Ministry of Food, Agriculture and Fisheries of Denmark

One Health

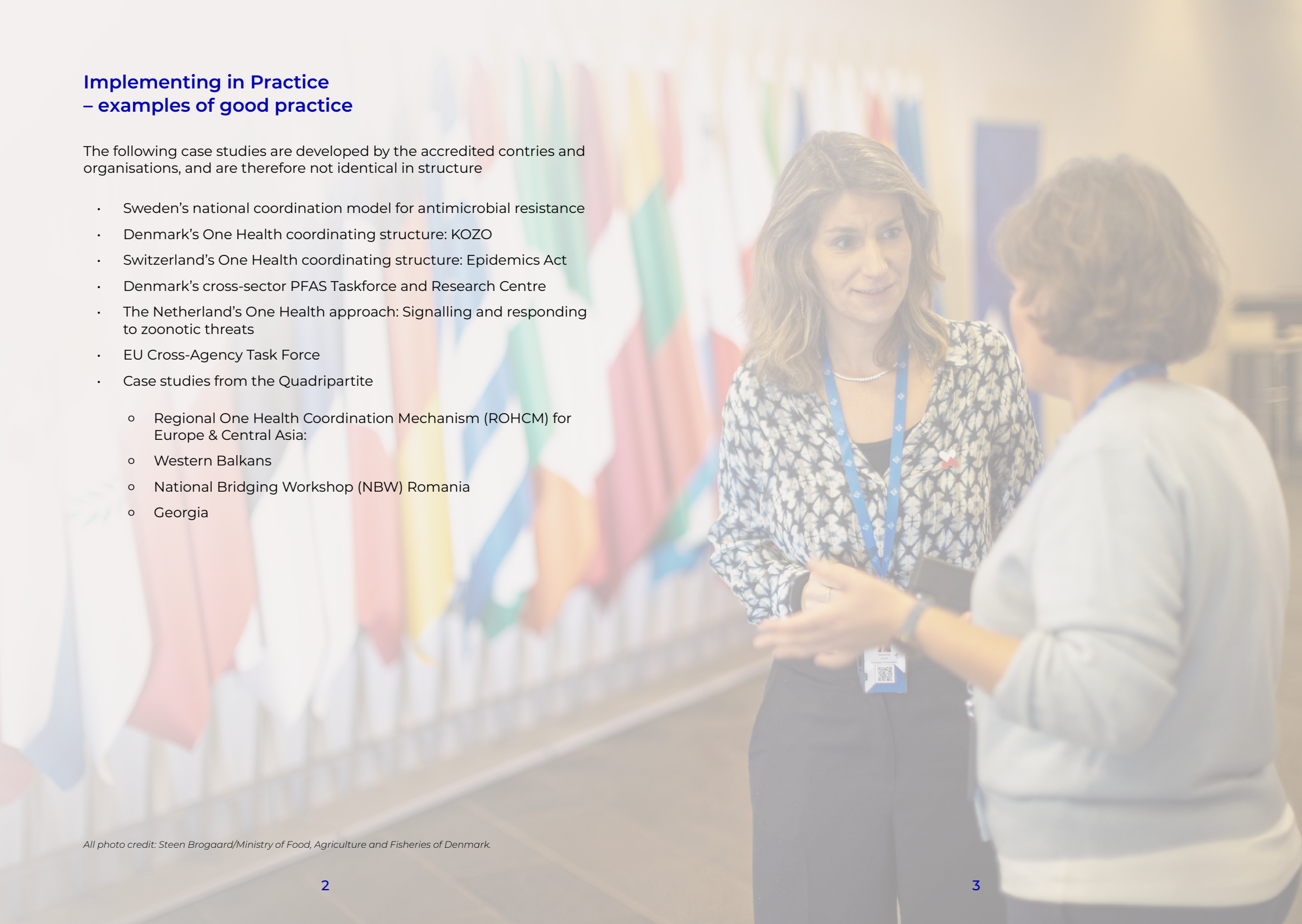
# The Copenhagen Recommendations

Implementing in Practice – examples of good practice

## Implementing in Practice – examples of good practice

The following case studies are developed by the accredited contries and organisations, and are therefore not identical in structure

- Sweden's national coordination model for antimicrobial resistance
- Denmark's One Health coordinating structure: KOZO
- Switzerland's One Health coordinating structure: Epidemics Act
- Denmark's cross-sector PFAS Taskforce and Research Centre
- The Netherland's One Health approach: Signalling and responding to zoonotic threats
- EU Cross-Agency Task Force
- Case studies from the Quadripartite
    - Regional One Health Coordination Mechanism (ROHCM) for Europe & Central Asia:
    - Western Balkans
    - National Bridging Workshop (NBW) Romania
    - Georgia



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## A One Health Approach to addressing the AMR challenge in Sweden

### Challenge

The development and spread of AMR.

