



**D5.9 Fourth annual report on  
dissemination activities to  
international stakeholders**

**WP5 Science to Policy  
Translation to stakeholders**

Responsible Partner: BfR, SSI

Contributing partners: PMT members

## GENERAL INFORMATION

European Joint Programme full title	Promoting One Health in Europe through joint actions on foodborne zoonoses, antimicrobial resistance and emerging microbiological hazards
European Joint Programme acronym	One Health EJP
Funding	This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 773830.
Grant Agreement	Grant agreement n° 773830
Start Date	01/01/2018
Duration	60 Months

## DOCUMENT MANAGEMENT

Title OHEJP deliverable	D5.9 Fourth annual report on dissemination activities to international stakeholders		
WP and task	WP5, Task 5.4		
Leader	BfR, SSI		
Other contributors	PMT members		
Due month of the deliverable	M48		
Actual submission month	M48		
Type <i>R: Document, report DEC: Websites, patent filings, videos, etc.; OTHER</i>	R, DEC, other <b>Save date:</b> 16-Dec-21		
Dissemination level <i>PU: Public (default) CO: confidential, only for members of the consortium (including the Commission Services).</i>	PU <i>See updated Grant Agreement</i>		
Dissemination <i>Author's suggestion to inform the following possible interested parties.</i>	OHEJP WP 1 <input type="checkbox"/> OHEJP WP 2 <input type="checkbox"/> OHEJP WP 3 <input type="checkbox"/> OHEJP WP 4 <input type="checkbox"/> OHEJP WP 5 <input type="checkbox"/> OHEJP WP 6 <input type="checkbox"/> OHEJP WP 7 <input type="checkbox"/> Project Management Team <input checked="" type="checkbox"/> Communication Team <input checked="" type="checkbox"/> Scientific Steering Board <input type="checkbox"/> National Stakeholders/Program Owners Committee <input type="checkbox"/> EFSA <input checked="" type="checkbox"/> ECDC <input checked="" type="checkbox"/> EEA <input type="checkbox"/> EMA <input type="checkbox"/> FAO <input type="checkbox"/> WHO <input type="checkbox"/> OIE <input type="checkbox"/> Other international stakeholder(s): ..... Social Media: ..... <b>Other recipient(s):</b> .....		

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## 1. Summary

This report describes the dissemination activities of WP5 – Science to Policy Translation of One Health EJP during Y4 (2021). Dissemination activities of WP5 facilitate the uptake of One Health EJP's outcomes and deliverables by the stakeholders at the national, European, and international level.

Two Stakeholders Committee Meetings were held and dissemination activities followed the established strategy (D5.5). In addition to the established WP5 activities, additional dissemination activities targeted in particular to national stakeholders were initiated, for example at the POC-PMC meeting, and by launching the Dissemination Workshop series.

The use that stakeholders already do of One Health EJP-developed solutions (see section 4. Evaluation, impact and potential) demonstrates the effectiveness of these efforts. This includes the use EFSA is making of One Health EJP deliverables to inform their reports, the input of One Health EJP projects to ECDC's fellowship programme, and the addition of One Health EJP tools in the Tripartite Zoonoses Guide's Surveillance and Information Sharing Operational Tool (SISOT). Additional use of One Health EJP outcomes and deliverables is planned, for example by placing them at disposal of the Regional One Health Coordination Mechanism.

## 2. Highlights

### Top achievements:

- Two Scientific Committee Meetings (SCM) were held during Y4 with participation of representatives of Key EU stakeholders (ECDC, EFSA), EU agencies (EEA, EMA), international organisations (FAO, OIE, WHO-Euro) and EU-funded projects (EU-JAMRAI, JPIAMR).
- WP5 initiated a series of Dissemination Workshops, and held the first one, centred around metagenomics, to showcase the impact of One Health EJP outputs to national, European and international decision makers and strategic planners.
- The One Health EJP Outcome Inventory (OHOI), which provides up-to-date information on outcomes of Joint Research Projects (JRPs), Joint Integrative Projects (JIPs), and PhD projects, was regularly updated, and its user interface was improved.

- To advocate the One Health approach and maximise the dissemination of One Health EJP outcomes, WP5 was involved in a number of stakeholders' activities, such as consultations, the setup of new initiatives, joining pre-existing initiatives, and provided other kinds of ad hoc support. For example, WP5 contributed to a new One Health session in a module of ECDC's fellowships.
- WP5 collaborated in the setup of the One Health EJP Data Management Plan (DMP) tool (a WP4-led activity), participated in the evaluation of the DMPs of finalised projects, and contributed to maximise the FAIRness and transparency of One Health EJP DMPs.

### 3. Description of the activities

Dissemination is defined as follows: “The public disclosure of the results by any appropriate means (other than resulting from protecting or exploiting the results), including by scientific publications in any medium.” (EC Research & Innovation Participant Portal Glossary/Reference Terms). Dissemination activities aim at making results and outputs available as widely as possible so that others can use them. Dissemination is thus disclosure of the results in an attractive and user-friendly way. Targeted dissemination focuses on specific audiences that can make best use of the results.

