

Overview of a Center for Human & Planetary Health at Stanford

Steve Luby

Celebrating Human and Planetary Health at Stanford

October 30, 2023

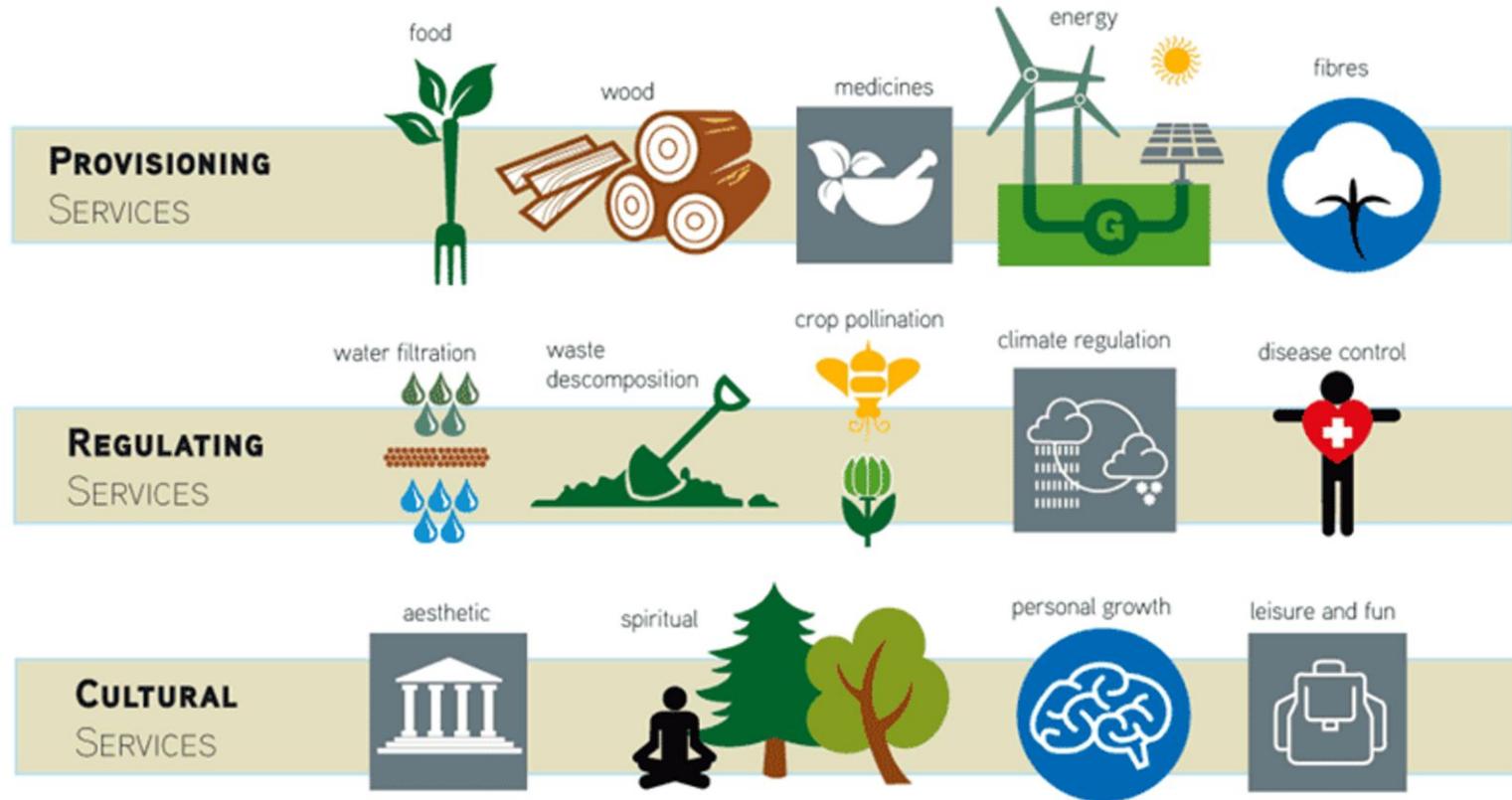


Stanford | Program for Disease Ecology,
