Health Issues a Human Security Threat: Lessons from the COVID-19 Pandemic:

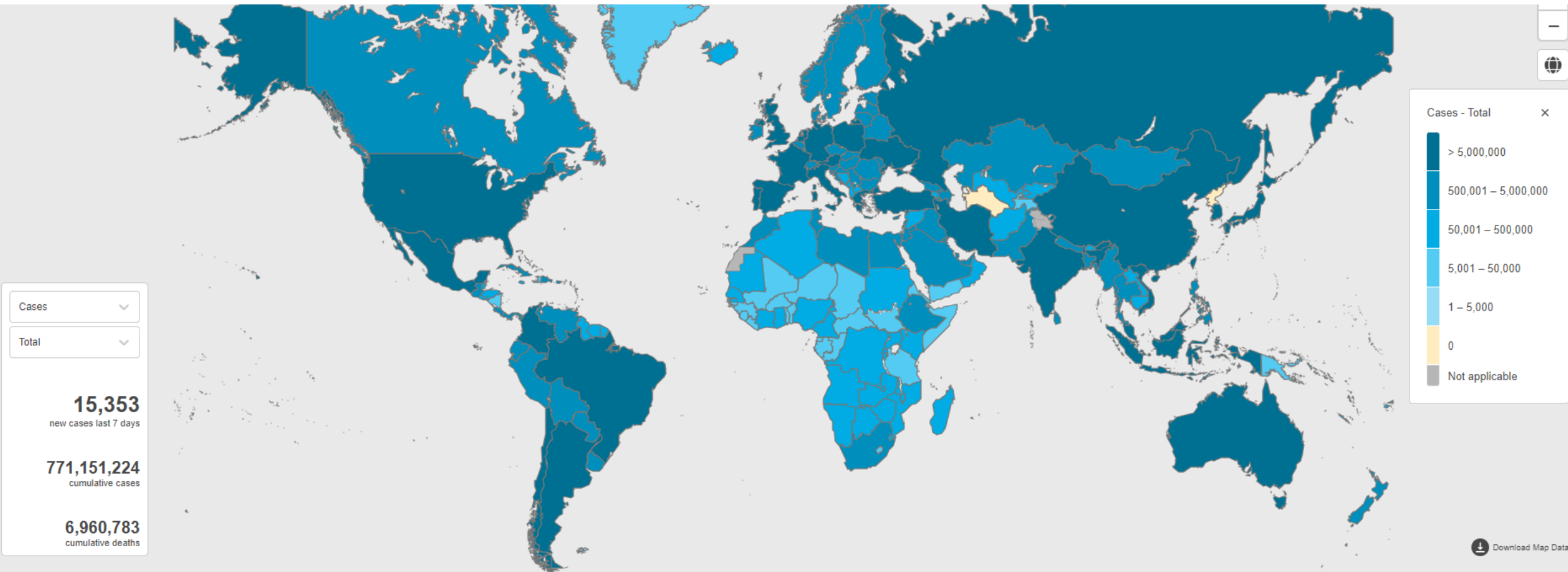Jeremiah Carlo V. Alejo, MD

Outline of Discussion

- Understanding Pandemics as a Human Security Threat
  - What is a pandemic?
  - Pandemics as global health hazard
- Lessons in Pandemic Governance from COVID-19
  - Strategies in Strengthening Health Systems Resilience
- The Six Building Blocks of Health and Social Determinants of Health

Understanding Pandemics as a Human Security Threat

Pandemic

the global spread of a pathogen or variant that infects human populations with limited or no immunity through sustained and high transmissibility from person to person, overwhelming health systems with severe morbidity and high mortality and causing social and economic disruptions, all of which ***require effective national and global collaboration and coordination for its control***

(WHO Intergovernmental Negotiating Body, Draft WHO Convention, Agreement or Other International Instrument of Prevention, Preparedness and Response)

Globally, as of 7:50pm CEST, 4 October 2023, there have been 771,151,224 confirmed cases of COVID-19, including 6,960,783 deaths, reported to WHO. As of 26 September 2023, a total of 13,513,017,637 vaccine doses have been administered.

