



PMAC | PRINCE MAHIDOL  
AWARD CONFERENCE 2023

# SETTING A NEW HEALTH AGENDA

At the Nexus of Climate Change, Environment, and Biodiversity

## Synthesis Summary, Conclusion & Recommendations

Sunday 29 January 2023

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# Conference programme structure

## *Pre-conference: 24 – 26 January 2023*

- 46 Side meetings
- 3 Field trips

## *Main conference: 27- 29 January 2023*

2 Keynote addresses

4 Plenary sessions

18 Parallel sessions

7 Special events

11 Poster presentations

236 Submissions of  
World Art Contest

## Total registered participants

**732** participants from 57 countries  
(F 46%, M 54%)

Age range	Percentage
≤ 30	16
31-40	20
41-50	26
51-60	23
> 60	16



# Speakers/ Moderators/ Panelists (81)

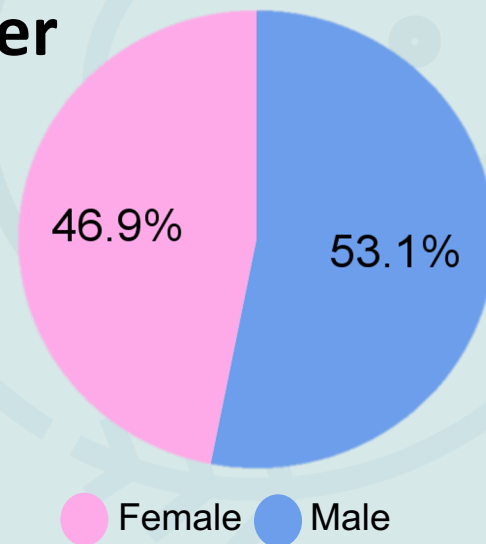


**SETTING  
A NEW HEALTH  
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At the Nexus of Climate Change,  
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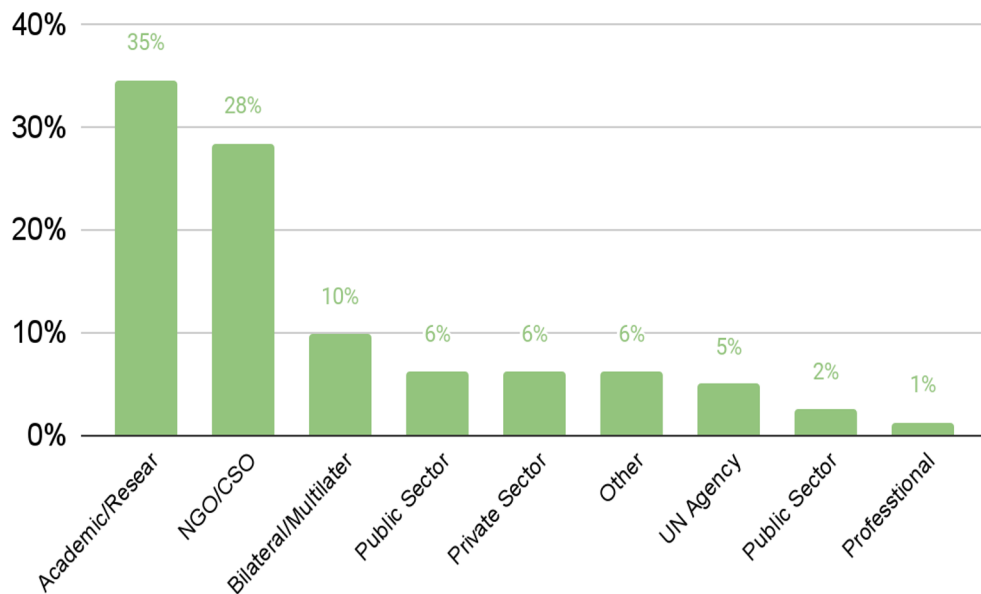
Age range	Percentage
≤ 30	14
31-40	15
41-50	33
51-60	17
> 60	20

## Gender

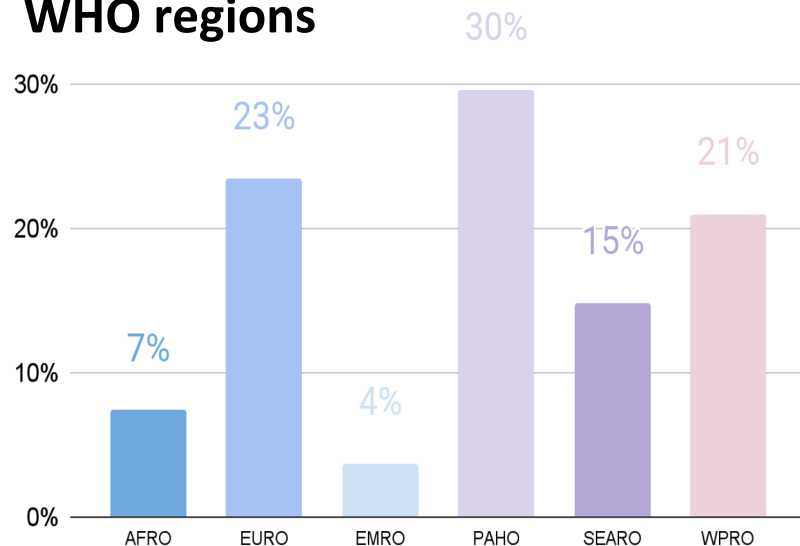


# Speakers/ Moderators/ Panelists (81)

## Type of organizations



## WHO regions







# Outlines

- A. Beyond Planetary Limit: Human Extinction
- B. Root Cause of Climate Inaction
- C. Potential Solutions
- D. The Way Forward



## A. Beyond Planetary Limit: Human Extinction



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## A. Beyond planetary limit: human extinction

### Biodiversity loss

[PL1, PL2]

