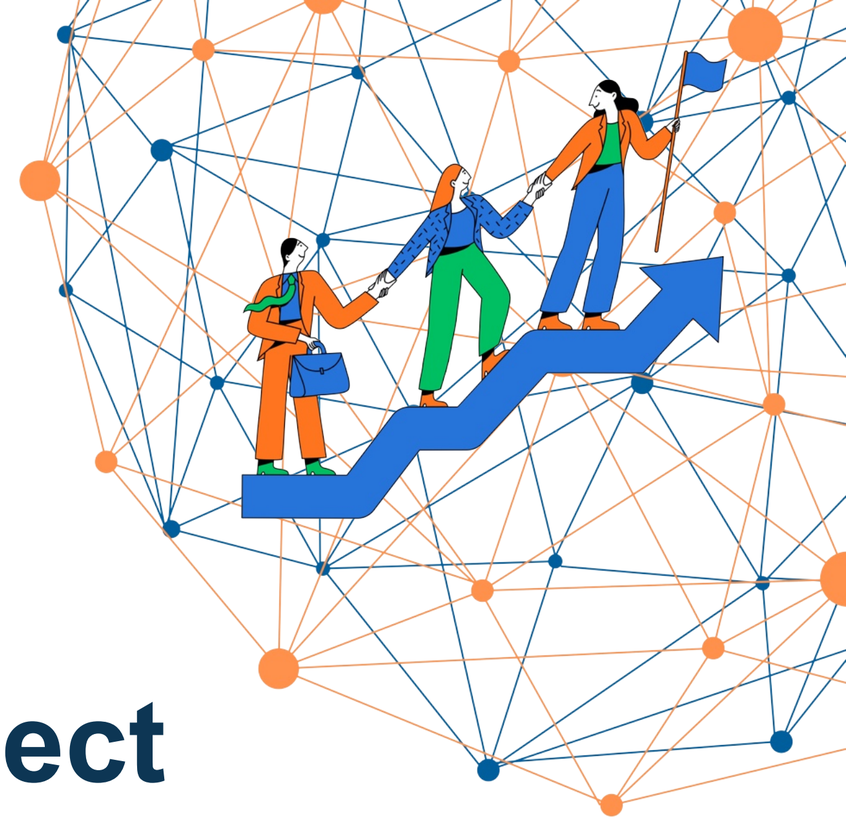
Introducing



Climate and Health Observatory Accelerator Project

18 November 2025

PASTEUR NETWORK

The Rockefeller Foundation

公益慈善研究院 Institute of Philanthropy

Climate&Health Accelerator

Climate and Health Fellows = 18; from 16 countries

Each fellow represents an Institut Pasteur based in their country

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Climate&Health Accelerator

2

Project Overview

OBJECTIVE	The Pasteur Network aims to systemically and sustainably transform public health implementation, research and policy decisions for the realities of the climate crisis
TIMING	3 years: April 2024 – April 2027 2 years for fellows: 2025-2026
FUNDERS	Co-funding from the Rockefeller Foundation and the Institute of Philanthropy

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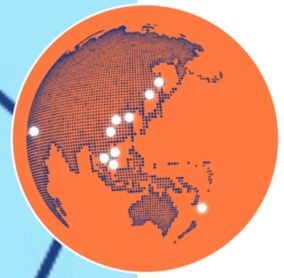
Key Activities for the project as a whole



1. Building connections across Exemplars & Fellows
2. Assessing Local Needs
3. Conducting research in relation to Climate and Health
4. Document, Advocate, Disseminate
5. Training and Build Partnerships

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Exemplars

Vietnam’s Focus:
Working on developing a Climate & Health **data warehouse** with improved accuracy for **Dengue** prediction

Senegal’s Focus:
Assisting ANACIM in **improving the monitoring report** (currently built for the Prime Minister's office) and **develop an interactive dashboard**

Brazil’s Focus:
Building **interoperable and adaptable tools and templates** (based on current model in Brazil) to facilitate the creation and daily operations of replicable climate & health observatories

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Institut Pasteur du Cambodge
PASTEUR NETWORK

Cambodia GeoSpatial Day 2025
18 November 2025
Institute of Technology of Cambodia, Phnom Penh

18 November 2025

Climate and Health Observatory Accelerator Project

Assessing climatic impacts on health through the lens of public perceptions in Cambodia

