8th International Conference on BIG DATA & Data Science for Official Statistics
BILBAO 2024

Informing Climate Change and Sustainable Development Policies with Integrated Data

BILBAO. SPAIN | 10-14 JUNE 2024 | #UNBigData2024

Standards for Official Statistics on Climate-Health Interactions

Vijendra Ingole (on behalf of Climate and Health Team)

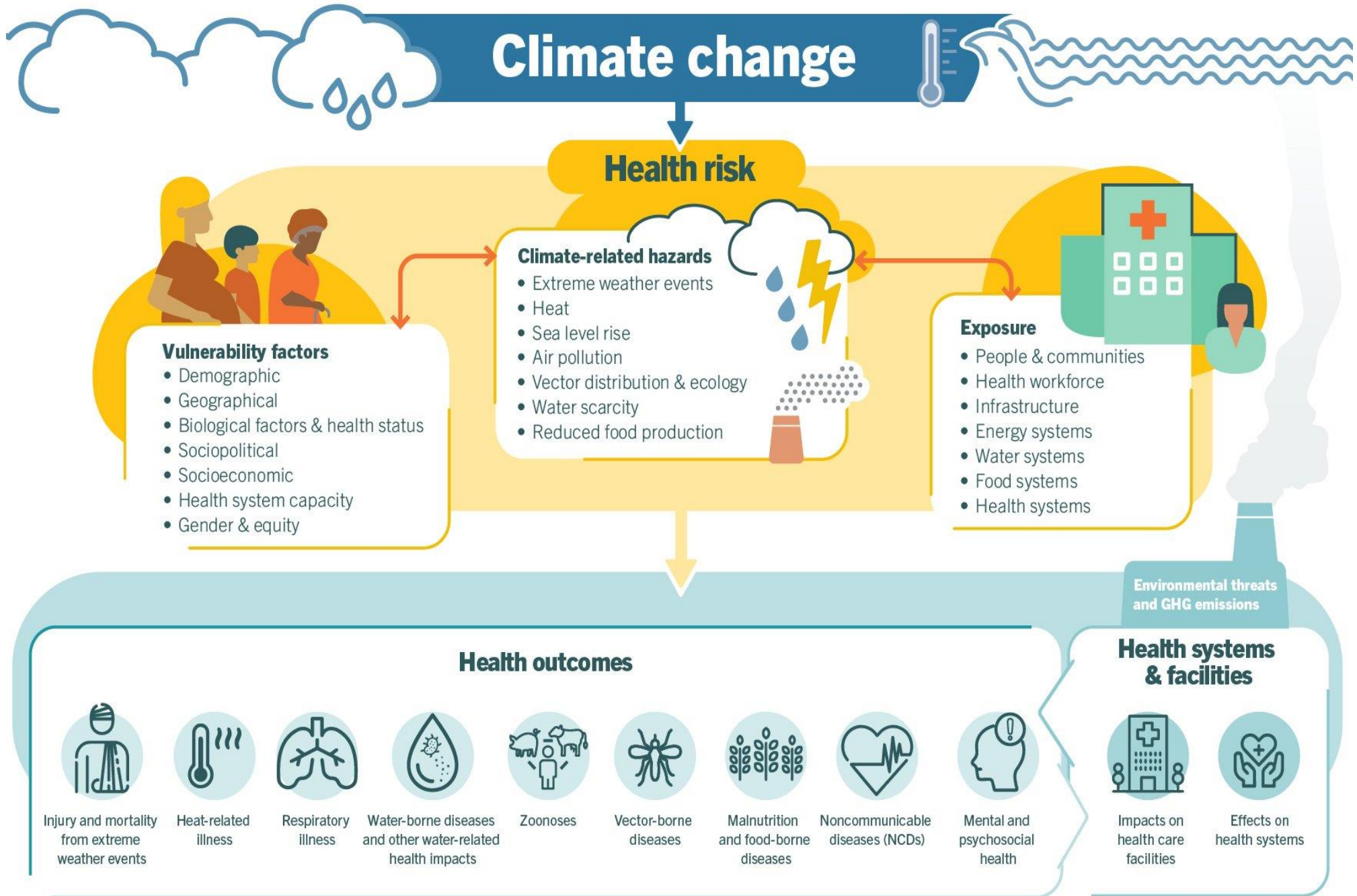Principal Data Scientist, Office for National Statistics, United Kingdom

