



D7.1 Analysis of outcomes and uptake of EJP's outputs by stakeholders

WP 7 Sustainability

Responsible Partner: ISS, SVA

Contributing partners: PMT members



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Analysis of outcomes and uptake of EJP’s outputs by stakeholders

The analysis of outcomes and uptake of EJP’s outputs by stakeholders consists of three parts. Part I presents a collection and evaluation of the stakeholders expectations and needs regarding the One Health EJP, which was conducted in the form of an analysis of Strengths, Weaknesses, Opportunities and Threats (SWOT analysis) at the beginning of the One Health EJP. Part II describes the interactions with the stakeholders, and refers to Deliverable D5.1, which shows the stakeholders categories and a list of stakeholders; this is principally the work of WP5. Part III presents a selection of outcomes of the One Health EJP intended to be utilised by stakeholders.

Part I.

Analysis of Strengths, Weaknesses, Opportunities and Threats (SWOT Analysis)

1 Introduction and Methodology

An objective of the One Health EJP was to identify the requirements of the stakeholders to continue the alignment and integration activities set up in the One Health EJP. In addition, it was anticipated that interactions with stakeholders would contribute to the definition of sustainability principles and the development of sustainability strategies. Milestone MS97 “Analysis of the Stakeholders’ Needs and Expectations inputs collected” addressed this objective. Under Task 7.1 a SWOT analysis was carried out in 2019 on the results from a survey undertaken to collect information on the needs, expectations, and judgements, with a specific focus on sustainability, of key stakeholders, project owners and partners of the One Health EJP.

The survey was organised following the scheme “Strengths, Weaknesses, Opportunities and Threats (SWOT)”: each section was articulated into questions (see below).

The survey was carried out from January to May 2019. Individuals, rather than Institutions were interviewed. The individuals belonged to relevant Ministries, Agencies/Authorities, Scientific Institutes and Universities from EU (European Union) Countries, involved in the One Health EJP Consortium.

Overall 178 people were addressed with a 30% response rate.

The questionnaire was anonymous, hindering any follow-up with specific responders as well as any detailed evaluation of the response rate: this is recognized as a significant limitation of the findings. Nevertheless, the responses are considered to represent a valuable probe of the expectations, suggestions, comments (and in a few cases, even disappointments) of the EU stakeholders more interested into the developments and outcomes of the One Health EJP.

The analysis of the responses to questions on strenghts, weaknesess and opportunities followed a reasoned, qualitative approach: for each question, responses were clustered into the following themes:

Table 1. Themes that cluster the responses to questions on strenghts, weaknesess and opportunities

	Theme
Strenghts	What works well in the One Health EJP
	Most valuable outcomes
	Features that support the continuation of the One Health EJP
	Other points or aspects (free additional comments)
Weaknesess	What could be improved in the One Health EJP
	Least important activities
	Features of the One Health EJP can be detrimental in its continuation
	Other issues
Opportunities	Arising new situations that the One Health EJP can take advantage of
	Competence gaps



	Additional partnerships
	Other points

In the ensuing results section, for each question individual responses are listed. Then the corresponding theme analyses, organised by keywords, are given.

Regarding questions on threats, the respondents were asked to provide a score of each given threat based on their perception on seriousness and probability of occurrence of the threat.

2 Results

2.1 Strengths

2.1.1 What do you think works well in the One Health EJP?

1. One Health EJP provides forums for collaboration and networking between different sectors and member states
2. One Health EJP is laying a foundation for sharing of knowledge and understanding
3. One Health EJP is actively bridging the gap between the different health sectors
4. One Health EJP is providing the possibility of joint analysis and interpretation serving the One Health objective
5. One Health EJP is fostering partnerships for future research projects and programmes
6. It allows us to:
 - 6.1. Be part of scientific networks across all member states to facilitate exchange of knowledge, technology and data sharing of partners.
 - 6.2. Work directly with policy customers, particularly European Food Safety Authority (EFSA) and European Centre for Disease Control (ECDC) to focus some of our research on policy-driven projects, with the flexibility to adjust quickly to relevant research.
 - 6.3. Work closely with national funders, but co-ordination is complicated.
7. Brings extra resources to dedicate to health priorities
8. Works across silos, bringing different sectors to work together
9. Brings together high-resource expertise centres to develop new methods and tools for one-health
10. Effective networking across 19 Member States (MS), and with EU Agencies
11. Second round of project applications was very well coordinated with stakeholders needs and priorities. In particular, by including field in the application template on added value the project brings on top of on-going EU activities
12. Stakeholders meetings very constructive and central project management attentive to stakeholders needs
13. Collaborative projects, integrative projects and “networking initiatives” as training, workshops and the annual scientific meetings. Ability of the One Health EJP to identify priorities within an extremely wide field
14. Strong organisation, good basis for animal and public health collaboration, possible involvement of authorities (ministries and agencies), links with other projects, links with ECDC and EFSA
15. Bringing partners involved in zoonotic diseases, including antimicrobial resistance (AMR) together, within countries and within the EU
16. International collaboration, particularly evident at joint meetings/conferences
17. Sharing of scientific resources and expertise
18. Human and animal health are considered inter-dependent
19. Coordination