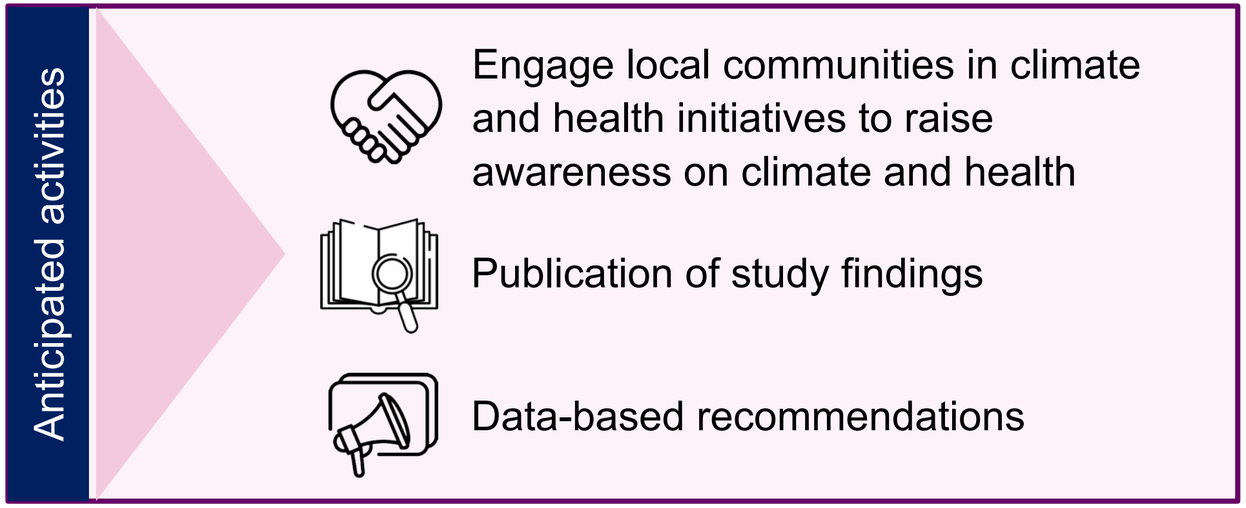
Epidemiology and Public Health Unit
Institut Pasteur du Cambodge

Fellow: Saren SOVANN
Supervisor: Dr. Claude FLAMAND

This study is co-funded by

The Rockefeller Foundation

公益慈善研究院 Institute of Philanthropy



Saren SOVANN

Climate and Health Fellow
Epidemiology and Public Health Unit
Institut Pasteur du Cambodge

2015

BSc. in Bio-Engineering

2019

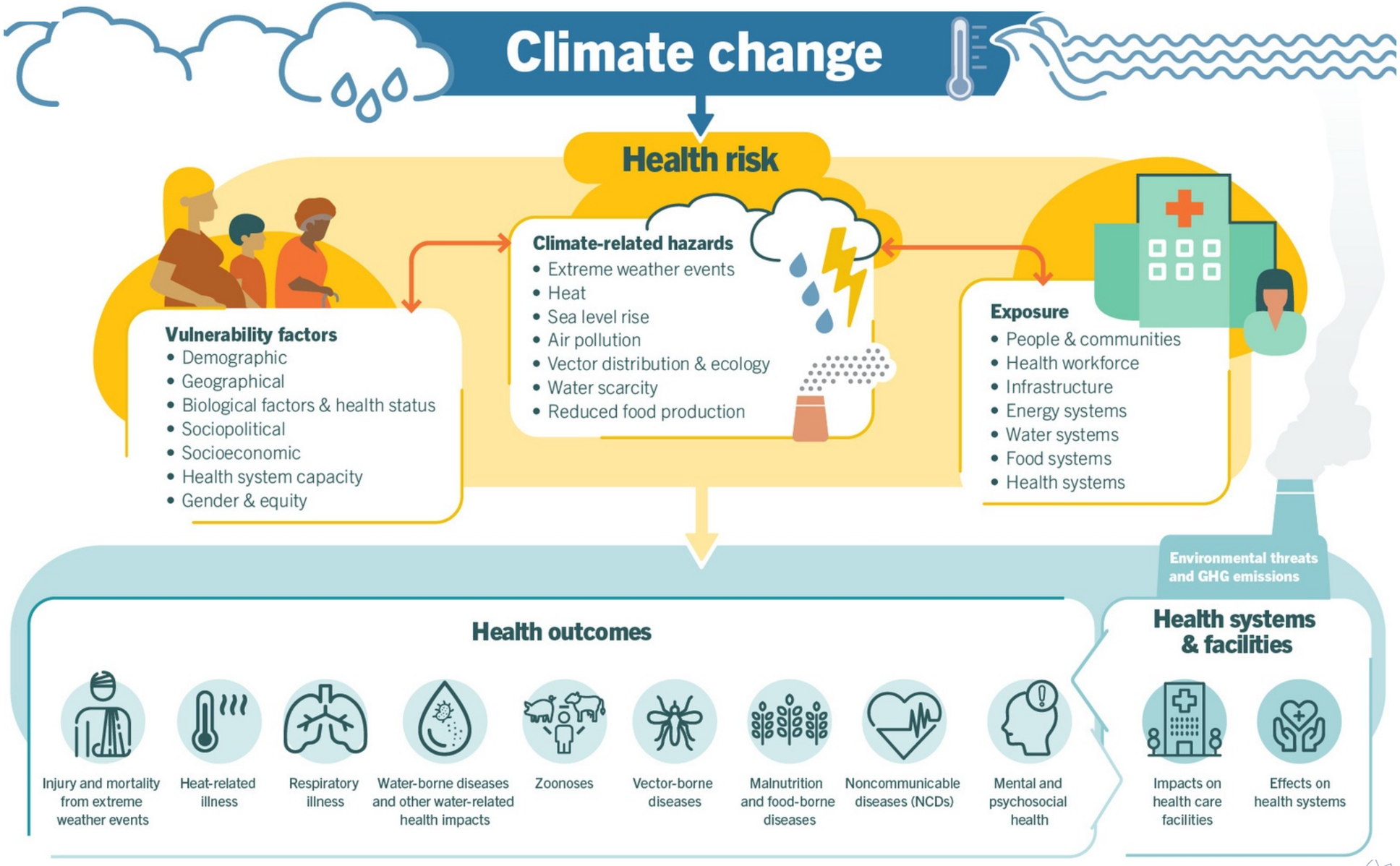
Clinical Research Lab Monitor
(TB, HIV, HBV in children & adult)