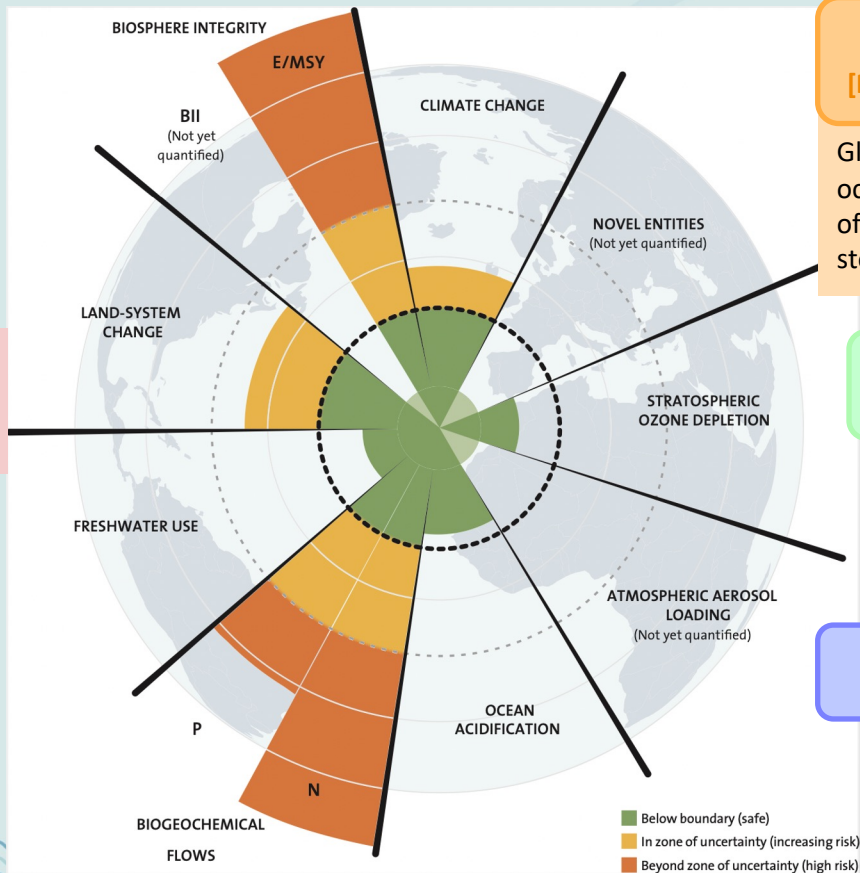
Loss of wildlife population, monocrop

### Land Conversion

[PS2.1, 2.4]

Cutting down rainforest, decrease in agricultural land due to conversion into develop land and open land

Designed by Azote for Stockholm Resilience Centre, based on analysis in Persson et al 2022 and Steffen et al 2015



### Climate change

[PLO, PL1, PS 1.1, PS 1.2]

Global temperature raising, warmer ocean, shrinkage of ice sheets, retreating of glacier, rises of sea level, heatwaves, storms, and drought

### Air pollution

[PS1.1, PS1.3]

The pH level of the ocean might drop from 8.1 to 7.7, the fastest drop in 50 million years

### Ocean acidification

[PLO]

The pH level of the ocean might drop from 8.1 to 7.7, the fastest drop in 50 million years

