



BREAKING BOUNDARIES: EFSA'S CONTRIBUTIONS FOR ONE HEALTH IN THE EU

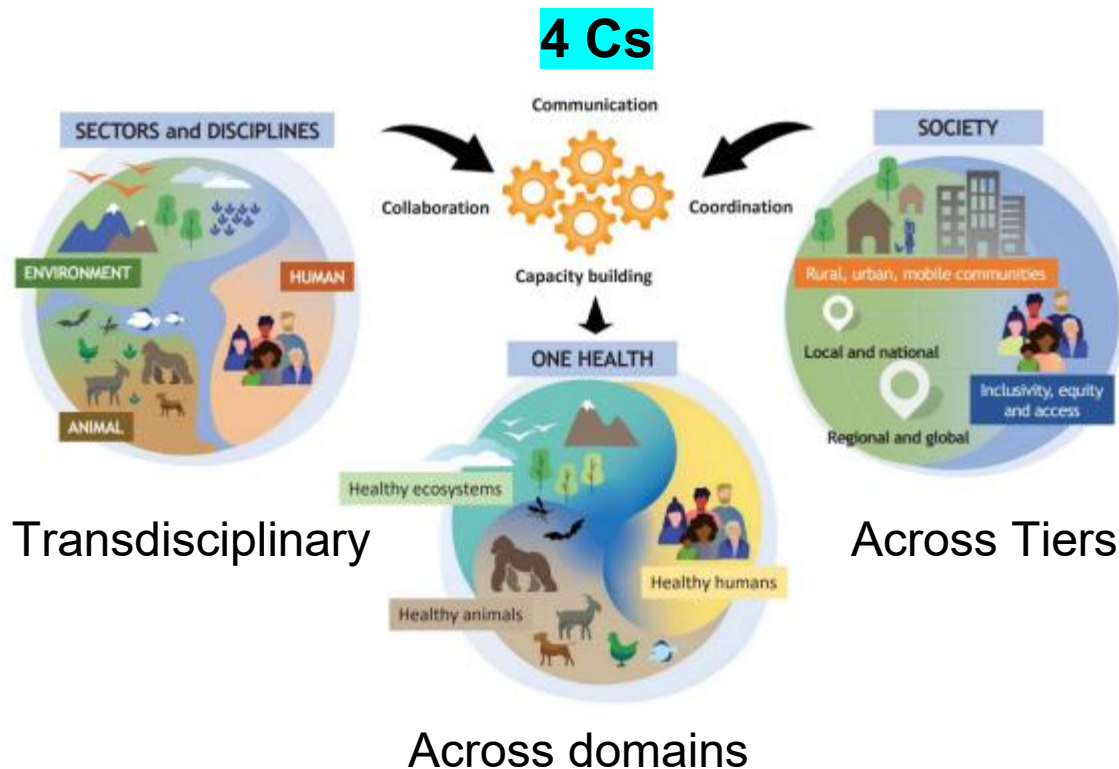
Konstantinos Paraskevopoulos
EFSA Chief Scientist Office

- 1 What is One Health
- 2 Why apply OH
- 3 What is happening at EFSA with OH; current examples of OH in action
- 4 How to further operationalise OH; challenges/barriers and future actions



ONE HEALTH DEFINITION – FAO, UNEP, WHO & WOA

- One Health is an **integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems.**
- It recognizes the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and inter-dependent.



The approach mobilizes **multiple sectors, disciplines and communities** at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development.



ONE HEALTH CONCEPT IS NOT NEW

- “One health” in the ancient times
 - **Hippocrates** – spoke of the importance of a clean environment for ‘good public health’
 - **Aristotle** – developed the practise of comparative medicine via looking at disease and characteristics across species (humans and animals)
- “One Health” in the 1000s
 - **Rudolf Virchow** – a medical doctor & pathologist—first **to introduce the term “zoonosis” in 1850s** and speak of infectious disease passing between humans and animals, highlighting the role the environment plays in disease transmission while addressing typhus
- “One Health” in the 1900s
 - **Calvin Schwabe** – a veterinarian & epidemiologist first used **the term “one medicine” in 1964** highlighting similarities between human and veterinary medicine, calling for collaboration of health professionals of varying backgrounds to work together against infectious diseases



