

COVID-19 Reports, April-July 2020: What Experts Expect and Propose

Michael Marien (7/30/20)

(Senior Principal, Security & Sustainability Guide; mmarien@twcnny.rr.com)

The COVID-19 pandemic has already changed our world and is still underway with no end in sight. The crisis will likely continue over several years, if not longer. Some countries are beginning to slowly re-open after lockdown, while other countries are facing a sharp upswing in infections, e.g. Brazil, Mexico, India, and Russia. In the U.S., infections and hospitalizations in some states are declining, but increasing in most states. As of late July, overall infections and deaths in the world and the US continue to rise--and this information is under-reported.

A quick tech fix treatment or vaccine is unlikely, despite Operation Warp Speed by the U.S. government, to deliver 300m doses of a vaccine by January (*The Economist*, 18 July, p19). As of July, over 135 potential coronavirus vaccines are in preclinical tests worldwide, and more than 30 others are in clinical trials on people (*New York Times*, 21 July, D1). Nevertheless, most experts expect success by early 2021 at best, and then there are problems of global distribution and “anti-vaxxer” backlash, as well as “A Pandemic of Misinformation” (*TIME*, 3 Aug, p.27), including ignorant statements and policies by some political leaders that defy what the experts propose and aggravate our existential problems (#37).

Why “COVID reports”? Because they are not only written by scientists and other experts, but by groups pooling their expertise. Although not a flood of reports, there has been a steady stream since March, with the vast majority of the 50 reports identified here published in the past four months. All of them are by groups with two exceptions (#16a & 29), albeit issued by reputable organizations, and all are by experts with one exception (#18).

The reports are generally quite brief, clearly written, and free online. Epidemiologists and other public health experts explain how governments at various levels can best deal with the crisis, while economists and other social scientists are considering the profound impacts on security and sustainability of individuals, families, communities, industries (airlines, schools, colleges, hospitals, sports, theaters, meat-packers, etc.), small and large businesses, state and local governments, and international relations. [NOTE: Asterisks highlight the most important reports. All reports have links to the original document; some also have links to organizations.]

The 50 reports (plus a few late additional inserts, e.g. 16a) are arranged in seven categories:

- I. Daily Data Reports (cases and deaths by country, and US states and counties);
- II. Scenarios (COVID-19’s course, global impacts, Sustainable Development Goals and COVID);
- III. General Overviews (global statistics, impacts on SDGs, COVID Commission, strategies);
- IV. Re-Opening Society (4-phase roadmap, local metrics, schools, businesses);
- V. Special Perspectives (leadership, communication, testing, tracing, disinformation);
- VI. Large-Group Agendas (calls for a new normal, healthy recovery, human security);
- VII. Pre-COVID-19 Warnings (global health security index, preventing pandemics, climate).

ALSO SEE the Organization Index following this page.

Most of these reports are by American experts. Readers are encouraged to suggest similar reports from elsewhere (e.g. #21 & 22), especially Europe, and to pass this “report on reports” on to political and health leaders who might use some of them to make a difference.

#

COVID-19 Reports, April-July 2020: Organization Index

(asterisk after item number indicates priority picks)

