



BCOMING

BCOMING Overview



GREASE



21 August, 2023

Yogyakarta, Indonesia



This project has received funding under the European Union's Horizon Europe research and innovation programme under grant agreement No 101059483



BCOMING

Biodiversity Conservation to Mitigate the risks of emerging infectious diseases

2022–2024



Horizon Europe Call: HORIZON-CL6-2021-BIODIV-01

(Biodiversity and ecosystem services)

What else is out there?

Exploring the connection between biodiversity, ecosystems services, pandemics and epidemic risk

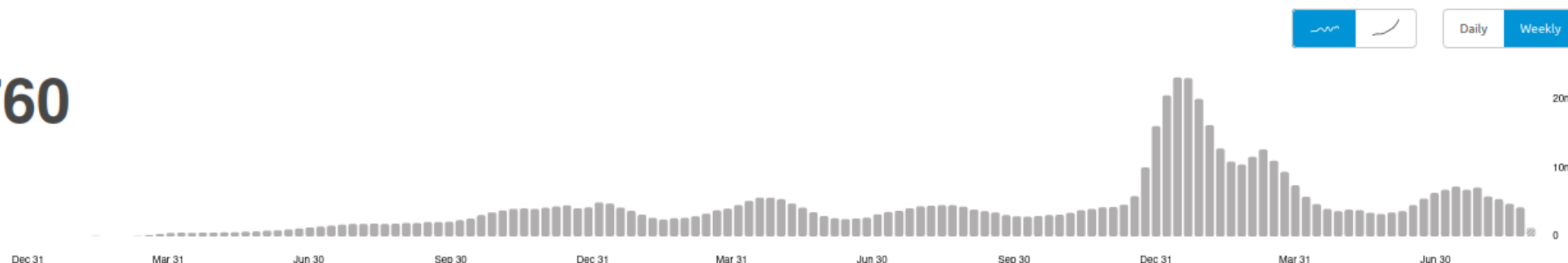


Globally, as of 6:58pm CEST, 7 September 2022, there have been 603,711,760 confirmed cases of COVID-19, including 6,484,136 deaths, reported to WHO. As of 4 September 2022, a total of 12,540,061,501 vaccine doses have been administered.

Global Situation

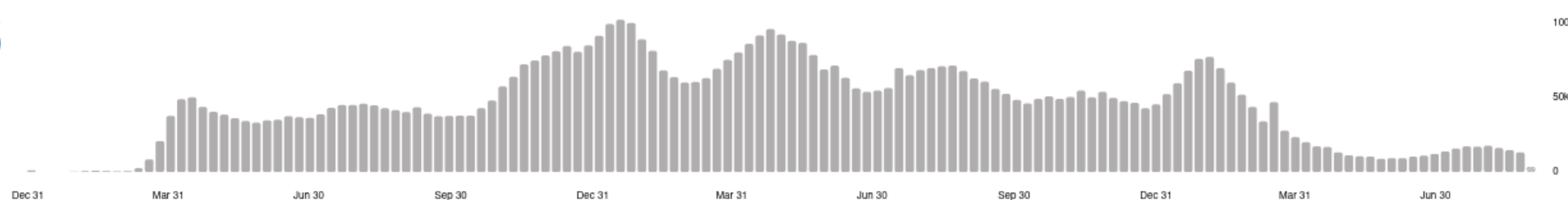
603,711,760

confirmed cases



6,484,136

deaths



Source: World Health Organization

Data may be incomplete for the current day or week.

