



One Health

—

a WHO perspective



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Organization**

REGIONAL OFFICE FOR

Europe



**Organisation
mondiale de la Santé**

BUREAU REGIONAL DE L'

Europe



Weltgesundheitsorganisation

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**Всемирная организация
здравоохранения**

Европейское региональное бюро

Dr Hilde Kruse

Programme Manager Food Safety

One Health concept getting increased attention

- ▶ Foodborne diseases
- ▶ Zoonotic diseases
- ▶ Global health and emergencies
- ▶ Environmental health
- ▶ Antimicrobial resistance (AMR)
- ▶ International Health Regulations (IHR)
- ▶ Health2020
- ▶ UN Sustainable Development Goals (SDG)



WHO estimates of the global burden of foodborne diseases



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WHO ESTIMATES OF
THE GLOBAL BURDEN
OF FOODBORNE DISEASES

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.



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Main findings globally

- Diarrhoeal diseases

- Causing more than half of the burden

- 550 million ill people (220 million <5yrs) and

- 230,000 deaths (96,000 <5 yrs) every year

- Norovirus and *Campylobacter* most common causes

- Non-typhoid *Salmonella* followed by typhoid fever causing majority of deaths and the highest burden

- Other important hazards to the global burden

- Hepatitis A, *Taenia solium*, aflatoxin





Foodborne diseases in the WHO European Region

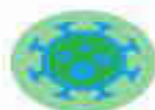
Every year

23 million
people fall ill



5 000
people die

Diarrhoeal diseases
are responsible for
most foodborne
illnesses



Norovirus infection =
almost 15 million cases



Campylobacter =
nearly 5 million cases

**FOODBORNE DISEASES ARE PREVENTABLE.
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Source: WHO Estimates of the Global Burden of Foodborne Diseases: 2015.



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Diarrheal foodborne disease - European region

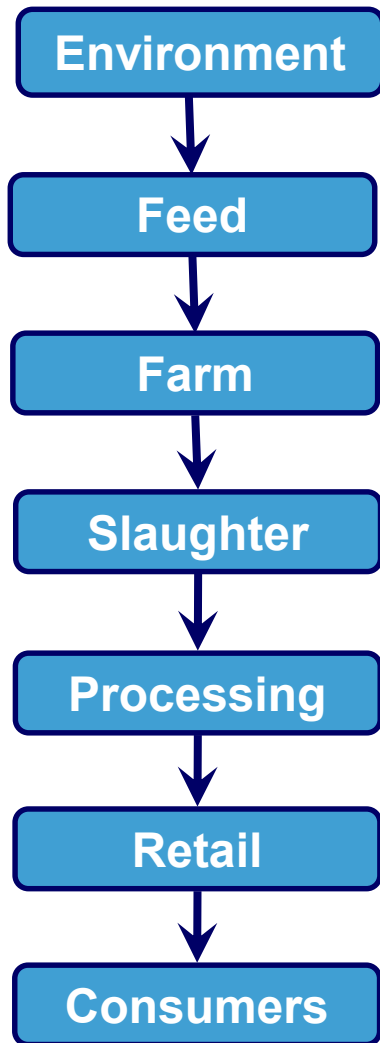
- More than 22 million illnesses per year
 - ~15 million due to [norovirus](#)
 - Close to 5 million due to [campylobacteriosis](#)
- Almost 3000 deaths per year
 - Almost 2000 due to non-typhoid *Salmonella*
- Diarrheal disease account for
 - 96% of foodborne illnesses
 - 62% of deaths
 - 57% of DALYs



European data – ranking of illness and burden

Rank	Illnesses	Rank	DALYs
1.	Norovirus	1.	Non-typhoid <i>Salmonella</i> spp
2.	<i>Campylobacter</i> spp	2.	<i>Campylobacter</i> spp
3.	Non-typhoid <i>Salmonella</i> spp	3.	<i>Toxoplasma gondii</i>
4.	<i>Toxoplasma gondii</i>	4.	Norovirus
5.	<i>Giardia</i> spp	5.	<i>Listeria monocytogenes</i>
6.	<i>Cryptosporidium</i> spp	6.	Dioxin
7.	Shiga toxin-producing <i>E.coli</i>	7.	<i>Brucella</i> spp
8.	Hepatitis A virus	8.	Hepatitis A virus
9.	<i>Ascaris</i> spp	9.	<i>Echinococcus multilocularis</i>
10.	Enteropathogenic <i>E.coli</i>	10.	<i>Mycobacterium bovis</i>

