

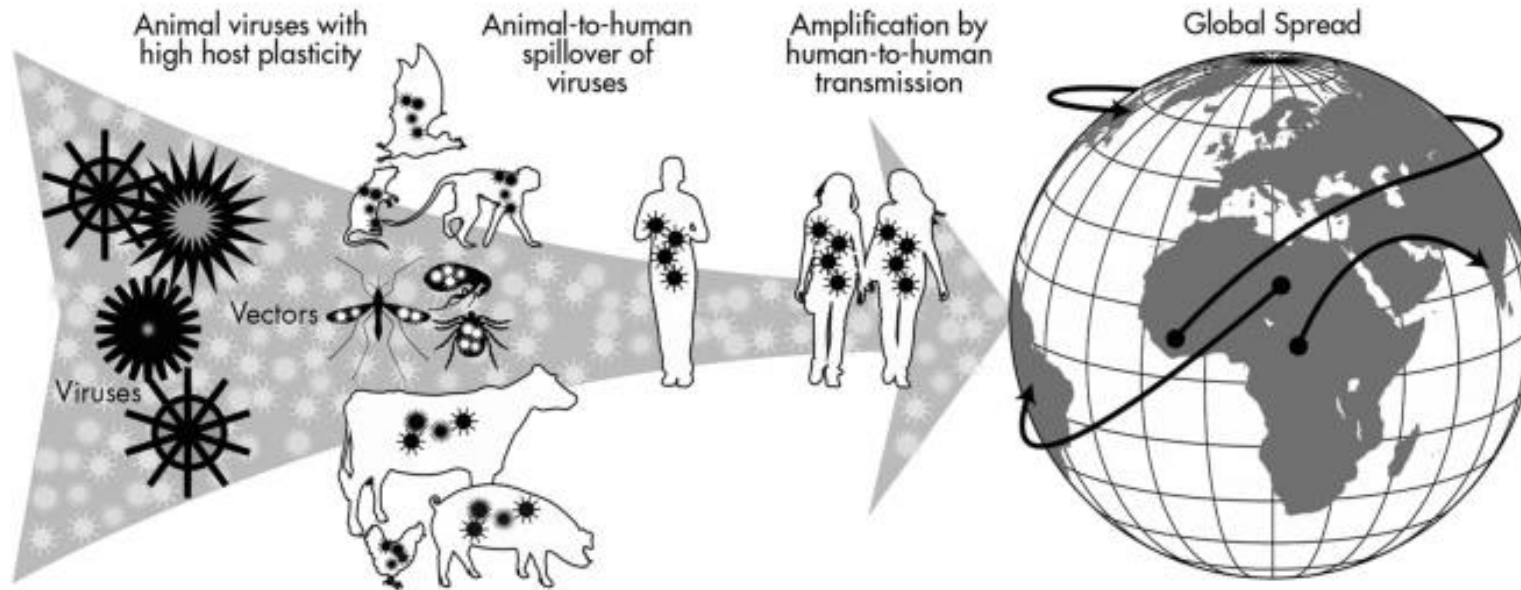


Forum Risk Management

obiettivo sanità & salute



25-28 NOVEMBRE 2025
AREZZO FIERE E CONGRESSI



Dr. Antonio Parisi

La minaccia silenziosa: come le zoonosi stanno ridisegnando il futuro della salute globale



Ricerca Controllo Sicurezza
Epidemiologia Prevenzione Zoonosi
Genomica Minacce Contaminazioni Sorveglianza
AMR residui Innovazione Vettori Alimenti
Animali Benessere Antibiotico Malattie Patogeni resistenza Rischi Ambiente

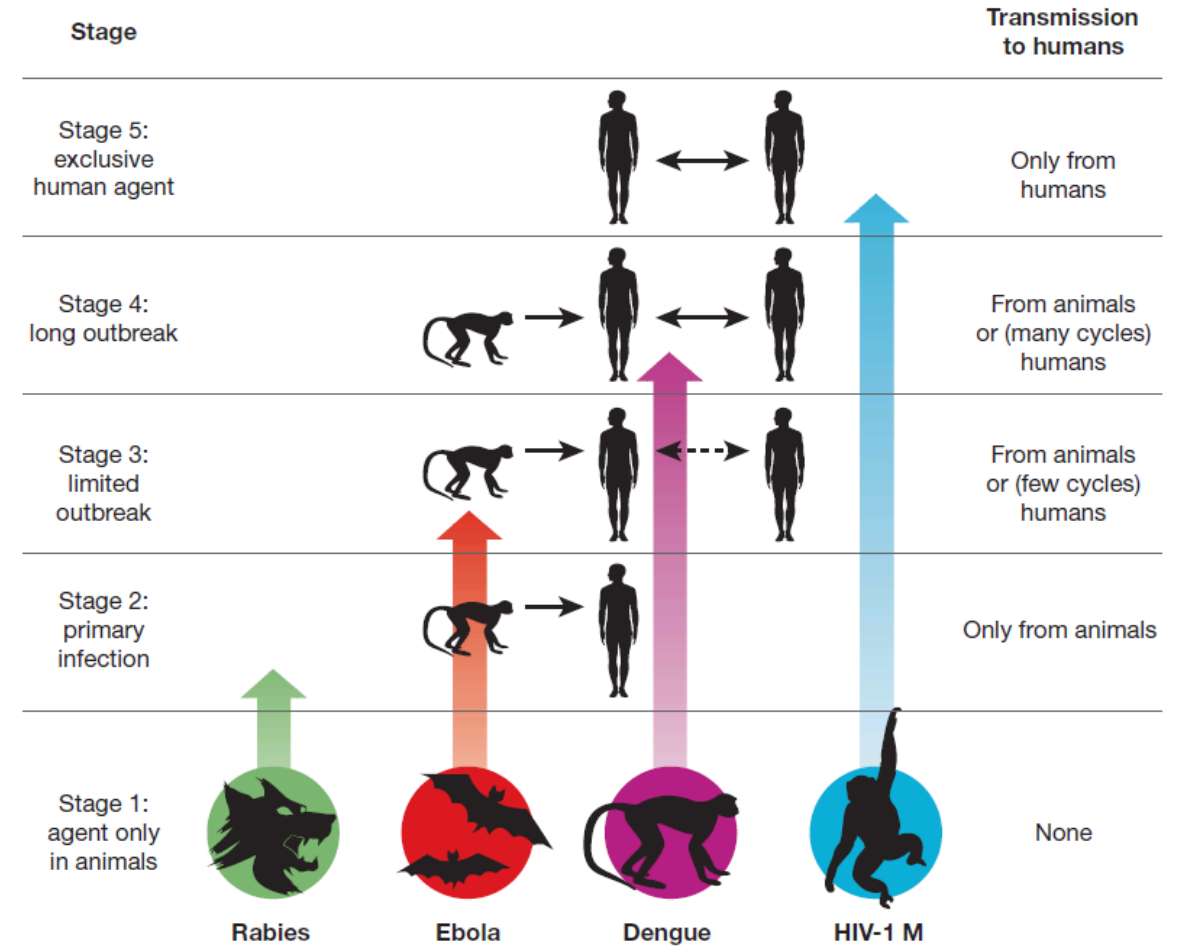
La Rete degli **Istituti Zooprofilattici Sperimentali (IZS)** supporta il Servizio Sanitario Nazionale (SSN) nei settori di:

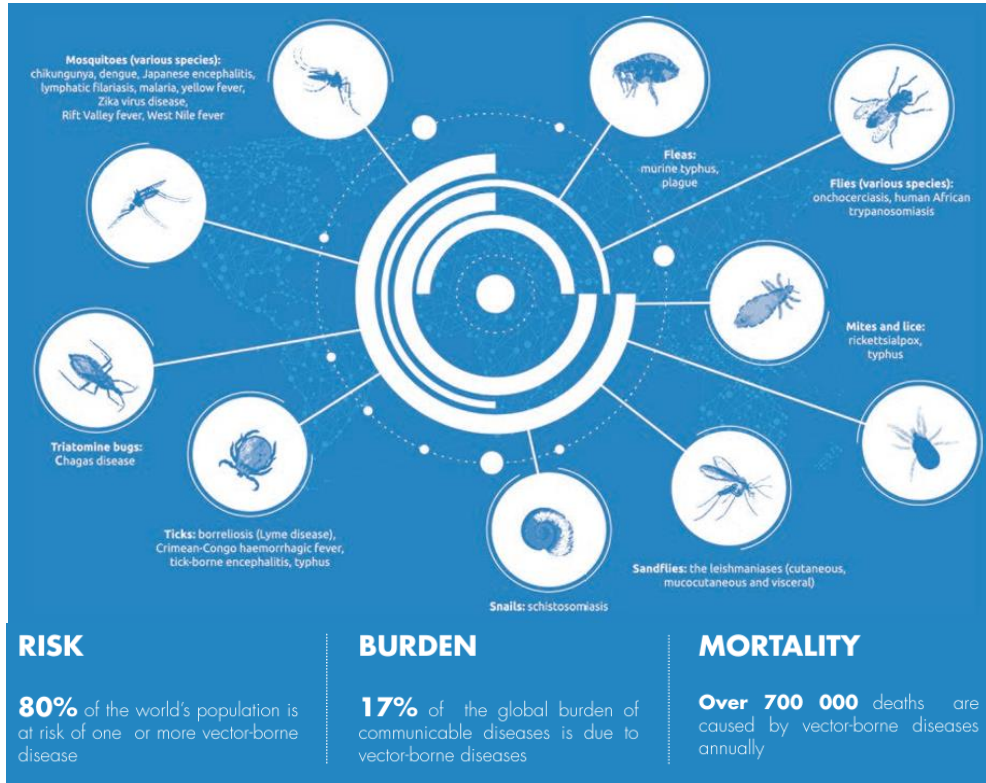
- sanità pubblica veterinaria
- sicurezza alimentare
- sorveglianza delle zoonosi
- ricerca su malattie animali ed emergenti
- prevenzione delle minacce di origine animale e alimentare

È costituita da **10 Istituti** distribuiti sul territorio nazionale, ciascuno con competenza su specifiche Regioni ma integrati in un sistema unico e coordinato.

Il valore aggiunto della Rete degli IZS

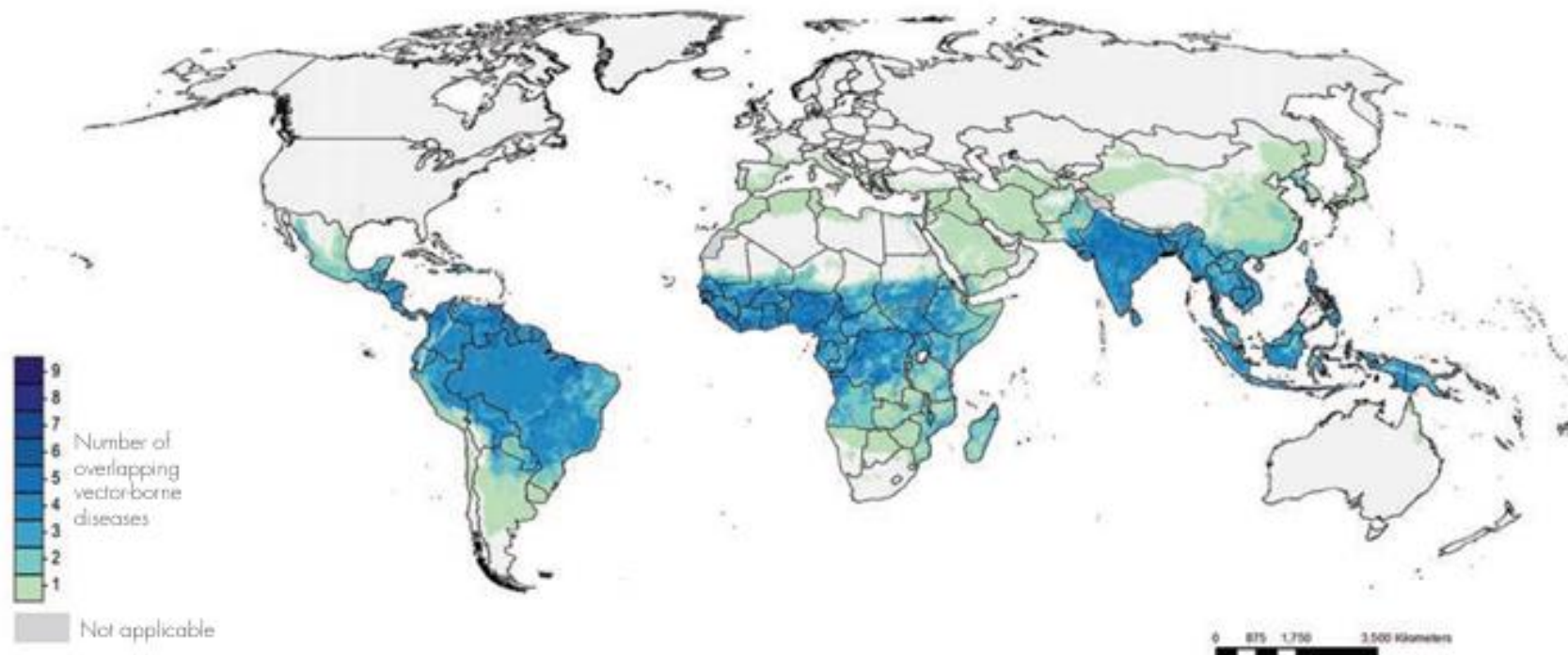
- **Capillarità territoriale:** presenza in tutte le regioni.
- **Eccellenza scientifica:** laboratori accreditati, ricerca avanzata, innovazione tecnologica.
- **Interdisciplinarietà:** integrazione tra veterinaria, microbiologia, epidemiologia, genomica, ambiente e alimenti.
- **Approccio One Health:** tutela congiunta di salute umana, animale e ambiente.
- **Resilienza nelle emergenze:** capacità di risposta rapida e coordinata.





Vector	Disease caused	Type of pathogen
Mosquito	Chikungunya	Virus
	Dengue	Virus
	Lymphatic filariasis	Parasite
	Rift Valley fever	Virus
	Yellow Fever	Virus
	Zika	Virus
	Lymphatic filariasis	Parasite
	Malaria	Parasite
	O'nyong'nyong virus	Virus
	Japanese encephalitis	Virus
Culex	Lymphatic filariasis	Parasite
	West Nile fever	Virus
Aquatic snails	Schistosomiasis (bilharziasis)	Parasite
Culicoides flies	Oropouche fever	Virus
Blackflies	Onchocerciasis (river blindness)	Parasite
Fleas	Plague (transmitted from rats to humans)	Bacteria
	Tungiasis	Ectoparasite
Lice	Typhus	Bacteria
	Louse-borne relapsing fever	Bacteria
Sandflies	Leishmaniasis	Parasite
	Sandfly fever (phlebotomus fever)	Virus
Ticks	Crimean-Congo haemorrhagic fever	Virus
	Lyme disease	Bacteria
	Relapsing fever (borreliosis)	Bacteria
	Rickettsial diseases (eg: spotted fever and Q fever)	Bacteria
	Tick-borne encephalitis	Virus
	Tularaemia	Bacteria
Triatome bugs	Chagas disease (American trypanosomiasis)	Parasite
Tsetse flies	Sleeping sickness (African trypanosomiasis)	Parasite

Malaria causes an **estimated 249 million cases globally**, and results in more than **608 000 deaths every year**. Most of the deaths occur in children under the age of 5 years



Global distribution of nine major vector-borne diseases: malaria, lymphatic filariasis, dengue, leishmaniasis, Japanese encephalitis, yellow fever, Chagas disease, human African trypanosomiasis or onchocerciasis.