20. Consolidated knowledge among participants and networking propensity.
21. Participants homogeneity, mutual understanding, similarity in intention and approach, propensity to the transfer and practical application of research results to public health, balancing between research and institutional role of most participants
22. Inclusiveness but selectiveness of the projects.
23. The topics addressed by the One Health EJP are overall appropriate, and it involves the appropriate stakeholders from a majority of EU countries.
24. Communication, diffusion of information, networking
25. The collaboration and communication work well
26. Establish personal contacts and initiate cooperation between different institutes in different countries
27. Collaboration between institutes
28. Roll-out of internal calls. Fast start of first round projects
29. Organisation, coordination, the help to the scientific partners and coordinators
30. Technical competence
31. The network; many of the One Health EJP partners have worked together for many years, building trust and common understanding. The One Health EJP partners understand the strengths of partners and how to best work together. The partners have common goals as reference laboratories – are often interested in robust methodologies because they know the evidence produced will be used for making decisions. We have a lot of expertise in this area.
32. Interaction of researchers
33. Strong commitment of research institutions (PMs) involved. Quite good balance among veterinarians and human practitioners
34. Collaboration between partners
35. Communication activities

2.1.1.1 Theme Analysis

Keywords:

WHAT:

- One Health EJP facilitates:
 - Collaboration
 - Networking
 - Training and dissemination
 - Gap-bridging across sectors (overcome of silos)
 - Policy customers engagement
 - The commitment of PM
- the One Health EJP participants
 - Knowledge
 - Expertise
 - Objectives
 - Trust
 - Data
 - Understanding (joint analysis and interpretation)
 - Technology
 - A common framework for different sectors
 - Balancing research and institutional role
 - Approaches / model :
 - Network propensity
 - From research to practical application
 - Science to policy

HOW:

- Coordination
- Partnership:
 - Stakeholders (especially EFSA, ECDC)



- Current and Future research programme
- National funders (PO)
- Communication
- Resources

WHO:

- MS
- Sectors
- EU agencies

2.1.2 What outcomes are the most valuable?

1. Networking, collaboration that can lead to future research.
2. The most valuable outcome is networking and communication between partners from different sectors and Countries that leads to building of new knowledge and strengthens OH partnership.
3. The establishment of networks and dissemination of knowledge between them, sharing of know-how, scientific collaboration across the EU (e.g. through training).
4. Joint training sessions and mobility programmes are very useful and should bring long-term impact. Work closely on this with European stakeholders.
5. Deliver impactful research that adds value to the European Regulatory Science bodies and the European Policy makers as well as to national policy makers.
6. Forging a common agenda and priority setting in the domains of foodborne zoonoses, antimicrobial resistance and emerging threats.
7. Creating a community of research and surveillance institutions integrating human, animal health and food safety.
8. All integrative aspects that make reference laboratories work together: capacity, databases, biobanks, procedures and methodologies.
9. Sharing expertise, sharing best practises, harmonisation of procedures, knowing each other (networking) and learning from each other.
10. Scientific papers.
11. Capacity building amongst researcher.
12. The ability to influence National policy and research funding priorities.
13. It is expected that all the outcomes of the One Health EJP participants will be valuable, the most valuable ones will be those triggering technical-scientific advancements and their translation into the institutional context by involving the whole network.
14. At present, the effort of gathering 38 institutions from 19 countries, on both the medical and veterinary sides, with the common aim of giving a strategic vision to OH in term of research and institutional translation, is itself a decisive result.
15. The stronger the integration, the more solid and lasting the results will be. In line with this, it is expected that the outcomes underpinning and requiring the integration between as many countries/Institutions as possible (i.e. common database, shared technological platforms, biological banks etc.), will be among the most important in term of sustainability.
16. The results from the projects supported by the One Health EJP will drive the One Health agenda in the EU forwards. The mere existence of the One Health EJP also serves to raise awareness in the EU and at the national level about the One Health concept.
17. Standardization of protocols, standard operating procedures (SOP), and guidelines.
18. Information that can be used to specifically tackle an issue or inform stakeholders. Scientific publications are also important in order to demonstrate the quality of science and ensure the outputs are in the public domain.
19. Network consolidation.
20. Facilities to develop a network, scientific projects developed within the EJP.



21. The extended partnership compared to MVNA means that we are working with some new people-extended network.
22. Including food means we assess more of the problem i.e. more is in scope.
23. Having close working with ECDC and EFSA is important.
24. Across the members we have different working relationships with our ministries- some are very close, and we should learn from this as it's a direct way to impact.
25. Solid research outcomes.
26. Integrative projects.
27. Prioritization of Strategic Research Agenda for the 3 areas.
28. Research outcomes (databases, guidelines, protocols, methodologies).
29. Mobility and training activities.

2.1.2.1 Theme Analysis

Keywords:

- Networking, it is essential for:
 - Future research
 - Reinforce partnership
 - Dissemination
 - Knowledge,
 - know-how
 - protocols, harmonisation/standardisation
 - Establish core capability
 - Learning from each other
 - Translation of research output into institutional context
 - Elaborate on a common strategic vision for One Health
 - Face possible future crisis
- Capacity building;
 - preparedness
 - Integration of tools, methodologies, data, platform, materials (reference, biobanks etc.), components, SOP, harmonisation/standardisation
 - guidelines
 - Science to policy translation
 - Lobbying in national policy for research (priorities)
- Integrative projects
- Training and mobility
- Share and influence at national/EU level:
 - Common vision of One Health
 - Priority setting
 - common agenda
 - One-Health strategic vision
- Scientific articles to share with the public domain
- Collaboration and Information of stakeholders
- Working with EFSA and ECDC