American Enterprise Institute 17
Asia Society Policy Institute 16a
Atlantic Council Scowcroft Center for Strategy
And Security 5, 15
Center for Strategic and International Studies *4
Center for Disease Control (Atlanta) 2, 27
CIDRAP (Center for Infectious Disease Research
and Policy, Univ of Minnesota) *3, 30, 31, 32, 34
Economist Intelligence Unit *48
Foreign Affairs 16a
Foreign Policy 16
Georgetown Univ Center for Health Science and
Security 20
Global Challenges Foundation (Stockholm) 14
Global Disinformation Index 37
Global Mayors' COVID-19 Recovery Task Force *44
Group of Eight Australia *22
Harvard Global Health Institute 49
Healthy Recovery.net *45
Heritage Foundation 18
Indian Institute for Human Settlements (Delhi) *21
International Growth Centre (UK) 23, 42
IPBES (Intergovernmental Science-Policy Platform
on Biodiversity and Ecosystem Services) 11
Johns Hopkins Center for Health Security 19, 25, 26, 35, *48
Johns Hopkins Coronavirus Resource Center 1
Lancet COVID-19 Commission *10
McKinsey & Company 6, 28
McMaster University (Hamilton, Ontario) 36
National Center for Disaster Preparedness
(Earth Institute, Columbia Univ) 24, *29
NIAID (National Institute of Allergy and Infectious
Disease; Dr. Anthony Fauci) 38
Nuclear Threat Initiative 20, *48
Parliamentarians for Nuclear Non-Proliferation
and Disarmament 46
Swiss Re (Zurich) 50
The Wire 47
UN Committee for Coordination of Statistical Activities *8
UN Dept of Economic and Social Affairs *7
UN Environment Programme 39
UN Sustainable Development Group *9
UN World Food Programme 40, 41
US Dept of Health and Human Services 33
WHO (World Health Organization) *13
Women Legislator's Lobby 46
World Future Council 46
World Wildlife Fund 12
Worldometer 2

I. DAILY DATA REPORTS

1. MAP OF U.S./WORLD

COVID-19 Map ([Johns Hopkins Coronavirus Resource Center](#)). A daily count of identified cases and deaths by country and by counties within US states. “Critical Trends” shows where COVID cases are increasing, mortality rates by country, and data about COVID testing and tracing.

Also see: The [CDC COVID Data Tracker](#) for US data only.

2. WORLDOMETER

Reported Cases and Deaths by Country, Territory, or Conveyance ([Worldometer](#)). COVID-19 is affecting 215 countries and territories, and two international conveyances. This spreadsheet of countries reports daily on total cases, new cases and deaths, total recovered, and tests, cases and deaths/1m population.

Note: In many countries there is underreporting due to lack of testing, suppressed information, and/or probable COVID-caused deaths at home that aren’t counted.

II. SCENARIOS

3. *THREE COVID SCENARIOS FOR 2020-2021

The Future of the COVID-19 Pandemic: Lessons Learned from Pandemic Infections (Michael Osterholm and 7 others, [Center for Infectious Disease Research and Policy](#), Univ of Minnesota, April 30, 8p). Part 1 of “[The CIDRAP Viewpoint](#)” series. The worst case is a fall 2020 wave larger than the spring 2020 wave; best case is “slow burn” of ongoing cases but no further waves.

Note: The worst case of a fall 2020 wave has already been supplanted by a summer 2020 wave that Osterholm calls a “forest fire of cases” that is not “going to slow down” (*New York Times*, 22 June, A6).

[Read more](#)

4. *THREE WORLD SCENARIOS

Forecasting Covid-19’s Course ([Center for Strategic and International Studies](#), May 20, 14p). Commentary by the CSIS Senior VP on the pandemic as a “history-altering event,” with no “V-shaped recovery for major economies.” Presents three scenarios: Best Case (U-shaped recovery), Worst Case (5-10 year vaccine timeline, collapse of global trade, no global leadership), and Mixed Case (fall 2021 vaccine, uneven recovery, China as leader).

[Read more](#)

5. THREE WORLD SCENARIOS

What World Post-COVID-19? Three Scenarios ([Atlantic Council Scowcroft Center for Strategy and Security](#), April 2020, 33p). The pandemic presents “a substantial shock to the post WWII order, and the worst may be yet to come until a vaccine is widely distributed. The recovery will likely be difficult and extended, and US global leadership is at risk. The three scenarios: downward deglobalization, China as global leader, and optimistic multilateralism.

[Read more](#)

6. NINE SCENARIOS ON COVID AND ECONOMY
COVID-19 Briefing Materials: Global Health and Crisis Response ([McKinsey & Company](#), April 13, 91p) An extensive analysis with many charts and graphs, as well as scenarios on economic downturn vs. renewal and virus containment vs. escalation.