WP5 dissemination activities are complementary to the general dissemination activities of the One Health EJP (by Communications Team and by the Joint Research Projects / Joint Integrated Projects). Scientific publications and other One Health EJP outcomes are quickly made available on the website of the One Health EJP and on the European OpenAIRE program Zenodo. Stakeholders are encouraged to use these materials, and usage is promoted during formal contacts. For example the Targeted Reports, distributed twice a year to stakeholders' organisations in the form of clickable pdf files, do not only report scientific progress and recent publications of the One Health EJP, but also facilitate linkage with the One Health EJP website, social media, and with projects' webpages and resources.

During Y4, WP5 dissemination efforts focused on strategic dissemination of applicable project outputs and outcomes to national, EU and international stakeholders, with particular focus on policy and decision makers at the national level. Thus in particular transactional aspects, linking the

providers and users of the knowledge, were included. Moreover, there are social change aspects: the EJP advocates One Health approach by enhancing and facilitating access and use of the One Health EJP results.

## Stakeholders Committee

The **Stakeholders Committee** is a well-established committee consisting of: Key EU Stakeholders ECDC and EFSA, other EU agencies EEA and EMA, international agencies FAO, OIE and WHO Regional Office for Europe (WHO-Euro), and EU funded projects EU-JAMRAI and JPIAMR.

The Stakeholders Committee meets regularly twice per year at the **Stakeholders Committee meetings** (SCMs), which are often organised in conjunction with other major One Health EJP events in order to ease the participation of the stakeholders in these events.

The 7<sup>th</sup> SCM was a hybrid meeting that took place on June 11<sup>th</sup> 2021, on the final day of the third Annual Scientific Meeting of One Health EJP (ASM) 2021, and the 8<sup>th</sup> SCM was an online meeting that took place on November 22<sup>nd</sup> 2021, two days before the joint POC-PMC meeting. The possibility to attend the SCMs virtually made it easier for several delegates from the stakeholders' organisations to participate. The SCMs were appreciated by stakeholders not only to obtain updates on One Health EJP outputs and outcomes, but also to put forward their input onto the consortium activities.

The 7<sup>th</sup> SCM was held as hybrid meeting, with attendance possible both in person at SSI in Copenhagen, Denmark, and online. It was attended by representatives of Key EU-stakeholders ECDC and EFSA, international organisations FAO, OIE, WHO-Euro, as well as EU-funded projects EU-JAMRAI and JPIAMR. The objectives of the meeting were 1) to give an update on current activities of the One Health EJP; 2) to collect input from the stakeholders' side to One Health EJP initiatives; 3) to inform on activities and discuss options of sustainability of the One Health EJP consortium with the stakeholders. The objectives were fully reached. To support the dissemination of results from the One Health EJP, representatives of the JIP COVRIN and of four JRP's FED-AMR, IDEMBRU, MedVetKlebs, and TOXOSOURCES, were invited to give a brief overview on their outcomes. As the environmental side of One Health was previously identified as an important topic of interest for the stakeholders, the invited presentations of JRP's focused on environmental aspects of their research.

The discussion was supported by material which had been provided to all participants beforehand (the 5<sup>th</sup> Targeted Report to Key EU Stakeholders and the [Thematic Report on environmental aspects addressed in One Health EJP activities](#)). Stakeholders that were not able to attend the meeting were kept up-to-date with background documents, and with the minutes of the meeting.

The 8<sup>th</sup> SCM was held fully online and was attended by representatives of the stakeholders' organisations EFSA, EMA, OIE, WHO-Euro, and JPIAMR. It focused on 1) the impact achieved by the One Health EJP projects; 2) dissemination strategies and sustainability issues. Representatives of the JRP ARDIG and of the JIP OH-HARMONY-CAP were invited to present selected outcomes, and corresponding impact. This was followed by WP5 presenting the achieved and potential scientific, policy, societal and economic impact perceived from One Health EJP's side of the two projects, and of the One Health EJP as a whole. Discussion focused on the perception of impact from the stakeholders' point of view, and how it relates with the perception that the One Health EJP has. This discussion was important to guide dissemination efforts to ensure maximum impact. The discussion was supported by the 6<sup>th</sup> Targeted Report to Key EU Stakeholders. Stakeholders that were not able to attend the meeting were kept up-to-date with background documents, and with the minutes of the meeting.

Beside from being an occasion of discussion between the stakeholders and the One Health EJP, WP5-organised events are also a forum of exchange between the stakeholders, and an opportunity to create new links between them, with the support of WP5. WP5, for example, liaised between the Romanian One Health EJP national stakeholder and representatives at FAO to support the Tripartite Zoonoses Guide's Surveillance and Information Sharing Operational Tool (SISOT) pilot in the European region, an activity which is still followed by the One Health EJP.

## Reports

Targeted Reports are regular reports disseminated ahead of the SCM meetings (i.e. twice per year). In Y4, two **Targeted Reports to Key EU Stakeholders** were produced. Targeted reports are a key tool used to disseminate concise updates, with the objective of keeping the One Health EJP stakeholders up-to-date with 1) updates of the One Health EJP consortium; 2) outputs of projects, with focus on those communicated by ECDC and EFSA as being of particular interest; 3) impact

achieved by finished projects; 4) recent scientific publications. Although Targeted Reports are aimed at ECDC and EFSA, all the stakeholders' organisations have access to them, and WP5 encourages internal dissemination in the stakeholders' organisations.

