

PREZODE

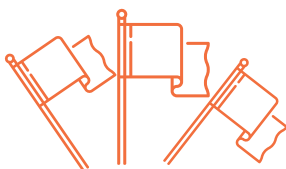
PANDEMICS OF ANIMAL ORIGIN: UNDERSTAND TO PREVENT

Preventing risks of pandemics of animal origin

PREZODE is an innovative international initiative addressing all the challenges related to the prevention, surveillance, early detection and rapid response to risks of zoonotic pandemics.



**Already more than a
1,000** scientists involved



From **50** countries



5 continents



A least **200 millions euros**
of projected budget
(2021-2025)

PREZODE was set up by three French research institutes–INRAE, CIRAD and IRD–in cooperation with several public and private research organisations from over 50 countries and international organisations including WHO, OIE, FAO and UNEP. The initiative is supported by the French Ministries for Higher Education, Research and Innovation, for Europe and Foreign Affairs, and for Agriculture and Food.

[Click on the image to view the video](#)

Beginning at 2:34'34"



French President Emmanuel Macron announced the initiative on 11 January 2021, at the One Planet Summit organised by the French government. During the event, the initiative was applauded by WHO, FAO, the World Bank and the European Commission.

Zoonoses: a major scientific and global challenge

Over the past decade, 75% of emerging human infectious diseases have been of animal origin.

(WHO)

The proportion of zoonoses among emerging human diseases has increased over the past 50 to 60 years, rising from 62% to 75%, and the occurrence of associated epidemics has also increased over the past 30 years.

The emergence and reemergence of these diseases are profoundly linked to pressures on the environment, and especially on natural habitats and biodiversity. PREZODE addresses a frequent deficiency in current strategies for combatting zoonoses: rather than ensuring prevention, the response strategies arrive too late, after the disease has spread to human populations.

The crisis caused by the Covid-19 pandemic has also reminded us more than ever of our need for a One Health approach including human, animal and environmental health in order to fight new pandemics and, above all, better prevent and avoid them.

Through innovative, participatory approaches involving local communities, researchers, technical and financial development partners and decision-makers, we will be able to reduce the risk of emergence and ensure the relevance of surveillance and early detection systems at the local, regional and global levels.

Click on the images to view the videos



Surveillance and interdisciplinarity: the Rift Valley Fever example

Research has shown that Rift Valley fever epidemics (East Africa) are linked to the El Niño phenomenon. In Kenya, increased surveillance of the disease during these climate patterns now allows for rapid detection of the circulation of the virus and better control. It also relies on weather, veterinary and medical surveillance, in which ruminant livestock farmers play a vital role. Contributions from the social sciences helped to highlight the role of livestock farmers, livestock traders and hunters. This was possible due to programmes designed to focus on local knowledge and participation.

Excerpt from <https://lemag.ird.fr/en/keys-preventing-future-pandemics>

<https://theconversation.com/les-cles-pour-empêcher-les-futures-pandémies-152143>

PREZODE is part of the One Health High-Level Expert Council framework announced on 12 November 2020 at the Paris Peace Forum.

Deployment of PREZODE

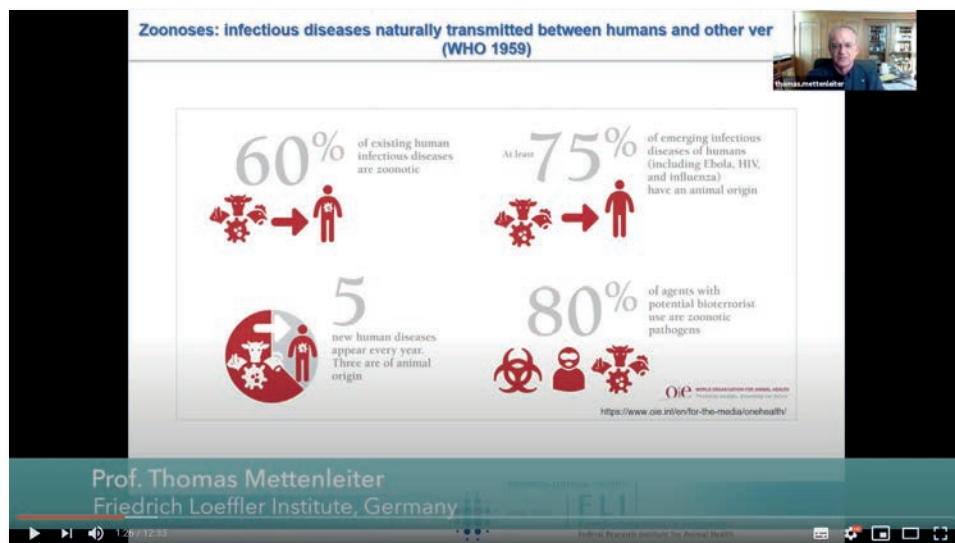


Investment in prevention is believed to cost 100 times less than the cost of controlling future pandemics*