A long and increasingly complex food chain

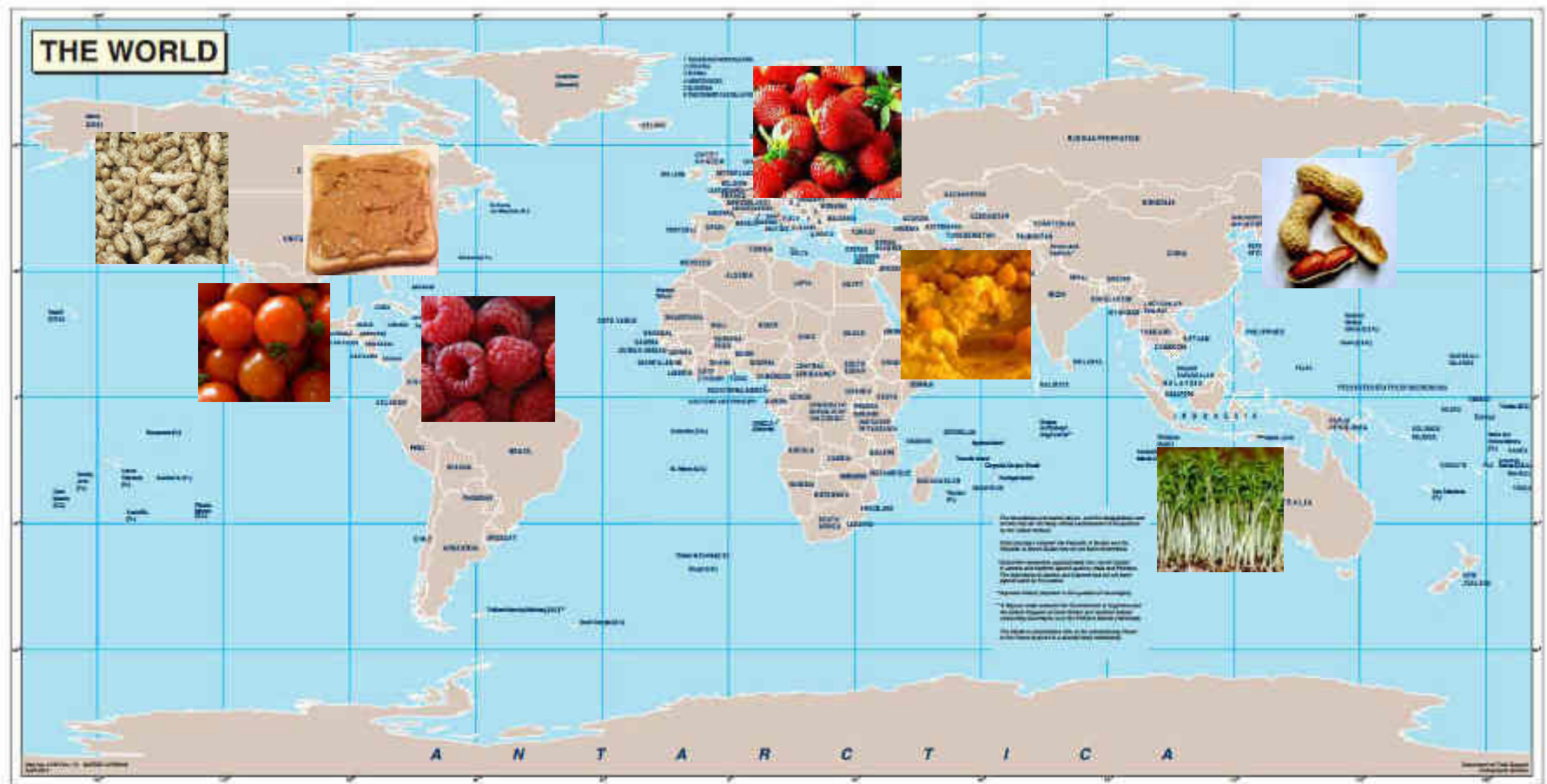


- Micro-organisms
- Parasites
- Chemicals
 - Contaminants
 - Additives
 - Residues
- Radioactivity
- Allergens