Differently to Targeted Reports, **Thematic Reports** are not regular reports, but produced by WP5 as stakeholders' needs arise. These reports link the outcomes of One Health EJP with identified stakeholders' needs, and depict how the consortium closes knowledge gaps. During 2021, a [Thematic Report on environmental aspects addressed in One Health EJP activities](#) was published and uploaded on Zenodo, as well as disseminated to national, EU and international stakeholders, and to the Scientific Steering Board of the One Health EJP consortium. Targeted reports are publicly accessible through Zenodo, and, to maximise visibility, on a [dedicated webpage](#) of the One Health EJP website.

### Dissemination mechanisms: The Dissemination Workshop series

During Y4, dissemination efforts of WP5 paid particular attention to national stakeholders. One of the main tools to reach out to national policy makers was launching the **Dissemination Workshop series**. The Dissemination Workshop series was initiated by WP5, and its format was defined after thorough discussion with the PMT and with Project Leaders. These workshops focus on the impact of One Health EJP-produced solutions, e.g. case studies on how the solutions have been used in a country, how they were/could be applied in specific situations, and how they benefit the prevention, detection, and response in a One Health approach. Each Dissemination Workshop is centred around one topic, with several projects contributing to different aspects. Target audience is mainly national stakeholders with decisional power: experts on the level of ministries (e.g. risk managers) and decision/policy makers, however the workshops are open to EU and international stakeholders (EFSA, ECDC, EEA, EMA, FAO, OIE, WHO-Euro). Given the varied technical background of the audience, Dissemination Workshops focus on examples of applications rather than on the scientific side, avoiding technical details and using an appropriate language.

Before each workshop, a briefing flyer is produced, with information on the scope of the workshop, and after the workshop a concise report of outcomes (highlights, key messages, recommendations and future needs) is distributed to the participants.



The workshops consist of an initial part of presentations by invited scientists, and an important second part of dialogue between the scientists (speakers) and the policy makers (audience). During this phase, needs of both the groups are exchanged, and discussion highlights how the scientists can support policy makers, and vice versa. This is a unique opportunity of bridging the gaps between science and policy.

Topics of Dissemination Workshops should reflect the interests of the audience, therefore in Y4 a survey was initiated involving POC, PMC, SSB, and stakeholders' organisations. The survey helped WP5 to identified topics of interest for future workshops.

The first Dissemination Workshop was held on October 27<sup>th</sup> 2021 fully online. It was centred around metagenomics, as this was reported to be a topic of interest by SSB, POC and PMC based on input gathered in previous SSB and POC-PMC meetings. A webpage was set up by the Communications Team with the briefing flyer, the agenda, and the registration link. This webpage was not reachable through the One Health EJP website, but only through a direct link, which was distributed to the target audiences. Information of the Dissemination Workshop on Metagenomics was distributed to SSB, POC, PMC, and stakeholders, with the request of forwarding to relevant decision makers. The workshop had 143 participants from 20 European countries (top 3: Germany, Belgium, Finland). Most of the participants were from national public health, animal health, and food safety authorities, and several were from national ministries. After the workshop, a report was produced by WP5 in collaboration with the speakers, branded by the Communications Team, and distributed to the participants (attached).

### Dissemination mechanisms: national stakeholders' meetings

WP5 presented its achievements in meetings of national stakeholders: the **Programme Owners Committee (POC, i.e. representatives of the relevant Ministries of authority) - Programme Managers Committee (PMC, i.e. Directors General of the beneficiaries) joint meeting** and the **Scientific Steering Board meetings**. The meetings had a particular focus on the impact of the One Health EJP and its projects at the national level. After presentation of selected outcomes and how they were applied, WP5 illustrated the perceived and potential scientific, policy, societal, and economic impact of the outcomes. The meetings included feedback and testimonies of national

stakeholders and of Key EU Stakeholders (ECDC, EFSA) regarding the use of outcomes and their impact at national and EU level respectively.

## Dissemination at One Health EJP and external meetings and events

WP5 disseminated its achievements, the achievements of the One Health EJP and its projects, by contributions, talks and posters also at the following events:

- One Health EJP ASM 2021 (June 8<sup>th</sup>-11<sup>th</sup> 2021)
- PREventing ZOonotic Disease Emergence (PREZODE) workshops (e.g. European workshop on 7<sup>th</sup> July 2021, final European synthesis workshop on December 12<sup>th</sup> 2021)
- One Health EJP Summer School (August 4<sup>th</sup> 2021)
- EU4HEALTH stakeholders consultation at the EC (September 8<sup>th</sup> 2021)
- International Meeting on Emerging Diseases and Surveillance (IMED, 4<sup>th</sup>-6<sup>th</sup> October 2021)
- Dialogue Meeting of the Regional One Health Coordination Mechanism Partner Platform (Tripartite, November 22<sup>nd</sup> 2021)
- WHO-Global Outbreak Alert and Response Network (GOARN) meeting of partners (December 14<sup>th</sup>-16<sup>th</sup> 2021)

Often a contribution of One Health EJP was requested by the stakeholders, indicating recognised value of the One Health EJP. This was the case, for example, for our involvement in the EU4Health presentation at the EC level, in the Regional One Health Coordination Mechanism Partner Platform dialogue meeting, and in the WHO-GOARN meeting of partners.