Biological Hazard

a hazard of organic origin or conveyed by biological vectors, including pathogenic microorganisms, toxins and bioactive substances

US CDC's Top Global Health Security Risks

- Emergence and spread of new infectious diseases

- Ever-increasing globalization of travel and trade, enabling disease to spread

- Rise of drug-resistant, disease-causing pathogens

- Potential for accidental release, theft or illicit use of dangerous pathogens

ANNEX 1.   WHO CLASSIFICATION OF HAZARDS

GENERIC GROUPS[1]	1. NATURAL						2. HUMAN-INDUCED[2,3]		3. ENVIRONMENTAL
GROUPS	1.1 GEOPHYSICAL[4]	1.2 HYDRO-METEOROLOGICAL			1.3 BIOLOGICAL[5]	1.4 EXTRA-TERRESTRIAL[4]	2.1 TECHNOLOGICAL	2.2 SOCIETAL	3.1 ENVIRONMENTAL DEGRADATION[17]
SUBGROUPS	Earthquake: - *ground-shaking*	1.2.1 HYDROLOGICAL[4]	1.2.2 METEOROLOGICAL[4]	1.2.3 CLIMATOLOGICAL[4]	Airborne diseases	Impact: - *airburst* - *meteorite*	Industrial hazards:[8] - *chemical spill* - *gas leak* - *radiation* [radiological, nuclear]	Acts of violence	Erosion
Main types	Tsunami	Flood: - *riverine flood* - *flash flood* - *coastal flood* - *ice jam flood*	Storm: - *extratropical storm* - *tropical cyclone* [cyclonic wind, cyclonic rain, cyclone (storm) surge] - *convective storm* [tornado, wind, rain, winter storm, blizzard, derecho, lightning, thunderstorm, hail, sand/dust storm]	Drought	Waterborne diseases	Space weather: - *energetic particle* - *geomagnetic storm* - *shockwave*	Structural collapse: - *building collapse*[8,9] - *dam/bridge failures*	Armed conflicts:[14] - *international* - *non-international*	Deforestation
- subtypes	Mass movement (geophysical trigger): - *landslide* - *rock fall* - *subsidence*			Wild fire: - *land fire* [e.g. brush, bush, pasture] - *forest fire*	Vector-borne diseases				Salinization
[sub-subtypes]	Liquefaction	Mass movement (hydro-meteorological trigger): - *landslide* - *avalanche* (snow) - *mudflow* - *debris flow*		Glacial lake outburst (flood)	Foodborne outbreaks[7]		Occupational hazards - *mining*	Civil unrest	Sea level rise
	Volcanic activity: - *ash fall* - *lahar* - *pyroclastic flow* - *lava flow*	Wave action: - *rogue wave* - *seiche*			Insect infestation:[4] - *grasshopper* - *locust*		Transportation:[8,11] - *air, road, rail, water, space*	Stampede	Desertification
					Animal diseases		Explosions	Terrorism: - *chemical, biological, radiological, nuclear, and explosives*[15,16]	Wetland loss/ degradation
			Extreme temperature: - *heatwave* - *coldwave* - *severe winter condition* [e.g. snow/ice, frost/ freeze, dzud][6]		Plant diseases		Fire[8]		Glacier retreat/ melting
					Aeroallergens		Air pollution:[9] - *haze*[10]		Sand encroachment
					Antimicrobial resistant microorganisms		Infrastructure disruption: - *power outage*[11] - *water supply* - *solid waste, waste water* - *telecommunication*	Financial crises: - *hyper-inflation* - *currency crisis*	
			Fog		Animal-human contact - *venomous*		Cybersecurity		
							Hazardous materials in air, soil, water:[12,13] - *biological, chemical, radiological*		
							Food contamination[7]		