Situation by WHO Region

Europe

249,105,808

confirmed

Americas

176,342,137

confirmed

Western Pacific

85,868,508

confirmed

South-East Asia

60,084,208

confirmed

Eastern Mediterranean

23,011,442

confirmed

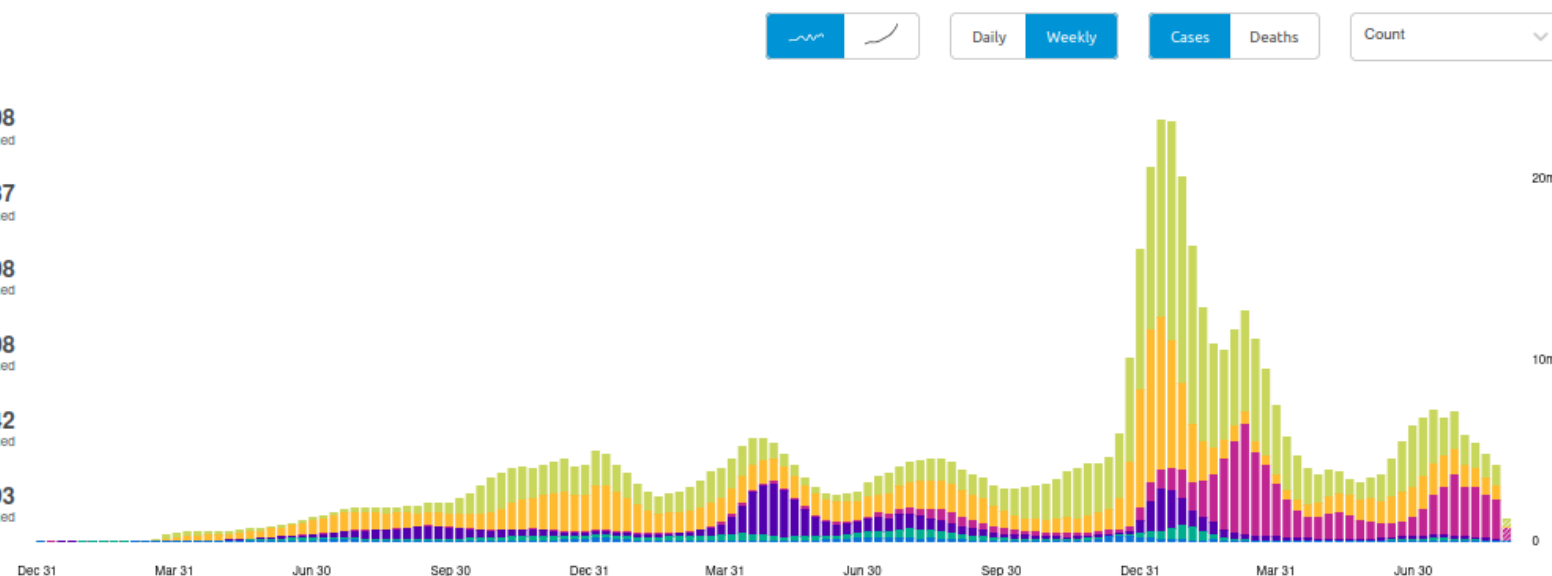
Africa

9,298,893

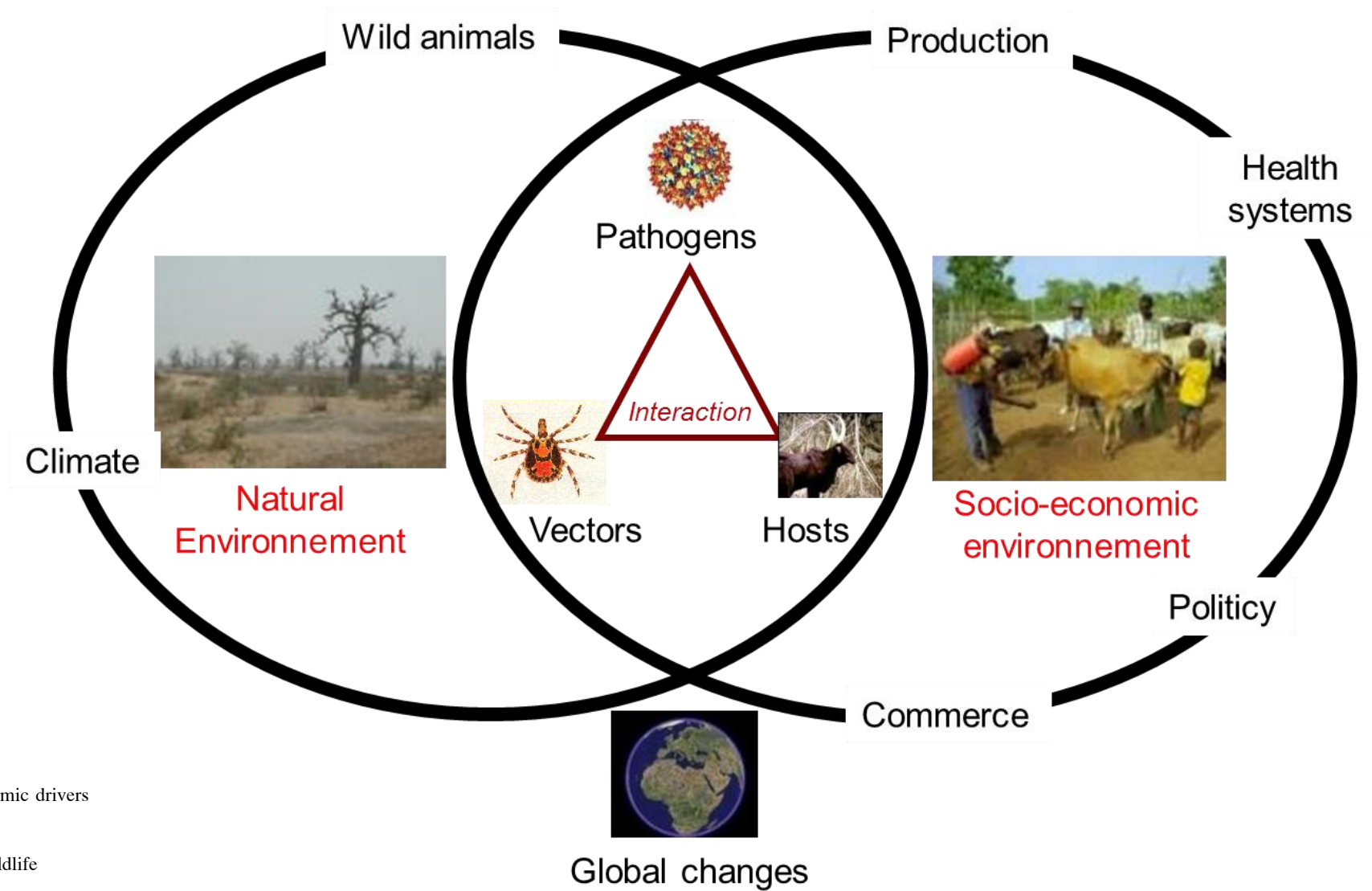
confirmed

Source: World Health Organization