2.1.3 What features of the One Health EJP are helpful in supporting the continuation of the One Health EJP

1. The joint research projects (JRPs) and joint integrative projects (JIPs) are key instruments to facilitate partner organizations working together: continuous EU funding and engagement of EU stakeholders (especially ECDC, EFSA and the European Commission eventually other EU bodies and EU interest organisation) as well as organisation on the global level like FAO, WHO, etc
2. The linkage to EFSA/ECDC, research calls, PhD programmes, EJP website (useful for finding contacts but needs to be improved in terms of accessibility and information available), shared ownership through the national mirror groups are all good features



3. To be able to demonstrate and quantify the added value that the project brings
4. To be able to demonstrate new unique insights delivered by the project
5. Making the demonstration of one health research integrating human, animal health and food safety. Ability to meet the expectations and needs of the users (EFSA, EC)
6. All activities that help the One Health concept
7. Strong core management group, Importance of One Health
8. Continued access to funding for multi-national research collaborations
9. Funding for conferences and scientific meetings to maintain the community
10. Continued engagement of both veterinary and medical scientists
11. The OHEJP is currently one of the most important structured One Health initiatives, globally. The competences expressed by the participants are such as to fully cover the domains of food safety, drug resistance and, to a large extent, that of zoonoses. Moreover, the inclusion of the Med-Vet-Net Association (MVNA) is a crucial factor in the long-term sustainability of the OHEP
12. The involvement of the relevant national authorities; without their continued support, sustaining the OHEJP activities will not be possible
13. Involvement of the human and animal counterparts and participation of 38 national reference laboratories/institutions from 19 MS
14. The sustainability element, building of collaborative networks, the overarching activities and the link to the MVNA
15. Regularly meetings should be continued
16. The network with funding
17. Network consolidation
18. The topics funded by the EJP are very important and the main scientific partners are included in the EJP
19. The help obtained to build the budget is very important
20. Long lasting cooperative research activity
21. Common purpose as reference centres means that we generally have national funding and that the people tend to stay quite a long time (compared to an academic research group where people can rotate in and out quickly). The personal links help maintaining the network together. Many of us have worked together on things other than the EJP (back to common purpose)
22. The funding profile drives some compromise in research topics and therefore approaches become more consistent
23. The integrative projects are key to embedding new approaches (which could come from research). They are also more inclusive- again promoting the network
24. This also means that the best practice is spread across the network and helps to develop the skills base
25. Short term missions help maintaining this together
26. Website
27. Strong connection with MVNA
28. Having continuity in EU funding
29. Training activities
30. Networking
31. Integrative activities

2.1.3.1 Theme Analysis

Keywords:

- Research calls



- PhD programme
- Integrative activities and any initiative to facilitate the networking of the community:
 - Regular meetings
 - STM
 - Training
 - One Health EJP website
- Demonstrate the added value of One Health approach:
 - Outcome of JIP, JRP
 - Multiple sectors engagement
- Identify best practice
- Harmonisation of
 - Approaches, methodologies, procedures for assessment and management
- Involvement of Stakeholders (EFSA, ECDC, FAO, WHO, National)
 - Through JRP, and JIP
 - Meet their expectations (EFSA; EC)
 - Involvement of the MVNA
 - National authorities for continuing funding
- Shared ownership:
 - National mirror groups
 - Commitment for funding
- Funding (multinational, national) the network for:
 - Research
 - Meetings important to maintain the community
 - Common vision, common purpose

2.1.4 Other points or aspects (free additional comments by respondents)

1. The use of research facilities and exchange of people (twinning) enabling participation of partners with less financial resources leads to trust, standardising of methods and data collections, open access.
2. Respected by stakeholders
3. The collaborative network established through the MVNA that has created the platform for the One Health EJP and has taken many years to develop. The trust and understanding of the partner organisations is now deep and well established. Further funding builds on this previous investment.
4. The involvement of institutions that in addition to carrying out research activities have a formal institutional mandate (e.g. NRL, EURL, surveillance, risk assessment, etc.) is an added value of the One Health EJP since it ensures a homogeneity of vision and approach and the immediate translation of research results into practice.
5. The possible involvement of environmental and climate issues that will contribute for the improvement of planetary health.
6. The One Health aspect is a strength.
7. Presence of many leading EU research and health management players (EURLs).
8. Annual scientific meeting
9. Results from ORION and COHESIVE projects.

2.1.4.1 Theme Analysis

Keywords:

- Trust and understanding
- Involvement of many stakeholders
- Common vision and approach
- Best practice
- Training and meeting
- Integrative activities