### Solution

The Swedish Inter Sectoral Coordinating Mechanism (ICM) facilitates collaboration across sectors, it coordinates national efforts, monitor progress and adjust strategies under the agreed overarching goal: To preserve the possibility of effective treatment of bacterial infections in humans and animals. The mechanism was established in 2012 and currently includes representatives from 25 authorities and organisations in public health, animal health, food, environment and research. It is jointly coordinated by Public Health Agency of Sweden and Swedish Board of Agriculture, and the presidency is shifted on a yearly basis. This, together with the broad representation secures that the work has a one health perspective.

Political and legislative support is strong, with the Swedish strategy adopted by the government and participating organisations appointed by their respective ministries. The engagement and political support for the ICM have been crucial.

### Practical steps

The ICM is structured into different groups with varying level of responsibility. The collaboration group includes all 25 organisations and meets a full day twice a year. The core group includes 9 authorities and this group has an additional full-day meeting two times per year and an online meeting once a month. The participants in the core group are more involved in the daily work. The group prepares activities and questions for the collaboration group to take part in.

Some examples of recurring activities:

- Develop and manage the action plan that goes together with the strategy.
- Coordinating international activities such as the TrACSS self-assessment survey.
- Arranging a yearly conference called Antibiotic forum with the aim to exchange experiences and stimulate dialogue between all sectors.
- Develop and manage a common communication campaign called Safeguarding antibiotics.

The ICM forms a hub in Sweden's work against antibiotic resistance. The complexity of the issue makes cross-sector collaboration of utmost importance to ensure that activities have the desired effect and are sustainable in the long term. As a forum, the ICM enables discussions both on practical issues and the strategic direction for ongoing work. Many new collaborations and concrete activities arise from these discussions. Experiences so far show that the issue of antibiotic resistance continuously becomes relevant in new contexts and that the actors involved must adapt to this development through enhanced collaboration. The ICM is an indispensable tool in meeting that challenge.

Collaboration can be time-consuming and bring an administrative load, but despite this we would say that what you gain in the long run makes it worth it every day of the week.

## Denmark's One Health coordinating structure KOZO

### Challenge

After the Covid-19 pandemic, the Danish Veterinary and Food Administration (DVFA) has increased focus on zoonoses and on cooperation with other relevant authorities.

### Solution

In 2022, on initiative of the DVFA, an interministerial group Coordinating Zoonoses (KOZO) was formed. The purpose of the group is to strengthen the cooperation and coordination between authorities about risks, outbreaks and incidents other than foodborne zoonoses in Denmark.

Members of KOZO are currently representatives from Danish Health Authority, Danish Patient Safety Authority, Danish Medicines Agency, Statens Serum Institut (SSI), University of Copenhagen, Agency for Green Transition and Aquatic Environment, and DVFA.

### Practical steps

KOZO is organised with a steering committee with biannual meetings and a core-group with monthly online meetings. KOZO also meets physically biannually at themed workshops, and the KOZO members can always call an urgent online meeting when needed. DVFA is secretariate for the group.

### Collaboration

Agenda:

- Novel threats: Sharing of signals and changes in risk.
- Risk alignment: Similar understanding of risk levels.
- Coordination of actions: Sharing of press releases, commission risk assessments, information, surveillance etc. and Danish input to international affairs.
- Management of current outbreaks and issues: Areas of responsibility, problem solving and rapid communication.



### Outcome

National common understanding, communication and management of risk, leading to trust and improved preparedness and outbreak control.

### Difficulties

Establishing trust among group members is a gradual process that requires sustained effort.

Prioritising interagency cooperation and collaborative initiatives can be challenging when individual authorities are compelled to address immediate operational priorities.

## Practice Case Example from Switzerland

With the entry into force of the Epidemics Act (EpidA) in 2016, the Subsidiary body «One Health» was created. This subsidiary body supports the relevant federal offices in detecting, monitoring, preventing and combating zoonoses and vectors, as well as in handling and coordination of other cross-cutting issues within various working groups. There are two coordination bodies for One Health topics on governmental level.