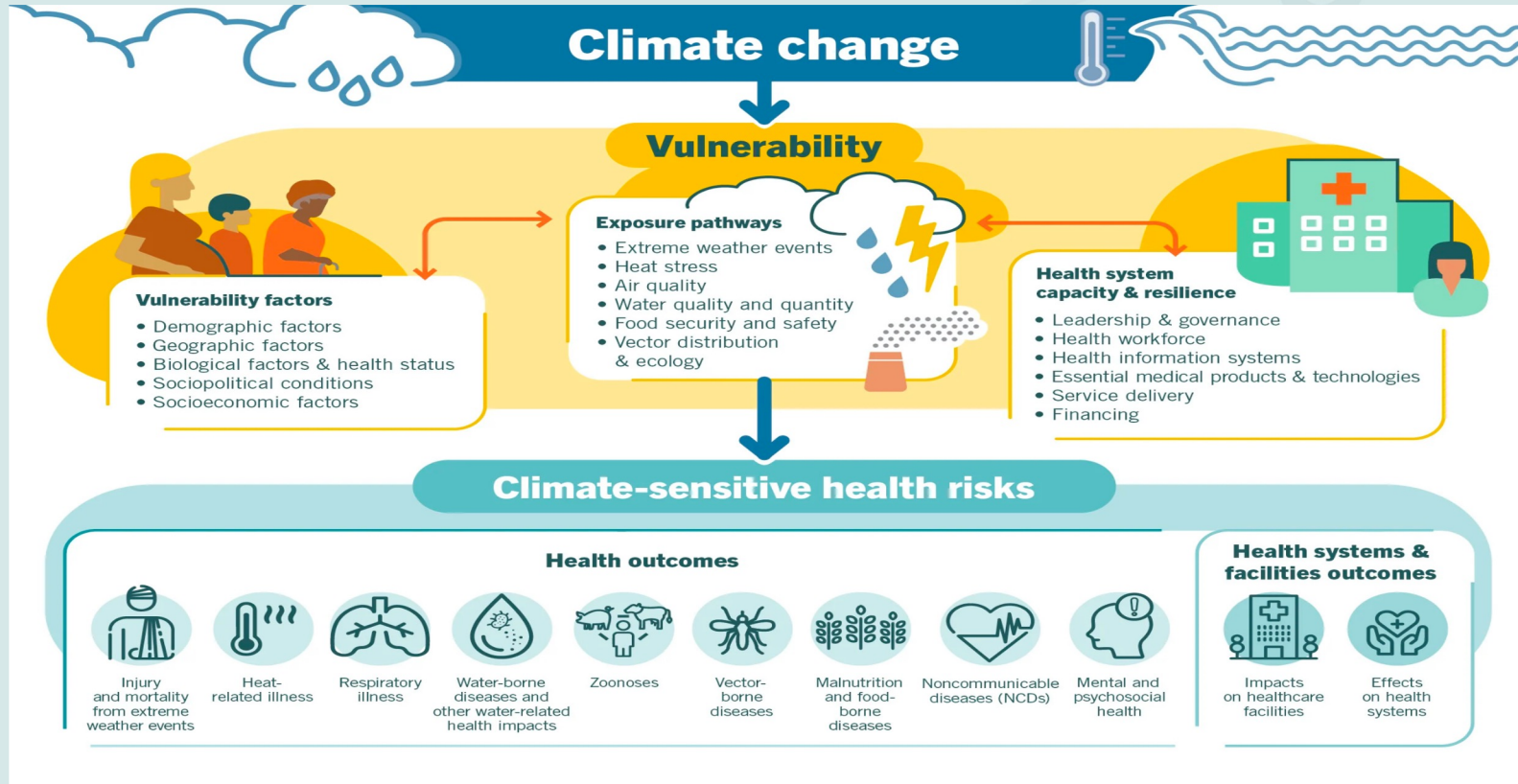


Image from: <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>

# Climate change-biodiversity-health nexus

## Exposure pathways



Extreme weather events



Heat stress



Air quality



Water quality and quantity



Food security, variety and safety



Vector distribution and ecology



Ecosystem / habitat degradation or ecological collapse



Conflict and displacement of people



Loss of health-promoting opportunities

## Health risks associated with climate change & biodiversity loss

### Health outcomes



Injury and mortality from extreme weather events



Heat-related illness



Respiratory illness



Water-borne diseases and other water-related health impacts



Zoonoses



Vector-borne diseases



Malnutrition and food-borne diseases



Noncommunicable diseases (NCDs)