Data may be incomplete for the current day or week.



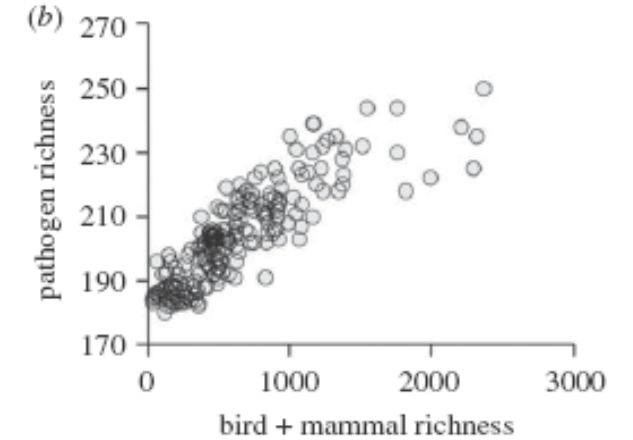
Drivers of disease emergence



- Biologic, ecologic, environmental and socio-economic drivers
- 2/3 EIDs in humans are zoonotic, mainly from wildlife
- Impact Human health, animal health and food safety

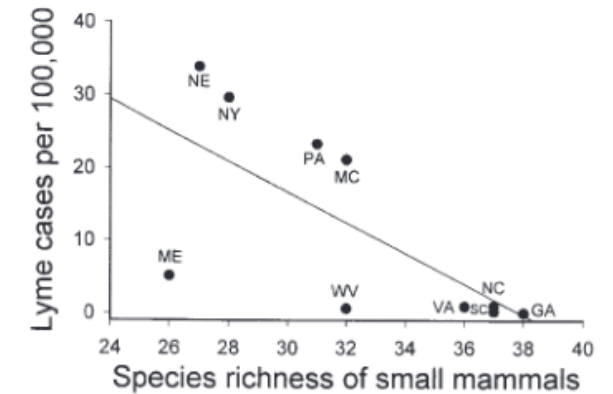
Biodiversity and the prevention of future pandemics