Strategic Body:

Composed of the directors of four federal offices from a total of three ministries: **Federal Office of Public Health FOPH and Federal Food Safety and Veterinary Office FSVO** (Ministry of Home Affairs), **Federal of Office of Agriculture FOAG** (Ministry of Economic Affairs, Education and Research), and **Federal Office for the Environment FOEN** (Ministry of Environment, Transport, Energy and Communications)

Defines the strategy, sets strategic goals, supervises the Operational Body, meets twice per year.

Operational Body:

Composition:

- A representative of the FSVO, FOPH, FOEN, and FOAG.
- A representative of the Swiss Armed Forces veterinary service.
- A cantonal doctor, a cantonal chemist, a cantonal pharmacist, a cantonal veterinarian, a representative of the Swiss Conference of Environmental Services and a representative of the Swiss Conference of Cantonal Agricultural Services.
- Specialists from other offices or from scientific circles may be involved on a case-by-case basis.

Forms and leads working groups on various topics such as “Vectors”, “Environmental contaminants”, “Campylobacteriosis”, etc.

Ensures operational implementation of One Health actions in the field. Organises educational series on One Health. Provides information to the public.



The same offices are also responsible for **Swiss Strategy on Antibiotic Resistance (StAR).** The aim is to ensure that antibiotics remain effective in the long term and to curb the development of resistance. The strategy approved by the Federal Council to combat antibiotic resistance is being pursued in the areas of human and animal health and the environment.

More information about StAR and the StAR and One Health Actionplans can be found on the following websites: star.admin.ch – the Federal Government’s platform on the topic of antibiotic resistance and star.admin.ch/en/about-star

The key to success is to pursue specific projects. The hurdles to carry them out and implementing them must be small.

It is also important not only to have structures in place, but also to equip those structures with the resources needed to achieve something.

The greatest danger is to create overloaded programs that are difficult to implement in practice and which then turn out to be pipe dreams.

## A One Health Approach to addressing the PFAS challenge in Denmark

Challenge: Per- and polyfluoralkyl Substances (PFAS) is a group of more than 10.000 different man-made chemicals that are widely used in our society, e.g. in textiles. PFAS are associated with adverse health effects such as cancer, fertility effects, and suppression of the immune system. The general population is mainly exposed to PFAS via the diet, and to some extent via consumer goods.

**Solutions**

- Call for action through high political focus. In Denmark PFAS gained extra political attention in 2021 where a group of citizens was found to have alarmingly high blood levels of PFAS upon intake of meat from highly contaminated cattle grazing near a fire-extinction plot.

- Knowledge building to identify major knowledge gaps and to propose or initiate regulatory action with the aim of reducing discharge of and exposure to PFAS.

- Regulatory measures at national and EU level, e.g. preventing intake of meat from livestock from polluted areas, setting of EU maximum limits for PFAS in food and banning the use of PFAS in certain sectors.

- Balanced communication about the risk for human, animal and environmental health in relation to PFAS.

**Practical steps**

Establishment of a cross-governmental coordination forum for health, veterinary/food and environmental authorities in order to exchange knowledge and coordinate activities and communication to the public.

Strengthening of inter-institutional collaboration on PFAS, e.g. between veterinary and food units to monitor PFAS levels in livestock and place restrictions on contaminated animals to prevent contaminated meat products reaching the market.

Adoption of a National Action Plan for PFAS (2024-2027) by the government with funding for e.g.

- A PFAS knowledge task-force representing academia from human, animal and environmental health. Mandate: identify knowledge gaps and propose further action (2023-2024).



- A PFAS research center representing academia from human, animal and environmental health: Mandate: Research on how to prevent, contain and clean-up pollution with PFAS with focus on effects on environment, health, food and feed (2025-2028).

- Concrete initiatives for reducing discharges of PFAS, cleaning of point sources and preventing exposure of environment, animals and humans (2024-2027).

**Communication**

To citizens via competent authority websites and social media platforms.

To policy makers and relevant stakeholders via seminars held by authorities and academia, including dissemination of PFAS research center activities.

## Signalling and responding to zoonotic threats using a One Health approach in the Netherlands

### Challenge

The Netherlands, being densely populated with high numbers of livestock, poultry and proximity to wildlife, is highly vulnerable to the emergence of zoonoses. In the first decade of this century, the country experienced major outbreaks of avian influenza (2003), livestock-associated methicillin-resistant Staphylococcus aureus (2007) and Q fever (2007–2010), highlighting the need for an integrated approach between the human and veterinary public-health systems and cross-sectoral early warning. Differences in risk perception between medical and veterinary professionals, especially when threats were detected only in animals, further underscored the challenge.