Mental and psychosocial health

### Health systems & facilities outcomes



Impacts on healthcare facilities

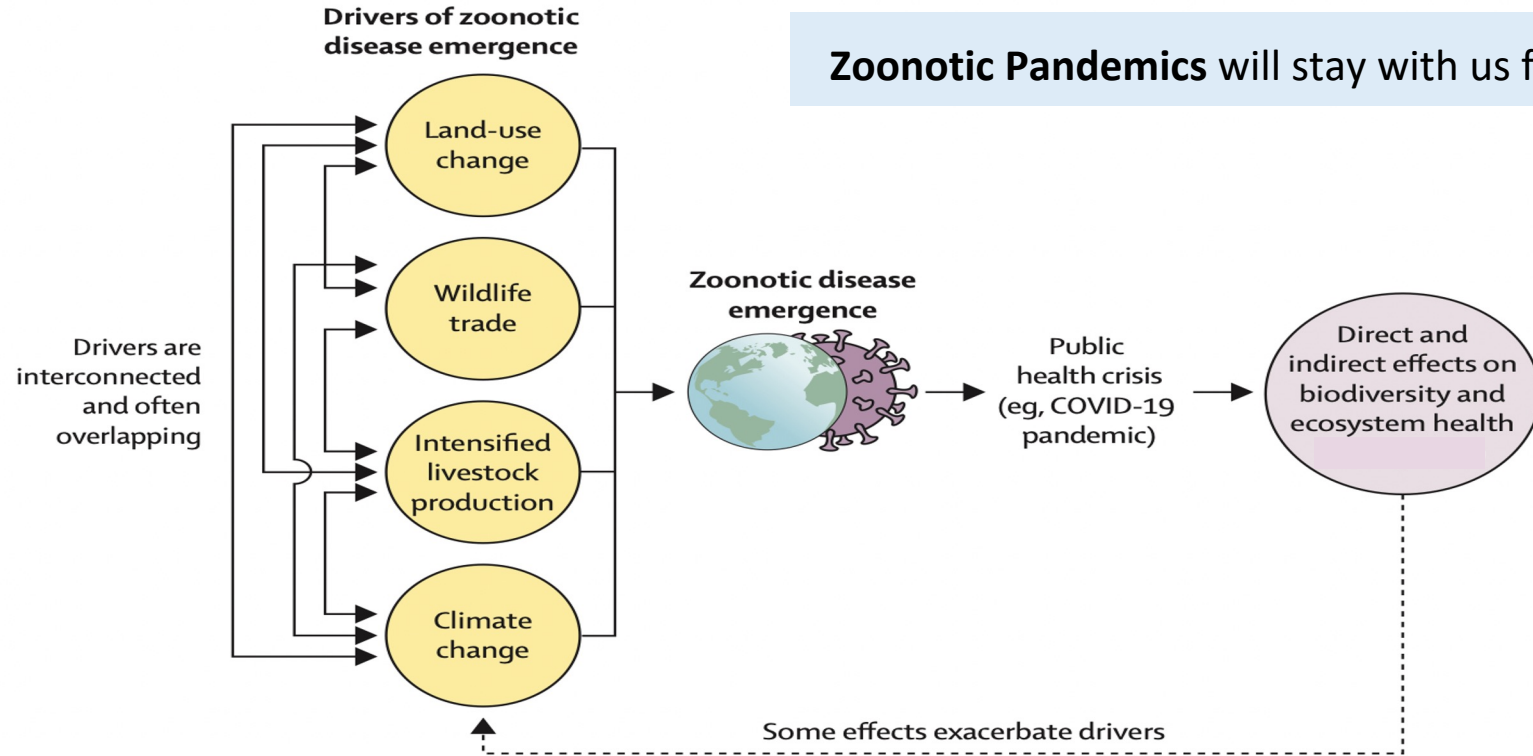


Effects on health systems





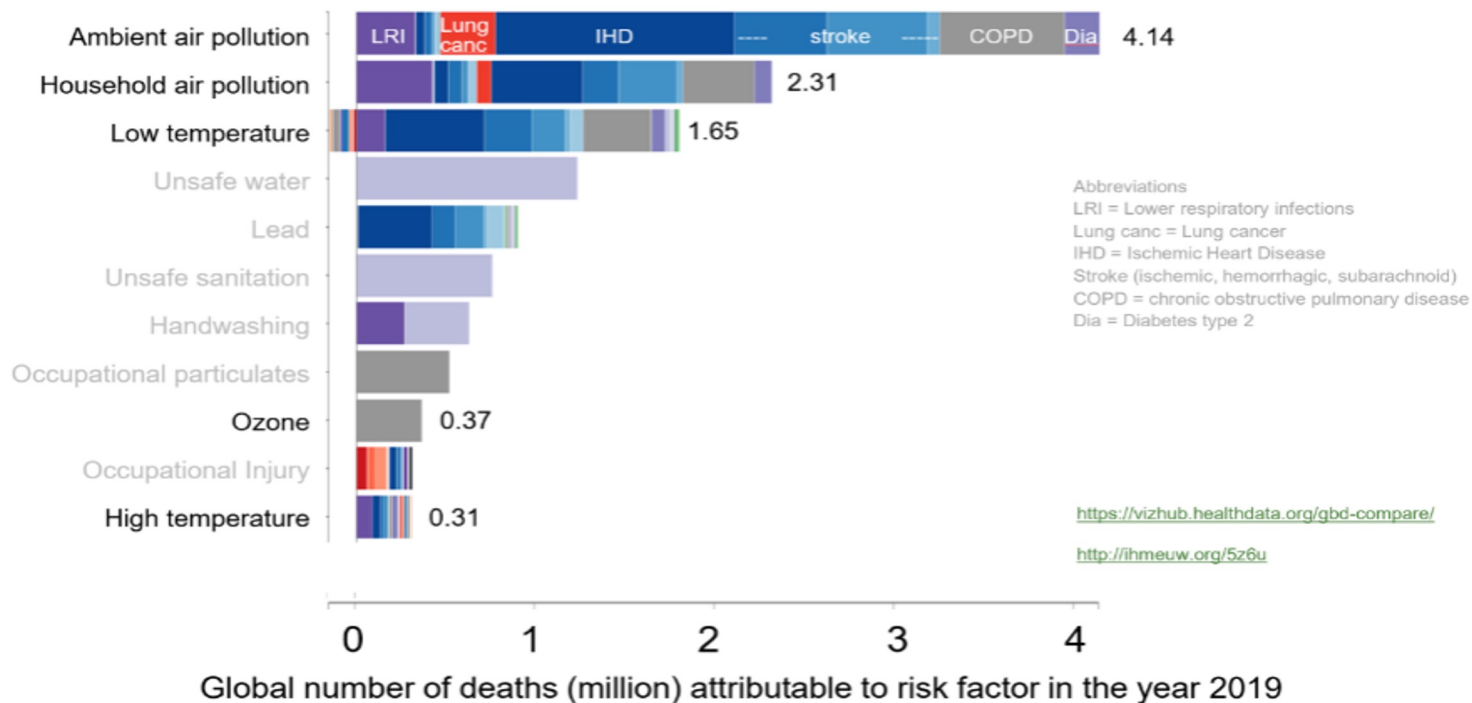
**Zoonotic Pandemics will stay with us forever.**



[PS2.1]



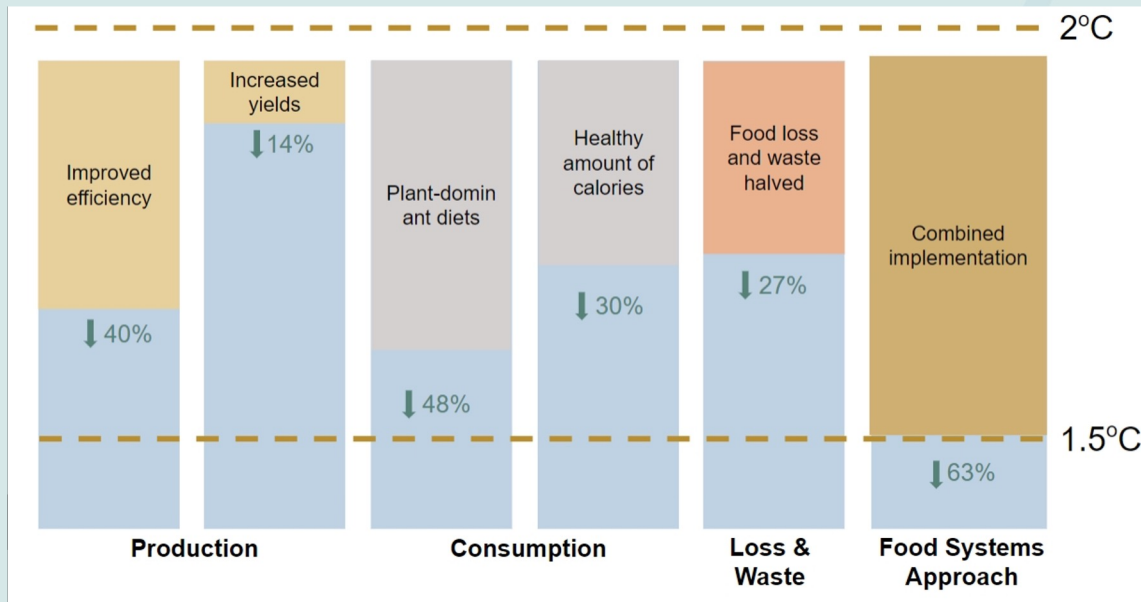
## Top global environmental risk factors GBD 2019



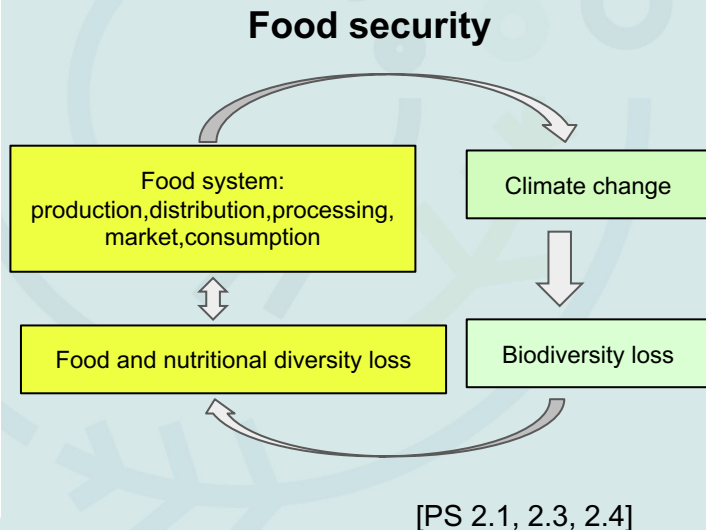
[PS1.6]