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**BIODIVERSITY
LOSS**



**CLIMATE
CHANGE**



**LAND
USE
CHANGE**



**WAR &
SOCIAL
UNREST**

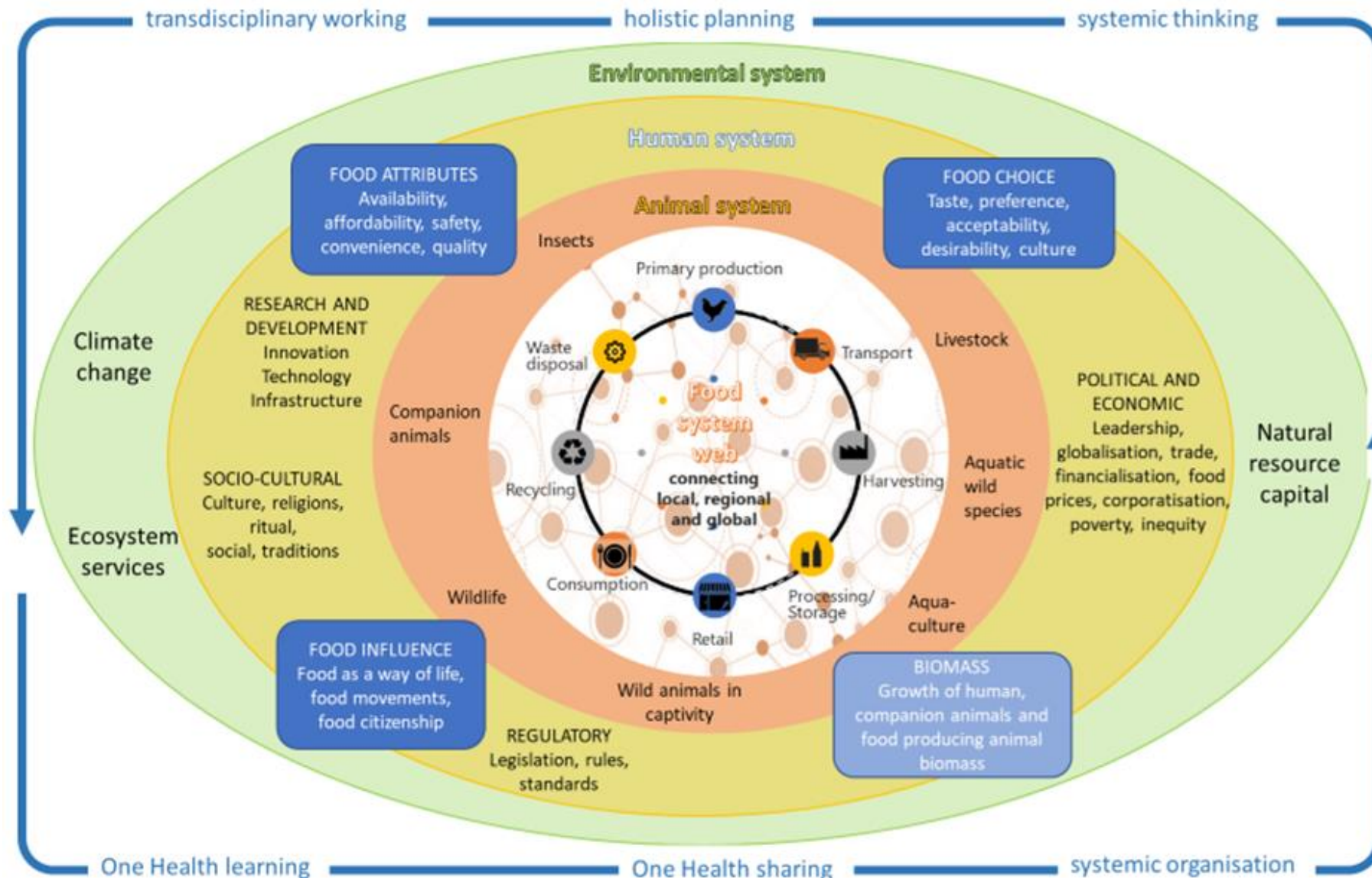


**PANDEMICS,
EIDs, NTDs**

**DEPLETION
NATURAL
RESOURCES**



FOOD – A COMPLEX ECOSYSTEM FOR RISK ANALYSIS



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EFSA = ONE HEALTH

Editorial |  Open Access |   

EFSA's expertise supports One Health policy needs

Stef Bronzwaer , Mirelle Geervliet, Marta Hugas, Bernhard Url

First published: 12 May 2021 | <https://doi.org/10.2903/j.efsa.2021.e190501> | Citations: 4

About the authors: Stef Bronzwaer, Research Coordinator; Mirelle Geervliet, Trainee; Marta Hugas, Scientist; Bernhard Url, Executive Director