2022

MSc. in Molecular Biology
Thesis: Human mAbs & PsA

2025

Climate and Health Fellow


Climate change
Health risk
Vulnerability factors
• Demographic
• Geographical
• Biological factors & health status
• Sociopolitical
• Socioeconomic
• Health system capacity
• Gender & equity
Climate-related hazards
• Extreme weather events
• Heat
• Sea level rise
• Air pollution
• Vector distribution & ecology
• Water scarcity
• Reduced food production
Exposure
• People & communities
• Health workforce
• Infrastructure
• Energy systems
• Water systems
• Food systems
• Health systems
Environmental threats and GHG emissions
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
Impacts on health care facilities
Effects on health systems

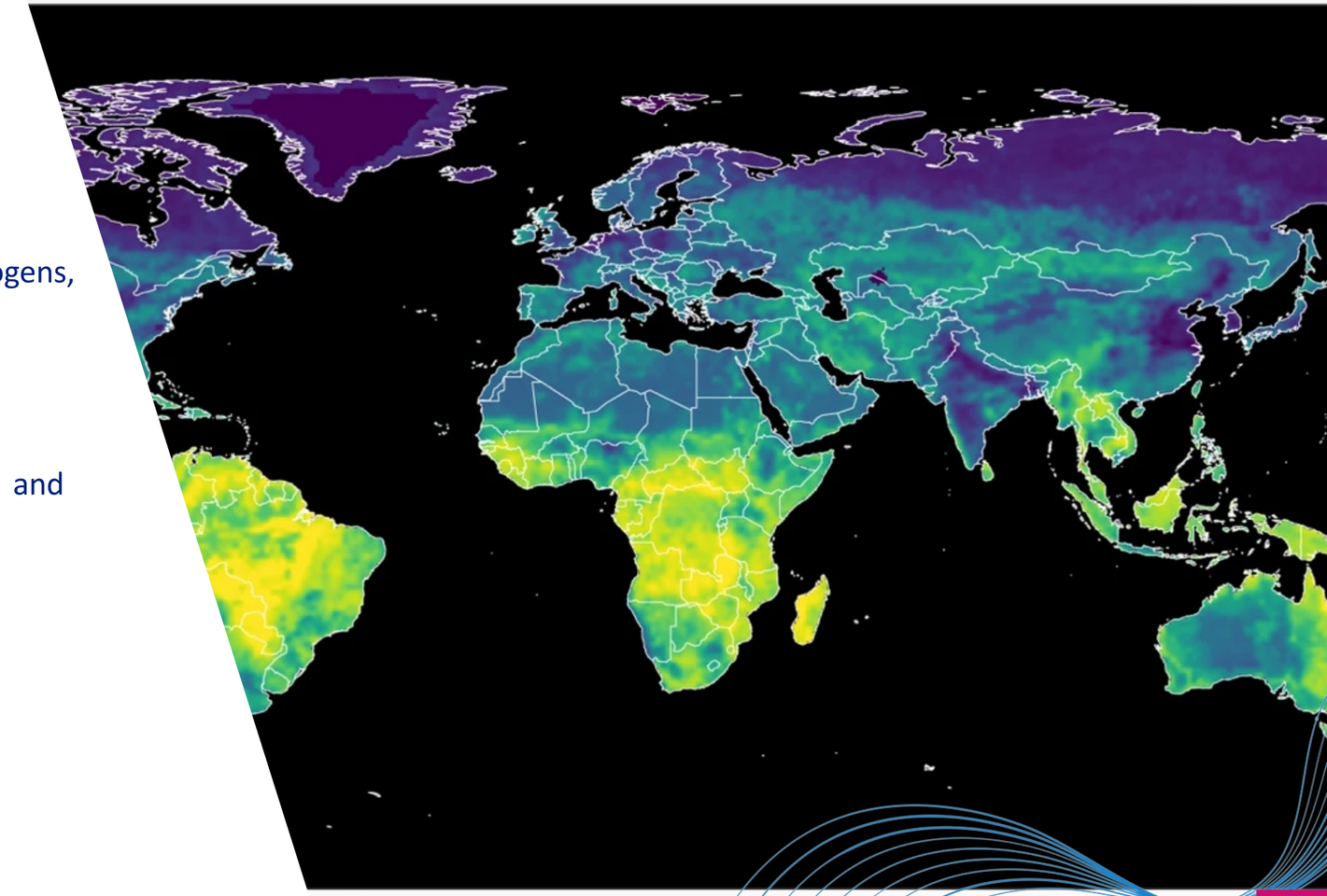
Challenges for Infectious Disease Control in LMICs