[Read more](#)

7. *THREE SDG/COVID SCENARIOS
Sustainable Development Outlook 2020: Achieving SDGs in the Wake of COVID-19: Scenarios for Policymakers ([UN Department of Economic and Social Affairs](#), July 2020, 56p). “The crisis has been unprecedented in its scope and scale, (but) has not affected all countries and all people in the same way,” and setbacks need not be permanent. It is quite possible to move ahead towards the Sustainable Development Goals, and “even possible to convert the crisis into an opportunity for recovering better.” A “Pre-COVID 19 benchmark scenario” from 2019 is provided, along with Post-COVID-19 pessimistic and optimistic scenarios.

[Read more](#)

III. GENERAL OVERVIEWS

8. *STATISTICAL OVERVIEW
How COVID-19 is Changing the World: A Statistical Perspective ([UN Committee for the Coordination of Statistical Activities](#), May 2020, 87p). “COVID-19 has turned the world upside down. Everything has been impacted.” New statistical records are being set on an almost weekly basis. The CCSA has compiled “a snapshot of some of the latest information,” derived from 36 international organizations and assembled in four broad categories: economic, social, regional and statistical. The best information available is necessary because “decisions made now and in the coming months will be some of the most important made in generations.”

[Read more](#)

9. *U.N. SUSTAINABLE DEVELOPMENT GROUP
Shared Responsibility, Global Solidarity: Responding to the Socio-Economic Impacts of COVID-19 ([United Nations Sustainable Development Group](#), March 2020, 24p). A joint effort of 43 UN organizations describes global measures to match the magnitude of the crisis, and potential impacts for each of the UN’s 17 Sustainable Development Goals.

[Read more](#)

10. *COVID-19 COMMISSION
The Lancet COVID-19 Commission (Jeffrey D. Sachs and Five Others, [The Lancet](#), July 9, 2019). The Commission seeks “to help speed up global, equitable, and lasting solutions to the pandemic.” A key aim is to enhance “awareness and adoption worldwide of successful strategies to suppress transmission.” Holding its first meeting on June 23, the Commissioners are leaders in health science and delivery, business, politics, and finance from across the world.

[Read more](#)

11. MORE FREQUENT PANDEMICS

[COVID-19 Stimulus Measures Must Save Lives, Protect Livelihoods, and Safeguard Nature to Reduce the Risk of Future Pandemics](#) (Josef Settele and 3 others, [IPBES](#) Guest Article, April 27, 3p). Built on the reports of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, warning that future pandemics are likely to be more frequent and spread more rapidly.

12. REDUCING FUTURE PANDEMICS

[COVID-19: Urgent Call to Protect People and Nature](#) ([World Wildlife Fund](#), June 2020, 21p). Humanity's broken relationship with nature comes at a cost, revealed in terrible ways by the COVID-19 pandemic. Humans have increasingly encroached on the natural world, resulting in escalating contact with wildlife and new zoonotic diseases causing deadly pandemics.
[Read more](#)

13. *WHO STRATEGY

[COVID-19 Strategy Update](#) (World Health Organization/[WHO](#), April 14, 23p.). On the current situation, key insights, and national and international strategies. "Countries must do everything they can to stop cases from becoming clusters and clusters from becoming explosive outbreaks." Speed, scale, and equity must be our guiding principles. "COVID-19 is a truly global crisis" requiring global solidarity.
[Read more](#)

14. GLOBAL GOVERNANCE

[Responding to COVID-19: Priorities Now and Preparing for the Future](#) (Augusto Lopez-Claros, [Global Challenges Foundation](#), April 22, 5p). World Bank economist and co-author of *Global Governance and the Emergence of Global Institutions* (Cambridge UP, Jan 2020) looks at global institutional arrangements that are needed to deal with the looming crises that are likely.