## Food and nutrition security

Achieving the Paris climate change targets requires multi-level food systems actions



[PS2.1] [DOI: 10.1126/science.aba7357](https://doi.org/10.1126/science.aba7357)







## Health and population

138. We recognize that health is a precondition for and an outcome and indicator of all three dimensions of sustainable development. We understand the goals of sustainable development can only be achieved in the absence of a high prevalence of debilitating communicable and non-communicable diseases, and where populations can reach a state of physical, mental and social well-being. We are convinced that action on the social and environmental determinants of health, both for the poor and the vulnerable and for the entire population, is important to create inclusive, equitable, economically productive and healthy societies. We call for the full realization of the right to the enjoyment of the highest attainable standard of physical and mental health.

## B. Root Causes of Climate Inaction



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## B. Root Causes of Climate Inaction

- **Challenges of Climate Inaction:** a complex issue influenced by economic, political, and social factors.
- **Lack of progress in COP27 of UNFCCC**
  - o Lack of political will to take strong and ambitious action,
  - o Hesitant to commit to emissions reductions that may be costly or negatively impact their economies.
  - o US as a major contributor to global emission has left Paris Agreement and WHO in 2020
  - o COVID-19 pandemic results in economic downturns, fiscal constraint to commit large resources while focused on economic recovery.
- **Lack of political will and accountability to citizens**
  - o Politicians and decision-makers focused on short-term gains
  - o Lobbying by fossil fuel interests is one of major barriers towards progresses



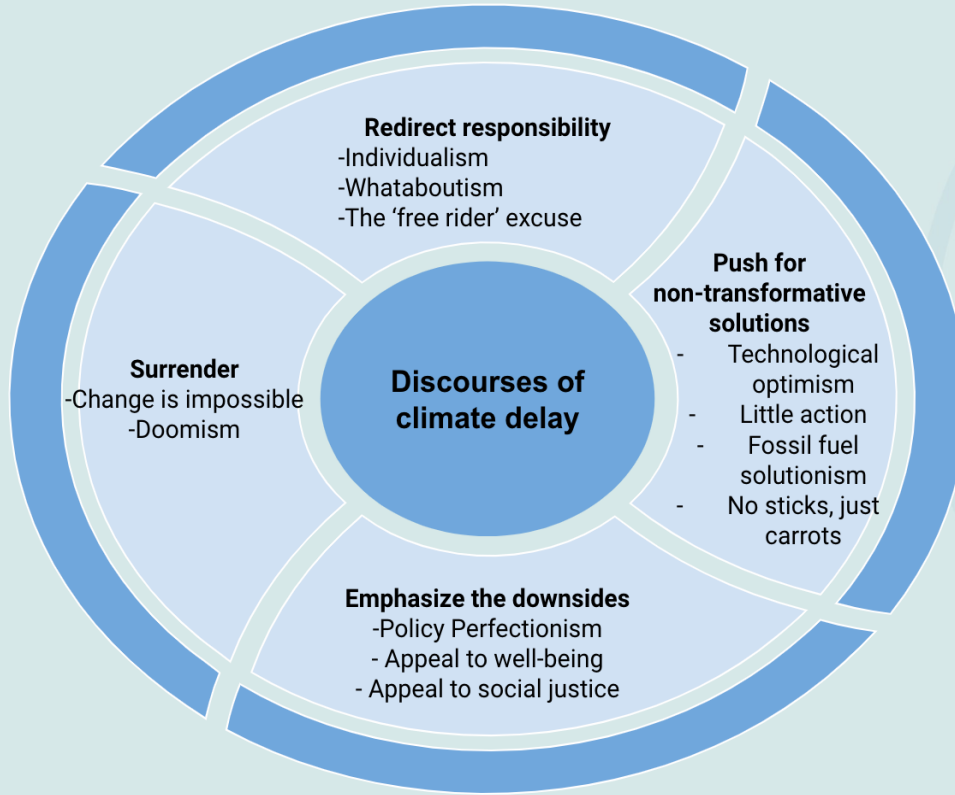
Image from: <https://www.chappatte.com/en/images/cop24-climate-conference/>

(IPCC Assessment Report 6 doi: 10.1017/9781009157926), Harvard Gazette: September 28, 2021 <https://bit.ly/3kRISkn>





## B. Root Causes of Climate Inaction



- **Inadequate global co-operation**
- **LMICs are victims of exploitation by HICs**
  - Inadequate implementation capacity
  - Financial, technical and institutional
  - Resources for mitigation and adaptation
  - More pressing development priorities: poverty reduction and economic growth
  - Inadequate international support and cooperation to address these barriers
- **Climate delay discourse:** highlight negative social effects of climate actions, cast doubt on mitigation feasibility.

DOI: <https://doi.org/10.1017/sus.2020.13>





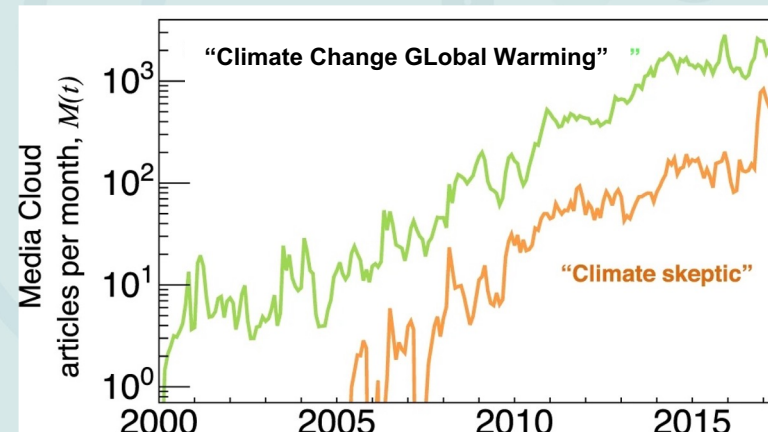
## B. Root Causes of Climate Inaction

### Misinformation and denial

- o Emergence of climate contrarians, denial of scientific consensus, increased visibility in media (DOI: [10.1038/s41467-019-09959-4](https://doi.org/10.1038/s41467-019-09959-4) )
- o Growing polarization around climate change on social media (<https://doi.org/10.1038/s41558-022-01527-x>)