RACSMEI

Weak surveillance and limited understanding of disease dynamics

Expensive research often done in silos on specific pathogens, components, and **small areas**

Paucity of data for policy-makers to develop, monitor and assess control policies



*Risk Assessment of Community Spread of Multiple Endemic Infectious Diseases in a One Health Perspective (RACSMEI)

Research Questions

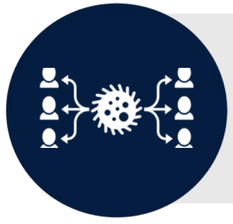
- How does Cambodian population **perceive climate change** and its **impacts on health**?
- What actions have been already implemented to mitigate these impacts? What are the challenges and how can we overcome them?
- **What are the key determinants of disease transmission** and how does **climate and environmental changes influence their spread** at individual, household, and community levels? What are the disease burden in Cambodia? Who are most at risk?

Core components of the study

C1 **First Component** — **2025-2026**

Nationwide KAP survey &
Semi-structure interviews

C2 **Second Component** — **2026-2027**



Multi-components risk maps

Objectives:

- Identification of **key determinants of disease transmission** and **climate impacts** at individual, household, and community levels;
- **Impacts of environmental/climate factors** on **pathogen diversity and abundance**, facilitating development of predictive models;
- Creation of **high-resolution risk maps**, highlighting vulnerable hotspots;
- Development of evidence-based **recommendations** for **targeted intervention strategies**;
- Strengthened **collaboration among stakeholders** in multiple sectors;
- Promoting a comprehensive **One Health approach** and **climate and health advocacy**

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Integrating **climate & health questionnaires** into a Nationwide One Health Survey

RACSMEI

RISK
ASSESSMENT
COMMUNITY
SPREAD
MULTIPLE
ENDEMIC INFECTIOUS
DISEASES

A Nationwide One Health Survey

HUMANS

C1

4,160 households,
104 villages, **10,000** individuals [age 2-75]
Questionnaire, blood samples
~ **40-50% of respondents** [age ≥ 18] – Climate KAP+SSI

LIVESTOCK & DOMESTIC ANIMALS

5 livestock species (Cattle, Sheep/goats , Dogs, Pig, Poultry)
20 -100 animal/village/species
Blood, oral & rectal swabs (short-life species)

WILD ANIMALS

~40 rodents /village using traps
10 households/village
Blood and internal organs

VECTORS

1,000 households (10/village),
BG @traps , 72h, inside and outside
Densities, diversity

ENVIRONMENT

5 surface samples within 5 households/village
3 air, 3 soil, 3 water samples / village at high-risk interfaces