### Solutions

To address these vulnerabilities, the Netherlands established the Zoonoses Structure in 2011, a formal One Health risk-analysis system supported by both the Ministry of Health, Welfare and Sport, and the Ministry of Agriculture, Fisheries, Food security and Nature. This framework strengthens trust, ensures transparency, and supports rapid cross-sector collaboration.

### Practical Steps

- Created permanent multidisciplinary representation within the Signalling Forum Zoonoses (SO-Z), ensuring consistent participation from human health, veterinary, wildlife, and entomology experts to strengthen trust and shared situational awareness.

- Formalised collaboration through detailed agreements outlining each partner's responsibilities, reporting lines, escalation criteria, meeting frequency, and information-sharing procedures, ensuring clarity before and during crises.

- Implemented a structured escalation pathway allowing signals to move efficiently from early detection to coordinated governmental action when necessary.

- Introduced routine monthly meetings and ad hoc urgent assessments, creating a predictable environment for joint review of signals, interpretation of data, and cross-sector risk assessments.



- Integrated field-level partners—such as wildlife surveillance, vector monitoring units, veterinary diagnostic labs, and public health experts—into the information flow, ensuring that insights from all ecological domains were brought into national decision-making.

- Promoted trust-building through stable representation, allowing experts to work together over time, understand each sector's priorities, and resolve differences in risk perception (e.g., when threats appear only in animal reservoirs).

### Communication

- Across agencies: Structured feedback loops ensured that decisions made at national levels were communicated back to municipal health services, veterinary authorities, and field partners, supporting unified implementation across sectors.

- To professionals and the public: Authorities improved outward communication through targeted newsletters and timely public updates during key zoonotic events. Ensured that professionals and the public received clear, accurate information to support awareness and response efforts.

## Case example of the Cross-Agency One Health Task Force

### The Case and Identified Challenge

The Cross-Agency One Health Task Force is comprised of the following five EU agencies: European Centre for Disease Prevention and Control (ECDC), European Chemicals Agency (ECHA), European Environment Agency (EEA), European Food Safety Authority (EFSA), and European Medicines Agency (EMA). The commitment of the Task Force is to support the implementation of the One Health approach in Europe, thereby strengthening the ability of the EU and its Member States to respond to health threats. To achieve this, the Task Force facilitates transdisciplinary cooperation between the EU agencies. Through strategic and research coordination, data sharing, communication and stakeholder engagement, and the development of partnerships, the Task Force builds scientifically backed One Health capacities and coordination.

As described in OHHLEP's One Health Theory of Change, and the SAPEA Evidence Review Report, there are significant barriers to One Health cooperation including, legal and regulatory frameworks, constrained financial resources, and limited intersectoral coordination. Implementing a One Health approach, building on existing mechanisms of cooperation, is necessary to address the complex health threats that Europe is facing, requiring transdisciplinary expertise and evidence to support the EU policy needs.

### Structure: Solution, Practical steps, Communication

Senior officers operating under the auspices of the Executive Directors of each of the five EU agencies, come together in the Task Force to coordinate joint activities. A representative from the European Commission participates in the meetings and occasionally the Task Force also engages other representatives from within the agencies and external ad hoc participants. While the Task Force does not act as a decision-making body, they may propose recommendations for action to their respective senior management.



### Outcome and collaboration

Integrated analyses on AMR have already provided a series of recommendations to inform the research agenda and close current data gaps. The Task Force recently recommended actions to address the cross-sectorial challenge on how the broad use of azole substances in human medicine and in agriculture, contributes to the risk of Aspergillus becoming azole-resistant. The report reinforces the value of a One Health approach in addressing complex health threats like antifungal resistance.

### Difficulties/special attention to

The Task Force acknowledges the need to intensify implementation of the One Health approach at all levels, including through joint risk assessments. It recently underscored the urgent need to make intersectoral collaboration the norm, enhance global and regional coordination, invest in stronger One Health governance and collaborative leadership, and leverage evidence to support strategic investment in One Health in a Joint Statement delivered by the Cross-Agency One Health Task Force and the European and Central Asia Quadripartite on occasion of the World One Health Day.