15. GEOPOLITICS AND COVID

[Taking Stock: Where Are Geopolitics Headed in the COVID-19 Era?](#) ([Atlantic Council Scowcroft Center for Strategy and Security](#), June 2020, 20p). The pandemic is having dramatic effects on everyday life, global prosperity, international security, and geopolitics. It is a transformative shock, and its negative effects on the global economy are a secondary shock.
[Read more](#)

16. GLOBAL POWER SHIFTS

[How the World Will Look After the Coronavirus](#) ([Foreign Policy](#), March 20). 12 "leading global thinkers" offer their "predictions" on global political and economic power, e.g. reinforced nationalism and contracting of supply chains.
[Read more](#)

16a. AMERICA AND CHINA

[The Coming Post-COVID Anarchy: The Pandemic Bodes Ill for Both American and Chinese Power-and for the Global Order](#) (Kevin Rudd, Foreign Affairs, May 6). Former Australian Prime Minister and president of the Asia Society Policy Institute warns of reinforced fragmentation and a possible new Cold War.

IV. RE-OPENING SOCIETY

17. NATIONAL ROADMAP

[National Coronavirus Response: A Road Map to Reopening](#) (Scott Gottlieb and 4 others, American Enterprise Institute, March 28, 16p). Details in four Phases, provided by Gottlieb (former director of the US Food & Drug Administration) and others from the Johns Hopkins Center for Health Security.

[Read more](#)

18. REOPENING: FIVE-PHASE PLAN

[Saving Lives and Livelihoods: Recommendations for Recovery](#) (National Coronavirus Recovery Commission, The Heritage Foundation, June 15, 2020, 113p). Proposes a five-phase plan to combat COVID-19 and reopen America, following an “all of society” approach recognizing that recovery “must proceed expeditiously” and that success requires coordination among all levels of government, the private sector, and civil society, rather than a national or top-down approach.

[Read more](#)

19. PHASED RE-OPENING PRINCIPLES

[Public Health Principles for a Phased Reopening During COVID-19: Guidance for Governors](#) (Johns Hopkins Center for Health Security, April 17, 23p). A framework for considering risks of likely transmission and assessing nonessential business. Decision-makers must make choices based on individual situations in their states, risk levels, and resource assessments.

[Read more](#)

20. *LOCAL LEADERS

[COVID-19: A Frontline Guide for Local Decision-Makers](#) (Nuclear Threat Initiative and Georgetown Univ Center for Health Science and Security, May 22, 4p). Provides easy-to-use metrics for phased re-opening and a Metrics Scorecard to assess progress.

21. *TRANSITION ESSENTIALS

[Where & When to Lift a Lockdown: What to Do to Enable a Transition to Normalcy](#) (Indian Institute for Human Settlements, Delhi, April 8, 10p). Aromar Revi, the founder and director, lists 40 essentials regarding administration and coordination, finance and banking, health systems, basic services, food and agriculture, poverty and livelihoods, transportation, supply chains, housing and construction, and education, with priority to 10 activities.

22. *AUSTRALIAN OPTIONS

COVID-19 Roadmap to Recovery: A Report for the Nation ([Group of Eight Australia](#), late April 2020, 190p). An independent report by >100 leading researchers from Australia's Group of Eight (Go8) universities, presenting two options: Elimination requiring restrictions for a longer duration at first and Controlled Adaptation by suppressing the illness to a low level and managing it—"a signal of pragmatic acceptance." A third option of Herd Immunity was rejected at the outset.

[Read more](#)

23. DEVELOPED VS. DEVELOPING COUNTRIES

Containment Strategies and Support for Vulnerable Households ([IGC COVID-19 Guidance Note](#), April 2020, 9p). The [International Growth Centre](#) in the UK notes that policy responses in developed countries are not a good model for developing countries, which must weigh health risks vs. economic damage.

[Read more](#)

24. BUSINESS

Work in the Time of Pandemic, Phase 1: Reopening America's Businesses ([National Center for Disaster Preparedness](#), [Earth Institute](#), Columbia U, May 2020(?), 6p). A guide to Phase 1 reopening that is not a plan for full recovery ("a process that could take a year—or significantly longer"). Covers asymptomatic carriers, diagnostic and antibody testing, contact tracing (the US may need 100,000 to 200,000 workers), and examples of reopening for nine types of businesses.