Health and the Environment

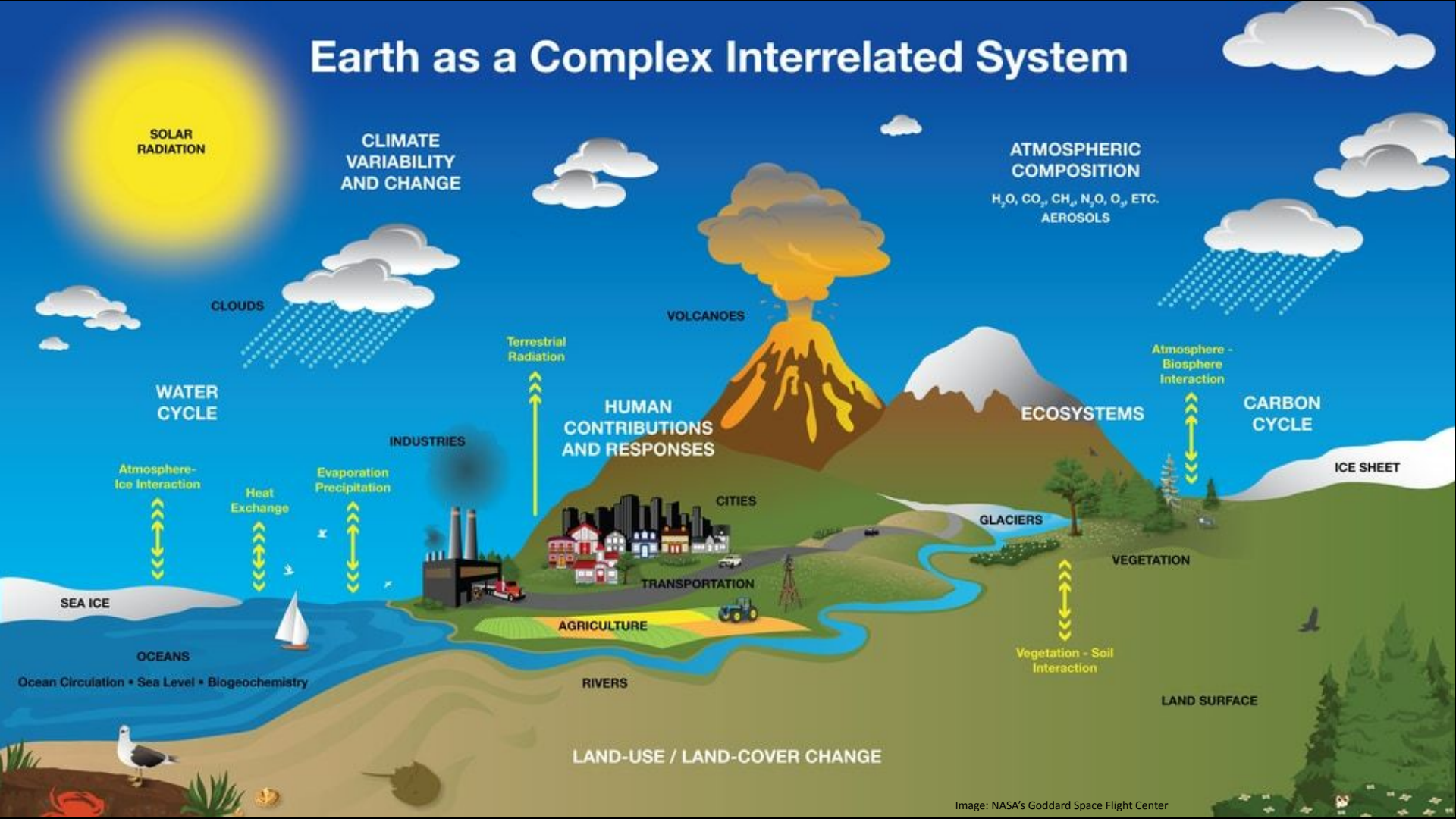


STANFORD
CENTER FOR INNOVATION IN
GLOBAL
HEALTH

People depend on ecosystems



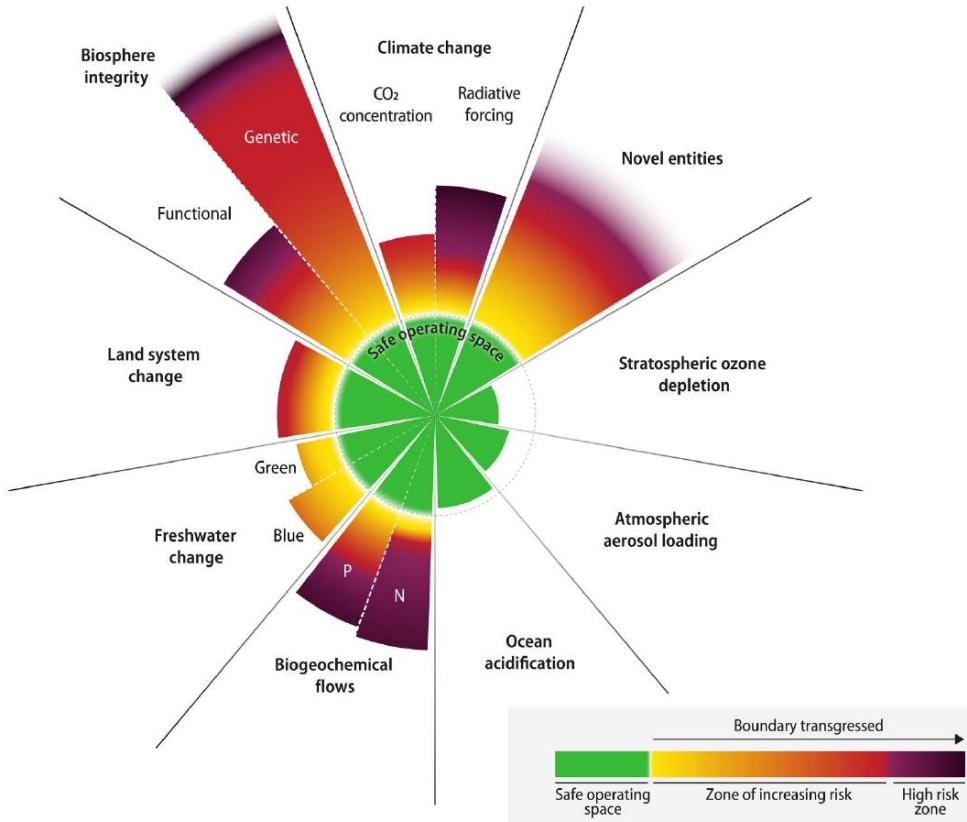
Earth as a Complex Interrelated System