Regulation (EC) No 178/2002 - mission European Food Safety Authority:

*The Authority shall contribute to a high level of protection of **human life and health**, and in this respect take account of **animal health and welfare, plant health and the environment ...***



EFSA & ONE HEALTH



1. Develop Risk Assessment approaches to address **ONE HEALTH POLICY** needs and in particular sustainable food and feed systems
2. Ensure wide and timely use of open food safety data by digital platform-based collaboration and **EU ONE HEALTH ECOSYSTEM**
3. Spearhead EU '**ONE HEALTH - ONE ENVIRONMENT**' communication science research agenda
4. Wider access to and broader exploitation of data and analytics is achieved. EFSA will strengthen a collaborative data governance together with Member States and other Agencies, improve data quality and interoperability in line with the **ONE HEALTH APPROACH**



EFSA ONE HEALTH OUTPUTS- AMR



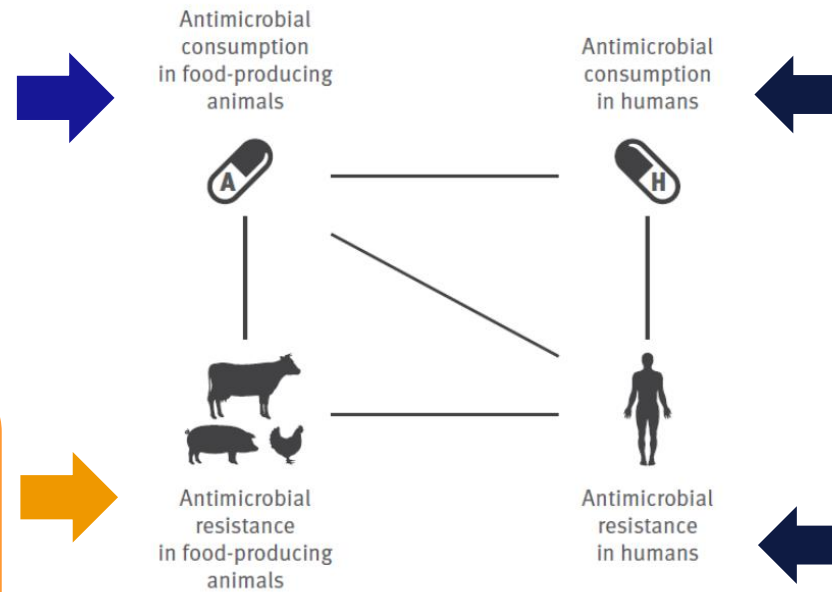
 **EUROPEAN MEDICINES AGENCY**
SCIENCE MEDICINES HEALTH

European Surveillance of Veterinary Antimicrobial Consumption (**ESVAC**)


 **EFSA**
EUROPEAN FOOD SAFETY AUTHORITY

Network on Zoonoses Data Collection

EU Summary Report on AMR in zoonotic and indicator bacteria from humans, animals and food



European Surveillance of Antimicrobial Consumption Network (**ESAC-Net**)

 **ecdc**
EUROPEAN CENTRE FOR DISEASE PREVENTION AND CONTROL

European Antimicrobial Resistance Surveillance Network (**EARS-Net**)

Food- and Water-borne Disease Network (**FWD-Net**)



EFSA ONE HEALTH OUTPUTS

storymaps.arcgis.com/stories/ca42d02e580441b79fd46a427abaab

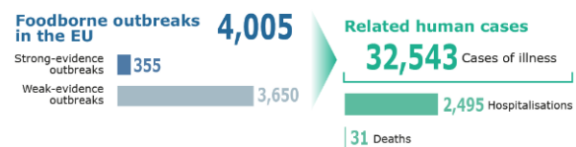
Intranet - Home Hootsuite EFSA | European Fo... Request Summary ... SYSPER Login Sign In My Intraconn Wel... Stef Bronzwaer (@s... LinkedIn Research Platform ... EFSA Research Com... sbr