2.2 Weaknesses

2.2.1 What do you think could be improved in the One Health EJP?

1. Coordination of needs assessment and collaboration with stakeholder
2. A conscious effort to strengthen and balance contributions from different sectors should be undertaken
3. Better coordination to remove ambiguities and overlays between projects
4. The governance structure is too large and complicated
5. Better planning for reporting back to One Health EJP governance. Longer timeframes would allow project leaders more time to capture information from multiple partners in projects
6. Less complicated finances. The current finance rules can cause barriers to bidding and potential risks e.g. It is difficult to replace partners who withdraw and the inflexibility in moving funds within project rounds makes it difficult to manage the budgets with national funders
7. Allow more industry involvement in projects e.g. from SME's or the veterinary industry
8. More focus on environmental themed projects
9. Extremely large number of more or (frequently) less important e-mails
10. The complexity of the project and bureaucracy needed to administer it
11. Improve funding available for hosting/organizing workshops/conferences
12. Communication from some work package leaders with the stakeholders (ECDC, EFSA). Invitations by stakeholders to joint meetings have not swiftly be taken up on by work package (WP) or project leaders
13. OHEJP activities are very much impact-driven. This permits to meet the expectation of stakeholders but may limit the scientific impact of the OHEJP
14. More involvement of Eastern countries; animal health and food are predominant: public health (and environment) should be reinforced; more One Health: improve inter-sectoral collaboration with more specific activities
15. Not specific for One Health EJP but collaboration between (international) organisations on 'soft' tasks is difficult
16. Some tasks are done within one or two organisations. Difficult to really involve more partners (also due to finances)
17. Core management group is small
18. Involvement of stakeholders (EFSA, ECDC, program owners). More partners in the integrative projects
19. Administrative burden is high.
20. Agility. The size of the partner network and the rules around EU funding mean that agility to respond to emerging situations is poor.
21. Participation of more public health institutes
22. The environment component of OH is somehow neglect.
23. The OHEJP is focused mainly on food safety and foodborne zoonoses. Expanding its range of activities, for example by promoting the inclusion of ecologists would be beneficial in the field of emerging zoonoses from wildlife
24. It would be beneficial to promote the development of risk assessment activities, mathematical models and ecological approaches to zoonoses and AMR
25. It would be useful to develop systems able of early warning of emerging risks
26. A stronger central coordination between the different One Health EJP projects is needed, with projects being imposed to build on and use for example infrastructure and terminology developed as part of other One Health EJP projects. Also, better defined plans for how to move relevant project



results into routine use at the national and, where relevant, EU level are needed. Plans for the involvement of additional countries would also be useful

27. Balanced participation of all partners by positive discrimination; knowledge transfer; twining; and equal opportunities taking into account the differences between countries
28. Streamlining of processes and less emails. Improved communication regarding the responsibilities of each individual. Clearer project guidelines for the scientific projects in order to keep them more focused
29. Participate adequately in the projects
30. The level of bureaucracy is rather high; this drains energy and enthusiasm from participants
31. General agreements with related ongoing initiatives about sharing resources and findings are needed for optimal integration.
32. Openness for contribution/collaboration of partners not strictly listed in the consortium would improve integration efforts
33. The conditions to apply to the PhD funding (it is difficult to obtain half of the funding, before the application).
34. The administrative part concerning the data management plan
35. Limited participation of public health (PH) institutes
36. The financial model is complicated and difficult to understand. I think we have underspent because people haven't understood the model. To set this in context our institute has funding from several EU programmes with different rules, from grant awarding bodies (national and international- also different rules) and core funding. So its difficult to keep on top of this
37. Website
38. Mutual knowledge among participants/PMs especially referring to cross sectors
39. Collaboration with researchers from institutions out of the Consortium.

2.2.1.1 Theme Analysis

Keywords:

One Health vision:

- Unbalanced contribution from different sectors
- Animal health and food safety and foodborne overrepresented
- Clinical and public health under-represented
- Environment and ecological approach neglected
- Intersectoral collaboration should be improved
- Better 'need assessment'
- *Scientific/Internal to One Health EJP:*

Governing structure:

- Need for a better coordination
- Governance structure too large/too long (difficulties in reporting)
- Core management group too small
- Ambiguity and overlaps among projects; better coordination among projects
- Improve communication and website; to reduce emails (high background noise)
- Poor flexibility to involve more countries
- Better assessment of needs
- Positive discrimination (leadership) of some countries
- Difficulties (but need) to involve other countries
- More funds are needed to collaborative training/exchange/meeting
- External to One Health EJP consortium and relevant to stakeholders and translation into the field
- Better collaboration/involvement of stakeholders and programme owners
- Improve communication and exchange among stakeholders and WP and project leader;
- Better collaboration with stakeholders and partners outside the consortium
- More countries involved



- More industry involvement
- Need to better plan the translation of outcomes to stakeholders, policy makers and the involvement of other countries
- Need to better approach to early warning
- Structural difficulties
- Administrative burden & financial difficulties
- Complexity of bureaucracy
- Difficulties linked to EU rules for the cofinancing
- Difficulties in complying with specific co-funding rules (e.g. for PhD)

2.2.2 What are the least important activities?

1. Administrative burden from the commission in relation to financial management. Implementation of financing based on lump sums could lead to decrease of costs related to administration and financial management. A lump sum grant means the following: the grant agreement will set out the lump sum (EU funding) corresponding to the full accomplishment of the work committed in Annex 1. The lump sum for the grant is set out at its signature, the costs actually incurred are not relevant
2. Improved efficiency of governance/reducing duplication
3. Perhaps too much emphasis currently on doing inventories. For example, a deliverable for the One Health EJP is to provide a capacity map of expertise, resources and skills of the partners. This could mean hundreds of questions to many parties. It is discouraged to do such an inventory if the added value of such exercise is not clear. An alternative could be to provide a tool to MS to perform a one-health preparedness country assessment to identify possible gaps in one-health readiness.
4. At the moment it is difficult to judge. To answer this question, we would need to have the rate of participation to the various activities. Regarding the ability to meet the “one health” objective, I doubt the PhD program is very efficient. One Health implies a high level of integration, which is not possible for PhD. Longer integrative projects, longer enough to include some PhD projects would be more efficient.
5. I can't think of any!
6. I don't know if there are less important activities, but attention must be paid to duplications and redundancies.
7. That is very difficult to know as an outside stakeholder, but in general any activities that duplicate systems or resources that are already available elsewhere in the scientific community.
8. We consider that all activities are important. However, professional development modules are not fully explored and understood.
9. All the activities are important, but the scientific activities need to be made more prominent to the outside work.
10. The administrative information concerning ethic and data management plan. Each country has to fulfil to these rules. So why should we justify all the procedures we have?
11. PMC meetings and SSB meetings.
12. PhD/ activities with direct involvement of academia.
13. Collaboration with or involvement of stakeholders.

