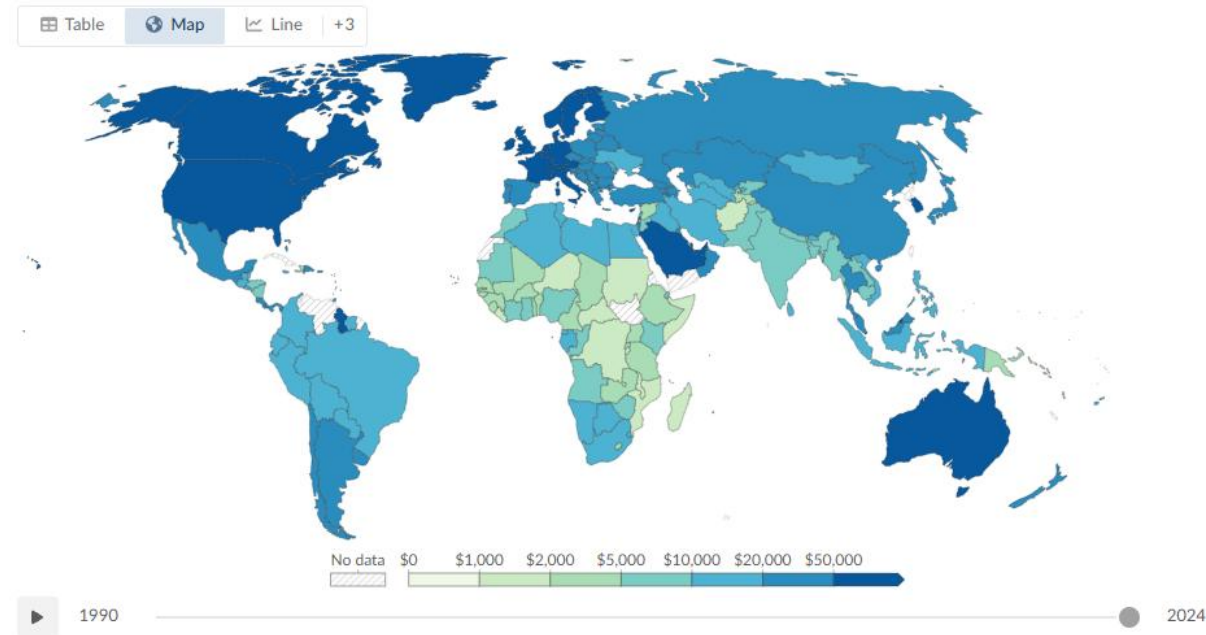
- **Status of individuals and States**
- **Voluntary informed consent and absence of coercion**
- **Evidence-based, time-limited, accountable**
- **Role of public health institutions**
- **Role of International public health institutions**

Evidence-based public health

GDP per capita, 2024

GDP per capita is a country's gross domestic product divided by its population. This data is adjusted for inflation and differences in living costs between countries.

Our World in Data



Data source: Eurostat, OECD, IMF, and World Bank (2026) – [Learn more about this data](#)

Note: This data is expressed in international-\$ at 2021 prices.