Biodiversity Hotspots: Higher zoonotic pathogen richness



Dunn et al. 2010

Biodiversity Loss: Higher Risk of emergence through complex multifactorial processes



Ostfeld & Keesing, 2000

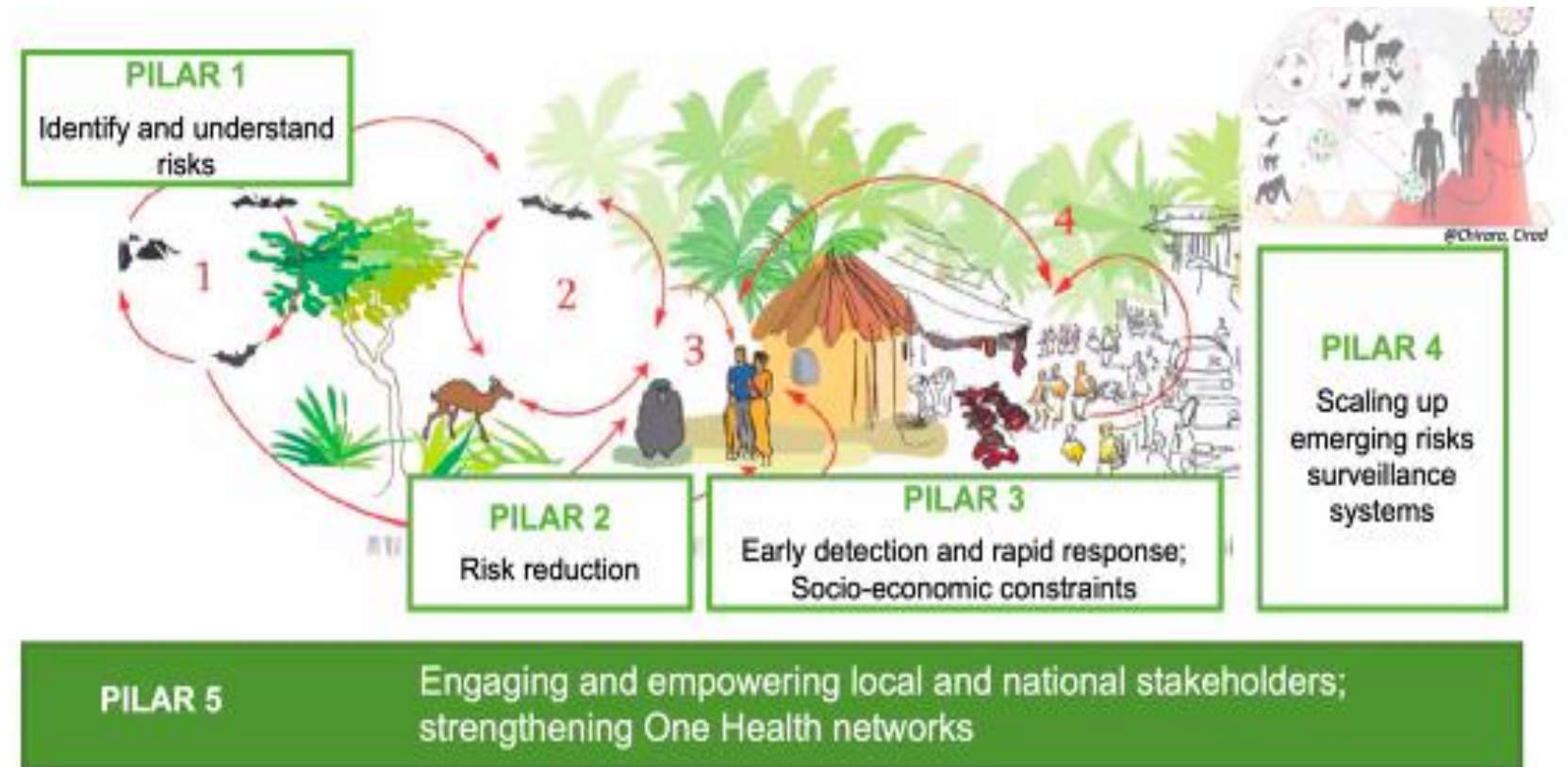
BCOMING Rationale

- 1 – Focus on **biodiversity hotspots** and improve our **understanding** of the ecological and socio-cultural factors involved in disease emergence
- 2 – Involve local **citizens and authorities** in the design and implementation of innovative solutions to ensure **sustainability** of the prevention measures.

BCOMING Main Objective

to **reduce the risk** of infectious disease emergence in three **biodiversity hotspots** by developing a standardised data collection and **analysis** framework to support the **co-construction, with all stakeholders**, of innovative biodiversity conservation strategies and zoonotic disease surveillance.

BCOMING is embedded in the Prezode initiative



IDENTIFY AND UNDERSTAND RISKS to