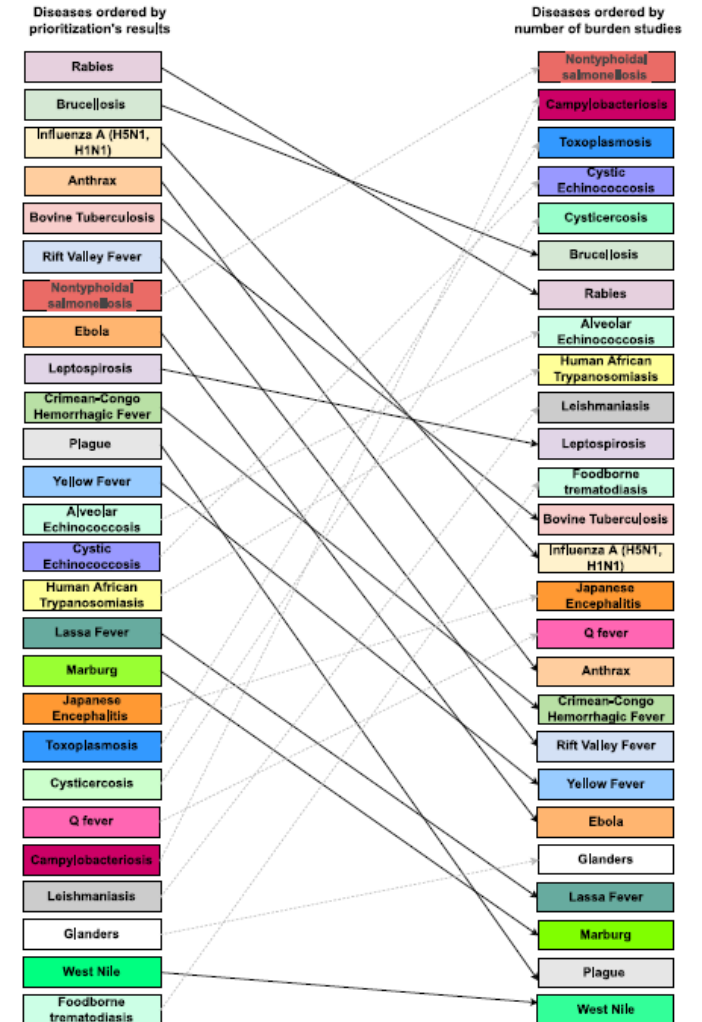
Global burden

Zoonoses represent a major global public health burden, accounting for over 200 known diseases and a large share of emerging infections worldwide.

DALY

I **DALY (Disability Adjusted Life Years)** sono un indicatore dell'impatto globale di uno o più fattori di rischio. Vengono espressi come gli anni cumulativi di vita persi a causa di morbosità, mortalità e disabilità.

= **YLD** Anni vissuti con malattia o disabilità + **YLL** Anni di vita persi





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The burden of foodborne diseases is substantial

Every year foodborne diseases cause:

almost
in 10
people to fall ill

33 million
healthy life years lost

Foodborne diseases can be deadly, especially in children <5

420 000
deaths



Children account for
1/3
of deaths from
foodborne diseases

FOODBORNE DISEASES ARE PREVENTABLE.
EVERYONE HAS A ROLE TO PLAY.

For more information: www.who.int/foodsafety

#SafeFood

Source: WHO Estimates of the Global Burden of Foodborne Diseases, 2015.



World Health Organization



Confirmed cases reported to a local or state health authority



For some samples, the laboratory is able to isolate an agent



In some cases, laboratory tests are performed



Some sick people consult a doctor



Some people develop an illness



People exposed to contaminated food



United Nations

Department of
Economic and
Social Affairs



Photo credit: <https://www.un.org/development/desa/pd/file/16497>

World Population Prospects 2024

Summary of Results

July 2024 . <https://www.un.org/development/desa/pd/> . #UNPopulation

The world's population is likely to peak within the current century. The world's population is expected to continue growing for another 50 or 60 years, reaching a peak of around 10.3 billion people in the mid-2080s, up from 8.2 billion in 2024.

After peaking, it is projected to start declining, gradually falling to 10.2 billion people by the end of the century.



United Nations

Department of Economic and Social Affairs
Population Division

World Urbanisation Prospects 2018



Crescita della popolazione urbana

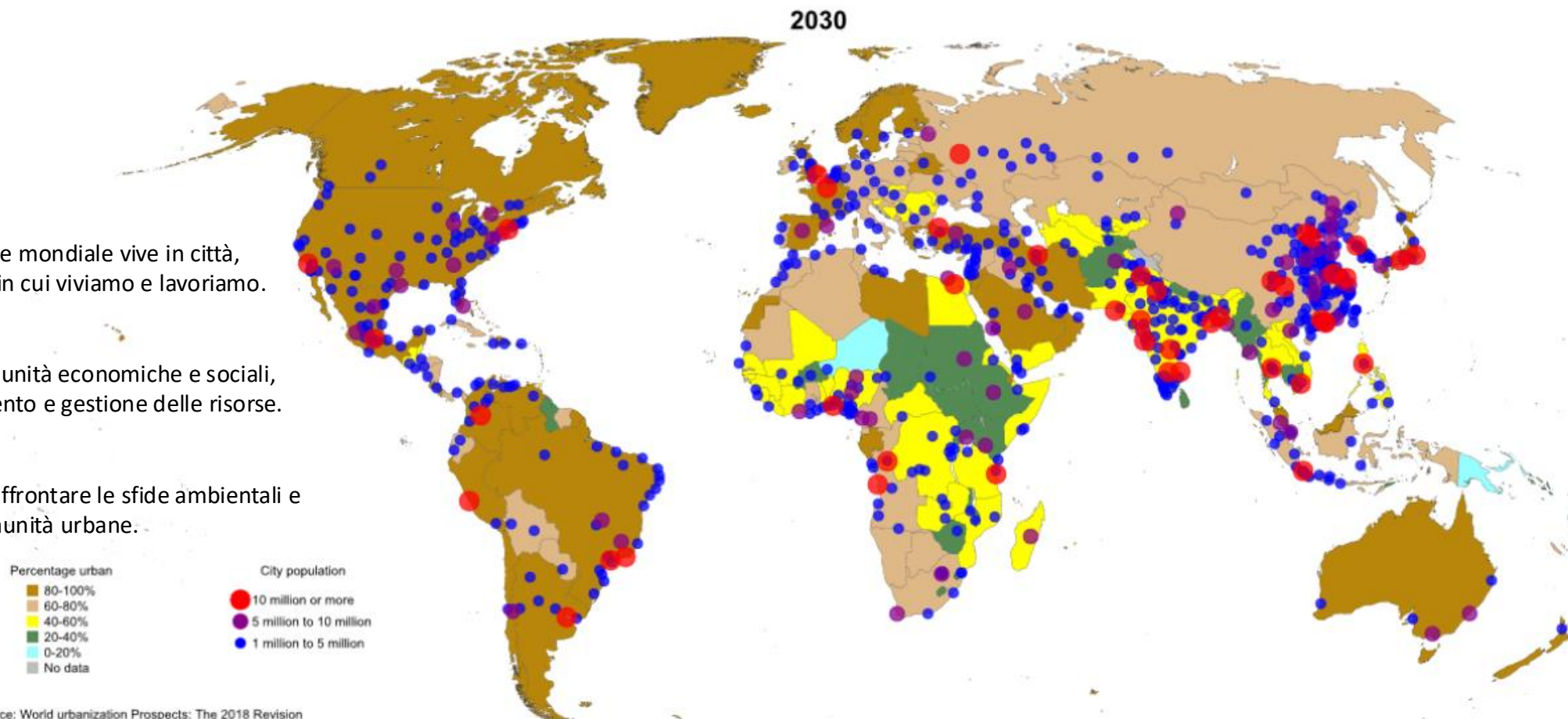
Oggi più della metà della popolazione mondiale vive in città, cambiando profondamente il modo in cui viviamo e lavoriamo.