efsa EUROPEAN FOOD SAFETY AUTHORITY Foodborne Outbreaks story map

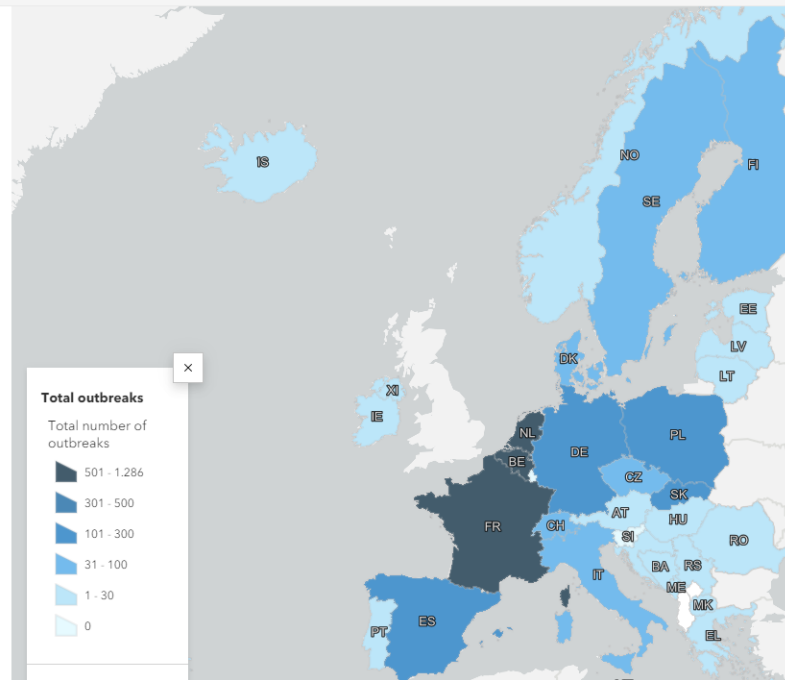
Foodborne outbreaks What foods Agents & symptoms Food contamination Who investigates Occurrence in 2021 Real burden Prevention EU mon

Occurrence of foodborne outbreaks in 2021

In 2021, all EU Member States and United Kingdom (Northern Ireland) reported foodborne outbreak data to EFSA, with the exception of Bulgaria and Cyprus, which reported zero outbreaks. In addition, seven non-Member States countries (Bosnia and Herzegovina, Iceland, Montenegro, Norway, Republic of North Macedonia, Serbia, Switzerland) reported 83 outbreaks, 1,270 human cases, 65 hospitalisations and 2 deaths.



Overall, at the EU level, despite the number of foodborne outbreaks reported to EFSA in 2021 was higher than in



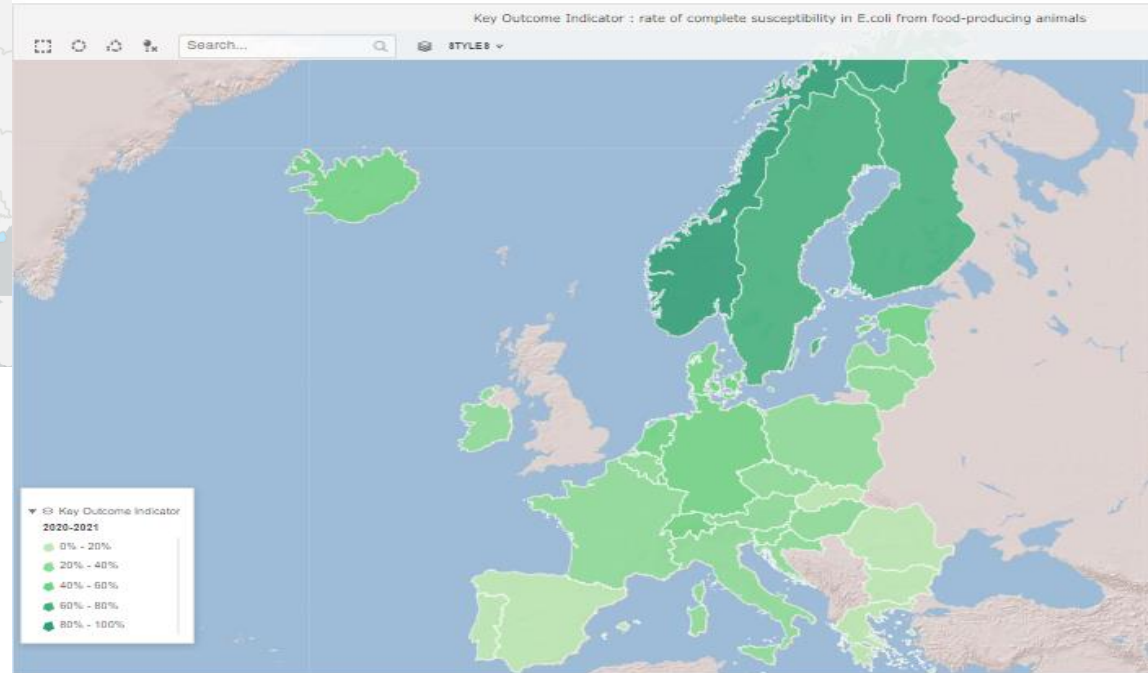
efsa.europa.eu/en/microstrategy/dashboard-indicators-antimicrobial-resistance