Approach: Multisectoral, interdisciplinary

Globalization: increasing risk of international food safety and zoonotic events

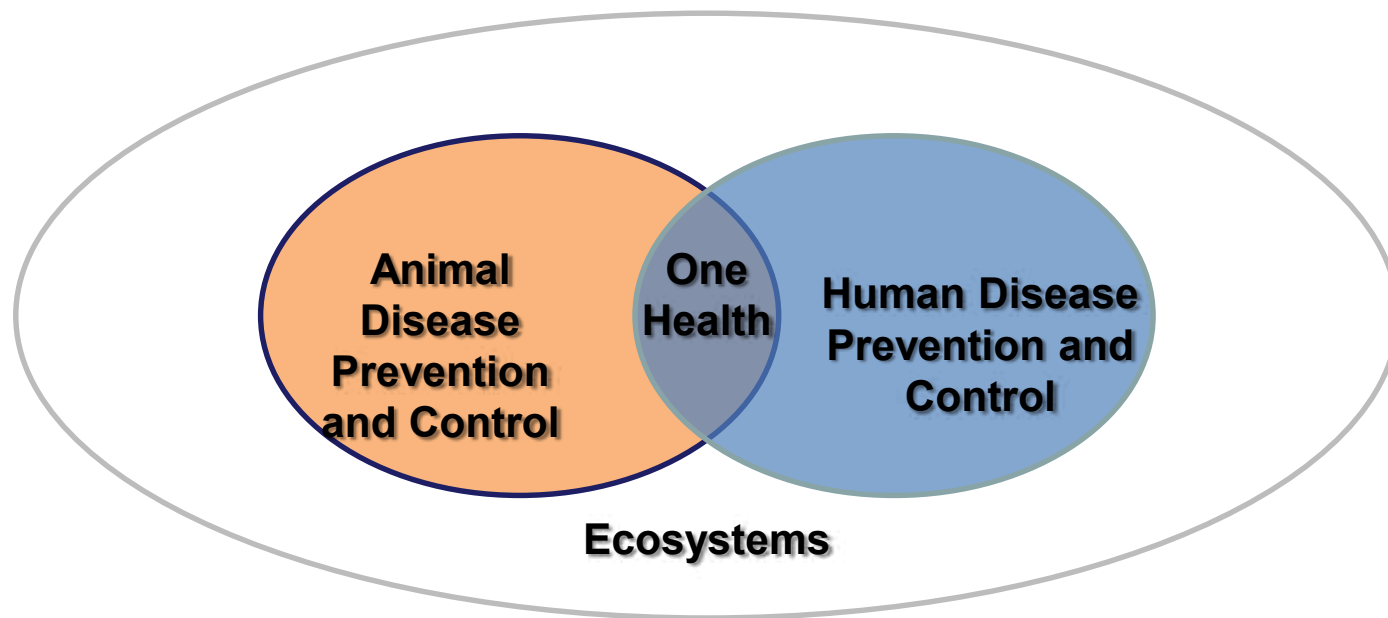


Global changes and emerging food safety/ zoonotic threats

- Globalised food/animal trade, travel and migration
 - long-distance transmission of pathogens, long and complex food chains
- Changes in agriculture and food industry
 - intensification and industrialization of agriculture, new technologies, and handling infected animals during food production
- Increasing vulnerability of humans
 - ageing population, people who are immunosuppressed, poverty, migration, emergencies and extreme weather events
- Changing lifestyles
 - urbanization, eating food prepared outside the home, and consuming more raw food.
- Climate change
- Antimicrobial Resistance (AMR)