## The Establishment of the Quadripartite and UNEP's Role in the One Health Approach

The intricate relationship between human and animal health is undeniable. Many emerging and endemic diseases affecting humans originate from animals, whether transmitted directly, through food, or via the environment.

The One Health approach addresses health challenges at the interface of humans, animals, plants, and the environment. As global threats such as zoonotic diseases, antimicrobial resistance (AMR), foodborne illnesses, and environmental hazards increase, a coordinated, multisectoral response becomes essential.

To tackle these complex health challenges in Europe and Central Asia, the Regional One Health Coordination Mechanism (ROHCM) was established.

Since 2022, the regional Quadripartite partnership—comprising the Food and Agriculture Organization (FAO), the United Nations Environment Programme (UNEP), the World Health Organisation (WHO), and the World Organisation for Animal Health (WOAH)—has worked to strengthen the One Health approach. This collaboration addresses health risks at the human-animal-environment interface, as highlighted by the COVID-19 pandemic, which demonstrated the critical need for multisectoral surveillance, preparedness, and response.

Initially, the Quadripartite included FAO, WHO, and WOAH (formerly OIE), bringing expertise in agriculture, human health, and animal health. The inclusion of UNEP in 2022 expanded the partnership's focus to environmental factors such as climate change and pollution, which are critical drivers of human and animal health.

Through this collaboration, the regional Quadripartite strengthens coordination and action on health threats including AMR, food safety, and health security. It also supports countries in preventing, detecting, and managing health risks, aiming to reduce economic disruptions and protect livelihoods.

The ROHCM operates through a two-tiered structure: the One Health Executive Group—comprising regional heads of FAO, UNEP, WOAH, and WHO—provides strategic direction, while the One Health Technical Group delivers operational and technical support. Additionally, the Regional One Health Partner Platform strengthens collaboration among policymakers and experts to implement One Health initiatives effectively.



## Joint Risk Assessment for Zoonotic Diseases in the Western Balkans

**Background**

Effective detection, assessment, and response to zoonotic diseases require strong multisectoral coordination using the One Health approach. To strengthen countries' capacity in this area, the Quadripartite (FAO, UNEP, WOAH and WHO) jointly supported Western Balkan countries in strengthening their capacity to conduct joint risk assessments (JRA) for priority zoonotic diseases using the Joint Risk Assessment Operational Tool, a practical framework derived from the Tripartite Zoonosis Guide. This initiative aimed to enhance countries' ability to evaluate and manage risks posed by priority zoonotic diseases in a harmonised and evidence-based manner.

**1. Solution and practical steps**

The process began with a sub-regional workshop (Sep. 2024), jointly organised by the Quadripartite and funded through the EU4Health grant on cross-border health threats. Participants from across the Western Balkans were introduced to the JRA methodology and jointly assessed common zoonotic diseases of regional importance. These were salmonellosis, avian influenza, Crimean-Congo hemorrhagic fever (CCHF) and rabies. Participants developed disease-specific risk pathways and assessed likelihood, impact, and uncertainty, followed by discussions on risk management and communication options. Several countries, including Albania and North Macedonia, subsequently requested technical support to conduct country-specific JRA workshops and adapt the methodology to their own contexts. These country workshops took place in May 2025.

**2. Communication**

Throughout the process, the Quadripartite maintained close coordination and clear communication among regional and country teams, ensuring a consistent technical message across agencies. Workshop outputs and progress were shared through the regional One Health Coordination Mechanism, serving as a platform for joint planning, implementation and follow-up.

### 3. Outcomes and collaboration aspects

The initiative benefited from high-level organisational commitment by the regional representatives of the Quadripartite, formalised through a joint coordination mechanism and workplan aligned with the One Health Joint Plan of Action (OH JPA). Furthermore, the initiative led to:

- Enhanced technical capacity among participating countries to conduct and institutionalise JRA processes for priority zoonoses.
- Strengthened multisectoral collaboration and trust between human, animal, and environmental health authorities.
- Increased alignment between subregional and national One Health priorities.
- Established follow-up plans for integration of JRA results into national disease control and preparedness frameworks.

### 4. Challenges and lessons learned

Key challenges in working as a Quadripartite include differing institutional strategies and performance indicators, unequal country presence and limited flexibility in the use of available funds.

Lessons learned highlight the importance of establishing a clear governance and coordination structure early on, ensuring consistent communication between technical and management levels and maintaining flexibility in resource allocation to respond to evolving country needs.