### Dilemmas on solutions

- o Reducing emissions versus climate adaptation.
- o Climate contrarians argue against mitigation; cast doubt on
  - a) cost-effectiveness
  - b) feasibility of transitioning to renewable energy
  - c) lack of scientific certainty
  - d) negative impact on the economy, increase energy costs, decrease economic growth



From: Discrepancy in scientific authority and media visibility of climate change scientists and contrarians

## C. Potential Solutions



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## C. Potential Solutions

### Financing

- Innovative green health financing solutions e.g. Egypt's Green Health Insurance
- Innovative financing options e.g.
  - Pandemic Fund: Strengthen pandemic prevention, preparedness, and response capacities at national, regional, and global levels, with a focus on low- and middle-income countries
  - Funding from The Climate Investment Funds (CIF)
  - Clean Cooking Fund
  - Blended financing
- Integrating health agenda into climate change funding, e.g. Green Climate Fund (GCF)
- Combining climate change agenda with existing fundings
- Engage the private sectors in the role of climate change and health space. [PS2.6]





## C. Potential Solutions

### Sustainable Food system: from production to consumption

“**Food sovereignty**” —people who produce, distribute, and consume food also control the mechanisms and policies of food production and distribution



- Transform from “**Monoculture farming**” to “**Biodiversification**”
- **Promoting sustainable and healthy food system**
- **Sustainable farming**: regenerate **soil**, reduce **chemicals**, **biogas** production in livestock farms, climate-resilient **crops**
- **Nature-based diet**



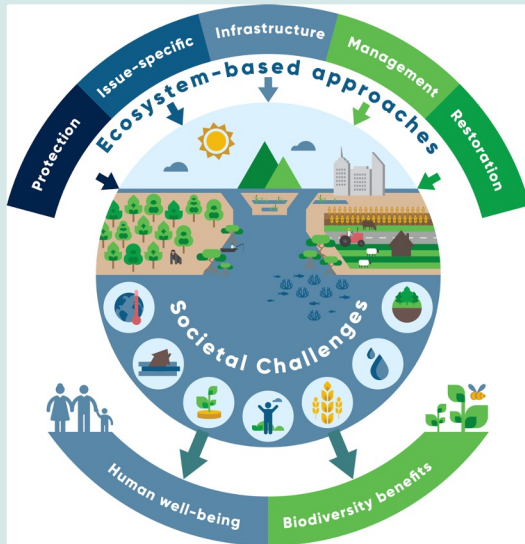
[PS2.1, 2.3, PS2.4]

Image from: <https://www.health.harvard.edu/staying-healthy/the-right-plant-based-diet-for-you>





## Nature based-solution



Climate change  
adaptation &  
mitigation

Disaster risk  
reduction

Economic & social  
development

Ecosystem  
degradation &  
biodiversity loss

Water security

Food security

Human health

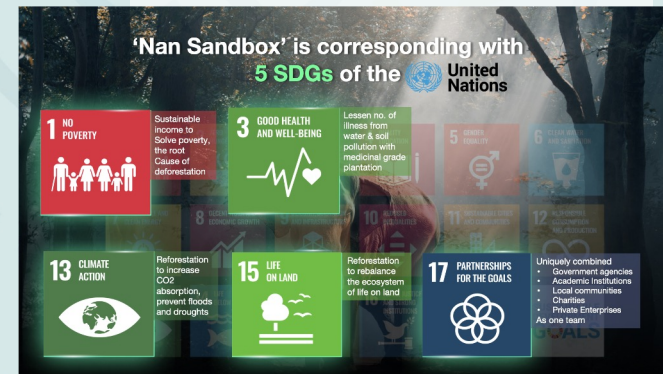
## C. Potential Solutions

### Examples of Nature based-solution

- **Gorilla Coffee Alliance:**  
improve quantity and quality of coffee harvest through regenerative agriculture + improved access to health care + conservation enterprises + protection of Kahuzi-Biega National Park
- **K Agro-innovate Institution** Moving from carbohydrate-based to high economic value of Medicinal Plants and new business opportunities



Players: Nespresso, Olam Food Ingredients, Asili WCS, TechnoServe, USAID

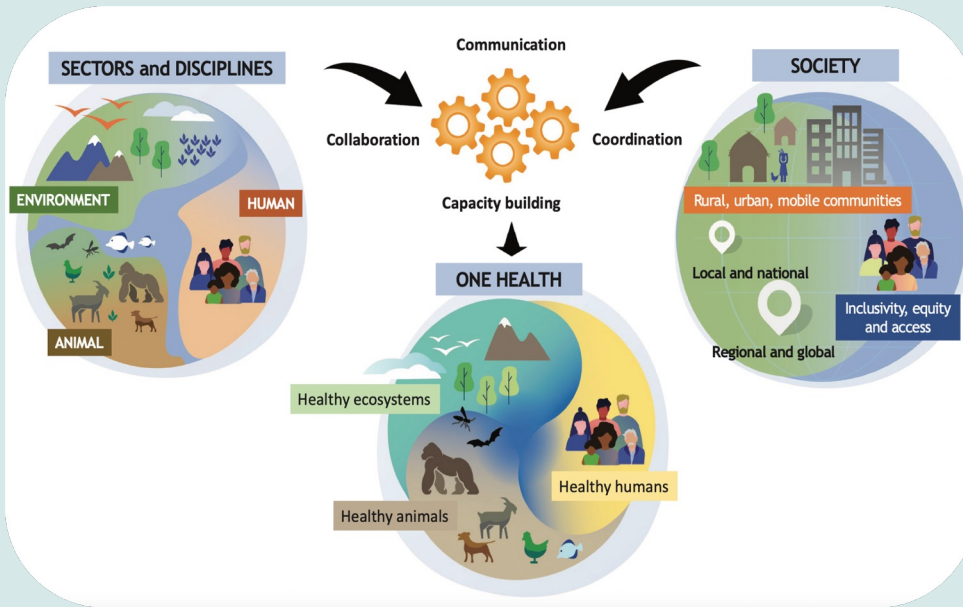


[PL1,PS2.2, 2.3]