Dissemination activities of WP5 are not unilateral. The information not only flows from the One Health EJP to the stakeholders' organisations, and is then distributed within the organisations, but the One Health EJP's vast network is also made available to the stakeholders. This **dissemination from stakeholders to the One Health EJP** was not limited to supporting the stakeholders by distribution of information, but went further by creating new links and interactions. Example of dissemination of stakeholders' calls by WP5 in Y4 are those of JPIAMR, of the International Student One Health Alliance (ISOHA) Europe, as well as of WHO-GOARN.

Dissemination by One Health EJP WP5 was also achieved when invited to participate in chairing a One Health session and round table in a module of ECDC's fellowships, with participation of projects

FED-AMR, FULL-FORCE, TOXOSOURCES, OH-HARMONY-CAP and MATRIX, covering the different aspects in the applicability of One Health to outbreak investigations and surveillance.

### Other forms of ad hoc dissemination

In order to support policy initiatives and to advocate the One Health approach at the EU and international level, WP5, with the support of the Coordination Team, contributes to relevant **stakeholders' consultations**. Relevant open consultations are identified thanks to the activity "scanning of stakeholders' documents", informal communications, but also through direct request of the stakeholders. During Y4, WP5 gave input on behalf of the One Health EJP to the following stakeholders' consultations:

- Public notice and comments on the Terms of Reference of a High-Level Expert group on One Health (Tripartite)
- EU4Health Programme
- EU4Health Annual Working Plan 2022
- European Health Emergency preparedness and Response Authority (HERA)
- EFSA strategy 2027
- WHO-GOARN Strategy 2022-2026

The One Health EJP's contribution to stakeholders' consultations was sometimes followed by invitation to stakeholders' meetings. This was the case, for example, of the invitation to the EU4HEALTH stakeholders' consultation at the EC, and to the GOARN meeting of partners.

Dissemination efforts of WP5 included the distribution to stakeholders' organisations of One Health EJP events (e.g. CPD, summer school, workshops), and of VIP places for such events, in collaboration with the Communications Team. Such VIP places facilitate the participation of stakeholders, for example with free-of charge registrations. Dissemination of such VIP places was always very successful, with stakeholders' requests often exceeding the available VIP places.

Some activities of WP5 deal with the issues of long-term sustainability and future needs of stakeholders. To reach maximum impact of results and to avoid duplication of efforts, WP5 collaborated with WP7 in the drafting of the Integrative Strategic Research Agenda (SRIA, in preparation). In this context, WP5 managed an expert group to discuss the scope of topics linked to

antimicrobial resistance in the future Horizon Europe partnership Animal Health and Welfare and the potential synergies with the partnership One Health AMR, drafted by the JPI-AMR team.

## WP5 dissemination efforts: going global

WP5 curates the “**going global**” strategy, which was strengthened following feedback from national, EU and international stakeholders. This consists of disseminating One Health EJP results, as well as One Health EJP’s potential as a well-acknowledged One Health network, outside of the European borders, which is becoming timely as some One Health EJP solutions are readily usable. Notable examples of global dissemination include:

- After dialogues that took place at the SCMs, the One Health EJP was invited by OIE and WHO-Euro to support the Regional One Health Coordination Mechanism by joining the Partner Platform. The One Health EJP joined the Partner Platform and was invited at the first dialogue meeting, where the support that the One Health EJP can give to the European and Central Asian Region was endorsed by representatives of EFSA and EC, and further discussed. This Tripartite initiative transcends the European borders, therefore it is an opportunity to expand the dissemination and outreach of One Health EJP results.
- Additional dissemination of One Health EJP results outside of Europe is provided via the Tripartite Zoonoses Guide’s Surveillance and Information Sharing Operational Tool (SISOT), which features a number of One Health EJP-developed solutions.
- One Health EJP is involved in setting up the flagship international One Health initiative PREZODE by providing its support as a consortium, and as partner institutes, and this visibility will enhance the usage of One Health EJP outcomes.
- WP5 is involved in a collaboration with the One Health Commission and WHO-GOARN in a project regarding the contribution of One Health workforce to COVID-19 response actions (paper submitted)
- The One Health EJP disseminates regularly WHO-GOARN calls for action

## Enlargement campaign

WP5 was involved since Y3 in the **enlargement campaign** of the One Health EJP, which aimed ideally at the representation of all EU Member States (MSs) in the consortium. One Health EJP

partner countries should be represented by one organisation responsible for the public health side and one for the animal health side in order to keep a good Med-Vet One Health balance.

During Y3, WP5 drafted a detailed list of organisations suitable for membership for all the EU countries not yet participating in the One Health EJP, as well as for the countries which lacked the representation of either the public health or the animal health side. The potential partners were contacted with the invitation to join the One Health EJP. In Y4, six new partners formally joined the One Health EJP: NMVRVI (LT), ISCIII (ES), BIOR (LV), RUOKA (FI), THL (FI), and NEBIH (HU). A welcome meeting was held on March 3<sup>rd</sup> 2021.

### Scanning of stakeholders' documents

WP5 carries on regular **scanning of stakeholders' documents** (scanning around 50 webpages of relevant institutions and organisations including ECDC, EFSA, EC, EEA, EMA, DG-SANTE, FAO, OIE, WHO) in order to identify relevant new research and integrative needs of stakeholders and establish interactions where complementarity may be feasible. Information extracted following this process is summarised in monthly reports and made available to the One Health EJP consortium members and to the stakeholders by uploading the reports in the groups of the One Health EJP website.