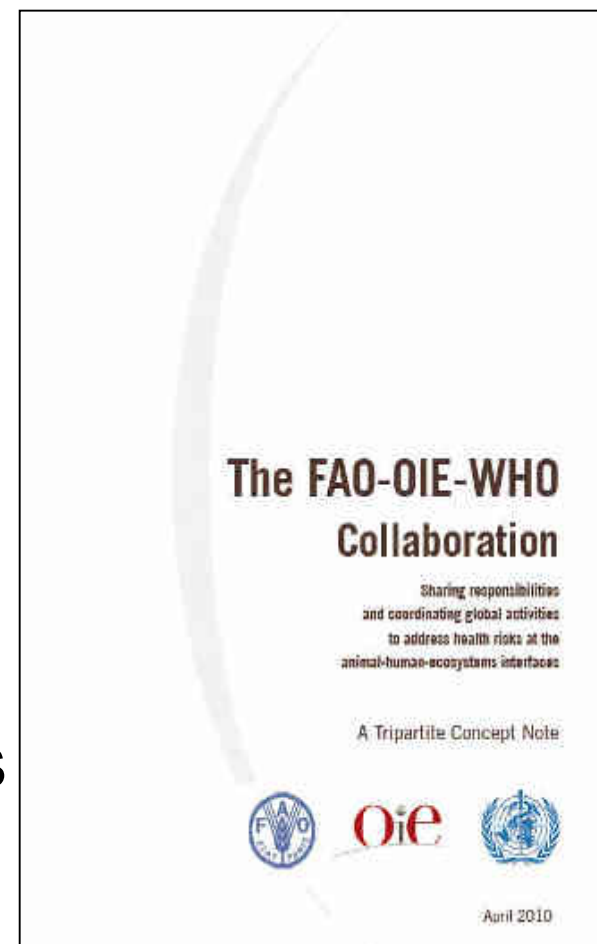
WHO and One Health

- WHO's zoonotic disease initiatives are built on the premise that the **human–animal–ecosystem** interface can be described as a continuum of direct or indirect human exposure to animals, their products and their environments which can lead to international public health risks.



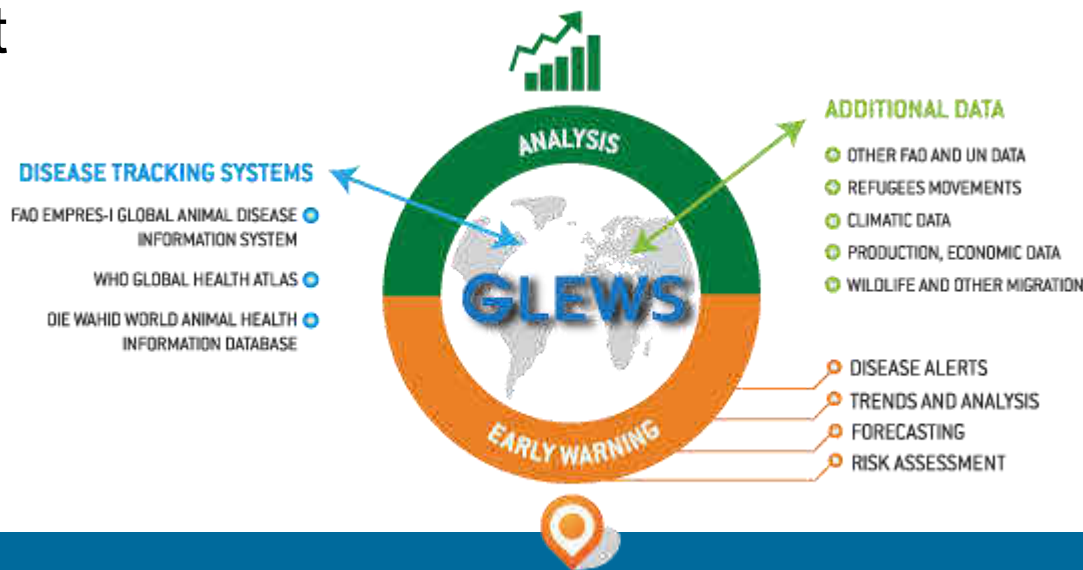
Intersectoral and interdisciplinary collaboration

- Crucial for **prevention and control** of foodborne and zoonotic diseases and for **cost-efficient and successful** interventions
- Joint **FAO/WHO/OIE** collaboration
 - Tripartite concept note, 2010
- Encouraging cooperation and information-sharing at national levels