## C. Potential Solutions

**One Health**, promoting a sustainable and healthy future through:



- **Broad vision of One Health** including environment and biodiversity protection
- **Collaboration & Coordination:** identify platforms to engage relevant experts that can work with health professionals
- **Communication:** identify strategic opportunities, conferences, etc., to promote investments in health, climate change and biodiversity interconnection
- **Capacity building:** improve understanding of linkages between health, climate change and biodiversity



## C. Potential Solutions

### Role of health sector

#### **Investing in health workforce development.** [PS2.2]

- Capacity building by implementing in the curriculum of healthcare professionals
- Include in extracurricular activities
- Transform the education--building the mindset of health professionals

#### **Promoting climate smart healthcare systems** [PS1.6, PS3.5, PL0]

- Placing climate policy in as a priority in facilities and management and supply chain
- Use of renewable energy and waste water management
- Biodigestion for disposal of organic and pathological healthcare waste
- Boston Medical Center Rooftop Farm that can use in the hospitals

**Advocate for cross-sectoral engagement** particularly in climate change issue by using health as arguments. [PL2]

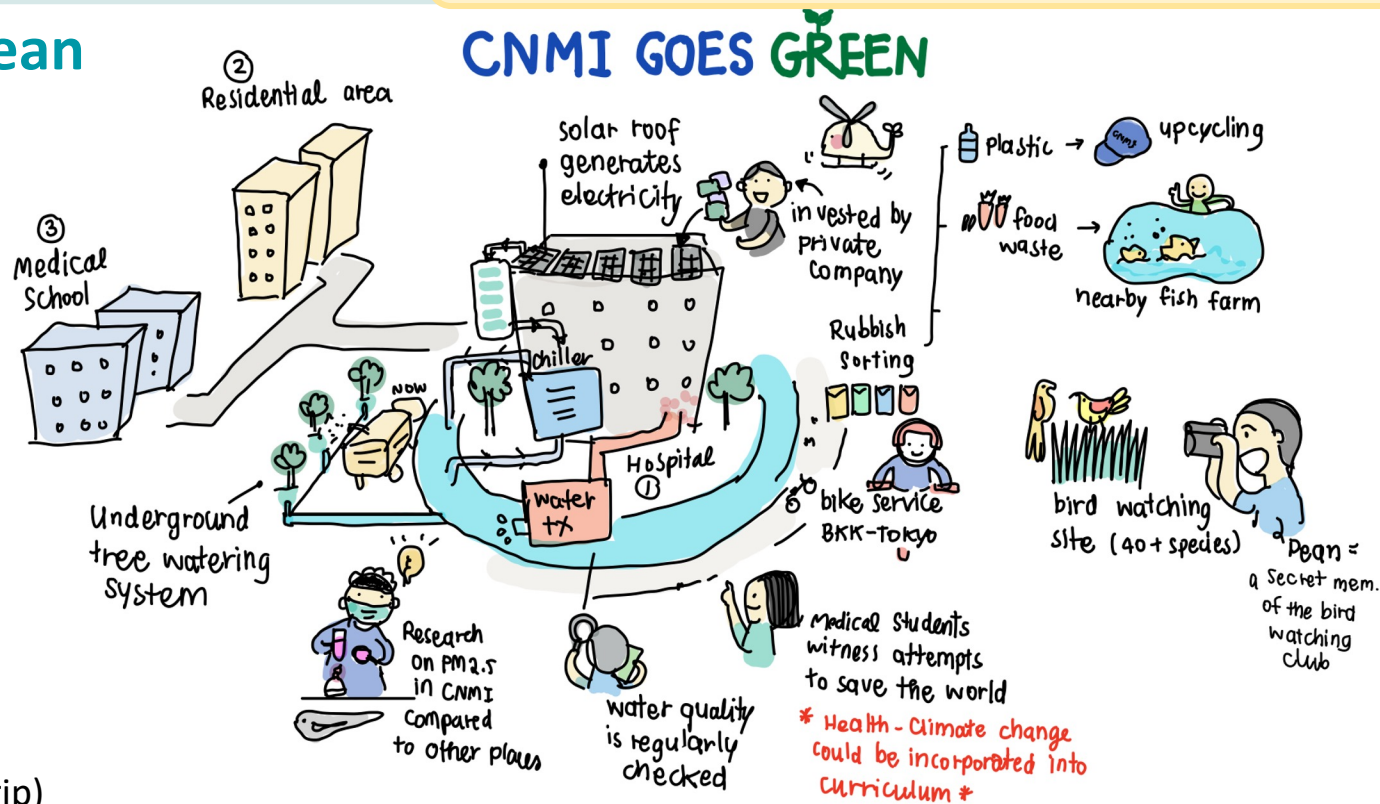
- Full engagement of health sector in climate change negotiations/ process





## C. Potential Solutions

### Green & Clean Hospital



Example of CNMI  
(PMAC 2023 Field trip)





