

Preventing zoonotic diseases emergence for sustainable food systems through a One Health approach: the One Health High-Level Expert Panel and the PREZODE initiative

France

Background

- Moving towards a food system transformation to deliver affordable healthy diets in a sustainable way, which is the overarching objective of the Food System Summit, is intertwined with many other issues at stake within the agriculture-health-environment nexus and global changes.
- New risks are emerging linked to socioecological processes impacting this agriculture-health-environment nexus: climate change, deforestation, urban growth, changing production conditions and market chains, waste mismanagement...
- However, while food systems are facing those threats, the COVID-19 crisis has highlighted the pivotal importance of functional food supply chains and the need to further increase their resilience to emerging risks and crisis.
- *The current pandemic has indeed shaken the world, taking a very heavy human, economic and social toll, with a particularly disastrous effect on the poorest populations. But the fact is that over the past 50 years the emergence of health crises linked to zoonoses has been picking up speed due to increased environmental pressure, driving movement of people, wildlife, reservoirs, and vectors, transformation of landscapes agricultural expansion and urbanization.*
- All this requires a better understanding of the interactions between global changes (climate change, biodiversity loss, urbanization) that transform socio-ecosystems, including food systems, to be able to promote solutions that maximize co-benefits and accelerate system-wide transformations.
- **In this context, it is high time to accelerate the implementation of the a One Health approach, which integrates human, animal and environmental health, to prevent, detect and respond to new pandemics and benefit to food systems at the same time.**
- A One Health approach is beneficial to both the prevention of zoonotic diseases and to agricultural biodiversity, including in livestock management and help increase food quality and food safety. The One Health approach is not new and has been conceptualized in the early 2000s (even if its roots date back way earlier). It is now of utmost importance to accelerate its implantation in practice, with stronger consideration to its environmental dimension,
- *In this context, the One Health High level Experts Panel (OHHLEP) will be instrumental to inform public officials and help them make appropriate decisions to address and prevent future zoonotic crises, as well as to inform citizens. In addition, the PREZODE (PREventing Zoonotic Disease Emergence) initiative, although primarily aiming at preventing the emergence and spread of zoonotic diseases, represents a unique opportunity to address simultaneously several flaws in the current global food system.*

1.1. Describe the solution: (what, in brief, is the solution)

OHHLEP

The One Health High-Level Expert Panel (“OHHLEP”) is established by WHO, OIE, FAO and UNEP. This group of 20 high-level independent scientific experts will provide guidance on One Health-related matters that support improved cooperation among governments. It will initially focus on: 1) providing policy relevant scientific assessment on the emergence of health crises arising from the human-

animal-ecosystem interface, and research gaps; and 2) guidance on development of a long term strategic approach to reducing risk of zoonotic pandemics, with an associated monitoring and early warning framework, and the synergies needed to institutionalize and implement the One Health approach, including in areas that drive pandemic risk. The OHHLEP's advice will contribute to enhancing strategic orientations and coordination, and to providing high political visibility on the subject of One Health.

PREZODE

- The overarching goal of the PREZODE initiative is to support international and local organizations, governments and civil society on the ground to prevent the emergence and spread of zoonotic diseases and to avoid the impact of pandemic crisis, **including impacts on food systems**, social systems, and economic development.
- *PREZODE is designed to incorporate and reinforce networks in human health, animal health and welfare and the environment. In line with the One Health concept, it aims to better characterise and detect emerging zoonotic threats and develop preventive measures with all stakeholders to protect humans, the planet, and socio-ecosystems.*
- The PREZODE initiative will complement the work of the OHHLEP and will decline the recommendations at the operational level.

1.2. What was/were the source(s) from which this solution emerged?

In the context of the COVID-19 crisis, stressing the urgency of accelerating the implementation of the One Health approach and preventing zoonotic emerging diseases, France and Germany suggested to the WHO, OIE, FAO and UNEP to create the OHHLEP, which was *announced on 12 November 2020 at the Paris Peace Forum and will hold its 1st meeting on 18-19 May 2021, ahead of the World Health Assembly.*

In addition, the PREZODE initiative first emerged thanks to the gathering of French research institutes in line with the creation of the OHHLEP and with recent recommendations of the report on biodiversity and pandemics published by IPBES in October 2020. PREZODE was announced by the French President during the One Planet Summit for biodiversity held on 11 January with the support of FAO and of the European Union.

1.3. What problem is it trying to address within food systems?

The COVID-19 crisis has highlighted the close links between human, animal and environmental health, in a context of increased human-livestock-wildlife contacts and ecosystems degradation.

In order to better understand pandemics emergence such as COVID-19 and to reduce the risk of zoonotic diseases, determined actions are needed. **This issue is highly relevant with regards to the FSS process, in a cross-cutting manner.**

The One Health approach, fostered by the OHHLEP and the PREZODE initiative, do not target a specific segment of food systems. It is about promoting a global vision of socio-ecosystems that are favorable to healthy and sustainable food systems.

In this sense, the One Health approach encompasses the various Action Tracks. It is also a relevant approach for the different ACAI inside AT3, though specifically addressing the ACAI “PROTECT”.

1.4. Why is addressing that problem important for achieving the goal of your ACAI?

The One Health approach must be supported, and the One Health High-Level Expert Panel and the PREZODE initiative will make a key contribution to this end. Together with the ACAI, the goal is to design virtuous socio-ecosystems.