When pressing information is identified, it is timely communicated, before the publication of the monthly report, to the PMT, Project Leaders, or Communications Team, as appropriate, to support their dissemination efforts and networking. This activity has led to a number of activities and actions, for example the One Health EJP's contributions to stakeholders' consultations.

### The One Health EJP Outcome Inventory (OHOI) and the Data Management Plans (DMP)

The activities of the One Health EJP consortium are numerous and diverse. WP5 makes sure that the results from One Health EJP are made readily available for policy and decision making through targeted dissemination to the stakeholders. For example, WP5 curates the **One Health EJP Outcome Inventory (OHOI)**.

The OHOI highlights outcomes of the One Health EJP, supports dissemination of results of the various activities (e.g. research projects, integrative activities), and depicts to some extent complementarity with activities outside the One Health EJP. The OHOI is a public online database accessible to all. As such, it targets also stakeholders not represented in the Stakeholders Committee, and supports internal and external collaboration and dissemination. The OHOI has been identified as a valuable tool for dissemination of results of the One Health EJP to national and international stakeholders, to other One Health initiatives, as well as within the One Health EJP, to minimize the risk of duplication of work and ensure timely uptake of outputs and outcomes.

Briefly, the OHOI is an online database inventorying and cataloguing the outcomes of the JRPs, JIPs, PhD projects and overarching activities of the One Health EJP. It is accessible from the One Health EJP website (<https://onehealthejp.eu/outcome-inventory/>).

The OHOI is organized into two main sections: an Outcome section and an Updates section. The Outcome section lists the outcome of the consortium (databases, biobanks, computational methods, pieces of hardware, etc.), gives general information on the specific outcomes, highlights the added value by depicting to a certain extent similar activities in place outside of the consortium, and links to specific resources that are available. Most importantly, it gives the contact information of the persons in charge, facilitating contacts in case more insights are desired. The Updates section illustrates the recent progress of the different areas covered in the OHOI in a timely manner. It gives updates on the activities of projects which are completed, in progress or planned, with reference to the source material where the information was acquired. If an update deals with a specific outcome, it links to the Outcome section of the OHOI. Contacts of the persons responsible for the update are also given. Both the Outcome and the Updates section have a search function to ease navigation and to browse the inventory.

During Y4 an additional section of the OHOI was added: the Archive. The Archive stores old updates from the Updates section of the OHOI in the form of a downloadable Excel file. This facilitates the navigation as the Updates section now has only recent updates, while the old and outdated entries are still findable in the Archive.

Two major updates of the OHOI database were performed during Y4, as well as ad hoc updates as new information became available and needed to be disseminated. To date, the Outcome section lists 117 outcomes, the Updates section has 223 entries, and the Archive section stores an Excel file with 798 old updates.

In addition, during Y4, the user interface of the OHOI was upgraded following discussion within the WP5 and with the PMT. The resulting interface of the OHOI is more user-friendly.

WP5 is also part of the **Data Management Plan (DMP)** committee, led by WP4, which supports JRPs and JIPs to draft and publish their respective DMPs. WP5 was involved in the evaluation of final DMPs of finished projects, and took care that they were correctly uploaded on Zenodo. Within the DMP committee WP5 focuses on the FAIRness aspects from the point of view of the stakeholders. After several feedback rounds and exchanges with the company providing the CPD software, a public DMP reader was set up, through which it is possible to have access to DMPs of the second call projects: projects that are still ongoing. Given that DMPs are living documents, normally available only after the end of the projects, having a DMP reader for ongoing projects improves the transparency of the One Health EJP consortium and timeliness of dissemination.

In addition, in order to make DMPs easily accessible, WP5 in collaboration with the Communications Team set up a [webpage](#) on the One Health EJP website. Through this webpage it is possible to access the DMP reader, and to easily have access to final DMPs of finished projects.

Given the similarity of scopes between the DMP and the OHOI, to maximise their added value and avoid duplication of work, WP5 linked the DMP with the OHOI: the DMP webpage is now reachable also through the OHOI.

### Bilateral interactions

WP5 also facilitates **bilateral interactions** between projects and stakeholders. These interactions are a way for the projects to discuss their strategy, progress, and synergies with the stakeholders' projects, and to disseminate their outcomes to targeted audience at stakeholders' organisations, and at the national level.

WP5 continued the mapping exercise started in Y3 (D5.8), focusing on the interactions between selected projects and national stakeholders, and on the impact and potential impact that One Health EJP-developed solution have at the scientific, policy, societal and economic level. The identified impact was reported at One Health EJP meetings (SSB, POC-PMC, SCM) to national, EU and international stakeholders.

To facilitate the collection of impact from the projects' side, the template of the Summary Progress Report (Deliverable of WP1) was edited, making bilateral interactions easier to identify. Bilateral interactions were found to be particularly effective when contact officers responsible for the interaction with One Health EJP project of interest were appointed (this is the case for some stakeholders' organisations like EFSA, ECDC and FAO). WP5 liaised between the new JIP COVRIN and the stakeholders, leading to the appointment of responsible officers at EFSA and EMA.

### Main dissemination plans for Year 5

In Y5 the planning and organisation of the Stakeholders Conference, foreseen in Y6, will continue by discussions within the PMT and at the SCM. The event will focus on dissemination of results to decision makers and policy makers, but also to other interested parties such the industry and farmer associations. The need for targeting also non-policy audience derives from the growing awareness of the societal and economic impact that One Health EJP-developed solutions can have.