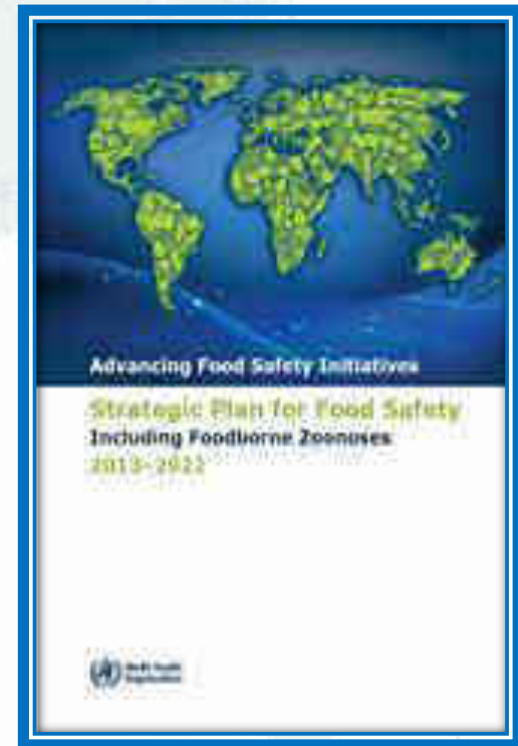
Global Early Warning System for major animal diseases including zoonoses (GLEWS)

Joint system that builds on the added value of combining and coordinating the alert and disease intelligence mechanisms of **OIE, FAO** and **WHO** to assist in **prediction, prevention and control** of animal disease threats, including zoonoses, through sharing of information, epidemiological analysis and joint risk assessment



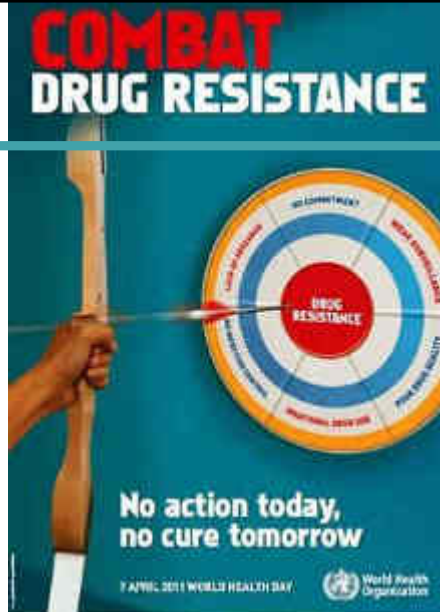
WHO “Strategic Plan for Food Safety including Foodborne Zoonoses 2013-2022”

- Overall mission: **To lower the burden of foodborne disease, thereby strengthening the health security and ensuring sustainable development of Member States**