Opportunità e sfide urbane

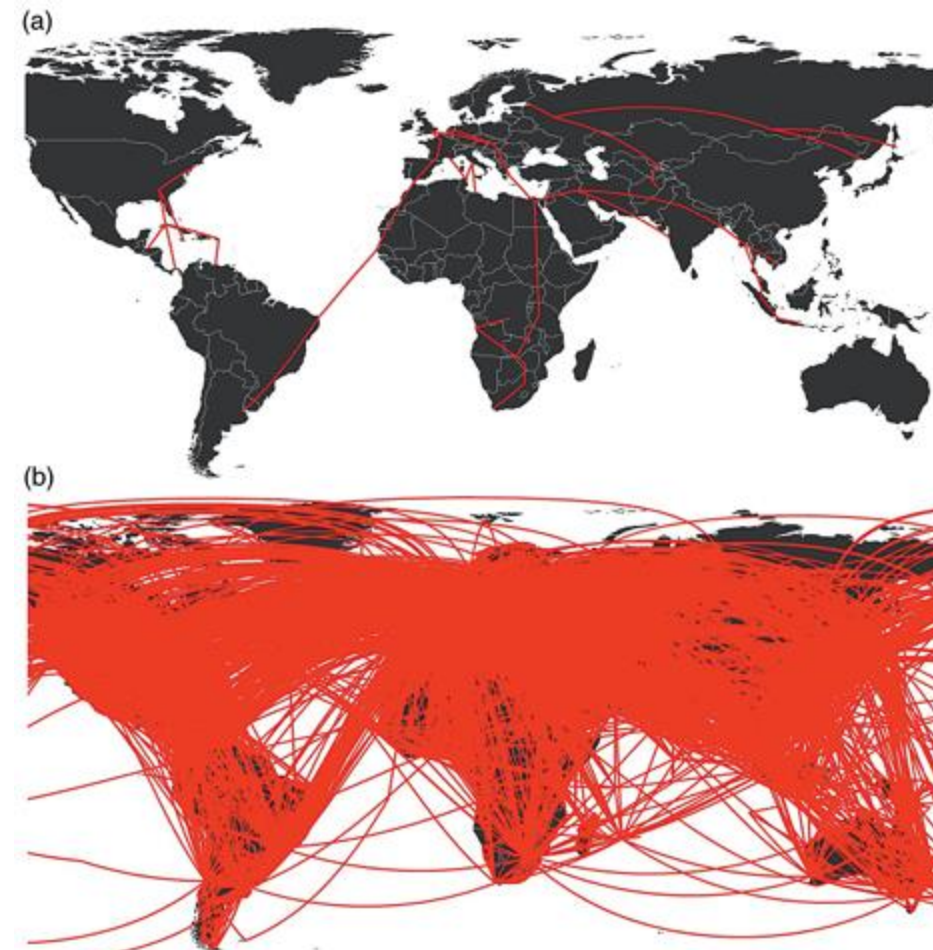
L'urbanizzazione porta nuove opportunità economiche e sociali, ma anche problemi come inquinamento e gestione delle risorse.

Importanza delle città sostenibili

Città sostenibili sono essenziali per affrontare le sfide ambientali e garantire un futuro migliore alle comunità urbane.

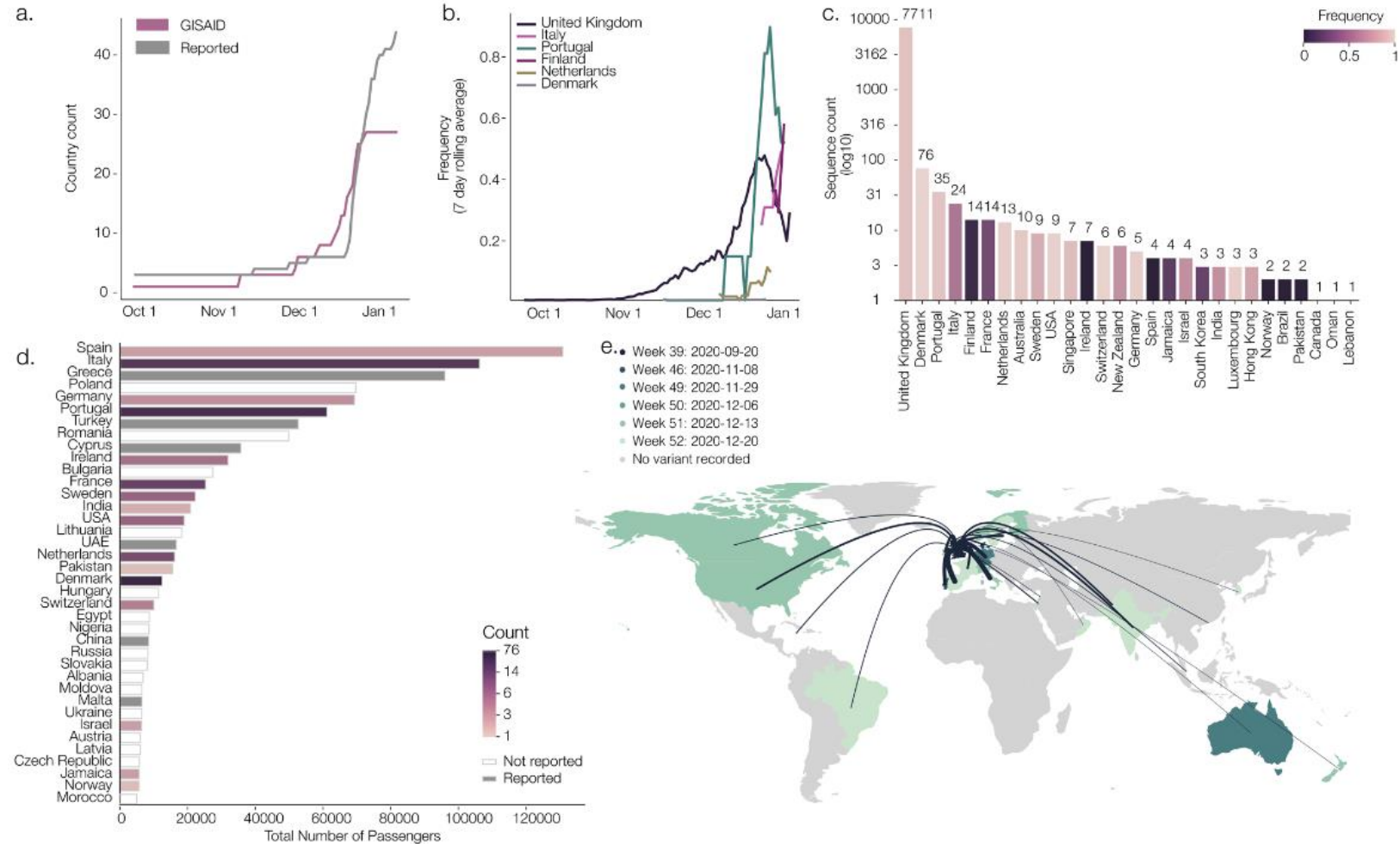
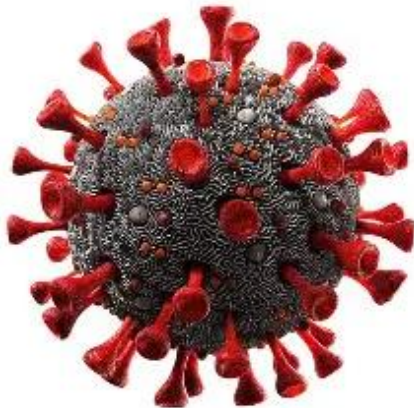


One billion people cross through International borders each year. This includes 350 million travelers arriving in the United States through more than 300 points of entry.



The international commercial air network in (a) 1933 and (b) 2010.

Tracking the international spread of SARS-CoV-2 lineages B.1.1.7 and B.1.351/501Y-V2 with grinch



182

Casi*

55% | 45%

Maschi | Femmine*

38.5 anni

Età mediana*

0

Decessi*

4 casi | 178 casi

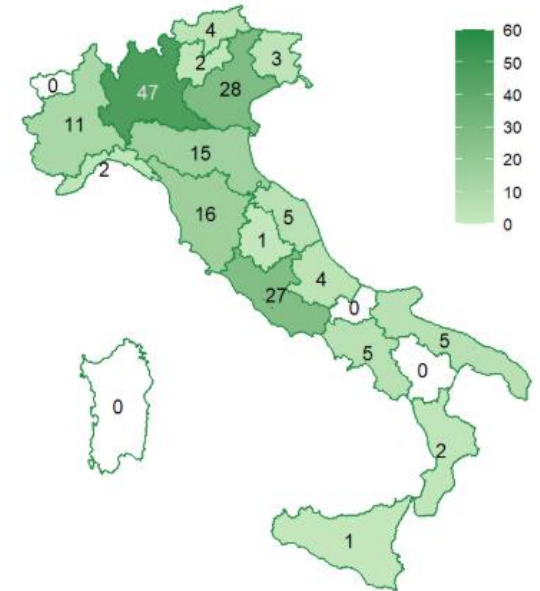
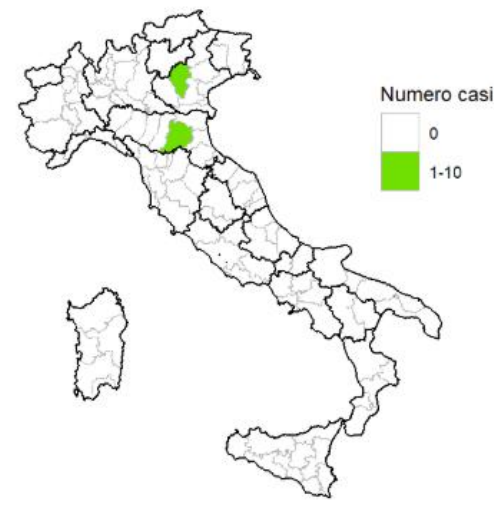
Autoctoni | Importati*