Hazard

1   a process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation

2   source of potential harm

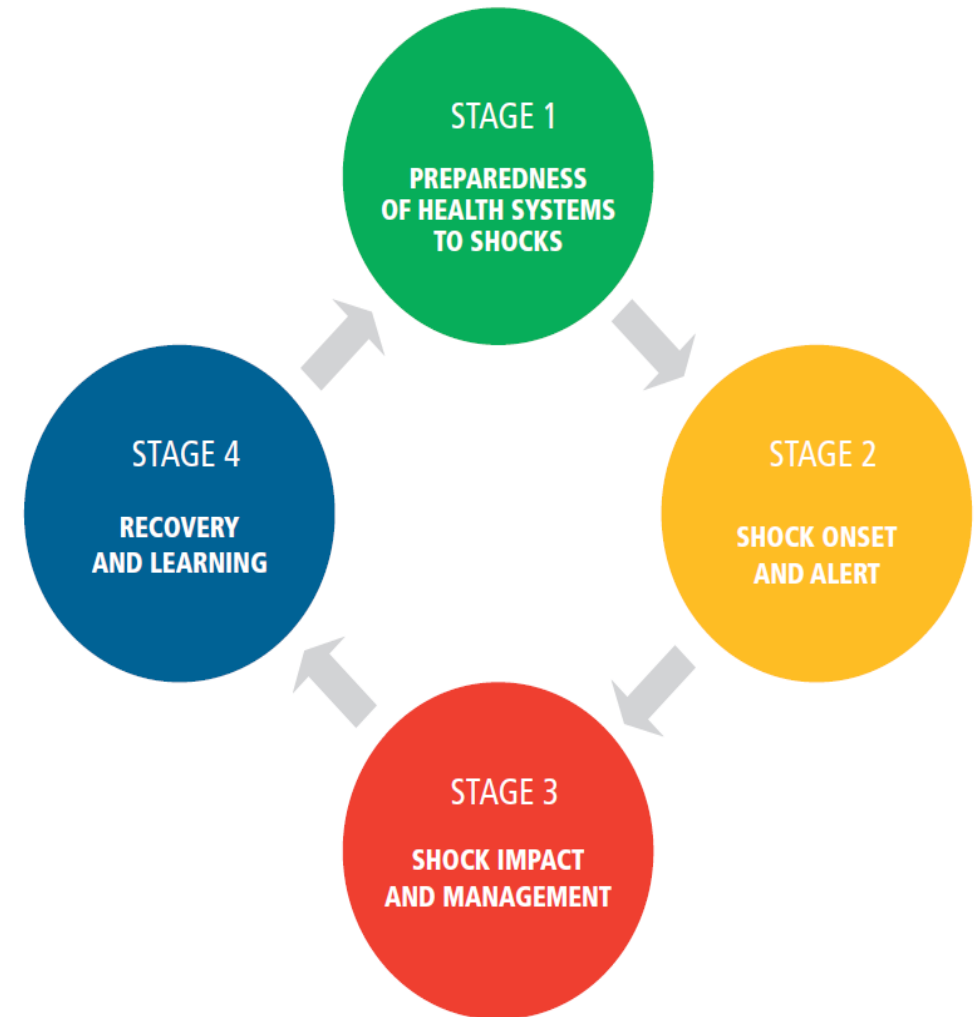(World Health Organization, Health Emergency and Disaster Risk Management Framework)

Developing System Resilience through Pandemic Risk Management

Resilience

- the ability of an organization to overcome external shocks and grasp new opportunities in their wake

(World Economic Forum)

Figure 1: Stages of a shock cycle

Resilience (World Economic Forum)

Consists of:

o **Operational resilience:** continuity in the event of a shock

o **Strategic resilience:** the ability to respond to changes in the economic, social and political environment

o **Financial resilience:** financial health in relation to its ability to weather a crisis

o **Social resilience:** degree of dependence on and interconnectedness with the social and political resilience of the communities in which it operates

o **Organizational resilience:** the ability of a company's workforce, culture and structure to deal effectively with sudden disruptions

Health System Resilience

- the capacity of health actors, institutions, and populations to prepare for and effectively respond to crises; maintain core functions when a crisis hits; and, informed by lessons learned during the crisis, reorganize if conditions require it

(Kruk, et al.)