WP5 will also continue to contribute to the discussions regarding the organisation of a Policy Event (an initiative led by WP1 and WP7) planned for Y5 to discuss the legacy of the One Health EJP at the high policy level.

WP5 dissemination activities will continue actively in Y5, and they will build on the established connections and success of the activities in Y1-Y4. Newly upcoming results for research projects and integrative activities will be disseminated using the means described in the dissemination strategy (D5.5). The major dissemination activities will be the Dissemination Workshops, the ASM2022 (April 11<sup>th</sup>-13<sup>th</sup> 2022) and the 9<sup>th</sup> and 10<sup>th</sup> SCMs. Focus of the dissemination activities during the landing phase of the One Health EJP will be on the benefit that One Health EJP-developed solutions



can bring when applied, and on the impact that they are having at the national, EU and international level.

Ad hoc dissemination opportunities will be taken advantage of to disseminate the impact of the One Health EJP, and to advocate One Health approach. Foreseen initiatives include participating in the panel discussion at the Risk Assessment Research Assembly (RARA, December 2022), where a representative of WP5 is invited, and hosting a side event at the ONE – Health, Environment, Society – Conference 2022 (June 2022), an activity which organisation is already ongoing.

During Y5 the OHOI will be updated twice by WP5 in collaboration with the Project Leaders, and following users' requests as they come up. Two Targeted Reports to Key EU Stakeholders will be written and distributed to the stakeholders before each SCM.

WP5 will keep collaborating with the other overarching WPs of the One Health EJP, in particular with WP4 supporting the DMP committee, and with WP7 supporting the SRIA. Information on policy and research needs of stakeholders are gathered by WP5 through contacts with EU and international organisations represented in the Stakeholders Committee, and through regular scanning of stakeholders documents. WP5 policy intelligence will support WP7 regarding sustainability of the consortium, and in particular will be used to draft the SRIA.

In parallel, WP5 will keep on working on sustainability of its activities after the end of the One Health EJP. Some solutions for sustainability are already being discussed (e.g. the hosting of the OHOI on the MedVetNet Association website)

#### 4. Evaluation, impact and potential

WP5 - Science to Policy Translation was active and successful in its dissemination activities during Y4. The structures for efficient dissemination are in place, in use, and were further adjusted and refined based on dialogue with the stakeholders. Maintaining dialogue with Key EU Stakeholders, putting more focus on national stakeholders (e.g. through Dissemination Workshops), identifying and disseminating the impact of One Health EJP, and supporting global actions, were all successfully achieved.

The dissemination strategy of WP5 received positive feedback from the stakeholders during SCM meetings and was highlighted by the EU and international stakeholders at the POC-PMC meeting of national stakeholders.

The success of dissemination efforts of WP5 and of the One Health EJP as a whole are demonstrated by the consortium activities being cited in stakeholders documents, for example in the One Health Zoonoses Report 2019, in a recent paper authored by EFSA Director Bernhard Url, and in EFSA newsletters. Publications resulting from work in One Health EJP projects have been cited in e.g. EFSA Scientific Opinions and Risk Assessments. The contribution of the One Health EJP to the One Health Session within the Project Review Module (PRM) of the fellowship is noted in the module report by the organisers at ECDC.

Efficient uptake and use of the results maximizes the impact of the projects and, in general, of the One Health EJP.

## 5. Attachments

- Thematic report on environmental aspects addressed in One Health EJP activities: <https://zenodo.org/record/4751562#.YZJVbWDMI2w>

- DMP webpage: <https://onehealthjep.eu/data-management-plan/>



- Dissemination workshop on metagenomics briefing flyer: [https://onehealthjep.eu/wp-content/uploads/2021/10/OHEJP-Disseminations-Workshop-Series\\_1-Metagenomics.pdf](https://onehealthjep.eu/wp-content/uploads/2021/10/OHEJP-Disseminations-Workshop-Series_1-Metagenomics.pdf)
- Dissemination workshop on metagenomics report (in the following pages):