CO-DEVELOP SOLUTIONS TO REDUCE THEM















STENGHTENING EARLY WARNING
SYSTEMS, OPERATIONAL
FROM LOCAL TO GLOBAL



BCOMING

14 Partners

8 Countries

Participant No.	Participant Organisation name	Short name	Country
1 (Coord)	Centre de coopération internationale en recherche agronomique pour le développement	CIRAD	France 
2	Europa Media Non-profit Ltd.	EM	Hungary 
3	Institut de Recherche pour le Développement	IRD	France 
4	Centre de Recherche et de Formation en Infectiologie de Guinee	CERFIG	Guinea 
5	Institut Pasteur du Cambodge Foundation	IPC	Cambodia 
6	Avia-GIS NV	Avia-GIS	Belgium 
7	Institut national de la recherche pour l’agriculture, l’alimentation et l’environnement	INRAE	France 
8	NatureMetrics Ltd	NM	UK 
9	Fauna & Flora International	FFI	UK 
10	Mekong Region Futures Institute	MERFI	Thailand 
11	Universite de Liege	UL	Belgium 
12	International Development Enterprises	IDE	UK 
13	Universiteit Antwerpen	UANT	Belgium 
14	Helmholtz-Zentrum fur Infektionsforschung	HZI	Germany 