United Nations BigData   EUSKO JAURLARITZA GOBIERNO VASCO   GOBIERNO DE ESPAÑA MINISTERIO DE ASUNTOS EXTERIORES, UNIÓN EUROPEA Y COOPERACIÓN   BC3 BASQUE CENTRE FOR CLIMATE CHANGE Klima Aldaketa Ikergai   EXCELENCIA MARÍA DE MAEZTU 2023-2027   INE Instituto Nacional de Estadística   Eustat EUSKAL ESTATISTIKA ERAKUNDEA INSTITUTO VASCO DE ESTADÍSTICA

Climate change

Health risk

Climate-related hazards
- Extreme weather events
- Heat
- Sea level rise
- Air pollution
- Vector distribution & ecology
- Water scarcity
- Reduced food production

Vulnerability factors
- Demographic
- Geographical
- Biological factors & health status
- Sociopolitical
- Socioeconomic
- Health system capacity
- Gender & equity

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

Figure Reference : WHO

What is this project about?

What problem are we trying to solve?

- Despite the extensive science on climate change, there is a shortage of measures and tools to monitor impact on health of climate change
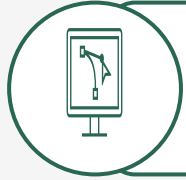
How are we doing it?

- Publish an agreed statistical framework of standard indicators

- Develop an online platform and open-source software tools to support global use of the indicators

Project Overview
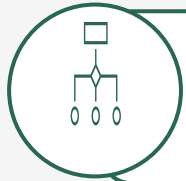
Define a statistical framework and unified methods for official reporting of climate change impacts on health, at national and local levels

Develop a **global reporting and knowledge-sharing platform** with an open-source toolset in line with the agreed framework

Discovery Phase 2022/23

- UK Climate and Health team launched
- Project aims developed
- Partner selection and onboarding

Alpha Phase 2023/24

- Topic Expert Groups (TEGs) established
- Development of Alpha draft
- Internal testing with project partners

Beta Phase 2024/25

- Refine framework and metrics
- Final development added to online platform
- Global pilots for National Statistical Offices to test
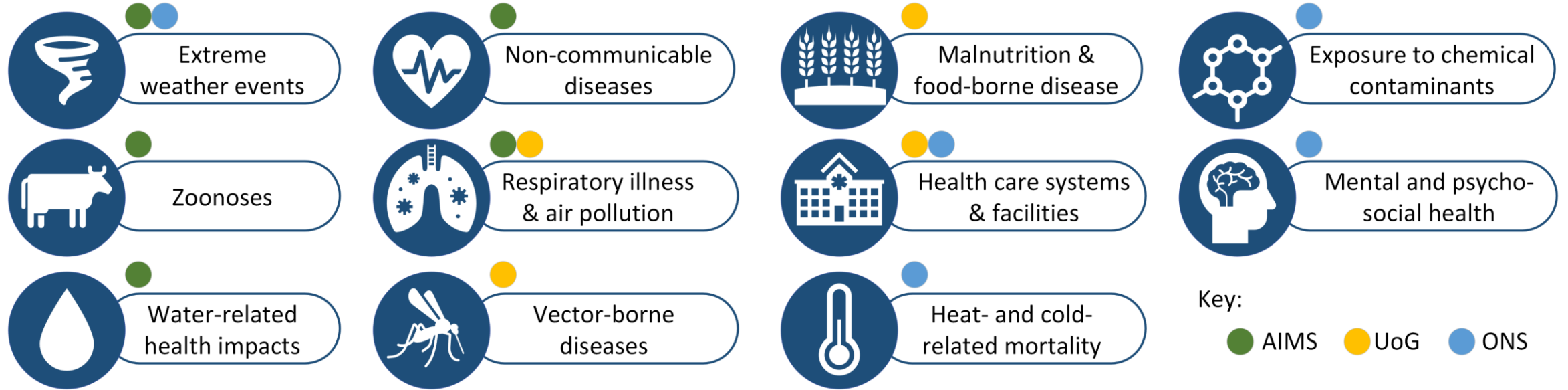
Launch year 2025/26

