

# Introduction

## Human health and planetary health are intrinsically linked

- In our efforts to treat illness and cure disease, we must also do everything in our power to look after the health of the planet
- True resilience will only come from a focus on people
- Tech is important for the outcomes derived, but is not the entire picture is not the reason itself to act
- Repeating the intentional decisions of the past will create the mistakes of the present and future
- “The master’s tools will never dismantle the master’s house,” Audre Lorde 1984



# General Root Problem

## Climate change will increasingly challenge healthcare systems and patients

### Greatest threat to public health

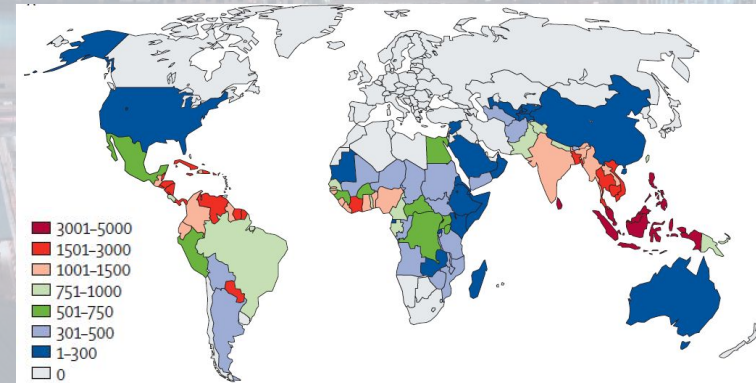
Science is unequivocal: increase of 1.5° C above pre-industrial average and continued loss of biodiversity risk catastrophic harm to health that will be impossible to reverse

### Equity

Consequences of environmental crisis fall disproportionately on communities that have contributed least to the problem and are least able to mitigate the harms

### For example: Dengue

- + 488% in Brazil
- + 500% in Singapore
- + 1200% in Cambodia
- + 297% in Vietnam



Incidents per 100,000 population<sup>1</sup>

Source: NEJM Editorial: Call for Emergency Action to Limit Global Temperature Increases, Restore Biodiversity, and Protect Health 1. Developed from Bhatt Nature 2013, Shepard Lancet 2016, Murray Lancet 2017, ECDC 2019

“Climate change is poised to become the biggest global health threat of the 21<sup>st</sup> century”

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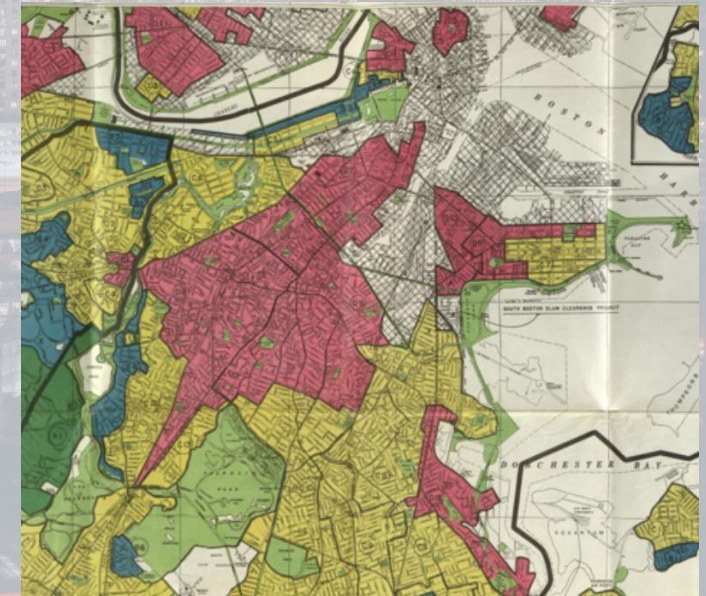
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### Redlining

- Practice of redlining prevented access to cash for buying homes and improving properties
- Undesirable and environmentally harmful projects were routinely sited in redlined districts
- Residents had no political capital or practical power to prevent the practice
- Multi-generational impact that resulted in degraded personal health and resilience
- The desire to build new infrastructure for electrification and clean transportation as cost effectively as possible means that existing rights of way and sites are likely to be reused, perpetuating decisions of the past



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# Key Obstacle to Overcome & Our Role

Creating momentum that bridges systems & regulations and allows for collaboration to aid most vulnerable communities...real action, not talk

- Stakeholders don't view prevention as revenue generation
- COVID pandemic highlighted systems interdependencies
  - Labor
  - Financial
  - Food
  - Safety
  - Healthcare
  - Education
  - Transportation
  - Energy
- Create climate resilient healthcare systems and delivery networks
- Create capacity in medical, public health and healthcare systems to prevent illness from climate change, not simply treat when patient is in distress
- Create capacity in multiple systems to build personal and community resilience in vulnerable communities

## Novartis efforts

### Changing epidemiology of neglected tropical diseases

Dengue (ME-78-OH90), malaria (KAF156),  
Chagas (Entresto®)

### Medicine portfolio responding to emerging changes

e.g. respiratory, cardiovascular, renal

### Collaborating to build health system resilience

With universities (e.g MIT, Morehouse), identify solutions to climate issues that disproportionately affect the health of communities of color through the Beacon of Hope

### Equity

Evaluating business-integrated solutions to both mitigate and adapt to a more variable climate while enabling health system resilience

# Benefits & Consequences

## What are the benefits / consequences of addressing or not addressing this obstacle?

### Benefits

- More effective energy generation, transmission and distribution to match future needs
- Lives saved
- Suffering prevented
- Societal costs reduced
- Social equity rebalanced to some extent
- Reduced respiratory illness
- Reduced energy poverty

### Consequences

- Further social inequity
- Cost paid in lives and money for inaction or delay will increase
- Increased tax burden and other indirect costs as care needs, deaths and physical destruction increase
- Multi-system impact will effect GDP

# Final Statement:

**"Regarding Critical Infrastructure, Equity & Resilience, to achieve Boston's Carbon & Equity goals, a critical obstacle to overcome is the lack of real focus and action to aid vulnerable communities impacted by climate change by reversing years of harmful regulation and zoning through equitable placement of generation, transmission and distribution assets."**

***"Energy justice requires that we rethink and redesign the entirety of our energy system,"  
Shalanda Baker, Deputy Director for Energy Justice in the Office of Economic Impact and  
Diversity at the U.S. Department of Energy***