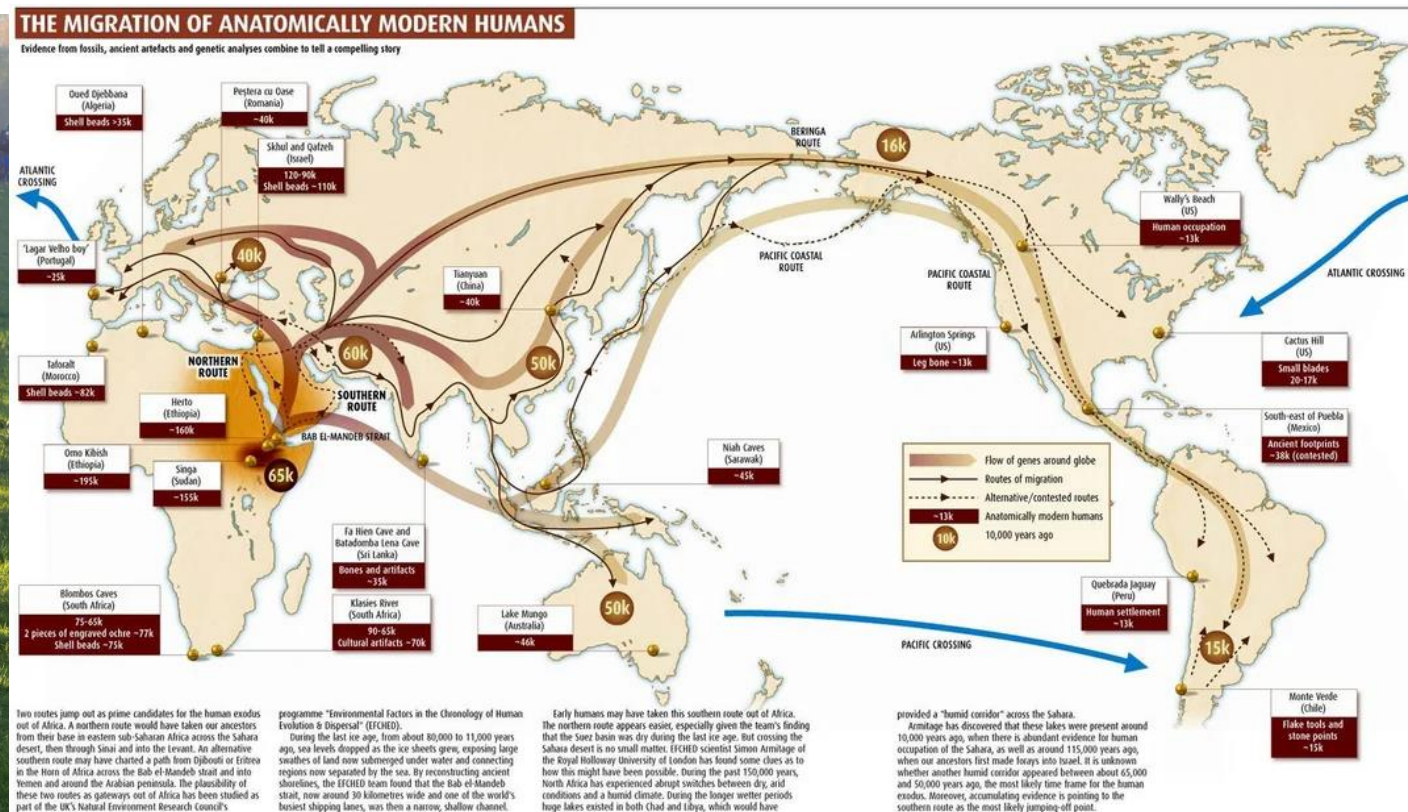
Casi autoctoni

Casi importati

Dengue is the most prevalent viral infection transmitted by *Aedes* mosquitoes.

More than 3.9 billion people in over 132 countries are at risk of contracting dengue, with an estimated **96 million symptomatic cases** and an estimated **40 000 deaths every year**.





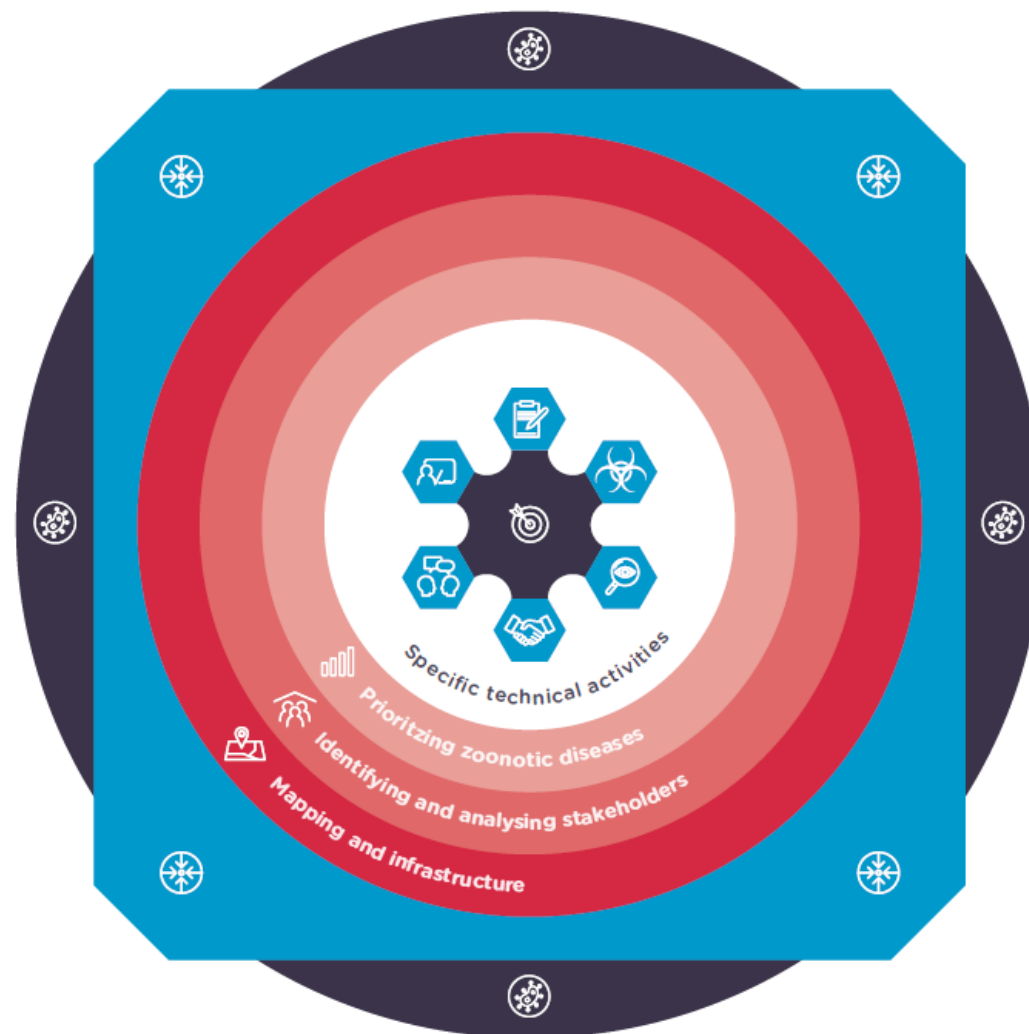


Climate change

Climate change is already impacting health in a myriad of ways, including by leading to death and illness from increasingly frequent extreme weather events, such as heatwaves, storms and floods, the disruption of food systems, **increases in zoonoses and food-, water- and vector-borne diseases**, and mental health issues.