25. BUSINESS

Operational Toolkit for Businesses Considering Reopening or Expanding ([Johns Hopkins Center for Health Security](#), May 6, 14p). An "Instruction Manual" with a step-by-step Business Risk Worksheet and an Excel Assessment Calculator spreadsheet to attain a risk score and a modification score.

26. SCHOOLS

Filling in the Blanks: National Research Needs to Guide Decisions about Reopening School in the United States ([Johns Hopkins Center for Health Security](#), May 15, 50p). Includes a 26p detailed Appendix on school policies in 11 countries: Australia, Denmark, France, Germany, etc.

27. SCHOOLS

CDC Readiness and Planning Tool to Prevent the Spread of COVID-19 in K-12 Schools ([Center for Disease Control](#), May 2020, 9p; www.cdc.gov/coronavirus). Checklists of guiding principles for lowest risks (virtual-only activities) and highest risks (in-person activities), promoting behaviors to reduce spread, maintaining healthy environments, and preparing for when someone gets sick.

Note: [CDC](#) also offers guidelines for businesses and workplaces, child care, summer camps, youth sports, parks and recreation facilities, community events, first responders, shared housing, retirement communities, tribal communities, homeless populations, prisons and jails.

28. IMPACT ON WORKERS

Lives and Livelihoods: Assessing the Near-Term Impact of COVID-19 on US Workers ([McKinsey Global Institute](#), April 2020, 10p). “Up to one-third of US jobs may be vulnerable—and more than 80% are held by low-income workers.”

[Read more](#)

V. SPECIAL PERSPECTIVES

29. *LEADERSHIP

Crisis Leadership for a Pandemic: COVID 19 ([National Center for Disaster Preparedness](#), [Earth Institute](#), Columbia U, May 2020, 2p). A concise overview of principles learned from 9/11 by the former Assistant Chief of the FDNY: Connect (“remove information silos” with a message that is truthful and empathetic), Collaborate (across levels of government and with key stakeholders), and Create (“a spider’s web structure of multiple leaders working with each other to coordinate efforts”).

30. COMMUNICATION

Effective COVID-19 Crisis Communication (Michael Osterholm and 7 others, [CIDRAP](#), U of Minnesota, May 6, 11p). Part 2 of [The CIDRAP Viewpoint](#) on principles too often ignored: don’t over-reassure, proclaim uncertainty, and admit mistakes (COVID-19 science is still in its infancy).

[Read more](#)

31. SURVEILLANCE OF COVID-19

SARS-CoV-2 Infection and COVID-19 Surveillance: A National Framework (Michael Osterholm and 11 others, [CIDRAP](#), U of Minnesota, July 9, 14p). Part 5 of [The CIDRAP Viewpoint](#) focuses on surveillance—the ongoing and systematic collection and analysis of data—as “the cornerstone of public health practice.” To have a meaningful impact, the data must be organized and analyzed in a thoughtful, structured way, with results “communicated regularly, clearly, and effectively to the public health workforce, policymakers, and the public.”

[Read more](#)

32. TESTING

Smart Testing for COVID-19 Virus and Antibodies (Michael Osterholm and 7 others, [CIDRAP](#), U of Minnesota, May 20, 13p). Part 3 of [The CIDRAP Viewpoint](#), states that testing is essential to confirm infection and contacts, guide patient care, prepare for case surges, and inform economic activity levels. Smart testing is “the right test given to the right person at the right time, with results provided in a timely manner.

33. TESTING

COVID-19 Strategic Testing Plan: Report to Congress ([U.S. Dept. of Health and Human Services](#), May 24, 81p). A plan to assist states, localities, and tribal organizations in understanding COVID testing for both active infection and prior exposure, including hospital-based testing, laboratory testing, mobile-testing units, testing for employers and other settings, etc. Covers testing goals, increasing testing capacity, resources for testing, and mechanisms for responding to future pandemics.