2.2.2.1 Theme Analysis

General comment: The large variety of answers reveals that the identification of least important activities is difficult. Some replies even mention structural pillars of the project as the least important items (e.g. stakeholders involvement; Data Management Plan (DMP) and ethics), whereas such items are requested by Horizon 2020.

Keywords:

- High burden of administrative items
- Duplication and redundancies inside and outside One Health EJP
- Training: professional development module ; PhD and academia



- Stakeholders involvement
- PMC, SSB
- DMP, ethics

2.2.3 What features of the One Health EJP can be detrimental in its continuation?

1. Lack or insufficient communication with stakeholders
2. The risks to project delivery if responsibility for their management is the responsibility of project leaders, with little support from the management structures
3. The risk of duplication. There is a significant risk of duplication/ overlap of efforts with activities carried out by the European stakeholders, and there is overlap among work package of the different projects (e.g. Whole Genome Sequencing WGS)). This should improve with the projects kicking off in the second round, by better defining from the start what the activities and deliverables will be, to ensure that new insights can be gained
4. The lack of awareness and understanding of the wider EU framework by some project leads / work package leaders.
5. Too many projects start with large scale inventories, bothering many data deliverers in the MS to fill out questionnaires with information that is already in the public domain. The project leaders should compile first the available information and only then approach respondents to complete/verify information.
6. The project management team (PMT) has to insist with the project leads to be clear what added value their project will provide (in addition to existing activities). This should be written down and communicated pro-actively.
7. One Health EJP is restricted to health and food safety, whereas the main challenges ahead need to integrate health and safety of the food chain in broader perspectives (e.g. "food systems" implies an integration of food safety, nutrition, environmental issues and socioeconomic perspective).
8. Insufficient support from the respective authorities; the in-kind contribution.
9. Balance between human and veterinary medicine. Even though the human public health institutes are well involved, from those organisations mainly people with a veterinary/biology background are taking part in the project, not so many medical doctors.
10. Financial issues excluding partners, especially in lower income countries. You also see that North-European countries often have the lead, mainly because they can afford it.
11. Change in partner organisational leadership and lack of support for continuation.
12. High administrative burden and cost.
13. UK leaving the EU.
14. I hope that no detrimental activities are currently underway in the One Health EJP. However, relying on the "consolidated" without taking up the challenges is certainly risky
15. Lack of demonstrated EU One Health activities could negatively affect the One Health EJP 's chances for continuation.
16. The heavy paperwork and the different realities in the different countries; difficulty of smaller institutions in contributing more and following all the issues, due to shortage of human and financial resources; maintenance of long-term collaborations between partners.
17. Over complication of processes and lack of collaboration with existing networks.
18. Participate adequately in the projects.
19. Unnecessary levels of bureaucracy.
20. Combination of short duration of JRP, closed list of participants, strict need for co-funding, limited budgets, etc. Make it difficult to organise cutting-edge research projects that interact optimally with ongoing initiatives. The administrative workload is very heavy compared to the available EU funds, with multiple rounds of intermediate reporting, data management plans, ethics reviews etc. (to some degree, the project support team is supporting these administrative tasks).
21. The weight of the administrative works or justifications



22. Absence of several MS;
23. Lack of environmental experts
24. Lack of institutional endorsement of the consortium.
25. Complicated financial reporting.
26. Fundamental a major role for PO, which could assure a future of funding (real common pot or virtual common pot). Currently the PO are only maintained informed and updated but have had a limited role in methodology and decisions.
27. Restrictive in joining new members

2.2.3.1 Theme Analysis

WHO:

Difficulties in the One Health EJP regarding:

- Stakeholders
- Insufficient communication to stakeholders
Risk for duplication of activities
- Lack of collaboration of many networks
- Insufficiently consistent interaction with authorities (national/EU) and project owners
- Lack of awareness and understanding of EU framework
- Lack of institutional endorsement /insufficient support by MS/PO
- Absence of several MS / difficulties in enrolling new members
- Need to demonstrate the added value/impact of One Health EJP to authorities
- One Health EJP partners
- Med/vet balance: underrepresentation of PH partners/overrepresentation food safety/vets
- Absence of component on environment

WHAT:

Inside the OHEJP

- Burden of bureaucracy/administrative/papers related to costs/resources/other EU funded projects
- Too many reports: financial, intermediate, etc
- PMT to:
- Better support to project leaders
- Be more pragmatic on the expected impact of project outcomes
- Overlap WP/JRP/JIP also towards MS
- Outside One Health EJP
- Overlap of activities (too many inventories) with other established bodies/network /project

HOW:

- Financial issue especially for some MS
- Non optimal vision of the One Health EJP: not taking up the challenge

2.2.4 Other issues

1. The administration costs are too high and not targeted to supporting project leaders
2. There is a reluctance to become project leaders due to the administrative burden
3. Contact persons of the European Stakeholders should be informed pro-actively by the projects. Currently not all work package leaders do reach out pro-actively
4. Improve the learning from public-private partnerships (engaging end-user interactions). Engaging with private sector (food businesses) (their knowledge and data(bases)) is a must
5. The alignment of national strategies and programmes at the trans-national level and coordination actors at the national level (ministries, funding agencies, etc.)
6. Importance of specifying the project deliveries: it is about 'One Health' then the project ought to focus on delivery of multi criteria decision making tools (integrated, multi-scale)



7. Importance of delivery of epidemiologic sound products and/or principles generalizable across MS, i.e. Not too specific for a few MS
8. Administrative burden
9. The MVN was borne as a network between researchers and institutions mainly dealing with food microbiological safety and foodborne diseases. The risk that this arrangement might tend to perpetuate itself without facilitating the opening to the new is something to take into consideration. Emerging zoonoses (not only foodborne) are one of the areas in which OH has been practiced for longer and with greater success and are an area in which to invest more. However, the challenges facing the future are much broader and more complex and go beyond the borders currently assigned to the One Health EJP (environmental sustainability of food production, risk / benefit assessment, environmental contamination and health impact, food safety / food security relationship, etc.)
10. Capability to capture fundings to continue the activities and implement the results in a long-term perspective. Five years is a short time for such a project, namely for those countries where the One Health concept is at early stages of implementation. A global vision of the situations and of infrastructures are needed in order to consider the Northern and the Southern countries' realities.
11. The funded topics are mainly related to control and diagnostic. It is difficult to perform fundamental research, which is, however, required to develop new control measures
12. Too many meetings
13. Increase or open the participation to different PMs. This selection should be performed at any future calls to better involve the research institution, which represents better the expertise included into the call. The current limitation in numbers will cause a serious detrimental effect in the excellence of participants since the evolution of the SRA
14. To enhance links with public health, maintenance of databases and infrastructures/protocols developed in integrative projects, to enhance open data
15. To boost collaboration with the industry

2.2.4.1 Theme Analysis

Keywords:

HOW:

- Too restricted vision and/or approach; too conservative expertise and consortium, need of much broader expertise to face with complexity of One Health paradigm
- Environmental sustainability
- Cost/benefit
- Health impact
- Food safety vs food security
- Different infrastructures available in MSs
- Better coordination with national and trans-national strategies (including database owner etc.)
- Decision making tools integrated multiscale (mutisector?)
- Need to capture funding to sustain the activities in the future

WHO:

- Public/Private: to engage the private sector and industry
- Increase the number of MS partners

WHAT

- Better involvement (proactive) of stakeholders
- Administrative burden
- Too many meetings

2.3 Opportunities

2.3.1 Are there new situations arising that the One Health EJP can take advantage of?

1. Cooperation outside the consortium – include other EU/associated countries and international organisations. Could be wise to have a separate budget to cover travel costs for possible experts that



are not in the consortium though would be willing to join project meetings and give feedback on the project implementation/research results

2. Protocols and recommendations used by EFSA and ECDC to improve surveillance, demonstrating the positive impact of One Health EJP
3. Renewal of AMR and foodborne zoonoses legislation provides scope for input by One Health EJP , e.g. gap analysis on new technologies required
4. Allow new/missing countries / organisations to get involved in the project
5. Rather recent situation: techniques and methods (WGS, big data methodology) open ways to progress toward a real One Health approach. Recent issues as imported diseases in EU (due to global warming for instance) or re-emergence of zoonotic disease are opportunities to apply the One Health EJP approach. In addition, “old issues” as antimicrobial resistance, zoonosis as Salmonella are still far from being resolved
6. AMR still is an important activity and One Health EJP needs to add to the intersector relation and collaboration, as added value on top of the research that is going on; many international initiatives can stimulate the One Health EJP: the global AMR R&D hub, tripartite (incl. its guidelines), the Danish ICARS initiative and EU/global projects like JAMRAI, JPIAMR, STAR-IDAZ
7. Climate change: include vector borne diseases
8. Risks of new foods such as insects
9. Big Data. The consortium is creating large volumes of data, we should develop a strategy for using this to best effect
10. Distance communications. The consortium should develop better ways of communicating between partners and ensure that training is given so that all can access and use these routes. Less frequent face-to-face meetings would have lower environmental impact
11. There are many. The awareness of living in a world that demographic development and technological advances have made smaller and smaller, along with the great challenges of sustainability, has brought out the need to address health problems - and especially prevention - through a holistic approach that looks at health in global terms. Concepts such as One World-One Health, One Health-One Medicine and Global Health have been developed. The One Health is being increasingly recognised as a paradigm and as systemic approach to health problems
12. Horizon Europe may offer new opportunities for the One Health EJP; however, details are not yet available.
13. The need of quick responses and integration of data in real time, using WGS and common shared databases
14. Yes, integration into new project calls and initiatives
15. Emerging threats due to climate change
16. New EU projects; global OH initiatives
17. Fast technology and science evolution
18. When thinking about what will follow- we need to consider what has changed since we put the One Health EJP bid in. From my perspective things like climate change have gone up the agenda. We should consider expanding into vector borne diseases. But maybe not all zoonoses- if we looked at avian influenza and tuberculosis I think it's too big
19. There is an increased emphasis on diets with less red meat- what does this mean from a One Health perspective?
20. We have made a lot of progress in moving WGS into routine use, and the analytical pipelines are developing. We need to be able to display these results and outcomes in a way which is accessible to clinicians- dashboards
21. There are also some validation issues
22. AMR continues
23. Should we be looking at phages? Or other alternative controls