Taking a Multisectoral, One Health Approach:
**A Tripartite Guide to Addressing
Zoonotic Diseases in Countries**



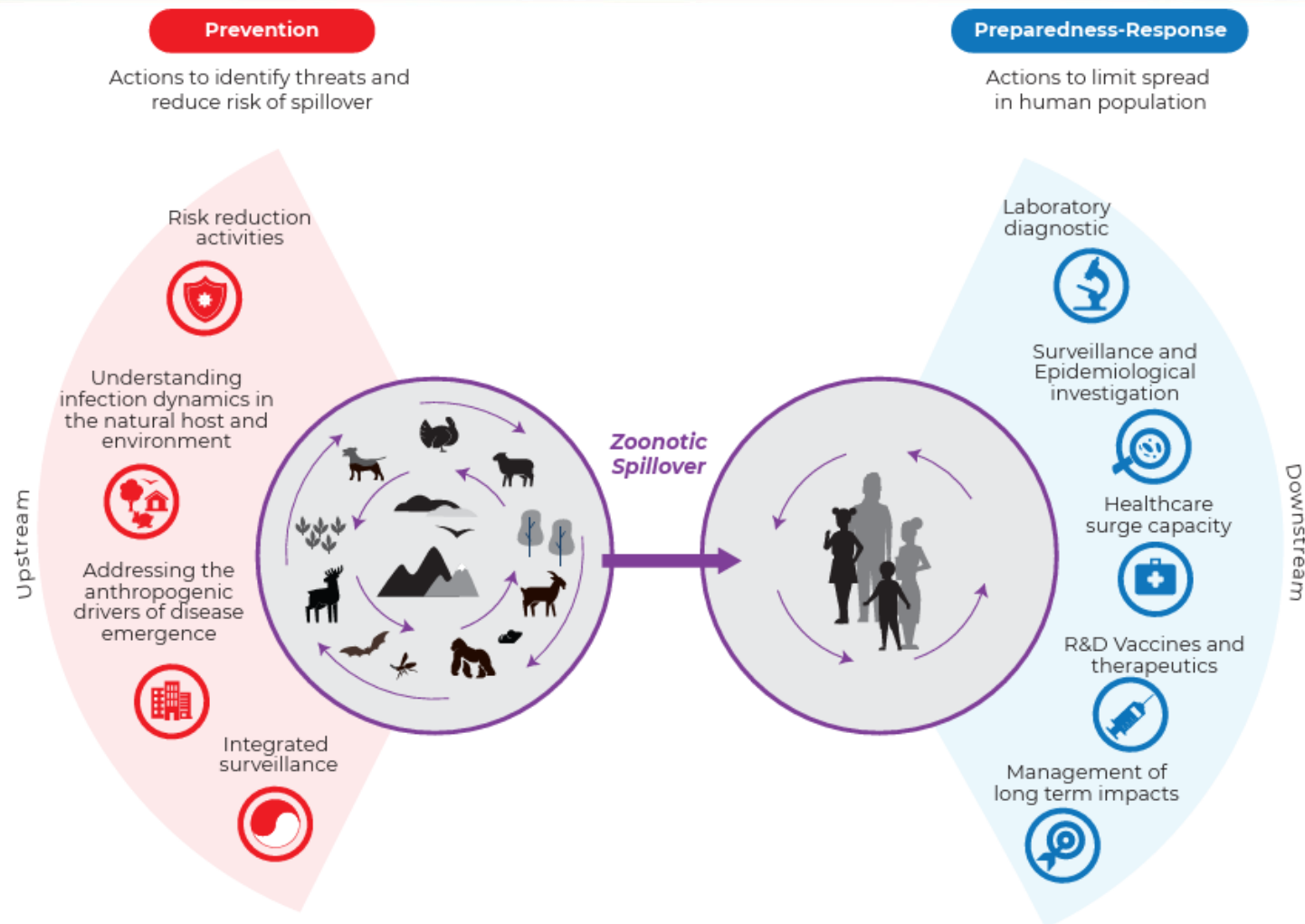
ONE HEALTH HIGH-LEVEL EXPERT PANEL

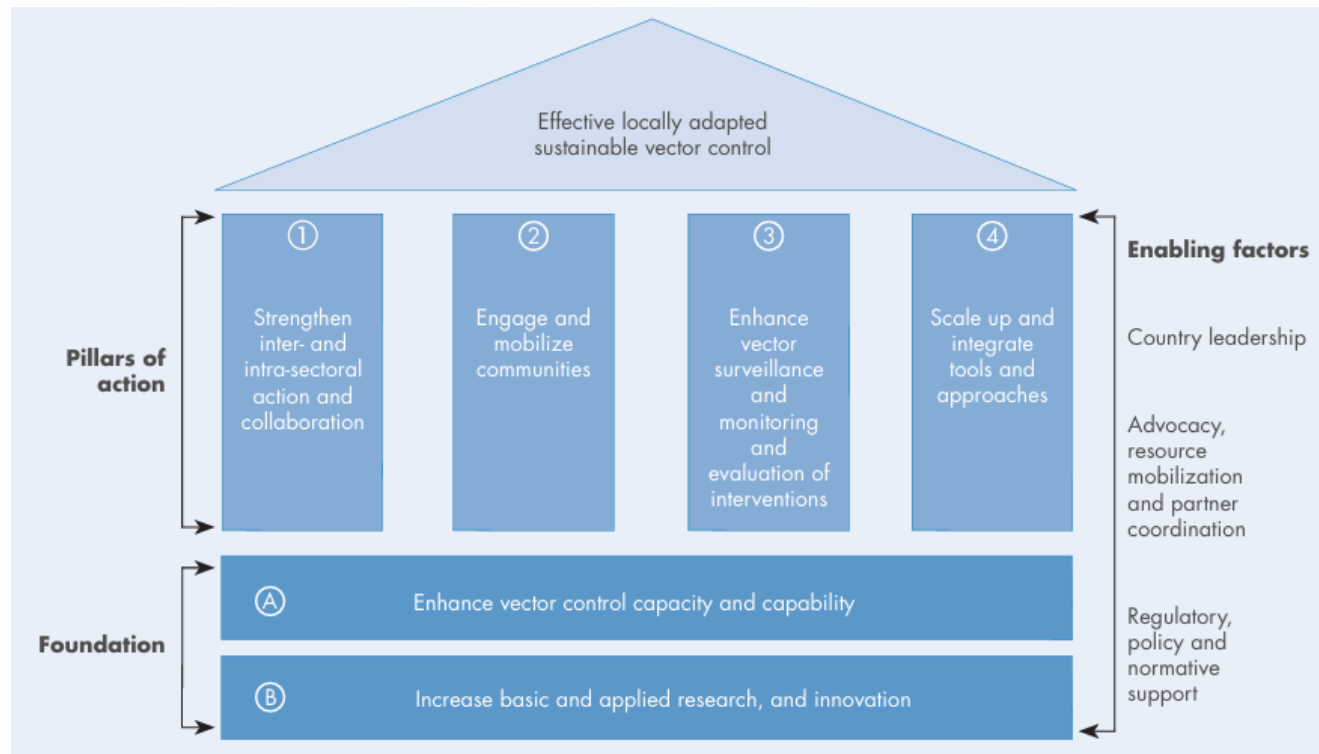
PREVENTION OF ZOOONOTIC SPILLOVER

FROM RELYING ON RESPONSE TO REDUCING THE RISK AT SOURCE
OHHLEP whitepaper/Opinion piece

Most human infectious diseases, especially recently emerging pathogens, originate from animals, and ongoing disease transmission from animals to people presents a significant global health burden.

Recognition of the epidemiologic circumstances involved in zoonotic spillover, amplification, and spread of diseases is essential for prioritizing surveillance and predicting future disease emergence risk.