## C. Potential Solutions

### Role of the citizens

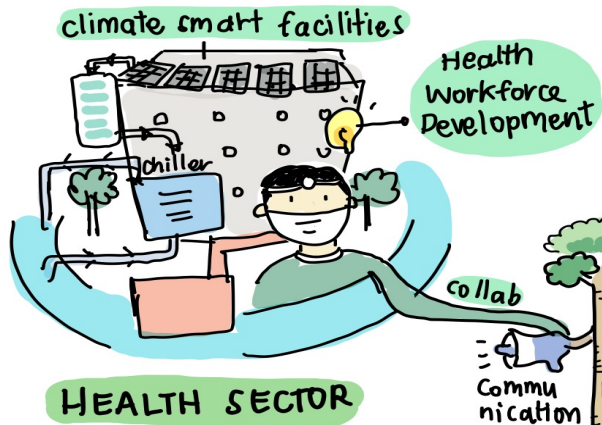
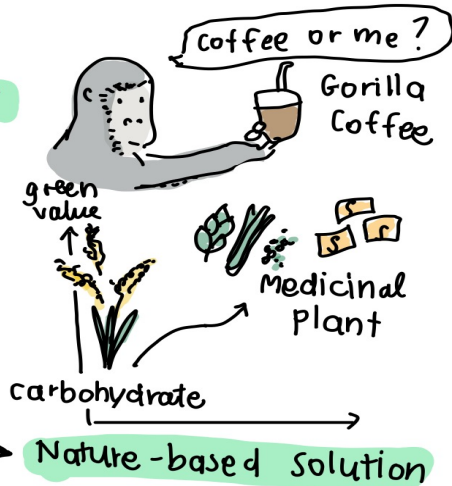
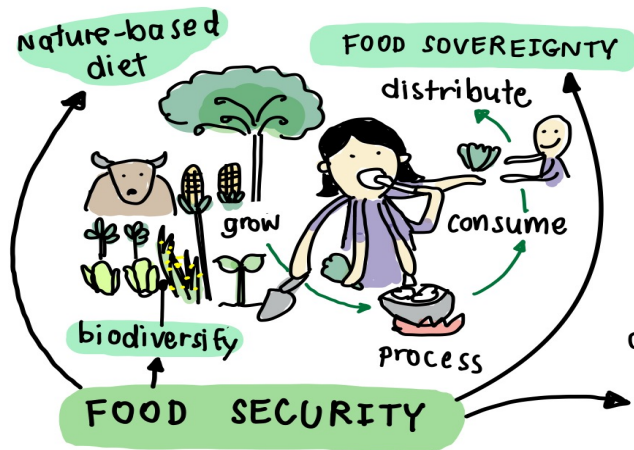
- **Put people at center of responses.** Give people agency to act and become partners in the solution based on equitable and ethical practices. **Empower the voice & wisdom of the youth, women, indigenous and local communities** and assist them on financing, tools and innovations. [PL0, 2, PS1.4, PS2.5]
- **Engage youth in the policy and advocacy process** includes: 1) Re-orient policy spaces and integrate young people as natural and equal partners; 2) Grassroot and youth-led initiatives funding; 3) Integrate climate change into all forms of **education**. [PL0, 3] [PS1.4]



"The realities of the climate crisis become more real when you recognize that 100 years pass in a flash and you are likely to know someone that it will affect."

- Simplify **message for the population** and include local journalist for better education on climate change. [PS1.2]
- **Inform, educate, and empower** local communities about the climate change and action that could implemented locally. [PS1.6, PS2.5]

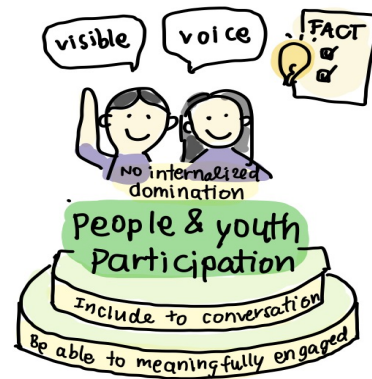




**PMAC<sub>2023</sub>**



WHAT CAN WE DO?





# The Way Forward

**Go to Menti.com**





# Q&A





# Acknowledgement: 68 PMAC 2023 session rapporteurs

Ajaree	Rayanakorn	Kanang	Kantamaturapoj	Payao	Phonsuk	Supakrit	Kositbovornchai
Anjalee Uthpala De Silva		Kanchanok	Sirison	Phatthanamon Sinsawat		Supitsara	Kositbovornchai
Polkotuwa	Polkotuwe Gedara	Khanin	Hosiripon	Pispasinee	Pisansin	Suravee	Assavachai
Anond	Kulthanmanusorn	Khanit	Pisawong	Ponlagrit	Kamwichar	Taksaporn	Laipasu
Bhumipat	Dejcharnchaiyuth	Khanitta	Saeiew	Praewa	Kulatnam	Teppei	Kondo
Boonyasit	Ngamvirojcharoen	Krittika	Tiwari	Ravikarn	Boonyapradub	Thanasak	Thumbuntu
Capucine	Barcellona	Mathudara	Phaiyarom	Rin	Indarodom	Thanyaporn	Teeraputorn
Chanya	Mittrakulkij	Maylin	Wongjarupun	Rujira	Adhibai	Thiphaphon	Chanthama
Chaovanon	Sophonsakulsuk	Mayumi	Okada	Rungsun	Munkong	Wan	Chantavilasvong
Chayannan	Jaide	Natnarun	Prutthiarphakul	Ryan	Sitanggang	Wanapas	Wachiradejkul
Collins	Santhanasamy	Natnicha	Manaboriboon	Salisa	Rittimanomai	Waraporn	Suwanwela
Dian	Faradiba	Nattadhanai	Rajatananvin	Sarayuth	Khuntha	Watinee	Kunpeuk
Dimple	Butani	Nikita	Mandyam	Shaheda	Viriyathorn	Wit	Wichaidit
Eakdanai	Samanuhut	Nontakorn	Siriwattanasatorn	Sirinard	Nipaphorn	Yan	Lin Aung
Haruka	Furukawa	Nujpanit	Narkpitaks	Siriya	Sirithienthong	Yanisa	Pumsutas
Hinano	Tateishi	Nurul	Hussain	Siriyaporn	Kanhachon		
Hui Xiang	Chia	Nuttara	Sapphaso	Somtanuek	Chotchoungchatchai		
Inthira	Suya	Nutwara	Kijthammarat	Sopana	Hiraburana		

# Rapporteurs contribution

## Lead Rapporteur



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Loreta Rufo



Abigail Johnson



Diarmid Campbell-Lendrum

## Rapporteur Coordinator



Titiporn Tuangratananon



Angkana Lekagul



Warisa Panichkriangkrai



Walaiporn Patcharanarumol  
(Advisor)

# THANK YOU