Planetary boundaries: A safe operating space for humanity

Steffen W. *Science*. 2015

Richardson K. *Science Advances*. 2023



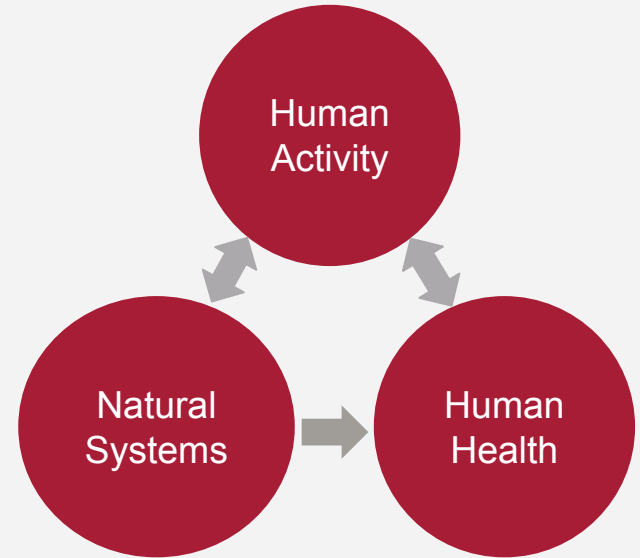
The earth's biosphere is supported by a complex interactive physical and ecological system.