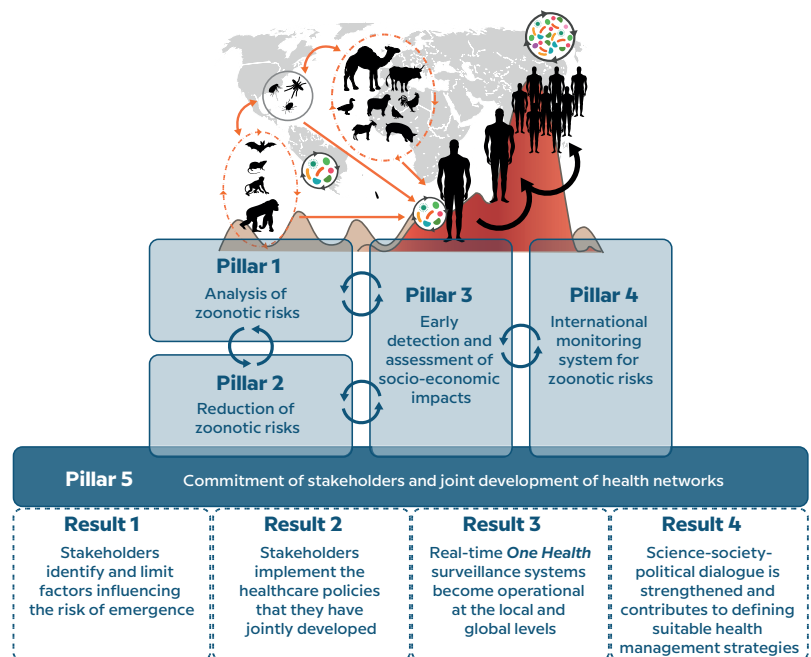
PREZODE will strengthen existing cooperation between the different world regions most affected by these risks. It supports the integration and consolidation of human, animal and environmental health networks aimed at better assessing and detecting threats and developing prevention activities.

Click on the image to view the video



The initiative aims to prevent the emergence and spread of zoonotic diseases—preventing them from becoming pandemics with all their impacts—while ensuring food security and the livelihood of communities, especially the poorest individuals.

It is founded on 5 pillars of operational research.



PREZODE: research pillars and expected results

PREZODE is in line with the recommendations of the report on biodiversity and pandemics published by IPBES in October 2020.