IMAGE: PXHERE

### TAKE-HOME MESSAGES

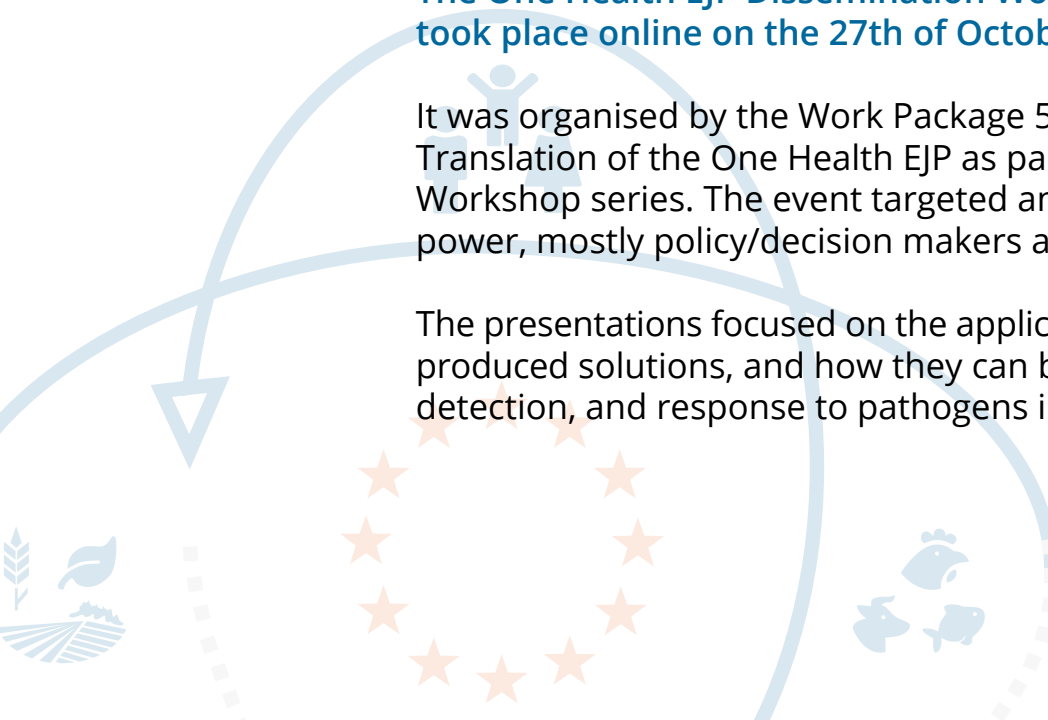
- Metagenomic techniques provide considerable advantages over current standard techniques, for example they are unbiased, allow simultaneous detection of different pathogens, are culture-independent and are applicable to different matrices.
- Challenges and limitations include the need of large databases and technical expertise, as well as EU General Data Protection Regulation (GDPR) issues.
- Results from metagenomic analyses have to be interpreted correctly, and require clear and transparent communication.
- The apparent trend in Europe is that metagenomic techniques are entering the routine work of reference laboratories.

## One Health EJP Dissemination Workshop Series: METAGENOMICS

The One Health EJP Dissemination Workshop on Metagenomics took place online on the 27th of October 2021.

It was organised by the Work Package 5 (WP5) Science to Policy Translation of the One Health EJP as part of the Dissemination Workshop series. The event targeted an audience with decisional power, mostly policy/decision makers and risk managers.

The presentations focused on the applicability of One Health EJP produced solutions, and how they can benefit the prevention, detection, and response to pathogens in One Health settings.



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## One Health EJP Dissemination Workshop Series: METAGENOMICS

*...the advantages of using metagenomic techniques in a One Health setting were highlighted.*

### Introduction

Steven van Borm, Sciensano  
One Health EJP project [METASTAVA](#)

Steven van Borm introduced the audience to the basic definition of metagenomics, “the study of genetic material directly obtained from (environmental) samples”, and clarified which questions can be answered using metagenomics. Metagenomic tools can be applied to the environmental, industrial, and clinical field, making their use optimal for One Health practices.

The speaker took us then through a full metagenomic workflow, highlighting the technical requirements and the expertise needed.

He highlighted the advantages of using metagenomic techniques in a One Health setting. These techniques require, for example, no prior isolation of the pathogen or knowledge of the pathogen in the sample, minimising the risk of detection bias. The large amount of data obtained, however, presents some challenging aspects in relation, for example, to the ethics of detecting unwanted pathogens (e.g. HIV in clinical specimen), or to the validation of the organisms being really present in the sample. Other challenges include costs and the need for sharable databases, raising technical as well as GDPR issues. A number of One Health EJP projects mined the potential of metagenomics by applying it in a number of settings at the human/animal/food/environment interface (for example [DiSCoVer](#), [FARMED](#), [FULL-FORCE](#), [MAD-Vir](#), [MedVetKlebs](#), [MEmE](#), [METASTAVA](#), [PARADISE](#), [RaDAR](#), [TELE-Vir](#), [TOXOSOURCES](#)).

*...several applications of metagenomics for One Health in the areas of antimicrobial resistance (AMR), food/feed chain safety, discovery of emergent viral threats, and in diagnostics were presented.*

After this introductory talk, several applications of metagenomics for One Health in the areas of antimicrobial resistance (AMR), food/feed chain safety, discovery of emergent viral threats, and in diagnostics were presented. These presentations provided a snapshot of the work that is being conducted in the One Health EJP consortium, using metagenomics.

### Antimicrobial Resistance Identification

Saria Otani, DTU  
One Health EJP projects [FARMED](#) and [FULL-FORCE](#)

One of the challenges of infectious disease surveillance is finding a method that allows real-time observation of trends in pathogens presence, including virulence and antimicrobial resistance (AMR) genes. By collecting and analysing samples from wastewaters throughout the world, Saria Otani introduced DTU work on sewage wastewater, and demonstrated that sewage sampling is a reliable surveillance methodology for both pathogens and AMR detection. For this aim, a novel method of sampling and sequence analysis was developed, coupled with bioinformatic tools that facilitate the understanding of AMR dynamics globally.