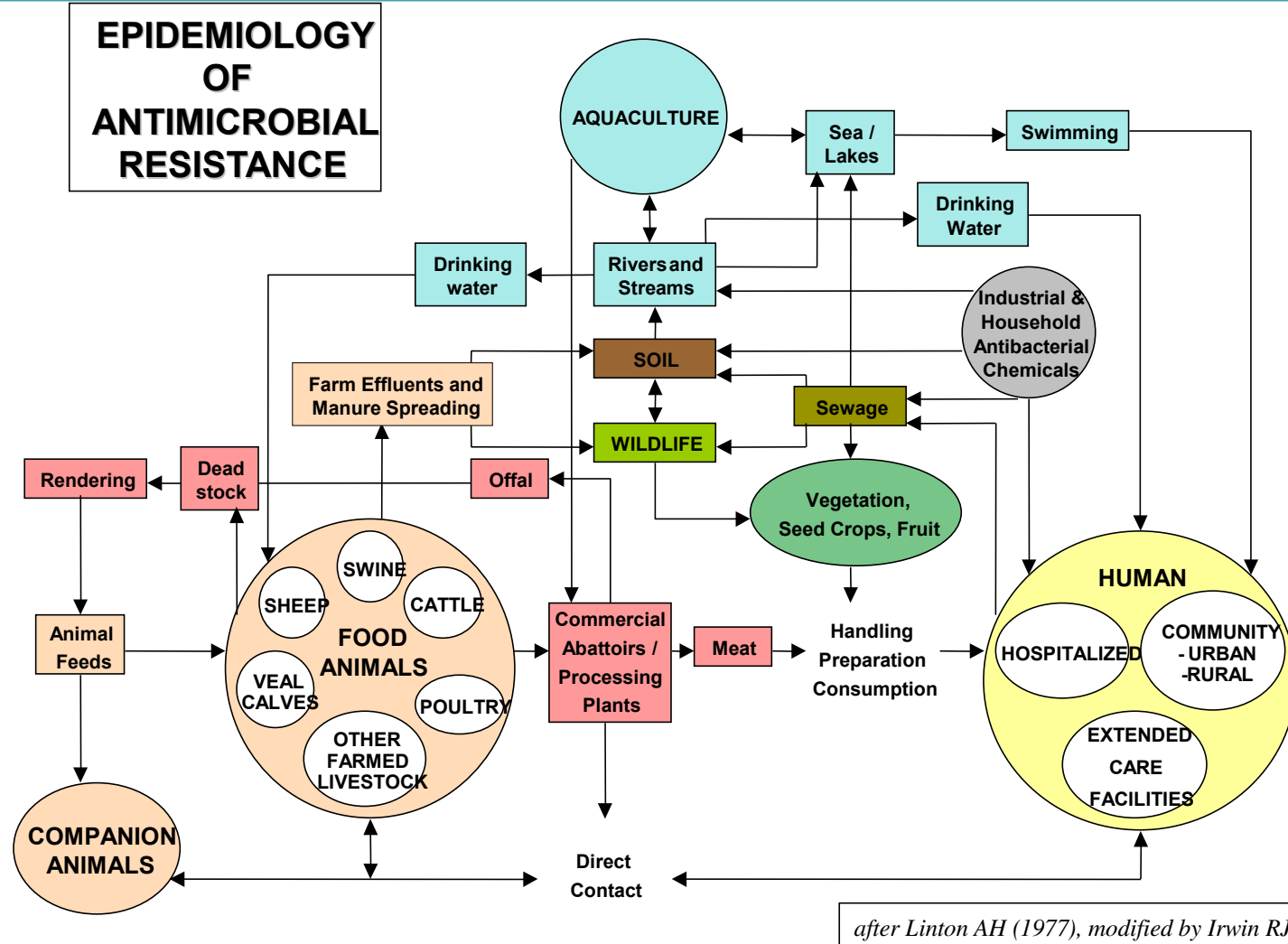
AMR: a WHO priority

- Major global public health threat
- Theme of the WHD 2011
- European Strategic Action Plan of Antibiotic Resistance, 2011-16
- Global Action Plan on AMR
 - Endorsed by WHA May 2015



GLOBAL ACTION PLAN
ON ANTIMICROBIAL
RESISTANCE

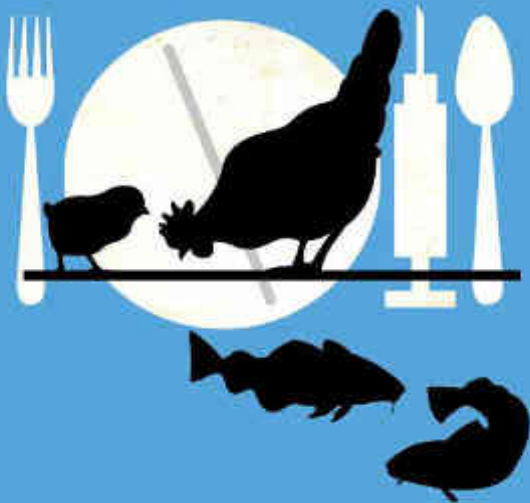
Epidemiology of Antimicrobial Resistance