The One Health approach can prevent and control risks by considering the interdependence of social and epidemiological dynamics, biodiversity and health, and veterinary and human public health. It considers the necessity for:

- Safer food systems (food derived from animals, including both livestock and wildlife, is an important vehicle for many zoonotic pathogens)
- Cross-sectional collaboration of veterinary and human medicine and other disciplines regarding wildlife preservation and animal management, across the food production chain,
- Sustainable nutrient management in agriculture,
- Empowerment of the local communities and actors involved in the food systems and at the front line of emerging risks,
- Intensified cooperation of relevant International Organizations in the field of One Health, with WHO, OIE, FAO and UNEP at the core.
- It has also the ability to improve connection between consumers and producers.

1.5. How can this solution address that problem?

OHHLEP :

The OHHLEP will perform the following functions:

- Provide advice on the analysis of scientific evidence on the links between human, animal and ecosystem health, and contribute to foresight on emerging threats to health
- Provide advice on better understanding of the impacts of food systems (including agriculture, livestock farming and trade, wildlife hunting and trade, aquaculture, animal products processing, handling, distribution and consumer practices) and ecological and environmental factors that may be contributing to zoonotic disease emergence/re-emergence and spillover events;
- Contribute to the One Health research agenda setting and propose, advise on and review approaches and specific studies relevant to the development of a global approach to reduce risk of zoonotic pandemics;
- Provide advice by invitation on One Health policy response in relevant member countries;
- Provide recommendations on specific issues identified by the Partners in the areas of highest concern for attention and action, and future directions, in One Health

PREZODE:

The PREZODE initiative is built around 5 operational pillars:

- Pillar 1 - Risk assessment of the emergence of zoonotic diseases
- Pillar 2 - Reducing the risk of zoonotic emergencies by building suitable and resilient socio-ecosystems
- Pillar 3 - Developing early warning systems, rapid response and assessing the socio-economic impacts

- Pillar 4 - Prototyping a global information system for surveillance and early detection
- Pillar 5 (cross-cutting) – Empowerment of the local communities, capacity building and health network strengthening

All 5 pillars are relevant to prevent the emergence and spread of zoonotic diseases, to avoid the impact of pandemic crisis while ensuring food security and poorest community livelihood. The second pillar of the Initiative, in particular, will be one of the instruments for boosting nature-based solutions at scale and allowing to protect natural ecosystems against new conversions for food and feed production. It will allow to systematically assess the relationship between human diseases and agriculture, and to understand the links between land-use changes associated with agricultural development and the multiplication of zoonoses.

It will work through innovative, participatory approaches involving local communities, researchers, technical and financial development partners and decision-makers at the local, regional and global levels.

1.6. Why does this solution align to the definition and criteria for a ‘game changing solution’ developed by the Summit?

Through its One Health approach, OHHLEP and PREZODE address the environmental, animal and agricultural roots of food systems. It has therefore the power to trigger a systemic change at scale.

1.7. What is the existing evidence supporting the argument that this solution will work, or at least that it will achieve the initial outcomes described above?

The PREZODE initiative and OHHLEP are consistent with the recent recommendations of the IPBES workshop (2020) on biodiversity and pandemics and in accordance with the work and commitments of international organizations in this area. PREZODE will focus on the quality of the data, thanks to involving local population in the project.

1.8. What is the current and/or likely political support for this idea?

OHHLEP, initially proposed by France and Germany at the highest level, has been endorsed and is now led by the “Tripartite Plus” (WHO, OIE, FAO and UNEP). It is currently funded by France and Germany, and its support has already been embedded in EU+MS positions (see draft EU WHA resolution)

The PREZODE initiative has been announced by the French President during the One Planet Summit for biodiversity held on 11 January with the support of FAO and of the European Union. It will be partly funded by the French government, with in-kind support from French research institutes, but fundraising efforts are still ongoing in 2021.

1.9. Are there certain contexts for which this solution is particularly well suited, or, conversely, contexts for which it is not well-suited at all?

OHHLEP has a global scope and no particular limitations in terms of context. The experts involved in the OHHLEP were chosen for their independence, and also to represent geographical, gender and disciplines diversity.

The PREZODE initiative is a **global initiative** directed to all local contexts, with a focus on specific hotspots but not limited to those. It is built on and will strengthen existing cooperation between the

different regions of the world (Africa, Asia, Pacific, Caribbean, Indian Ocean, Mediterranean, Middle East, Latin America and Europe); many national partners from these regions have already expressed their strong interest during first regional workshops held by PREZODE in December 2020. It is designed to incorporate and reinforce networks in human health, animal welfare and the environment.

1.10. Who are the key stakeholders to be further involved in the process of developing and refining the solution idea?

OHHLEP already involves the key international organizations competent for One Health issues (“Tripartite Plus”) but would benefit from political and financial support from the Member States and other stakeholders.

PREZODE will be guided by the OHHLEP recommendations and will also work in close collaboration with OIE, FAO, WHO, UNEP, IAEA and with programs initiated by the World Bank, by national development agencies and by foundations. It has a unique network of partners (researchers, international organizations, NGOs, governments) and relies on projects and partnership networks already underway in Europe, Africa, Asia and Latin America, coordinated by French research institutions (CIRAD, IRD, the network of Pasteur institutes and their public and private partners, as well as on the One Health expertise of INRAE and ANSES and in remote sensing from CNES).

The connection with key scientific and operational partners in the field (EcoHealth Alliance, GALVmed, the World Conservation Society, Agronomes et Vétérinaires sans frontières,...) already initiated in December 2020 (see #10 above) will be strongly strengthened through new co-construction international workshops and through their adherence to the PREZODE Charter in order to allow the project to immediately gain international stature.