– a "health system's ability to prepare for, manage (absorb, adopt, and transform) and learn from a sudden and extreme disturbance

(WHO, adapted from Thomas, et al.)

Lessons in Pandemic Governance from COVID-19

THE WHO HEALTH SYSTEM FRAMEWORK

SYSTEM BUILDING BLOCKS

OVERALL GOALS / OUTCOMES

SERVICE DELIVERY

HEALTH WORKFORCE

INFORMATION

MEDICAL PRODUCTS, VACCINES & TECHNOLOGIES

FINANCING

LEADERSHIP / GOVERNANCE

ACCESS

COVERAGE

QUALITY

SAFETY

IMPROVED HEALTH (LEVEL AND EQUITY)

RESPONSIVENESS

SOCIAL AND FINANCIAL RISK PROTECTION

IMPROVED EFFICIENCY

Key Strategies for Strengthening Health Systems Resilience (Thomas, et al., 2021)

A. Governance

B. Financing

C. Resources

D. Service Delivery

Key Strategies for Strengthening Health Systems Resilience

A. Governance

- Effective and ***participatory leadership with a strong vision and communication***

- Coordination of activities across government and key stakeholders
  - ***Community members participating from the earliest stages of policy and programme formulation*** help clarify local priorities, challenges, and pathways for practical and sustainable action
  - facilitate the meaningful engagement of all minority groups

Key Strategies for Strengthening Health Systems Resilience (Thomas, et al., 2021)

A. Governance

- Organizational learning culture that is responsive to crises

- *Effective information systems and flow*

- *Surveillance enabling timely detection of shocks and their impact*

Key Strategies for Strengthening Health Systems Resilience (Thomas, et al., 2021)

B. Financing

- Ensuring monetary resources for the system and flexibility to reallocate and inject extra funds

- Ensuring stability of health system funding through countercyclical health financing mechanisms and reserves

- Purchasing flexibility and reallocation of funding to meet changing needs and comprehensive health coverage

Key Strategies for Strengthening Health Systems Resilience (Thomas, et al., 2021)

C. Resources

- Appropriate level and distribution of human and physical resources

- Ability to increase capacity to cope with a sudden surge in demand

- Motivated and well-supported workforce

Key Strategies for Strengthening Health Systems Resilience (Thomas, et al., 2021)

D. Service Delivery

- *Alternate and flexible approaches to deliver care*

- *Mapping vulnerabilities*

- *Recognizing and addressing structural inequalities*

*"In today's globalized society,
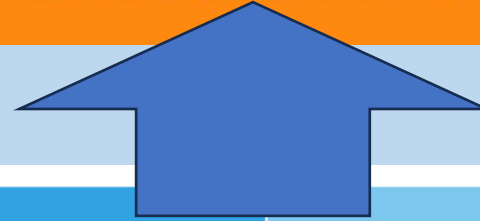a disease threat anywhere
is a disease threat everywhere.."*

US Center for Disease Control

WHO:

The success of Health EDRM relies on joint planning and action by ministries of health and other government ministries, the national disaster management agency, the private sector, communities and community-based organizations, assisted by the international community. ***At the core of effective Health EDRM are efforts to strengthen a country's health system with a strong emphasis on community participation and action to build resilience*** and establish the foundation for effective prevention, preparedness, response and recovery from all types of hazardous events including emergencies and disasters.
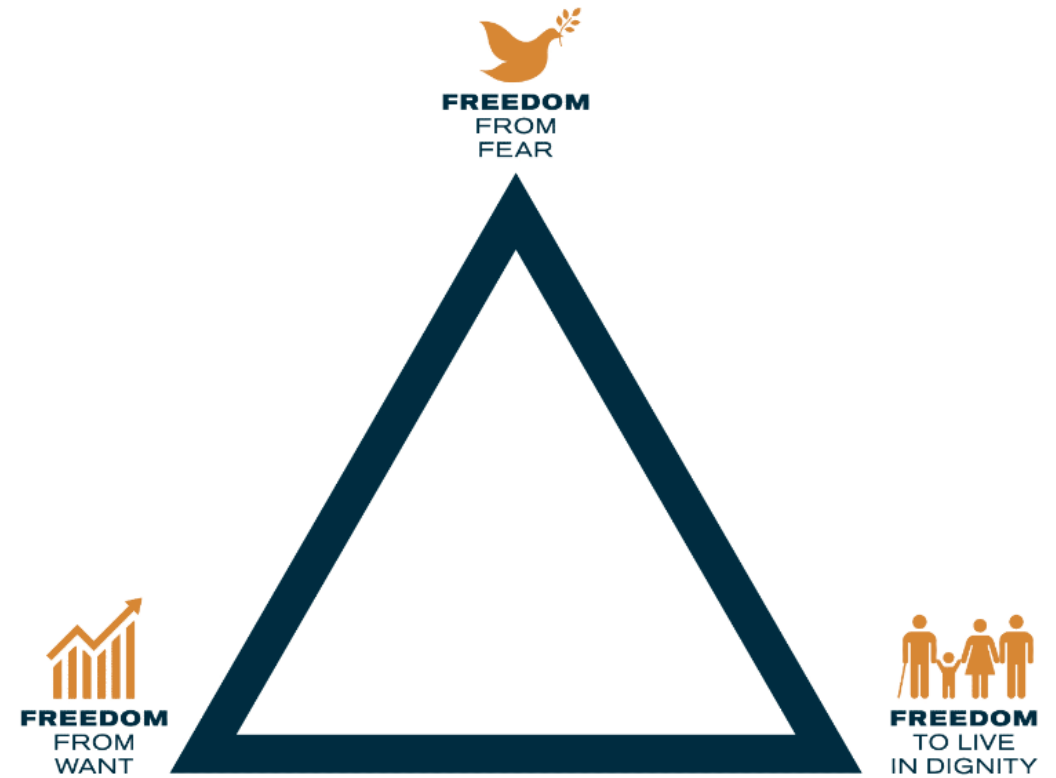
Health Outcomes
Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment	Housing	Literacy	Hunger	Social integration	Health coverage
Income	Transportation	Language	Access to healthy options	Support systems	Provider availability
Expenses	Safety	Early childhood education		Community engagement	Provider linguistic and cultural competency
Debt	Parks	Vocational training		Discrimination	
Medical bills	Playgrounds	Higher education			Quality of care
Support	Walkability				

At its most basic level, human security recognizes **3** **freedoms** to be fundamental to people's lives and aspirations.