## National Bridging Workshop (NBW) Romania, March 2024

### Background and solution

Leading international bodies such as WHO, WOAH, FAO, and UNEP, play pivotal roles in offering guidance and references for managing zoonotic diseases and other health risks at the human-animal-environment (HAE) interface.

- 2014: WHO and WOAH collaborated to establish the IHR-PVS National Bridging Workshop (NBW), aiming to unite stakeholders across human, animal, and environmental health sectors.
- 2017: The process was revised to include the development of a joint and operational roadmap between the sectors and the NBWs were rolled-out globally.
- 2020: FAO joined the NBW Program and the three organisations initiated a second phase, focusing on monitoring the implementation of the NBW Roadmap, providing in-country support (both technical and financial), and ensuring the follow-up of NBWs.
- 2022: UNEP was incorporated into the Tripartite, reaffirming the importance of the environmental dimension of the One Health collaboration, the now so-called Quadripartite partnership has welcomed UNEP as a collaborator in the preparation and conduct of NBWs. Since then, the NBW has been implemented in more than 55 countries worldwide.

### Practical steps

The Workshop was attended by 35 participants from key national institutions for One Health with representatives from national, provincial and local district levels. Discussions focusing on specific technical areas and the collaboration between sectors were based on four hypothetical case studies including rabies, Rift Valley Fever, brucellosis, and river ecosystem collapse. Main outcomes included an Assessment table of the level of collaboration between the different sectors for 15 technical areas and a joint One Health Roadmap including 11 objectives and 27 activities. For each activity it was indicated the timeline, responsible, impact, difficulty and process.

A year later, a follow up activity in the country, this time in Bucharest and during one day, was performed. Representatives from different sectors and members of the quadripartite were present. The status of implementation for each activity was assessed, bottlenecks identified, and solutions

proposed.

**Communication**
During the preparation process of the workshop, there was fluent communication by email and online meetings between the members of the Quadripartite at national and regional level, together with governmental representatives from the country. In addition, a preparation meeting to discuss topics like the working group composition as well as the selection of the case studies took place a day before the workshop. After the workshop, the final report of the NBW was reviewed by Quadripartite and country representatives. A similar communication methodology was followed for the follow up survey.

**Challenges and lessons learned**

In relation to the Quadripartite, the possibility of the participation of the full members is highly influenced by the availability of human resources and funds. In relation to the implementation of the One Health Roadmap developed by Romania, the participants highlighted the role and influence of the evolving national political environment and the political will of national decision-makers, as this ultimately determines budget allocations, institutional mandates, and human resource availability.



## One Health in Georgia through Sustainable Pesticide Management, for human, plant and environmental health

**Background**

Georgia is advancing a resilient agricultural and public health system by integrating actions for plant health and food safety within the One Health framework. This approach addresses interconnected threats such as crop diseases, food contamination, and pesticide misuse, which could jeopardise food security and human, animal, and environmental health.

Controlling pesticide use is vital. Reducing residues to safe levels in food and feed lowers health risks to people, protects animals, and preserves biodiversity by preventing chemical damage to ecosystems. Protecting insects, like honeybees is especially important for maintaining ecological balance and long-term agricultural resilience.

**The initiative**

This initiative implemented through the EU-funded FAO ENPARD IV Project, engages over 15000 unique beneficiaries, including consumers associations and local action groups, showcasing and implementing OH in action across sectors. Key partners include ministries of agriculture, health, and education, along with research centers, farmers' groups, accredited laboratories, and the National Food Agency.

Through their combined efforts a series of actions have been undertaken including:

- A new Certification System for Pesticide Application Equipment and updated inspection practices and official controls aligned with EU standards.

- National laboratory capacity has been strengthened to better detect pesticide residues and plant diseases, ensuring reliable analysis based on international benchmarks.

- A national monitoring program for pesticide residues operates in accredited labs, supported by data sharing among agencies to manage risks effectively and facilitate safe trade. Farmers cultivating watermelon, tomato, sweet pepper, broccoli, lettuce, melon, and eggplant benefit from continuous training via demonstration farms and Farmer Field Schools on good practices and safe pesticide use.

Finally, public awareness campaigns involve schools, civil society, and media to encourage responsible pesticide use and informed consumer choices.

Overall, Georgia's efforts go beyond compliance with EU standards toward building a transparent, accountable food system that safeguards health, supports rural livelihoods, and conserves biodiversity. This One Health approach demonstrates how responsible pesticide management can secure a sustainable future.