24. We have projects looking at improved surveillance- I think there is something around linking animal demographic data and being able to control production diseases without antibiotics. (different interventions). This would need to have a production gain for producers to adopt
25. New EU model of partnership.
26. Not new but a possible future is Art 185
27. The New Horizon Europe Program
28. Missions scheme

2.3.1.1 Theme Analysis

Keywords:

WHO:

- Involve expertise currently not in the consortium and arrange for making it really available
- New/missing countries to enter in the One Health EJP consortium
- Cooperation outside the consortium: other MS, and international organisations
- EFSA/ECDC

WHAT:

- Context elements:
- Technical:
- WGS& other fast and high throuput technologies
- Big data & databases
- Drivers:
- Global warming
- (Re)-emergent threats
- Vector borne
- AMR, phages?
- New foods/Novel foods
- Sustainability, globalisation and impact (environmental?, production? Less red meat?)
- Other consortium and initiatives
- Demographics changes (human and animals)
- Policy
- Revision of legislation for AMR and food safety it's an opportunity for the One Health EJP JP

HOW:

- Partners communication and training
- Less face-to.face meetings (environment impact!)
- Sustainability:
- Horizon Europe
- Global One Health initiatives

2.3.2 Are there new gaps in the areas of competence of the One Health EJP that One Health EJP can fill?

1. Exploitation of routine whole genome sequencing and environmental projects
2. Sharing of data will be priority topic for one-health EJP as they adhere to Open Data policy.
3. One Health EJP should include more competence outside "health surveillance". Otherwise, One Health EJP projects may fail in proposing solutions
4. There should be more than 3 or 4 partners per country, if these also have reference tasks (problem: not possible in this EJP + that will make the management even more difficult)
5. Involvement of more social sciences in One Health approaches, they have true added value
6. Environmental/ecological impact and modelling
7. Influencing public policy, at national as well as EU level
8. Sustainability



9. Diversity and inclusion across the partner network
10. The design of models of good OH practices should be promoted
11. The identification of metrics able to support the measurement of OH initiatives
12. This is a strange question; if there are competency gaps within the One Health EJP then the One Health EJP is by definition not able to fill them. Not clear what is asked here
13. Give more relevance to the environmental health, including the climate changes
14. Yes, the One Health EJP should be more responsive and able to fund work on emergency investigation of new and emerging threats
15. One Health can be an abstract term; it is highly necessary to develop tools that can measure the success of a one health approach; this is largely lacking
16. Environmental research
17. SRA and prioritization of research areas need to be updated every 2-3 years, it implies resources and time. Not sure the current model could face with

2.3.2.1 Theme analysis

One respondent that considered the question as not-applicable was not included in further analysis

Keywords

HOW

Gap in technological skills (not clear if it is intended that One Health EJP has to fill in the gap):

- WGS
- Modelling
- Open data
- Need to Revise the Strategic Research Agenda and Prioritisation
- Need to measure the impact of OH initiatives
 - More responsiveness in emergency investigation of new and emerging threats
 - One Health EJP to influence public policy at National, EU

WHAT

- Define OH best practices
- Tool to measure the impact of OH initiatives
- Environmental research & climate change
- More competence outside health surveillance
- More social sciences
- Sustainability

WHO:

- More partners per country

2.3.3 Are there additional partnerships that might be fruitful?

1. New countries or institutions could be added: see the point one. There are very few countries from South-East Europe (there is no country from former Yugoslavia nor Greece or Cyprus)
2. Involve additional outreach to global industry stakeholders for joint activities. Current focus in Europe but extend to global One Health networks e.g. Canada and Brazil
3. Health issues often have environmental source or cause and socio-economic drivers. Such partnerships would be fruitful
4. Eastern countries, global partners (OIE, WHO, FAO)
5. Include more countries such as Israel, Swiss etc. Make the program (financially) attractive also for lower income countries
6. Yes, any that address the gaps listed above under 2
7. It would be very fruitful to involve the Network for Evaluation of One Health



8. Groups with specific experience in the ecology of infectious diseases would be profitably involved as well as groups with experience in wildlife zoonoses
9. Participation of MS that are not yet joining the consortium
10. The One Health EJP should collaborate with project(s) selected under the H2020 SC1-BHC-13-2019 “Mining big data for early detection of infectious disease threats driven by climate change and other factors” call
11. The participation of local/regional authorities, apart from national authorities
12. I think partnerships with industry would be beneficial
13. More extensive partnerships with universities would be helpful. Access to OHEJP seems to be too restrictive
14. New EU projects; global OH initiatives
15. It could be fruitful to introduce new partners (universities for example)
16. If we were going to look at interventions in animal or food production, we may want to have better links with industry. I'd suggest they are not full partners- but on particular projects
17. One Health partners outside Europe
18. The choice to expand the partnerships is to the PO (national funders) which could choose the best research actors for the calls. This could be part of the process to take the PO to participate more actively to the funding of the next calls
19. The Network should be opened to international collaboration .and new members