AMR and food safety: key messages for countries



Tackling antibiotic
resistance from a
food safety perspective
in Europe



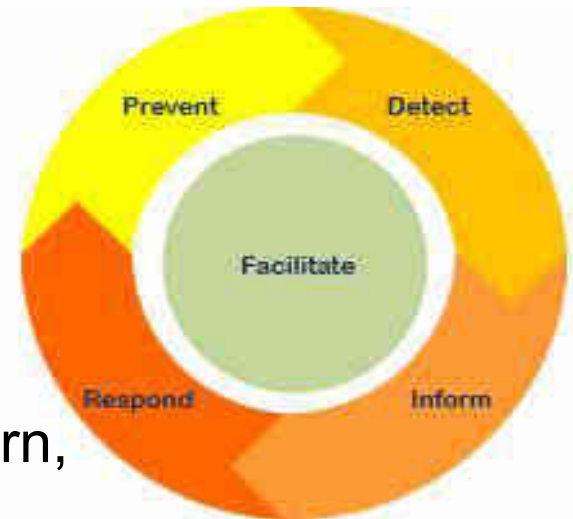
1. Improve overall coordination
2. Improve regulatory framework
3. Reduce the need for and promote prudent use of antibiotics
4. Improve surveillance
5. Advocate and communicate
6. Build capacity and provide training
7. Address knowledge gaps and research needs

The International Health Regulations 2005

Preparedness requires international networks whereby national and international systems interact seamlessly → IHR 2005

Calls for:

- Strengthened national capacity for surveillance and control, incl. in travel and transport
- Prevention, alert and response to public health emergencies of international concern, incl. food safety threats
- Global partnership and international collaboration



Key aspects of IHR for food safety

- Food safety events which could have international implications should be reported to WHO in accordance with the IHR
- Includes events due to imported foods, or events that are linked to domestic product known to have been exported abroad
 - Can help to confirm food vehicle if other countries observing same problem
 - Can help to avoid illnesses in other countries

What is unique about Food Safety Events?

- Requires collaboration of different partners in-country
- Requires different expertise than most infectious disease events
- Requires different types of questions to be asked
- Often multi-regional due to international distribution
- Sometimes treated with lower priority in the face of other infectious disease events
- Can have major economic and trade implications

Multi-disciplinary, Multi-sectoral, Integrated, Collaborative

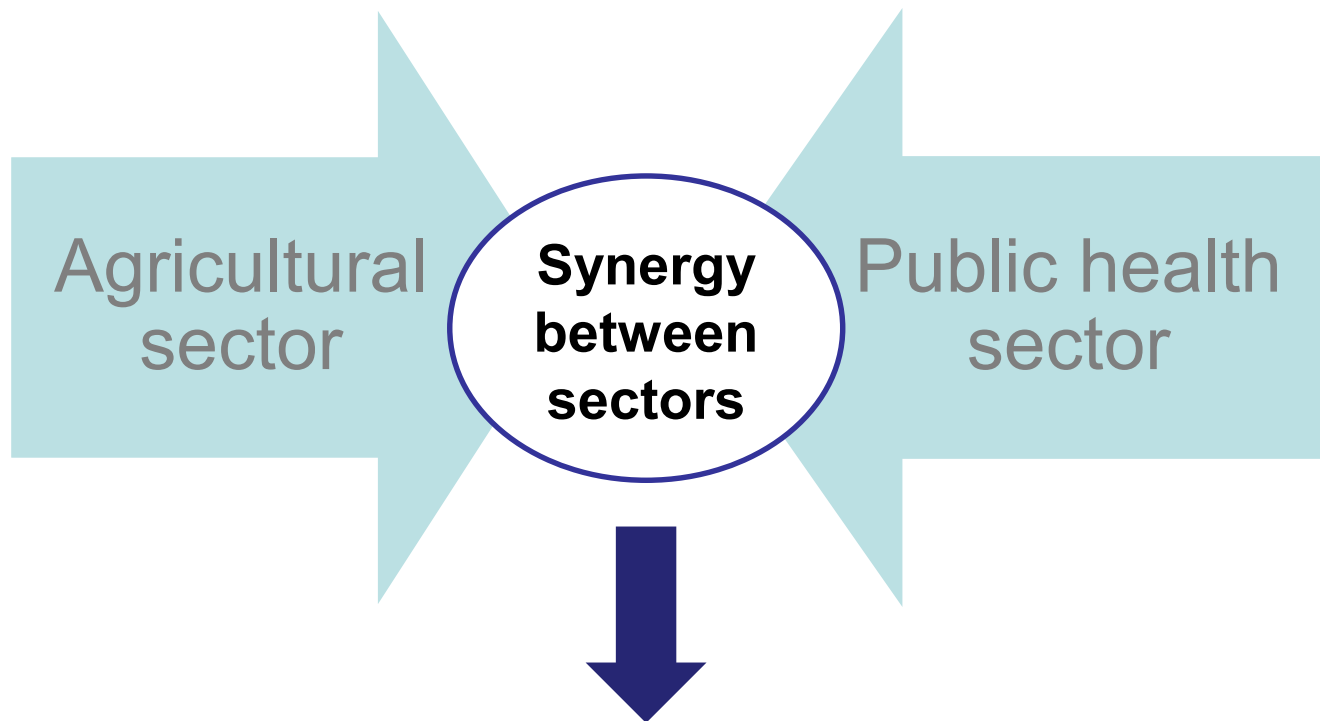
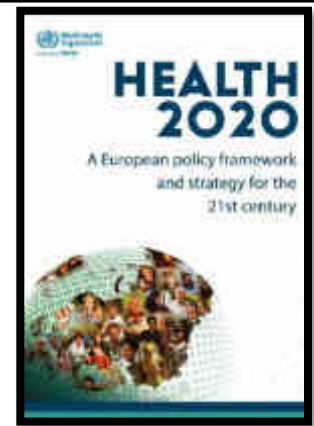
INFOSAN