Home Overview Temporal trends Complete Susceptibility Prevalence of ESBL/AmpC



Reporting years

2020-2021



EFSA OH – STORY MAPS – DASHBOARDS

HTTPS://WWW.EFSA.EUROPA.EU/EN/RESOURCES/DATA-COLLECTION-ZOONOSES

Reporting tools

- [Excel mapping tools for 2022 zoonoses and AMR data reporting](#)
- [Instructions on how to use the Excel mapping tools can be found in the: User manual for mapping Member State zoonoses standard terminology to EFSA standard terminology for information derived from the year 2018](#)

The catalogues extracted in the Excel format

- [Catalogues for 2022 zoonoses data reporting](#)
- [The 2022 mapping between the ZOO_CAT_MATRIX and the FoodEx2 and examples of prevalence data reported in SSD2 format](#)

Links to the annual reports

- The European Union One Health Zoonoses Report: [2011](#) | [2012](#) | [2013](#) | [2014](#) | [2015](#) | [2016](#) | [2017](#) | [2018](#) | [2019](#) | [2020](#) | [2021](#)
- EU summary report on AMR in zoonotic and indicator bacteria from humans, animals and food: [2011](#) | [2012](#) | [2013](#) | [2014](#) | [2015](#) | [2016](#) | [2017](#) | [2018](#) | [2019](#) | [2021](#)
- [National zoonoses country reports](#)

Dashboards and story maps

Foodborne outbreaks

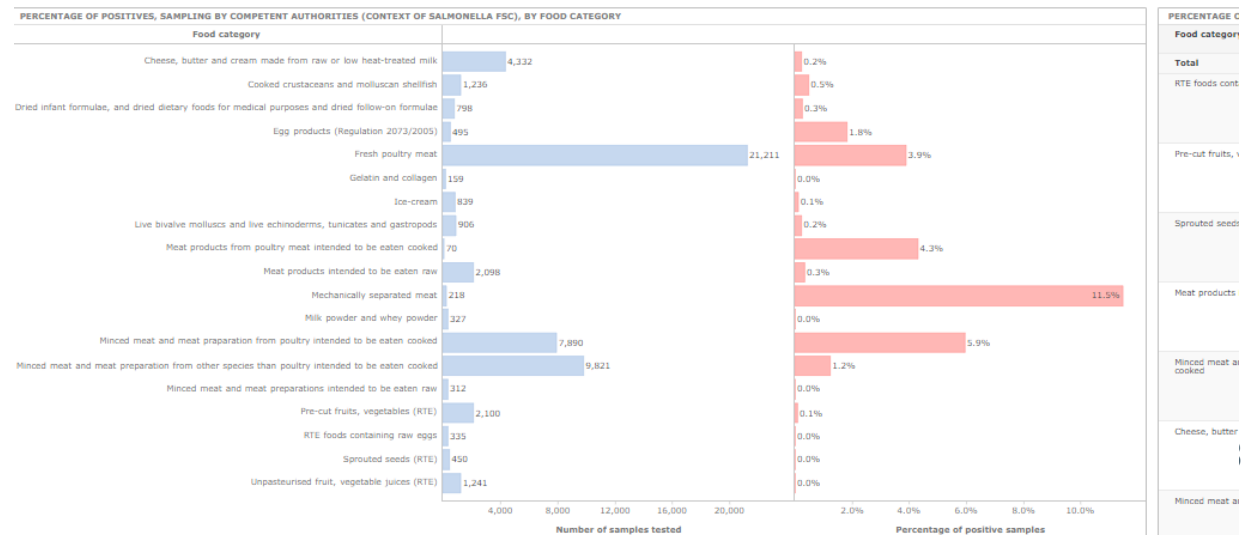
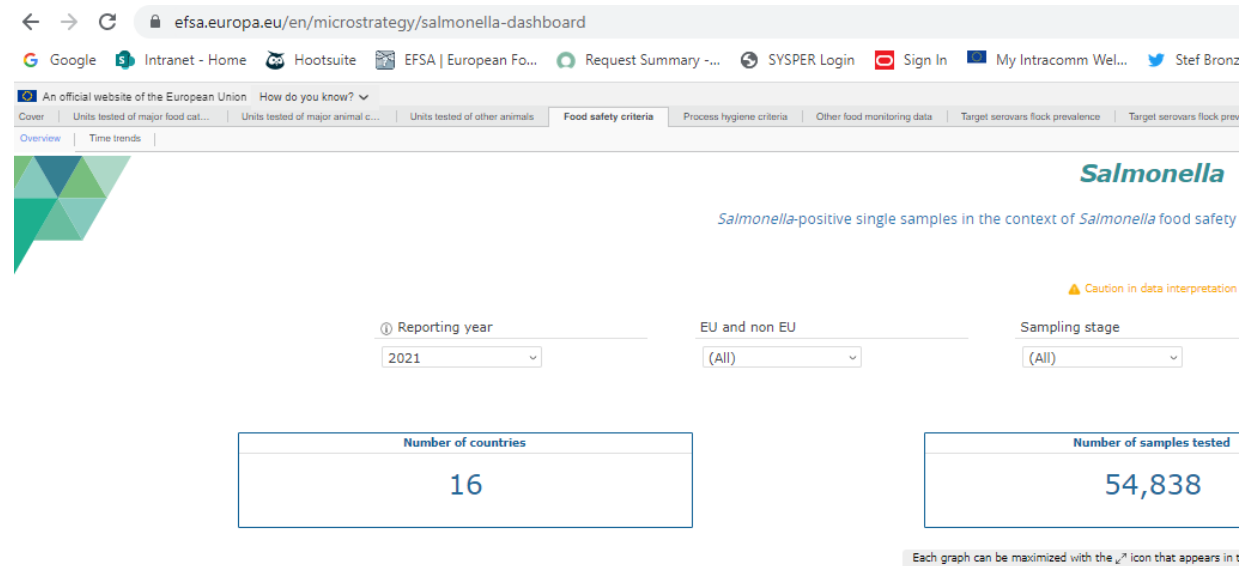
- [Foodborne outbreaks dashboard](#)
- [Foodborne outbreaks story map](#)