OurWorldinData.org/economic-growth | CC BY

Download

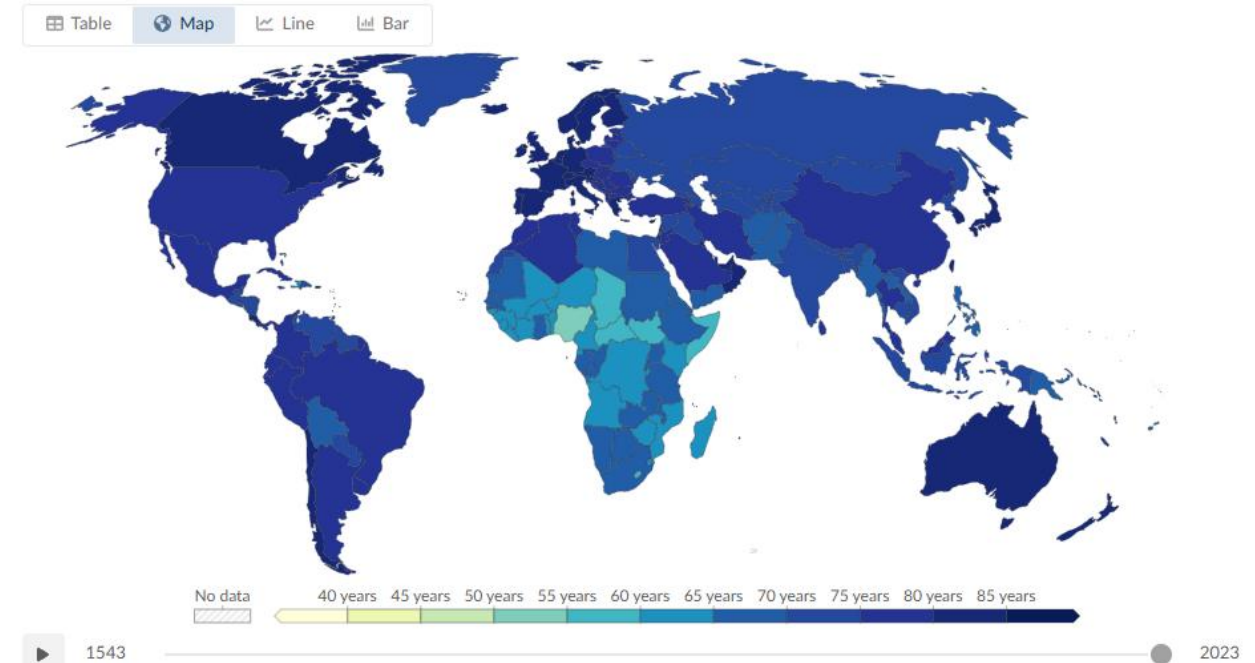
Share

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Life expectancy, 2023

Period life expectancy is the number of years the average person born in a certain year would live if they experienced the same chances of dying at each age as people did that year.

Our World in Data



Data source: Riley (2005); Zijdeman et al. (2015); HMD (2025); UN WPP (2024) – [Learn more about this data](#)

OurWorldinData.org/life-expectancy | CC BY

Download Share Enter full-screen

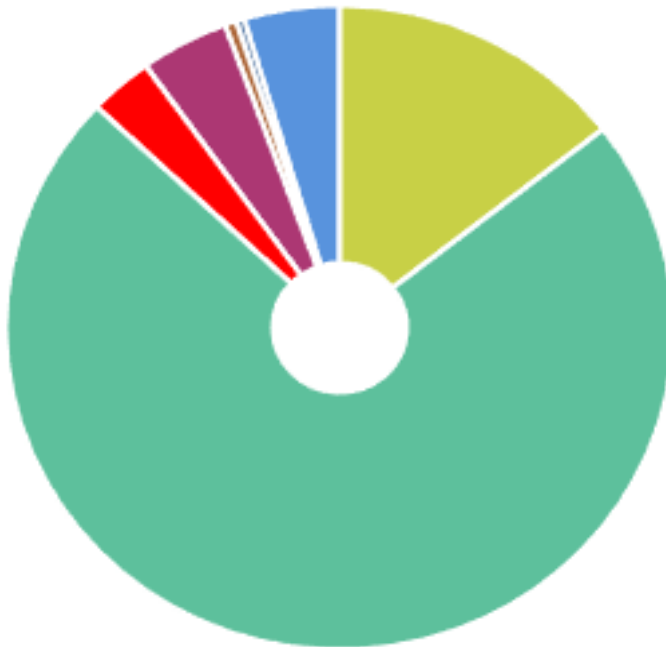
Why has WHO drifted from evidence-based public health?

- **Funding** – increasingly **specified** and of **private** origin
- **Loss of firewalls** with private (for profit) sector – *inevitable conflict with health priorities*
- **Legalism vs public health** – Treaty approach locks in policies increasingly contrary to evidence or need
- **Bureaucratic malaise**
- **Staffing distant from impact** – Low staff turnover *related to benefits, pension structure, salaries tied to funding sources*

Why has WHO drifted from evidence-based public health?

WHO 2024-25 budget: Who controls WHO?