FAO-WHO joint International Food Safety Authorities Network



- Voluntary **Global network** of national food safety authorities from around the world (~180 countries)
- Aims to prevent international spread of contaminated food and foodborne disease and strengthen food safety systems globally, by:
 - promoting the rapid exchange of information during food safety events
 - sharing information on important food safety issues of global interest
 - promoting partnership and collaboration between countries
 - helping countries strengthen their capacity to manage food safety risks

Health 2020: agriculture and health through food safety and nutrition



“Ensuring safety throughout the increasingly complex food chain requires collaboration between the health sector, agriculture, food transport, food service establishments and the food industry”.

- *Health 2020*

Food safety and control systems must adapt

“Today, the journey from where our food comes from to how it ends on our plate is longer and more complex than ever before. Food safety risks exist at every step. Our food safety and control systems must adapt and work together across sectors, along the entire food chain.”

Dr Zsuzsanna Jakab,
WHO Regional Director for Europe



Intersectoral “wins” – agriculture & health

Working together, the health and agriculture sectors have the power to address avoidable **communicable** and **noncommunicable** disease and **antimicrobial resistance**, to support **sustainable development**, and to ensure that those living in urban and rural communities are able to access nutritious and **safe** food.



Photo: US Department of Agriculture

World Health Day 2015 – Food safety

From farm to plate, make food safe



WORLD HEALTH DAY 2015
#safefood | www.euro.who.int/whd2015



- Spur governments to improve food safety through public awareness campaigns, and to highlight their ongoing action
- Encourage consumers to ensure the food on their plate is safe



Transforming our world: the 2030 Agenda for Sustainable Development

People, Planet, Prosperity, Peace, Partnerships



Conclusions

- Food-borne and zoonotic diseases including AMR are a considerable public health burden throughout the world
- Globalization increases the risk of emergence and spread of foodborne disease and zoonotic outbreaks and emergencies
- **WHO actions and partnerships seek to prevent, monitor, predict and respond to such threats through intersectoral cooperation**

“Only if we act together can we respond effectively to international food safety problems and ensure safer food for everyone”

Dr Margaret Chan –
Director-General WHO



Thank you for your attention

Further information

- WHO Headquarters, Food safety website:
<http://www.who.int/foodsafety/en>
- WHO/Europe, Food safety website:
<http://www.euro.who.int/foodsafety>
- World Health Day global site:
<http://www.who.int/campaigns/world-health-day/2015/event/en/>
- WHO/Europe World Health Day website:
<http://www.euro.who.int/whd2015>