Prevalence

- [Salmonella dashboard](#)
- [Salmonella story map](#)
- [Listeria dashboard](#)
- [Listeria monocytogenes story map](#)
- [Campylobacter dashboard](#)
- [Campylobacter story map](#)

Antimicrobial resistance

- [Monitoring antimicrobial resistance](#)
- [Monitoring AMR in Escherichia coli](#)
- [Dashboard on Indicators of antimicrobial resistance](#)



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ONE CONFERENCE 2022

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Advancing food safety: strategic recommendations from the 'ONE – Health, Environment & Society – Conference 2022'

Yann Devos | Edward Bray, Stef Bronzwaer, Barbara Gallani, Bernhard Url

First published: 11 November 2022 | <https://doi.org/10.2903/fj.efsa.2022.e201101>

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*Since **EFSA**, its partner **agencies** and **EU Member States** within the food safety ecosystem have access to extensive transdisciplinary **data**, scientific **knowledge** and **expertise**, they could effectively contribute to the **development and implementation of One Health policies** along the entire food chain by **deepening their cooperation**.*



ONE CONFERENCE



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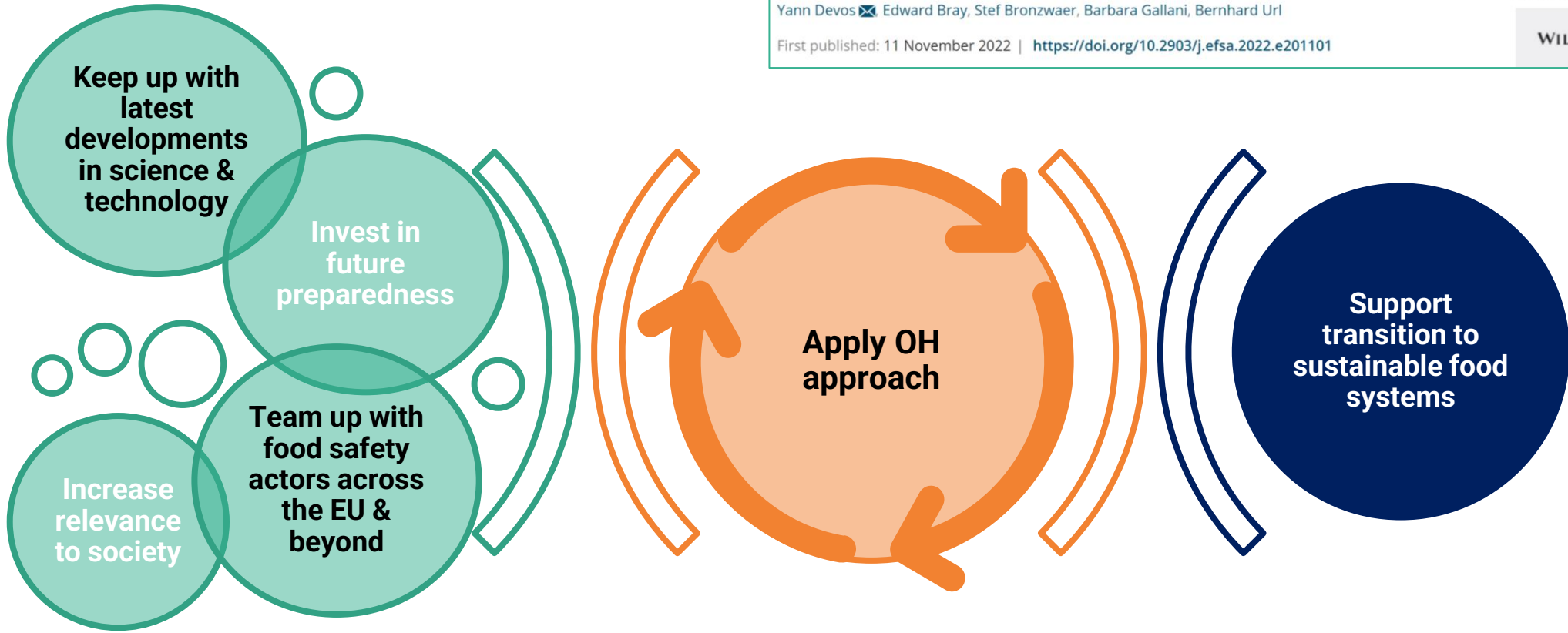
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Safe food

One Health (OH)

Sustainable food

How to gradually & systematically *make OH operational* at EFSA & beyond?



CROSS-AGENCY TASK FORCE ONE HEALTH- OBJECTIVES



Strategic coordination

- Common priorities One Health
- Inter-agency statement on OH



Research coordination

- Formulate common research needs
- Engage with research agenda setters



Stakeholder engagement

- Joint engagement with stakeholders
- Support OH plans from MS
- Joint events



Joint activities

- Sharing good practice
- Build internal OH capacity
- Support sustainability

JOINT MANDATE - ECDC, ECHA, EEA, EFSA & EMA (+JRC)

Impact of the use of azole fungicides other than as human medicines on the development of azole-resistant *Aspergillus spp.*

Joint EC Mandate

Overall coordination by EFSA

Deadline interagency report: July 2024



European Environment Agency



AZOLE FUNGICIDES



Health issue: infection in human with *Aspergillus spp.* resistant to treatment with azoles (ECDC, EMA)