GOALS	MILESTONES		TARGETS
	2020	2025	2030
Reduce mortality due to vector-borne diseases globally relative to 2016	By at least 30%	By at least 50%	By at least 75%
Reduce case incidence due to vector-borne diseases globally relative to 2016	By at least 25%	By at least 40%	By at least 60%
Prevent epidemics of vector-borne diseases*		In all countries without transmission in 2016	In all countries



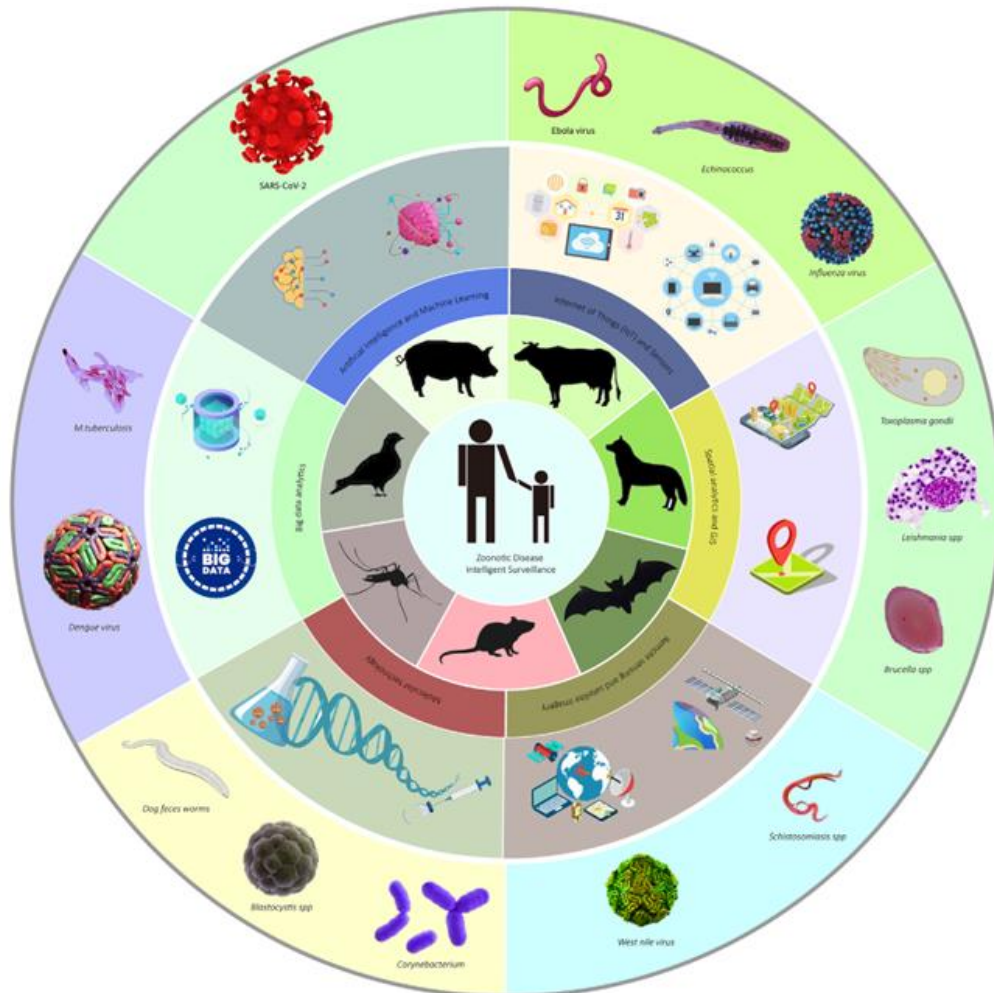
Ministero della Salute

Direzione Generale della Prevenzione Sanitaria

Piano Nazionale della Prevenzione 2020-2025

Macro Obiettivo n. 6 “*Malattie infettive prioritarie*”

specifici interventi per rafforzare misure volte a migliorare la capacità del sistema sanitario di rispondere ad un eventuale situazione di crisi, nonché a proseguire l'impegno nei programmi di prevenzione delle malattie infettive, avviandone di nuovi se opportuno, garantendone applicabilità e sostenibilità non solo nell'ambito delle malattie infettive in generale, ma anche delle Malattie Trasmesse da Alimenti, da Vettori e delle zoonosi.



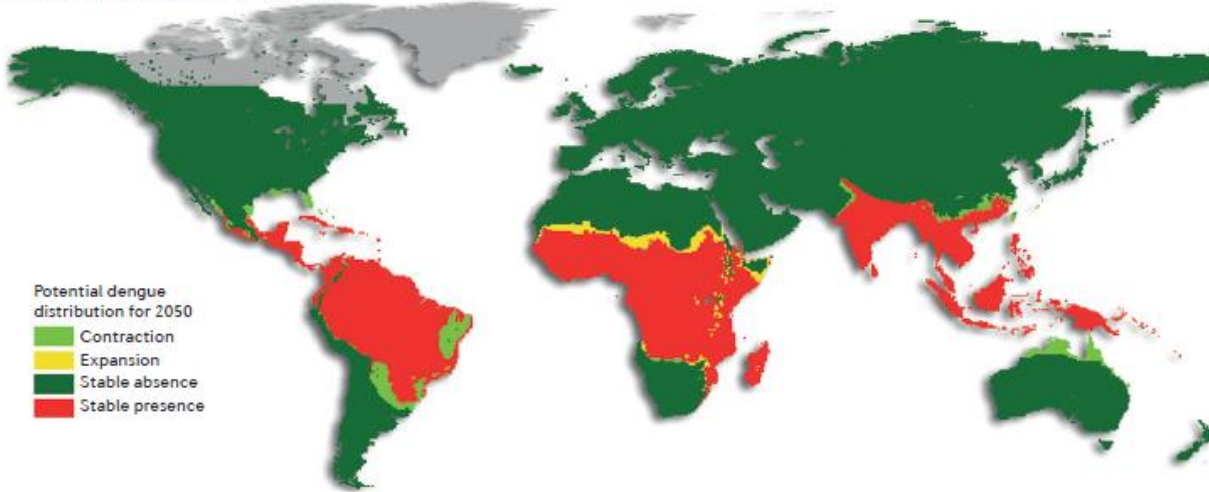
- big data analytics
- artificial intelligence
- the Internet of Things
- geographic information systems
- remote sensing
- molecular diagnostics
- point-of-care testing
- Telemedicine
- digital contact tracing
- early warning systems

- real-time monitoring
- prediction of outbreak risks
- early anomaly detection
- rapid diagnosis
- targeted interventions during outbreaks