34. CONTACT TRACING

Contact Tracing for COVID-19: Assessing Needs, Using a Tailored Approach (Michael Osterholm and 5 others, [CIDRAP](#), U of Minnesota, June 2, 9p). Part 4 of [The CIDRAP Viewpoint](#) series, “based on our current reality and the best available data.” Contact tracing is most effective early in the course of an outbreak, or much later when other measures have reduced disease incidence to low levels, e.g. it was “key in the late stages of the smallpox eradication program.” It is most effective when cases and contacts can be quickly and easily identified; less effective when contacts are difficult to trace (e.g. situations with airborne pathogens), the incidence of infection is high, or many infections are asymptomatic.

[Read more](#)

35. CONTACT TRACING

A National Plan to Enable Comprehensive COVID-19 Case Finding and Contact Tracing ([Johns Hopkins Center for Health Security](#), April 10, 15p). Argues for widespread testing and tracing, with examples from successful countries.

[Read more](#)

36. COVID-19 EVIDENCE

COVID-19 Evidence Network to support Decision-Making ([McMaster University](#), Hamilton, Ontario, n.d., 2p). Seeks to help those supporting decisions by finding the best evidence available, reducing duplication, and coordinating synthesis and tech assessment. Provides a guide to evidence sources, a rapid-evidence model, and seven principles underpinning the “COVID-END” network.

37. COVID DISINFORMATION/"INFODEMIC"

Ad-funded COVID-19 Disinformation: Money, Brands, and Tech ([Global Disinformation Index](#), July 8, 2020, 3p). COVID-19 disinformation has real world harms to public health (claims about magical solutions and disinfectants), specific groups (Chinese cover-up Jewish elite, Aryan immunity) and public order (police state, vaccine mind control, WHO, bioweapons).

[Read more](#)

38. COVID-19 RESEARCH

NIAID Strategic Plan for COVID-19 Research, FY2020-FY2024 ([National Institute of Allergy and Infectious Disease](#), April 22, 10p). NIAID, headed by widely-known Dr. Anthony Fauci, describes four research priorities: improve fundamental knowledge, support development of diagnostics, test therapeutics, and develop safe and effective vaccines.

[Read more](#)

39. WASTE MANAGEMENT

COVID-19 Waste Management Factsheets ([UN Environment Programme](#), June 19, 6p). Masks, gloves, gowns, and other protective equipment produced by hospitals, healthcare facilities, and individuals can be infected with the virus, leading to public health risks. Nine 1-2p Factsheets are available.

[Read more](#)

40. HUNGER TO INCREASE.

COVID-19: Potential Impact on the World's Poorest People ([UN World Food Programme](#), April 2020, 13p). Warns that "the depth and breadth of hunger will increase worldwide," due to disruption of food supply chains, loss of income, and the locust plague in Northeast Africa.

[Read more](#)

41. FOOD SECURITY

Policy Brief: The Impact of COVID-19 on Food Security and Nutrition ([United Nations](#), June 2020, 23p). Before the pandemic, >820 million people were identified as chronically food insecure, with 135 million people categorized as crisis level or worse. That number could nearly double by the end of 2020. Moreover, as of late May, "368 million school children were missing out on daily school meals on which they depend."

[Read more](#)

42. SUB-SAHARA AFRICA.

The Economic Impact of COVID-19 Lockdowns in Sub-Saharan Africa ([International Growth Centre](#), May 2020, 17p). Lockdowns are likely to make the savings of about 30% of the population essentially vanish, removing all resilience capacity to future shocks. Poor performance of COVID social protection programs suggests that expansion will do little to mitigate impacts.

43. GENDER PERSPECTIVES.

COVID-19: A Gender Lens. Protecting Sexual and Reproductive Health and Rights, and Promoting Gender Equality ([UNFPA Technical Brief](#), March 2020, 8p). Warns that pandemics will worsen existing inequalities for women, girls, and other marginalized groups, especially because women are 70% of the health and social sector workforce.