FREEDOM FROM FEAR
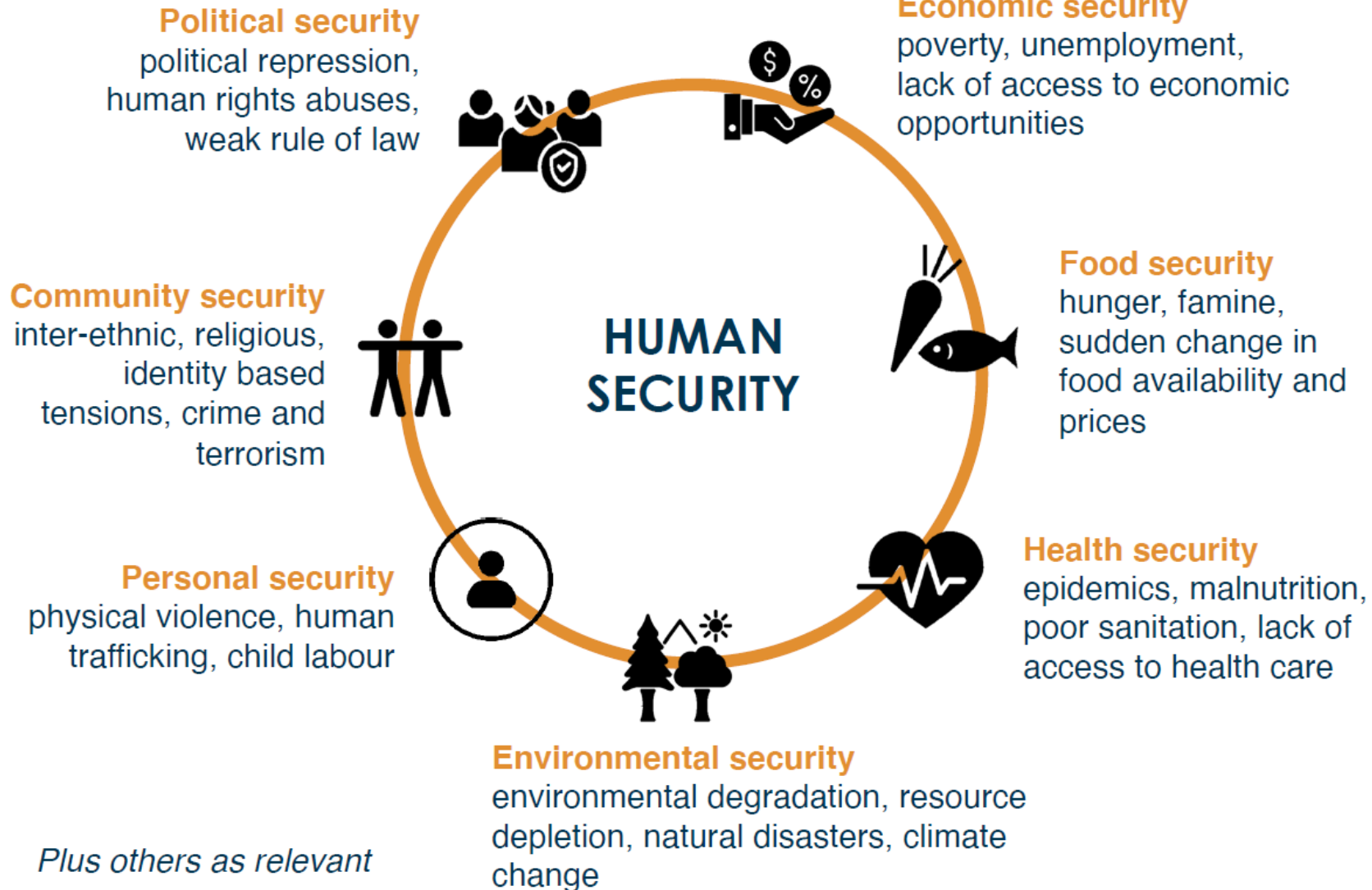
FREEDOM FROM WANT

FREEDOM TO LIVE IN DIGNITY

Security

- the state of being free from danger or threat (Oxford Dictionary)

Human Security

safety from constant threats of hunger, disease, crime and repression and protection from sudden and hurtful disruptions in the pattern of our daily lives, whether in our home, in our jobs, in our communities or in our environment. (UNDP Human Development Report, 1994)

Dimensions of human security

"In the final analysis, human security is a child who did not die, a disease that did not spread, a job that was not cut, an ethnic tension that did not explode in violence. Human security... is a concern with human life and dignity."
UN Human Development Report, 1994