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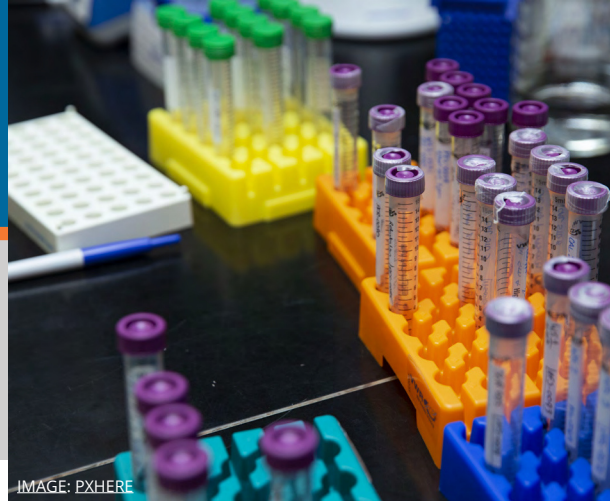


IMAGE: PXHERE

## One Health EJP Dissemination Workshop Series: METAGENOMICS

### Food/Feed Chain Safety

Sigrid De Keersmaecker and Florence Buytaers, Sciensano

One Health EJP project [FARMED](#)

Sigrid De Keersmaecker and Florence Buytaers took us through issues linked with the safety in the food chain, a process which goes “from farm to fork”. In this context, metagenomic techniques can support investigation of foodborne outbreaks, and detection of unwanted genetically modified microorganisms (GMM) and related AMR genes in microbial fermentation products. This is faster than, or sometimes even not achievable with, conventional methods, and unbiased, not requiring prior isolation. EFSA called for proofs of concepts of metagenomic use for outbreak investigation, source attribution and risk assessment of foodborne microorganisms, therefore paving the way for a possible future routine use.

### Discovery of Emerging Viral Threats

Anders Fomsgaard, SSI

One Health EJP projects [MAD-Vir](#) and [TELE-Vir](#)

Anders Fomsgaard presented two metagenomic tools for virus surveillance and detection of emerging virus threats: the Panvirus Micro-Array and a novel metagenomic field test based on whole genome sequencing. These tools allow the unbiased detection of viruses from a number of matrices and have the advantage of identifying co-infections. They were used in Denmark to detect the source of SARS-CoV-2 outbreaks that involved both human and mink transmission, events which had major public health, economic and political consequences. In addition a previously unknown Alphacoronavirus was detected in Danish bats using metagenomic methods.

### Diagnostics

C. Rune Stensvold and Pikka Jokelainen, SSI

One Health EJP projects [PARADISE](#), [TOXOSOURCES](#), [MEmE](#);

Steven van Borm, Sciensano, One Health EJP project [METASTAVA](#)

Metabarcoding relies on detection and differentiation of - typically - ribosomal genes using next-generation sequencing. Rune Stensvold and Pikka Jokelainen presented a platform already applied for testing clinical samples and piloted for surveillance, allowing the simultaneous detection and differentiation (typically to species level) of bacteria, parasites and fungi.

Steven van Borm closed the session by presenting his work on metagenomic methods' standardisation, validation and quality control, and the steps to follow to move from research to diagnostics in a One Health perspective. For this aim, guidelines for [diagnostic metagenomics](#) were set in a reference document.

### Conclusions

Simone Cacciò, ISS

One Health EJP project [PARADISE](#)

The presentations of the workshop exemplified the use of metagenomics applied to food chain safety, AMR detection, pathogen discovery, and diagnostics. In the final talk, Simone Cacciò summarised the key take-home messages, highlighting in particular the applications and possibilities of metagenomic approaches, their limitations, the challenges to overcome, and the steps to take to overcome the challenges.

*The presentations of the workshop exemplified the use of metagenomics applied to food chain safety, AMR detection, pathogen discovery, and diagnostics.*



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IMAGE: PXHERE

## One Health EJP Dissemination Workshop Series: METAGENOMICS

*The speakers generally agreed on the growing need to share data across sectors and countries, while the EU General Data Protection Regulation (GDPR) has been identified as a major challenge.*

### Discussion

Moderated by Pikka Jokelainen, SSI, and Annemarie Käsbohrer, BfR  
One Health EJP WP5 Science to Policy Translation

The discussion initially focused on the scenarios where metagenomic techniques offer a sensible advantage over conventional methods. Metagenomic approaches allow the detection of many possible pathogens at once therefore saving time and efforts, something particularly important in the case of co-infections. Metagenomic-based methods were seen as an additional support to current standard methods for diagnostic use. Similarly, in the food sector, metagenomics can be applied where traditional methods fail, supporting, for example, faster resolution of the origin of an outbreak. Consensus was that the benefits of application of metagenomics depends on the question to be answered.

The speakers generally agreed on the growing need to share data across sectors and countries, while the EU General Data Protection Regulation (GDPR) has been identified as a major challenge.

The audience was interested in the interpretability of the data from the perspective of the policy makers, and how to minimise issues potentially arising from metagenomic results. The speakers agreed that in case of an unexpected result, confirmation is crucial. Moreover, it was highlighted that metagenomic techniques are not functional assays, meaning that when a gene of concern is detected (for example an AMR gene) additional tests are needed to investigate its functionality. The shared understanding of these factors requires a clear communication.

*Clear and transparent communication between scientists and policy makers was overall an important point identified during the discussion between the audience and the speakers.*

Clear and transparent communication between scientists and policy makers was overall an important point identified during the discussion between the audience and the speakers.

The speakers also stressed the need of capacity building initiatives and of sharing the knowledge across laboratories. The sharing should go hand in hand with harmonisation of methods, ideally across countries and sectors - an endeavour brought forward by the One Health EJP.

The workshop was closed with the forecast that it is just a matter of time until metagenomic techniques become more incorporated alongside the current standard detection methods in reference laboratories.



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