Resilient to countless perturbations

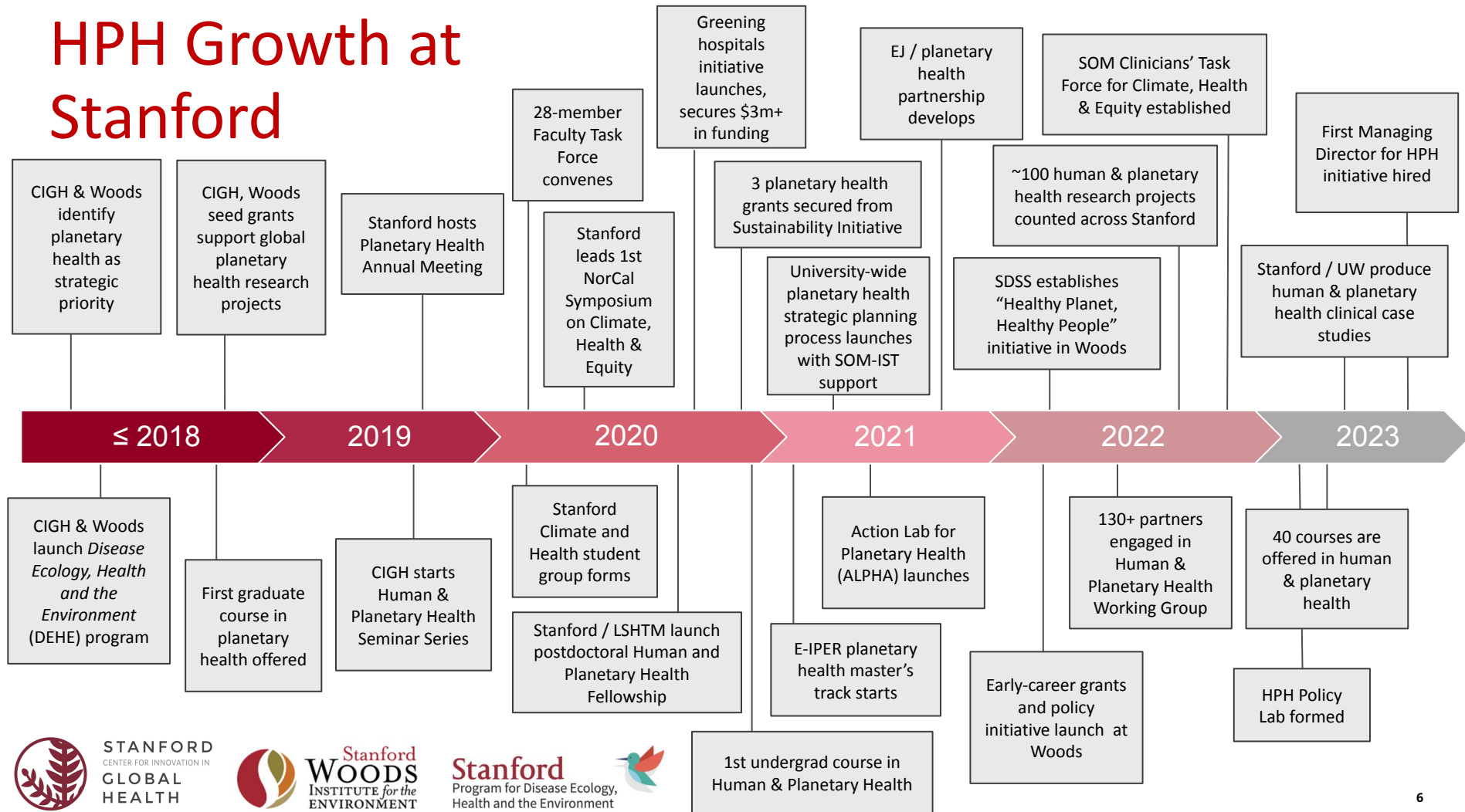
Anthropogenic actions risk permanently destabilizing longstanding resilient earth systems