[Read more](#)

VI. LARGE-GROUP AGENDAS

44. *GLOBAL MAYORS RECOVERY TASK FORCE

C40 Cities Mayors' Agenda for a Green and Just Recovery ([Global Mayors COVID-19 Recovery Task Force](#), July 15, 2020, 43p). COVID has caused immense suffering in our cities, exacerbating a wider social and economic crisis that has wiped out 400 million full-time jobs in the second quarter of 2020. It has exposed the stark inequality in our cities and our world, and laid bare the need "to improve resilience, strengthen data-driven government, and revive multilateralism." Climate breakdown and the breach of other planetary boundaries threaten to be even more severe. "We must forge a new normal."

[Read more](#)

45. *HEALTHY RECOVERY.

In Support of a Healthy Recovery ([Healthy Recovery.net](#), May 26, 9p). A letter to G20 leaders and their chief scientific/medical advisors, supported by 350 organizations (such as the World Medical Association) and >4,500 individual health professional from 90 different countries. Calls for adequate investments in public health and preparedness, a healthier society that addresses climate change and pollution, and healthy cities.

46. WOMEN'S APPEAL.

Human Security for Public Health, Peace and Sustainable Development ([Parliamentarians for Nuclear Non-Proliferation and Disarmament](#), [Women Legislator's Lobby](#), and [World Future Council](#), May 24, 7p). A "global women's appeal" on International Women's Day, expressing deep concern about impacts of the COVID-19 pandemic and existential threats to humanity and the environment from climate change and nuclear weapons. Calls for a substantial cut to the global military budget to better fund the UN and its SDGs. The world became better united to combat COVID-19; "let us build on that unity and be torchbearers for a better world embracing human security."

47. REWRITING ECONOMIC RULES.

Life After COVID-19: Decommodify Work, Democratise the Workplace ([The Wire](#), May 15, Op-Ed). More than 3,000 researchers from 600 universities issue an urgent call to heed the lessons of the pandemic and rewrite the rules of our economic life. This Op-Ed was published in 33 "leading media outlets around the world," including *The Guardian* and *The Boston Globe*.

VII. PRE-COVID-19 WARNINGS

48. *HEALTH SECURITY INDEX.

[2019 Global Health Security Index](#) ([Nuclear Threat Initiative](#), [Johns Hopkins Center for Health Security](#), and [The Economist Intelligence Unit](#), Oct 2019, 316p). “Intended as a key resource in the face of increasing risks of high-consequence and globally catastrophic biological events.” Provides 195 country profiles and ranks countries across six categories and 34 indicators, concluding that “*national health security is fundamentally weak around the world*” and “*no country is fully prepared.*”

Note: This early warning, along with many others, was obviously ignored. It proved to be on target and likely understated by ignoring the importance of national political leadership.

[Read more](#)

49. PREVENTING PANDEMICS.

[Global Monitoring of Disease Outbreak Preparedness: Preventing the Next Pandemic](#) ([Harvard Global Health Institute](#), 2018, 109p). On strengthening public health capacity, innovations in epidemic preparedness, rapid sharing of data, reinforcing risk analysis and incentives for action, strengthening global mechanisms, achieving sustained monitoring and stakeholder participation.

50. CLIMATE AND PANDEMICS.

[Pandemics in a Changing Climate: Evolving Risk and the Global Response](#) ([Swiss Re](#), Zurich, 2006, 27p). Prepared by students at Johns Hopkins University, succinctly warning that “Pandemic outbreaks can be economically devastating,” and that serious disease outbreaks are becoming more common due to population growth, globalization, increased mobility, and environmental and climate change acting as a “*risk multiplier*” by driving changes to vector ecology.

#

ACKNOWLEDGEMENTS

I wish to thank David Harries, Michael Sales, Bob Horn, and EcoWatch.com for alerting me to many of these important reports. I am also immensely grateful to Friedrich Hirler for helping to put this survey together in a readily usable format.

M.M., 7/30/20