UK partners :
associated

UNDERSTAND THE EMERGENCE OF INFECTIOUS DISEASES

through

STUDY AREAS on three continents

across

ANTHROPISTATION GRADIENT

Key pathogens



Key hosts & vectors

MICROBIOMES



Paramyxoviruses



Wildlife

Domestic & Human



Ebola, Marburg
Lassa Fever



Wildlife

Domestic & Human



Arboviruses



Vectors

Domestic



Other CoV



Wildlife

Domestic & Human



Trematodes



Vectors

Domestic & Human



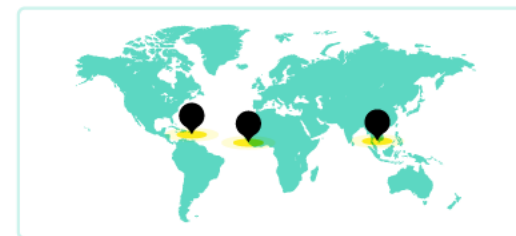
Cambodia



Guinea
Ivory Coast



Guadeloupe



All 3 areas

Pristine forest habitats

Fragmented forests
& rural agriculture

Intensive agriculture

Urban environment

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Key hosts & vectors



Paramyxoviruses



Wildlife

Domestic & Human



Cambodia

ZooCoV

Mondolkiri

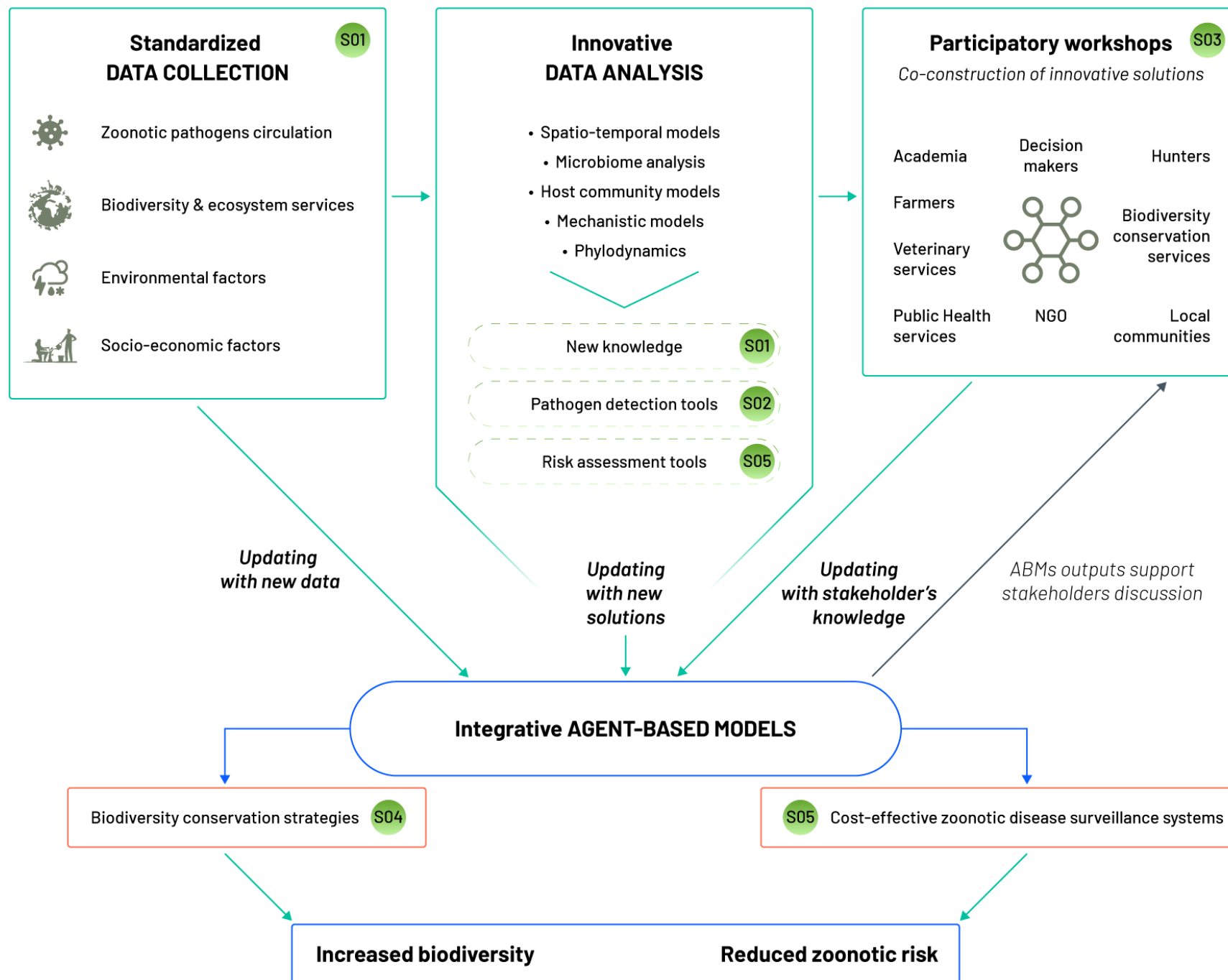
ZooCoV

Steung Treng



Battambang

Phnom Penh



Standardized DATA COLLECTION

S01



Zoonotic pathogens circulation



Biodiversity & ecosystem services

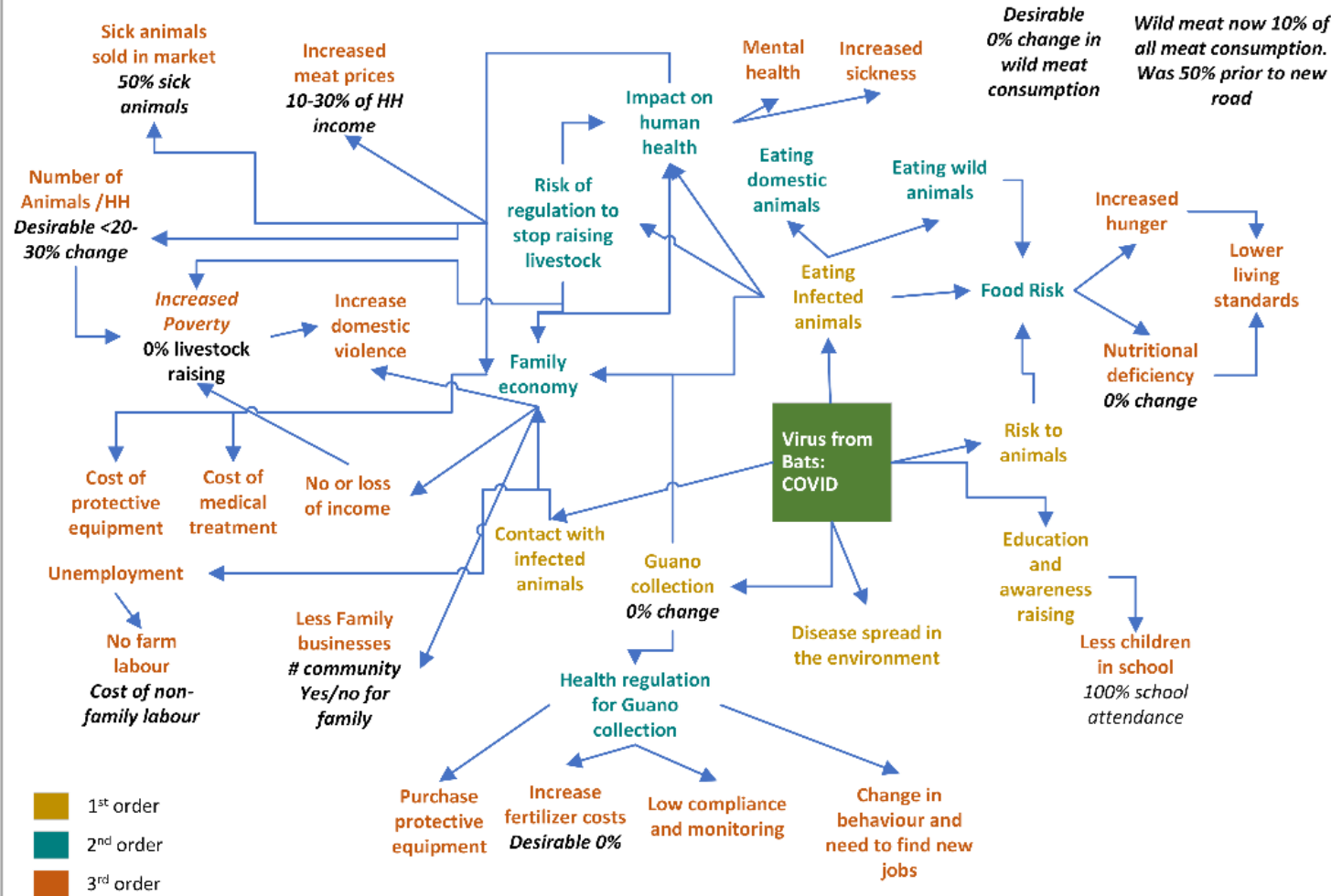


Environmental factors



Socio-economic factors





Strategies

Clean Environment

Collaborate with NGO on disease prevention

Education and awareness on infectious diseases

Community meetings and village posters

Education 100 % school attendance

Human and animal vaccination

Wear masks and protective equipment

Disease surveillance humans and environment

Immediate report to DoA and Public Health

Report to village, Commune Chief and then to MoH

Rapid Response

Actions

Community report disease case to local authorities

Village animal/health workers report disease to local authorities and MoH

Village health group/ VHSG report case to public health

Local authorities report to MoH and nearest health centre

Livestock agencies report to animal health

Wild life agencies report to MoE'vt

Public Health find the source of the virus and sample collection to lab

DoA investigate, implement controls, report to GDAH and Province

Village collaborate and implement controls provided by Gov't



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Thanks !



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