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C1

Nationwide KAP survey & semi-structure interview

This social science aspect of the study will combine quantitative and qualitative approaches to understand perception, knowledge gaps, vulnerability, and health risks in the context of climate change and health

Q1 Quantitative approach

Nationwide survey (KAP)

- Knowledge, attitude, and practice (KAP) on climate & health
- Target audiences: General public (N ~ 4000-5000)
- REDCap (Research Electronic Data Capture) — Data collection tool

Q2 Qualitative approach

Semi-structure Interview (SSI)

- Perception and practices on climate and health and education
- Target audiences: Provincial Representative, NGO/Conservation Worker, Healthcare Worker, Teacher, & farmer (N ~ 400)
- Recording + transcription + translation (from Khmer to English)

*Consent form for study participation must be obtained

C2

Multi-components risk maps

- Link between climate-sensitive infectious diseases and environment/climate change
- Diseases burden and transmission dynamic
- Multi-components risk maps

Bayesian geostatistical models to explain spatial heterogeneities in seroprevalence with environmental and climatic data

HUMANS

ANIMALS

VECTORS

ENVIRONMENT

CLIMATE

Project Timeline – IP Cambodia

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RACSMEI

Project Preparation | **Fieldwork** | **Data analysis**

Literature review

Survey Dev. | **Training & Field Preparation**

KAP & SSI questionnaire development

Results Dissemination

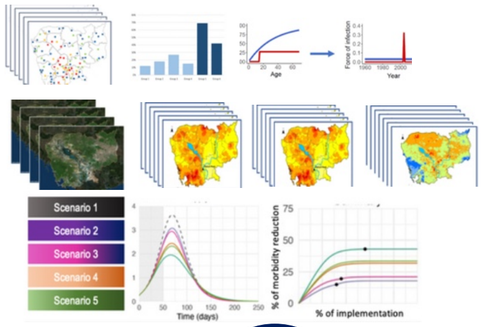
Initial Communication & Contract Finalization

Fellow Convening - HK
(April 26th –May 3rd, 2025)

CH meeting & PNAM – VN
(19th – 23rd October 2025)

Phase 2 of Workplan Implementation

- Social science insights
- Communication & Results Dissemination
- Public health recommendations
- Community feedback and Engagement
- Evaluation of the Project Impact



C1

C2

2024 | Q1 2025 | Q2 2025 | Q3 2025 | Q4 2025 | Q1 2026 | Q2 2026 | Q3 2026 | Q4 2026 | 2027

Develop Landscaping & Workplans

- **Partner Engagement & Project Management Structure**
- **Protocol Development**
- Ethics (NECHR in Apr. 2025)
- Communication strategy
- Logistical & Field Preparation
- Community Involvement
- Training & Capacity Building

Phase 1 of Workplan Implementation

- One Health Pilot study
- **Field Survey (from Dec 2025),** implemented among 104 villages, 4,160 HH (Humans, Animals, Climate & Environment, Vectors)

Sustainability Plan & Finalize Content

- *Finalize documentation / lessons learned*
- *Build sustainability plan based on continued needs / gaps and lessons learned*

PASTEUR NETWORK

Project Team in the Pasteur Network (PN)

Jessica Moore
Project Manager

Kathleen Victoir
Senior Scientific Officer of the PN
Lead on Hong Kong Convening

HyunJae Kim
Financial and HR Coordinator for the PN
Responsible for project finance

Rebecca Grais
Executive Director of the
Pasteur Network

Hichem Ben Hassine
Knowledge Sharing Platform
Coordinator for this project

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Climate and Health Fellows 2025

Workshop in Hong Kong and Pasteur Network Annual Meeting in Ho Chi Minh

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Acknowledgements

Institut Pasteur du Cambodge
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RACSMEI

Climate&Health Accelerator

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Funders

The Rockefeller Foundation

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wellcome

Partners

malaria consortium

cirad AGRICULTURAL RESEARCH FOR DEVELOPMENT

INSTITUT PASTEUR

Event Organizers

I.T.C. INSTITUT DE TECHNOLOGIE DU CAMBODGE

IRD Institut de Recherche pour le Développement FRANCE

CAMBODIA GEOSPATIAL DAY Phnom Penh, 18 November 2025

KHEOBS Khmer Earth Observation Laboratory

Espace DEV OBSERVATION SPATIALE, MODÈLES & SCIENCE IMPLIQUÉE

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IPC website: https://www.pasteur-kh.org/

Climate and Health Initiative (PN)

Epidemiology and Public Health Unit (IPC)

Key research studies at IPC