Click to open the link

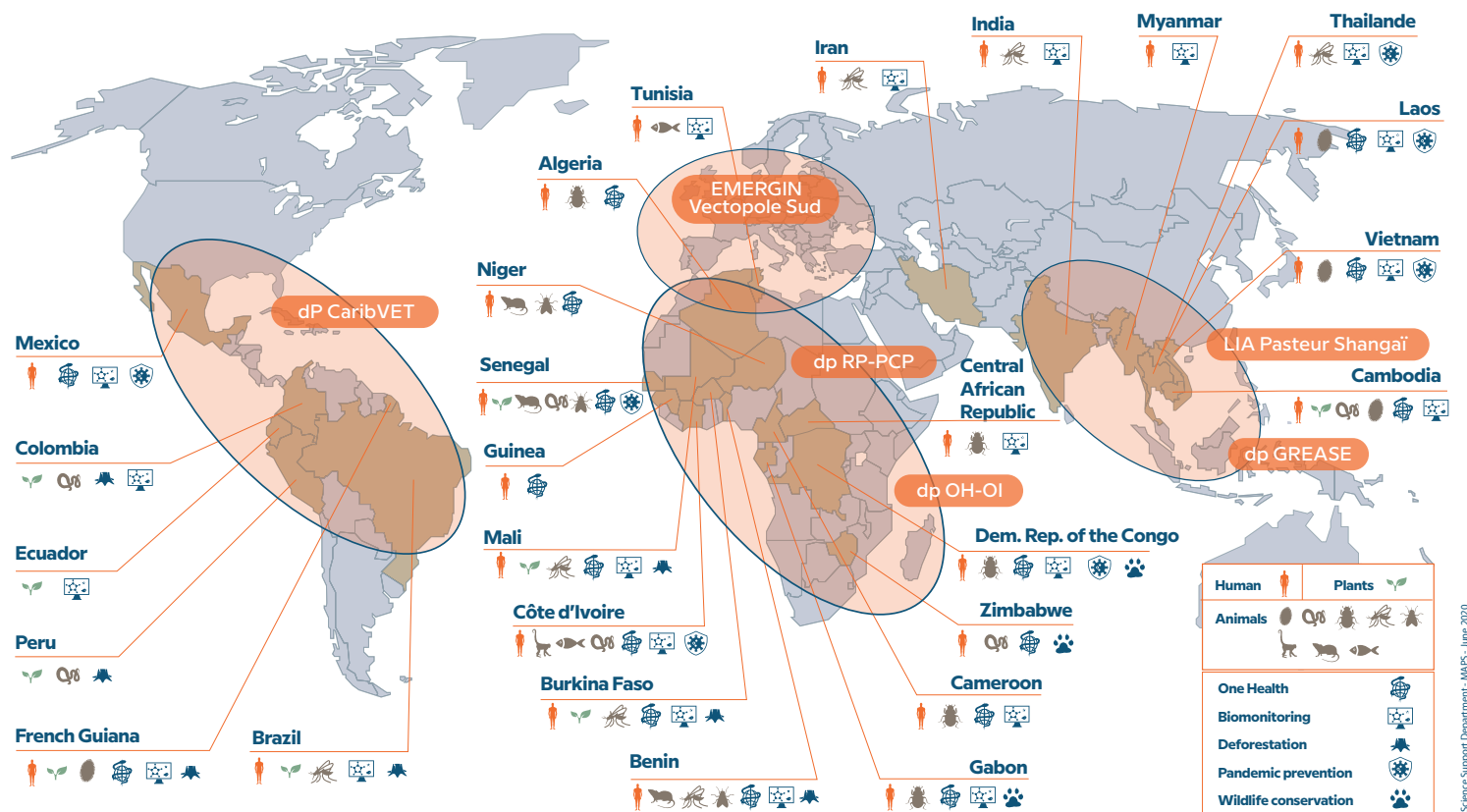
*Smith KF, Goldberg M, Rosenthal S, Carlson L, Chen J, Chen C, Ramachandran S., 2014, Global rise in human infectious disease outbreaks. J. R. Soc. Interface 11: 20140950. <http://dx.doi.org/10.1098/rsif.2014.0950>

* A.P. Dobson et al., 2020, Ecology and economics for pandemic prevention, Science, <https://science.sciencemag.org/content/369/6502/379.summary>

The PREZODE network

PREZODE boasts a unique network of partners and researchers and comprises three components:

- A multi- and interdisciplinary research component, jointly developed with the stakeholders.
- An operational component for developing and strengthening cooperation between research and monitoring efforts in Africa, South-East Asia and Latin America.
- A coordination component: in light of the recent announcement of a Europe for Health, the strengthening epidemio-surveillance networks and creation of a European One Health networks.



International activities and networks of international partnerships of French PREZODE partners

PREZODE aims to help establish a One Health network in West and Central Africa, then in America and in Asia (epicenters of the three previous pandemics caused by zoonotic diseases: H1N1 in Mexico, Zika in Brazil, COVID-19 in Asia).

PREZODE

PREVENTING ZONOTIC DISEASES EMERGENCE

Contacts

INRAE/IRD Director of Research, specialist in biodiversity / human transmission of infectious disease, professor at EHESP: Jean-François Guégan – jean-francois.guegan@inrae.fr

Biologist at IRD, expert on the IPBES report on biodiversity and pandemics, One Health Scientific Advisor IRD: Benjamin Roche – benjamin.roche@ird.fr

Epidemiologist and Deputy Director of UMR ASTRE, Cirad: Marisa Peyre – marisa.peyre@cirad.fr



Preventing zoonotic
disease emergence