- Final drafts signed off
- Framework endorsed by key stakeholders
- Launch platform and publish framework

Who is involved in the project?

- UN Global Data Platform

- African Institute for Mathematical Sciences, Rwanda

- University of Ghana, Regional Institute for Population Studies

- Cochrane Network Climate Working Group (University of Alberta)

- UK Health Security Agency

- Global academic experts

- DataKind non-profit

Planned scope of climate-health indicators

Extreme weather events

Non-communicable diseases

Malnutrition & food-borne disease

Exposure to chemical contaminants

Zoonoses

Respiratory illness & air pollution

Health care systems & facilities

Mental and psycho-social health

Water-related health impacts

Vector-borne diseases

Heat- and cold-related mortality

Key:

● AIMS ● UoG ● ONS

UN Global Set of indicators on climate change

CONNECTING TO

SDG targets and indicators

Office for **National Statistics**

Aims and target users

Global providers of official statistics

- Direct users will be primarily **analysts** responsible for **producing official statistics** on climate change and health for their country/region

Policymakers for climate action

- Policymakers, media, public; these statistics should support and evidence prioritisation of action against climate change

Wider users

- Academics, students, NGOs, anyone will be able to draw on our open-source tools to develop climate analysis more quickly, easily, and consistently

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Adapt existing climate and/or health **indicators and definitions** where applicable

Priority – the health impact is a widely experienced problem where policy action is needed

Relevance – clear causal pathway from climate effect to health impact. Wider climate change is out of scope