Funding by fund type



Funding by contributor

UPDATED UNTIL 08-2025

- All Contributors

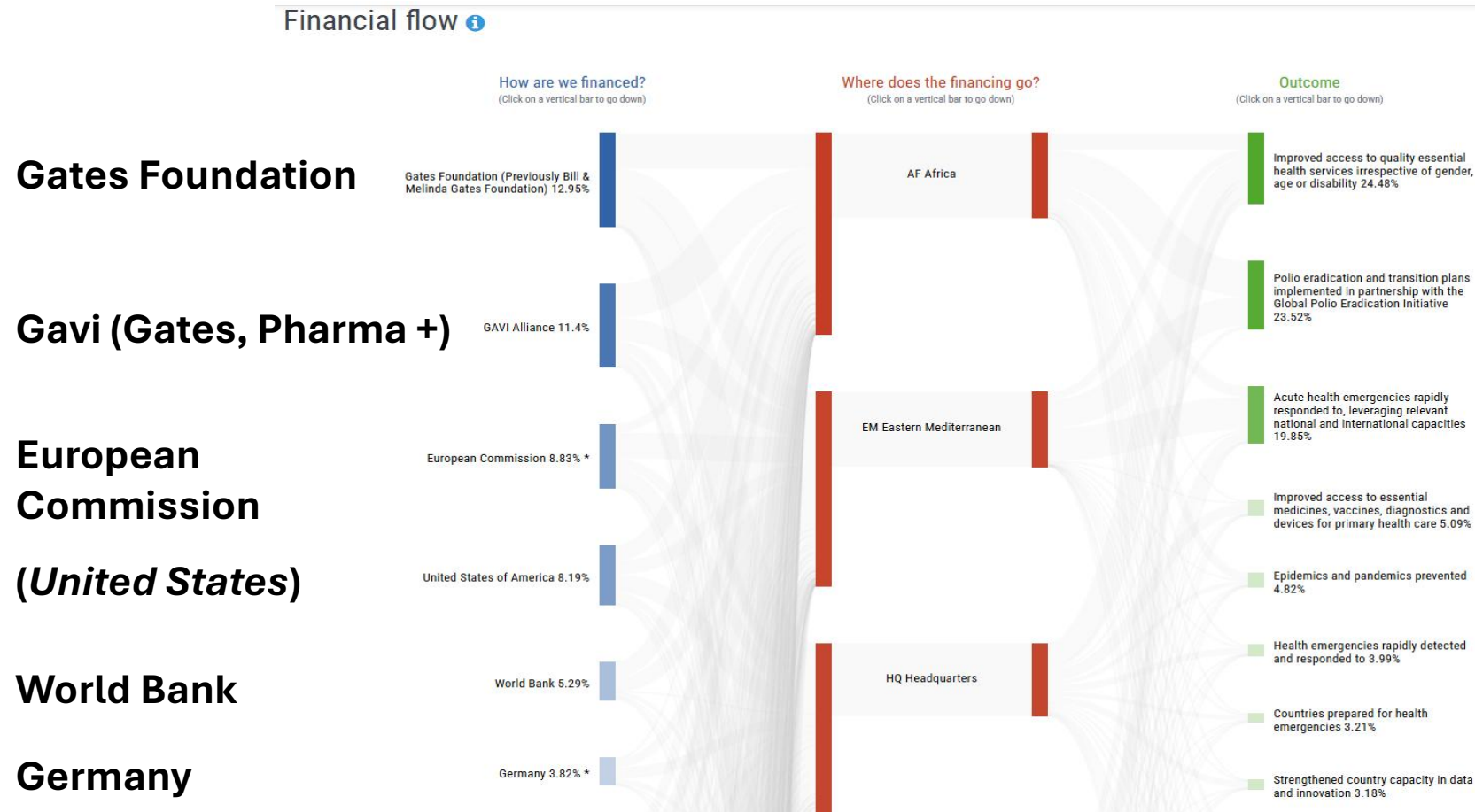
Assessed contributions	1,148,300K
Voluntary contributions - Specified	5,769,019K
Voluntary contributions - Thematic	246,086K
Core voluntary contributions	341,725K
PIP Contributions	45,275K
Contingency Fund for Emergencies	30,316K
Projected funding*	369,082K
Total	7,949,804K

* Projected can be either core voluntary or voluntary thematic/specified

<https://open.who.int/2024-25/contributors/contributor>,

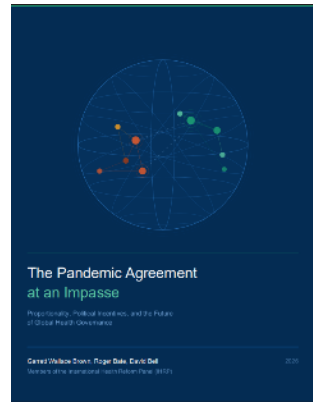
Why has WHO drifted from evidence-based public health?

WHO 2024-25 budget: Who controls WHO?



<https://open.who.int/2024-25/contributors/contributor>

Incentive structure of the health security agenda



- Covid-19 response saw record transfer of wealth from low to high income.
- Nutrition, malaria, TB funding is dropping.
- Malaria mortality is rising

Institutional Reform (Reform or replace)

Principles for reforming the WHO– or, if necessary, a successor International Health Organization (IHO):

- > **Decentralised authority.**
- > **Proportionate emergency policy** focus within a more people-centred public health approach.
- > **Focus on remediable high-burden diseases, health systems and major determinants of health and resilience**
- > **Financial independence** through assessed contributions.
- > **Strict conflict-of-interest rules.**
- > **Staffing reform:** Term limits, rotation, regionalisation
- > **Limited, clearly defined mandates.**
- > **Time-bound interventions** that build national capacity.
- > *Success measured by redundancy, not expansion.*



Thank you



<https://internationalhealthreformpanel.org>