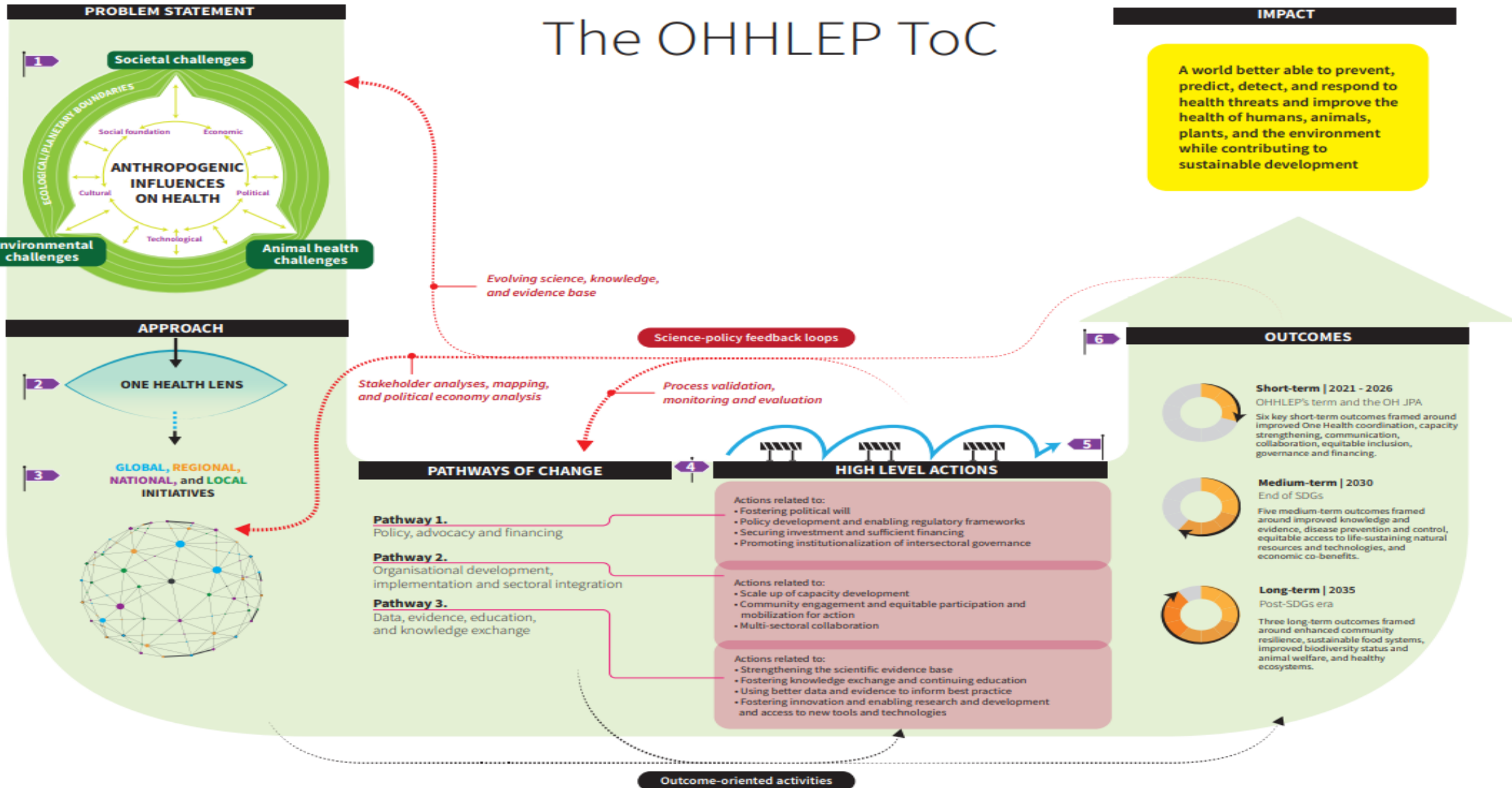
Use of azoles in the environment:

- Plant protection products (EFSA)
- Biocides (ECHA)
- Industrial chemicals (ECHA)
- Veterinary medicines (EMA)

OH THEORY OF CHANGE

[HTTPS://WWW.WHO.INT/PUBLICATIONS/M/ITEM/ONE-HEALTH-THEORY-OF-CHANGE](https://www.who.int/publications/m/item/one-health-theory-of-change)

The OHHLEP ToC



EFSA INTERNAL TASK FORCE- MAIN OH NEEDS/BARRIERS

Needs/Barriers	What it means for EFSA and beyond
Regulatory framework/mandates	<ul style="list-style-type: none">- More connective regulatory and legal frameworks reflecting a One Health approach- Overcome hurdles in data sharing- Joint mandates for cross-sectoral risk assessment
Time and resource allocation	<ul style="list-style-type: none">- Time and resource allocation for OH activities and national and central level- Resources to involve multidisciplinary sector experts and teams- Build capacity and establish an agency wide One Health approach- Consider OH a priority for everybody
OH perspective / vision	<ul style="list-style-type: none">- Encourage knowledge transfer between units/departments and between agencies- Increase community engagement- Reorganize teams / units to foster more transdisciplinary actions
Instruments / tools	<ul style="list-style-type: none">- Intersectoral <u>data</u> and <u>experience</u> sharing platforms/tools- Staff exchange with other Agencies (secondments)- Increase engagement with policy makers for OH regulatory science- Simplify collaboration with other agencies (eg common rules setting up working groups)- Perform joint procurement with sister Agencies to support external work on One Health- Develop and implement coordinated communication activities

IMPLEMENTING ONE HEALTH - A MATTER OF ENDURANCE!

The need for **TRANSFORMATIVE** change

Because challenges are interconnected and global...
... solutions must be based:

- Systemic thinking & organization
- Transdisciplinary work
- Learning and educating for change
- Trust & accountability
- Convergence & co-creation
- Culture and traditional knowledge
- Long-term commitment
- Intern. ↔ European ↔ Regional ↔ National ↔ Local



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