Global Data Platform

UN Global Platform	ONS	DataKind

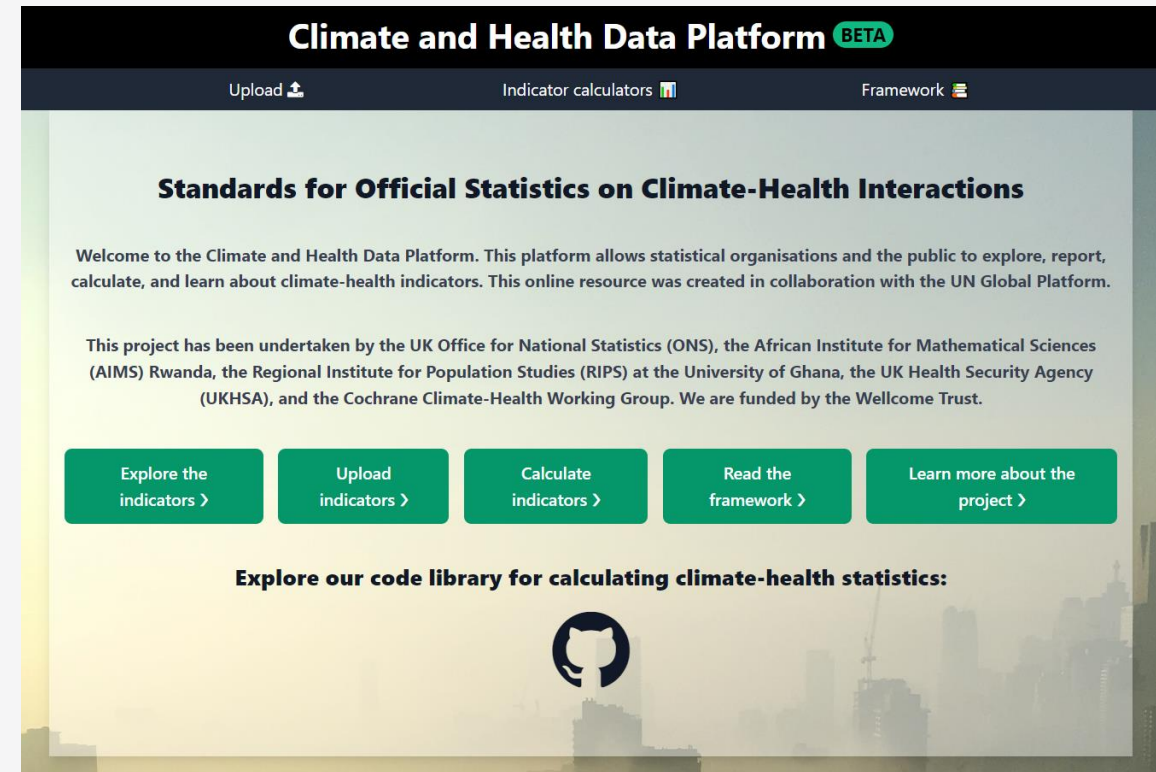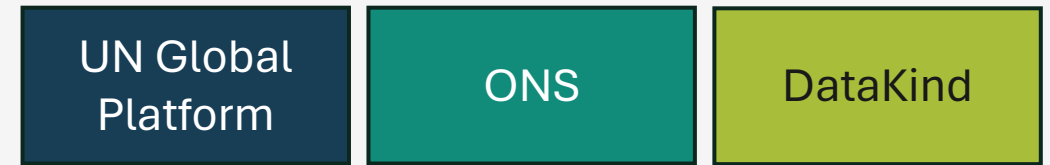**Enables sharing of the framework and indicator data**

Access to statistical framework and methods
- Documentation on indicators will be online to view or download

Calculate and visualise data for climate-health indicators

- Indicators calculated by R package API via platform website - no coding experience required

- Code will be available as downloadable open-source packages to use offline and incorporate into other projects or workflows

- Tool to automate pairing of health and climate data

Upload and **explore** indicator data

Climate and Health Data Platform BETA

Upload ⬆   Indicator calculators 📊   Framework 📚

Standards for Official Statistics on Climate-Health Interactions

Welcome to the Climate and Health Data Platform. This platform allows statistical organisations and the public to explore, report, calculate, and learn about climate-health indicators. This online resource was created in collaboration with the UN Global Platform.

This project has been undertaken by the UK Office for National Statistics (ONS), the African Institute for Mathematical Sciences (AIMS) Rwanda, the Regional Institute for Population Studies (RIPS) at the University of Ghana, the UK Health Security Agency (UKHSA), and the Cochrane Climate-Health Working Group. We are funded by the Wellcome Trust.

Explore the indicators ›	Upload indicators ›	Calculate indicators ›	Read the framework ›	Learn more about the project ›

Explore our code library for calculating climate-health statistics:

Disseminating the framework and software

- UN Global Data Platform is hosting our online platform, tools and database developed in collaboration with ONS and DataKind (now in Beta with heat-mortality indicator)

- Platform will allow users to upload data, calculate and visualise the climate-health indicators

- Indicators calculated by R package and API developed by ONS and hosted by UN Global Platform

- All calculations will be available as downloadable open-source packages to use offline and incorporate into other projects or workflows

- All documentation on the indicators will be online to search or download, including methodology details, data requirements, supporting scientific literature

Placeholder for demo recording

Way forward and how to engage with our work?

| Stakeholder engagement | User Feedback on Statistical framework and Global knowledge platform | Engagement with Expert Advisory Group |

Office for **National Statistics**

Standards for Official Statistics on Climate-Health Interactions

Thank you for your attention

Contact us at **climate.health@ons.gov.uk**