Human & planetary health studies the connection between health of the environment and health of people

- Assesses impacts of human disruptions of Earth's natural systems on ecological & human health
- Develops solutions to protect both human health and the environment
- Strengthens the rationale for urgent environmental action



HPH Growth at Stanford



Key personnel in human & planetary health



Steve Luby
Faculty Director



Michele Barry
Founding Leader



Giulio De Leo
Founding Leader



Lisa Patel
Founding Leader



Desiree LaBeaud
Founding Leader



Erin Mordecai
Founding Leader



Michael Wara
Founding Leader



Kathy Burke
Founding Leader



Allison Phillips
Founding Leader



Sibyl Diver
Founding Leader



Erika Veidis
Founding Leader



**NEW: Dept. of
Epidemiology
Faculty**

Successes to date

- **130+** faculty, researchers, and other partners engaged across Stanford
- **128** students enrolled in foundational “Human & Planetary Health” courses
- **100+** research projects engaging environment & health led by Stanford faculty in last 2 years
- **80+** partnerships established with external stakeholders
- **5** postdoctoral research fellows in joint Stanford / London School of Hygiene & Tropical Medicine program

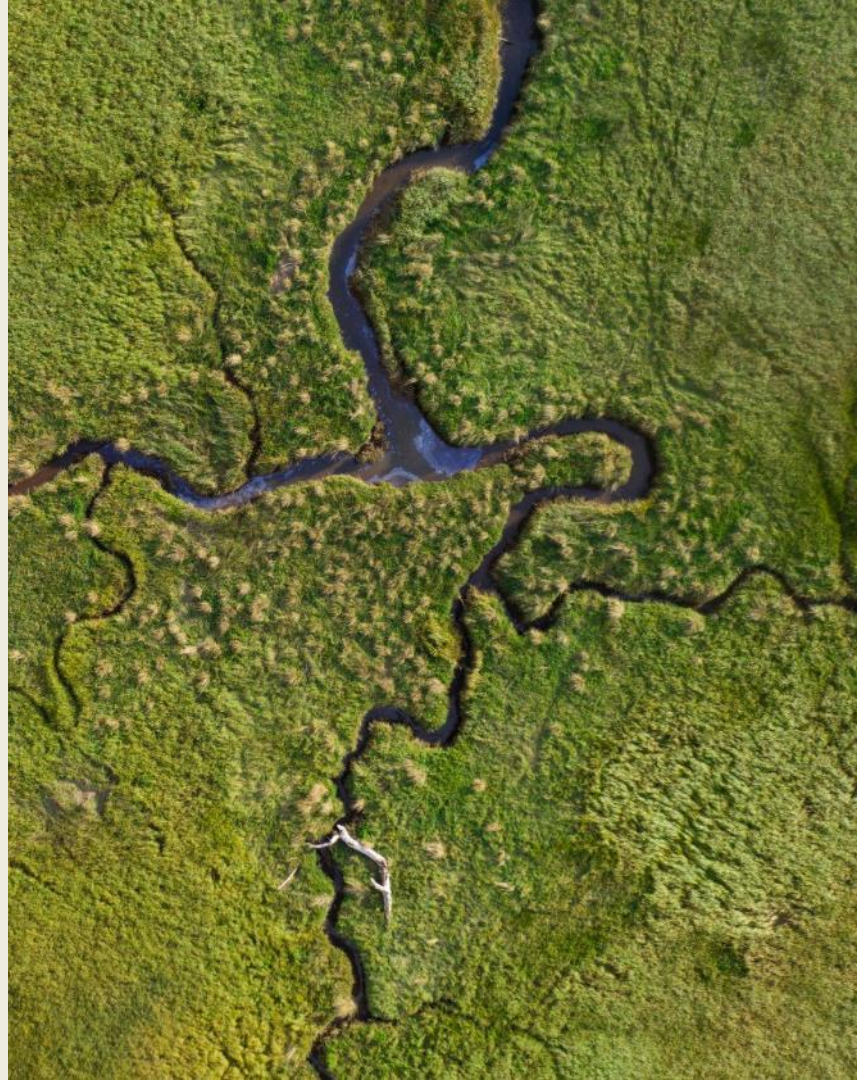
- **Master’s track** in human & planetary health established in E-IPER
- **Policy Lab** in SDSS
- **Seed grants** offered through CIGH & Woods
- **Medical education** expanded to train health professionals in climate, environment & health