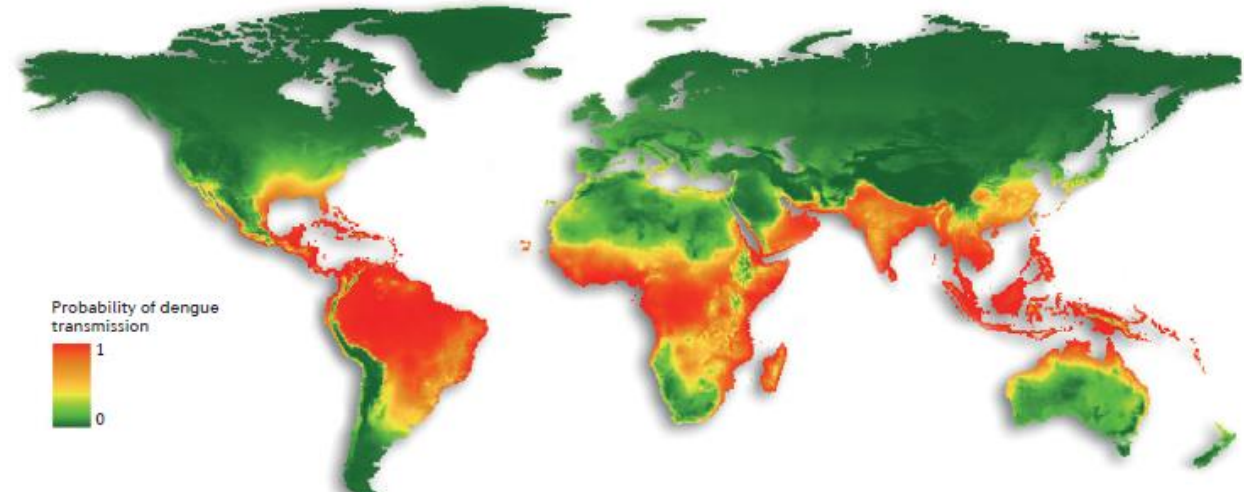
VECTOR-BORNE DISEASES

The many projected futures of dengue

a Projected dengue distribution for 2050

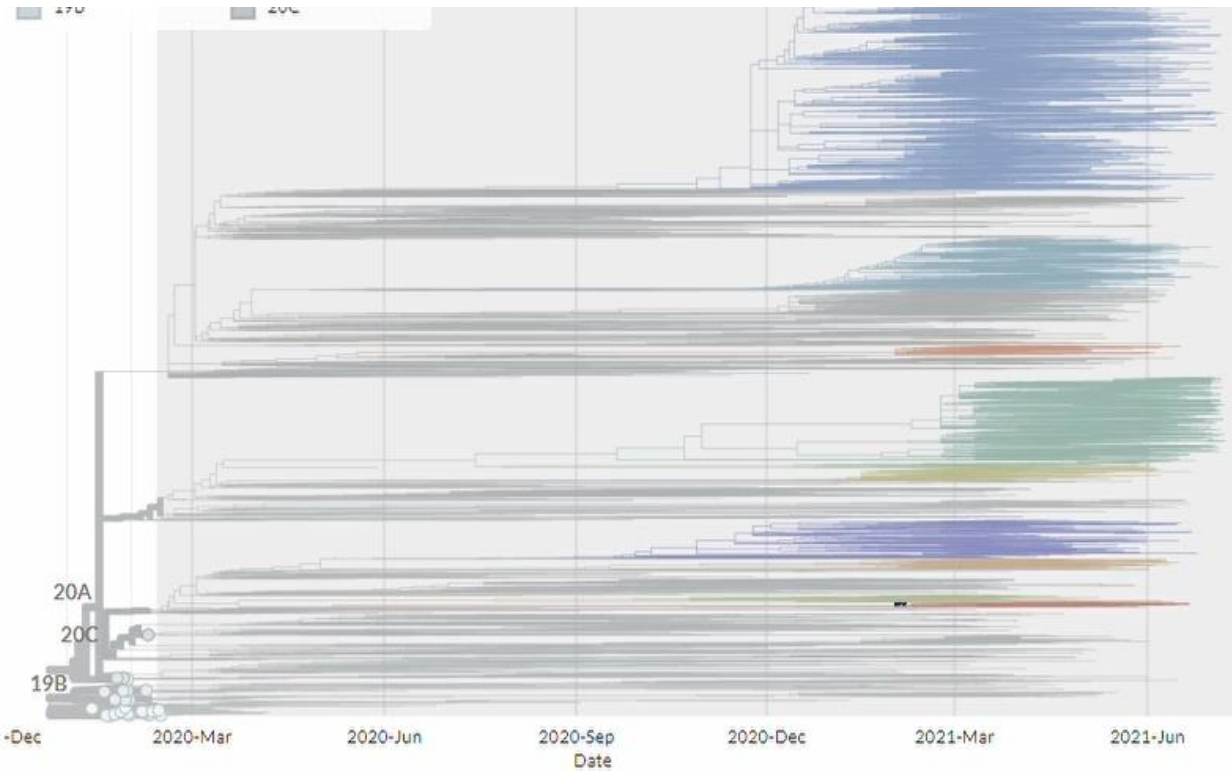


b Projected dengue distribution for 2085



«The pandemic has taught us that weakness in data and information systems present added and enormous challenge to decision makers.». Data deficiencies have serious consequences for people's lives.

Liu Zhenmin, Economic and Social Affairs- United Nations



Total n. of Outbreaks

1,754

Wild birds cases

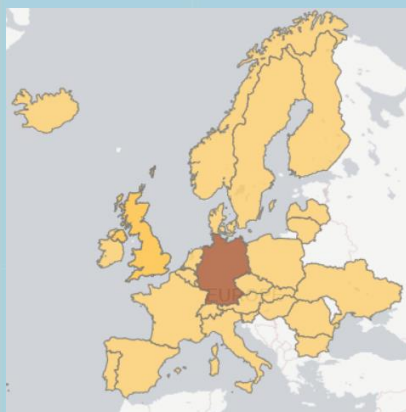
1,604

Farms, Captive, Backyard cases

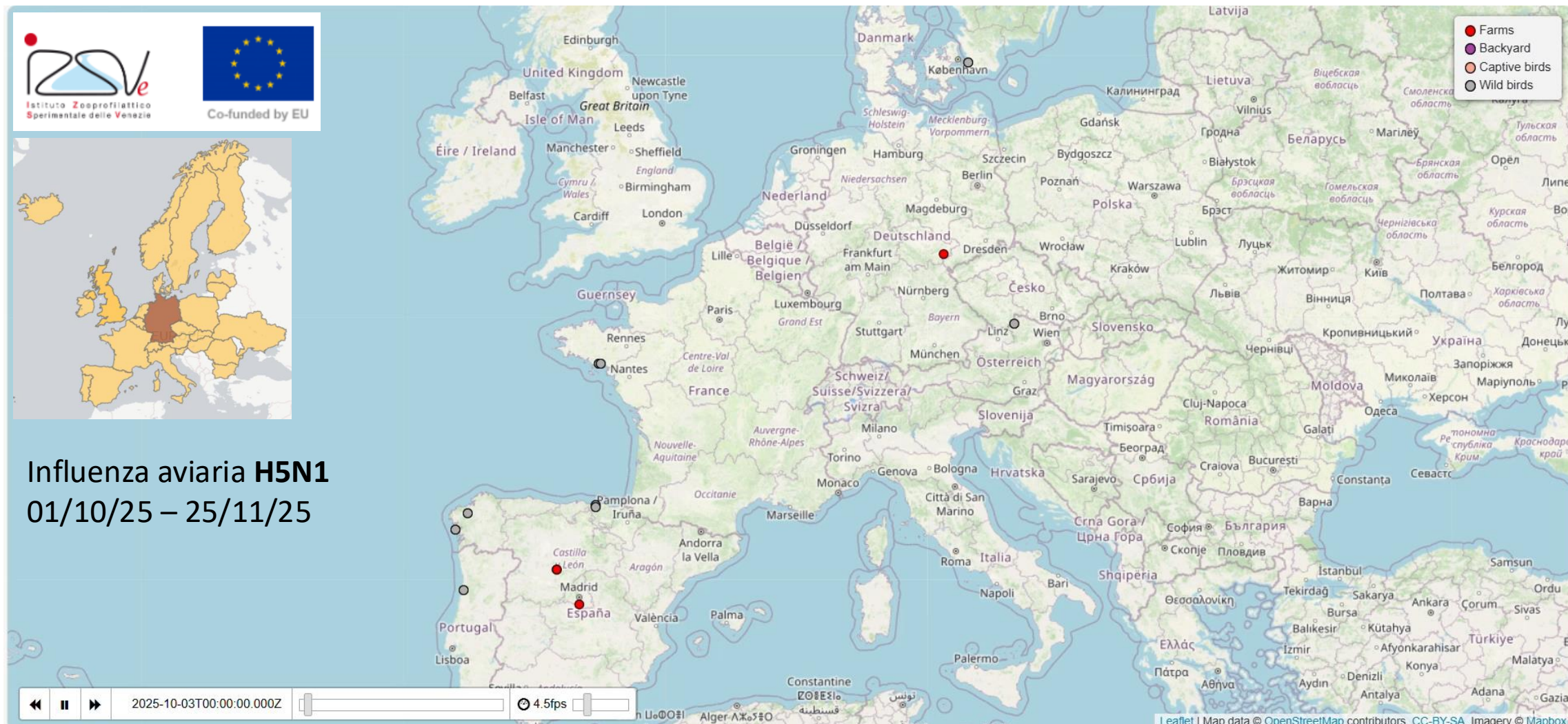
270

Affected countries

28



Influenza aviaria H5N1
01/10/25 – 25/11/25



Piano operativo DOHRI

Dipartimento della salute umana, della salute animale e dell'ecosistema (One Health) e dei rapporti internazionali

Missione 6 "Salute" - Componente 2



PNRR - Missione 6 "Salute" - Componente 2

Investimento 1.3.2: Infrastruttura tecnologica del Ministero della Salute e analisi dei dati, modello previsionale per la vigilanza LEA

Sub-investimento: 1.3.2.1 quater - Sviluppo della Piattaforma informatica dedicata ai dati di Epidemi sorveglianza che riguardano la sanità animale, la sicurezza alimentare e l'ecosistema.