Select Research Projects

- Assessing the short- and long-term **health impacts of wildfire smoke**
- Developing low-cost interventions that reduce coal consumption and air pollution from **brick kilns**
- Conducting a social impact assessment of Klamath dam removal that centers **indigenous community health**, wellbeing, and access to traditional foods
- Assessing the impacts of dams, irrigation, and other **agricultural systems on parasitic diseases**
- Studying the impacts of **human pressure on land in Brazil** on transmission of malaria, dengue, Zika, chikungunya, and leishmaniasis
- Exploring the **consequences of plastic pollution for health**—with a focus on infectious disease exacerbated by mosquito breeding in plastic containers
- Building an understanding of the unprecedented **mental health consequences** fueled by environmental degradation

VISION *A thriving future for our planet and all the people who call it home.*

MISSION *Create knowledge, train leaders, and drive impact in human & planetary health.*



Areas of Focus

1. Climate & Health

vulnerable populations

extreme weather

wildfires

displacement

new disease patterns

2. Pollution & Health

harm from pollution on the health of humans and the environment

redesigning business models and processes

3. Ecosystems & Human Wellbeing (*Healthy Planet, Healthy People*)

connections between ecosystems and human communities

ecological levers for planetary health

4. Healthy Foods for People & the Planet

available affordable comprehensive human nutrition

supporting thriving biodiverse terrestrial and aquatic environments



HPH Center Objectives



Drive Solutions-Oriented Research

- Catalyze interdisciplinary collaborations
- Enable community-engaged partnerships



Train Future Leaders

- Undergraduate students
- Graduate students
- Medical students
- Post-doctoral scholars
- Residents and fellows



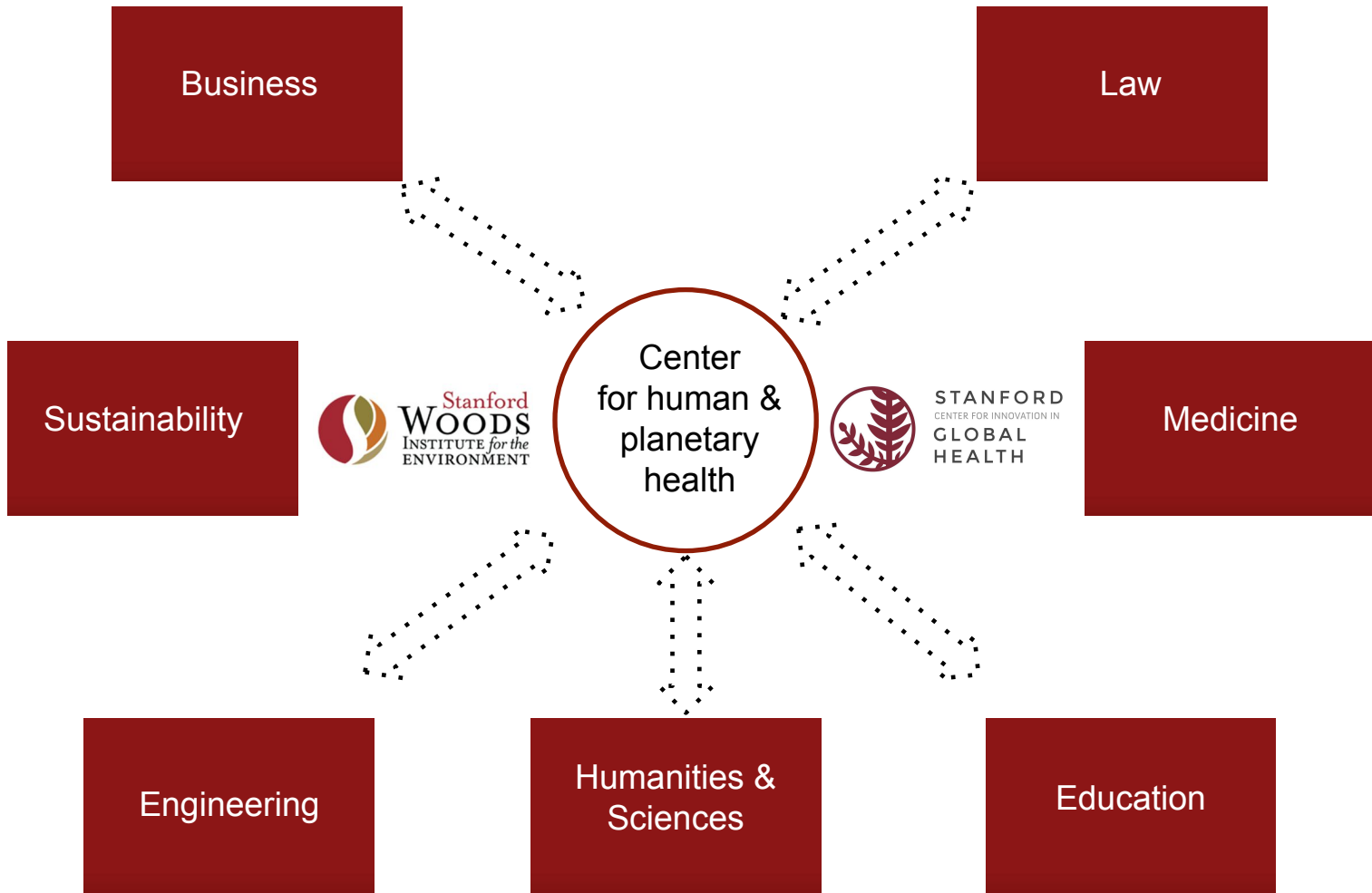
Accelerate Impact

- Policy development
- Private sector innovations and entrepreneurship
- Community-engagement
- Strategic communications



Build Community at Stanford

- Coordinate across all 7 schools
- Provide structure and support to faculty and students
- Foster purpose and belonging



Business

Law

Sustainability



Center
for human &
planetary
health



Medicine

Engineering

Humanities &
Sciences

Education

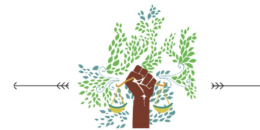
Human and Planetary Health depends on partnership from across campus

Stanford

Program for Disease Ecology,
Health and the Environment



EMERGENCE



ENVIRONMENTAL
JUSTICE
• STANFORD UNIVERSITY

Stanford | Doerr
School of Sustainability



Stanford
WOODS
INSTITUTE for the
ENVIRONMENT



STANFORD
CENTER FOR INNOVATION IN
GLOBAL
HEALTH



Stanford
MEDICINE

Stanford | Center on Food Security
and the Environment

Freeman Spogli Institute and Stanford Woods Institute for the Environment



Stanford Climate Health and
Equity Task Force

Human and Planetary Health at Stanford

- Global
- Interdisciplinary
- Rooted in equity
- Solution, impact-oriented
- Moving from an initiative to a Center
- Name change is likely on the horizon