2.3.3.1 Theme analysis

Keywords:

- New countries
- South East Europe; including non-EU
- Stakeholders
- Industry
- Global partners (FAO/OIE/WHO)
- Other consortia
- Networks for evaluation of OH
- Other OH initiatives outside EU: Canada Brazil
- Mining big data for early detection of infectious disease
- University
- Strengthen partnership in/with:
- Environment
- Ecology
- Wildlife
- Socio-economic
- Local /regional authorities

2.3.4 Other points or aspects

1. National organisation/coordination (integrate in national research system)
2. Flexible funding mechanisms: engagement of private sector
3. Open data, transparency in methods and analysis. Room for improvement in (enhanced) data collection, management, and analyses
4. Food Borne Zoonoses (FBZ), AMR ... keep on being relevant for public health
5. Involvement of (new) stakeholders (industry, environment (i.e. wildlife community), WHO/OIE/FAO)
6. Creation of a virtual multicentric One Health institute
7. Referenced interaction with risk management operators



8. The expertise and networks established in Med-Vet-Net Association and One Health, to facilitate a broader participation of organisms of public research at national level on equal terms

Keywords:

- Reinforce partnership and engagement of:
- Risk managers (both public and private sector)
- Research system at national level
- Stakeholders:
- FAO/OIE/WHO
- Industry to fund OH research
- Environment and wildlife
- Priority topics:
 - AMR, FBZ
 - Improve networking: OH virtual institute

2.4 Threats

Table 2. Score for seriousness (1-3) and probability of occurrence (1-3) (scores 1-3 for seriousness: 1 less serious, 3 very serious, and 1-3 for probability of occurrence: 1 low probability, 3 high probability)

Rank	Description of the threat	Seriousness (1-3)	Probability of occurrence (1-3)
	Competitors that can provide better services	3	1
	Other priorities at EU/National/Institutional level far from the fields of competence of the One Health EJP	3	2
	Regulations or policies that can negatively affect the One Health EJP: GDPR	3	3
	Other (<i>please specify</i>)		
	Difficulties in managing EJP funding model with national funders and partners	3	3
	Differing national priorities and capabilities across the EU	1	2
	Inflexibility of finance model for involving other relevant partners and experts	1	1
	BREXIT and loss or less optimal contribution of partners/expertise/knowledge (e.g. Surrey - APHA)	1	2
	Competitors that can provide better services	1	1
	Other priorities at EU/national/institutional level far from the fields of competence of the One Health EJP	3	3
	Regulations or policies that can negatively affect the One Health EJP	1	1
	Competitors that can provide better services	2	1
	Other priorities at EU/national/institutional level far from the fields of competence of the One Health EJP	2	2
	Regulations or policies that can negatively affect the One Health EJP	1	1
	Other priorities at EU/national/institutional level far from the fields of competence of the One Health EJP	3 (Nationally, but also EU/Inst)	3 (Nationally, but also EU/Inst)
	Fear of One Health EJP doing things that are allocated to specific stakeholders or may affect them (EFSA/ECDC)	2	2



	Competitors that can provide better services	2	1
	Other priorities at EU level far from the fields of competence of the One Health EJP	3	2
	Other - BREXIT	2	3
	Competitors that can provide better services. Competitors from the academy can be potential competitors of the One Health EJP. This might be true in particular for research. A reflection should be made by the One Health EJP management in order to identify and engage (even as external participant) specific expert groups	2	2
	Other priorities at EU/National/Institutional level far from the fields of competence of the One Health EJP. It is in the definition that One Health EJP is not aimed at addressing all the aspects of OH, but specifically, those related to foodborne zoonoses, antimicrobial resistance and emerging threats. If it is true, it is to be strongly hoped that other initiative at European level will address other crucial and emerging aspects of OH (i.e. the sustainability of food production, the relationship between health and environmental chemical contamination, the relationship between food safety and food security, etc.)	3	3
	Regulations or policies that can negatively affect the One Health EJP. I am not aware of Regulations that can negatively affect the One Health EJP. However, Regulations and policies do not promote the One Health. Usually, national and international regulations are sectorial and the human and veterinary sectors are obviously separated. However, important examples of integration have been made in the years by EFSA and ECDC for zoonoses or by ECDC, EFSA and EMA for antimicrobial resistance. Unfortunately, these experiences do not have corresponding at national level in each Member State, showing gaps in the regulations. Moreover, the integration is made only at the end of the process with the integration of data and not in design of surveillance and in the way the data are produced	3	3
	One Health should have institutional and "political" governance. As long as it remains an integration effort between different scientific sectors and not a structuralized condition, it is difficult that the efforts spent by the scientific community alone, will be able to grant the One Health the necessary success and long-term sustainability	3	3
	Competitors that can provide better services Comment: Since it's not clear what services the One Health EJP are planning to offer, assessing the impact of that happening is next to impossible	2	2
	Other priorities at EU/national/institutional level far from the fields of competence of the One Health EJP Comment: A change in priorities at either EU, national or institutional level would have a negative impact on the One Health EJP, but the impact can vary greatly depending on at which level the change occurs. It's not clear what is meant by "far from the fields of competence", but a possible scenario is that the national bodies prioritize other work over One Health-related work. This would certainly negatively impact the One Health EJP	3	2
	Regulations or policies that can negatively affect the One Health	2	1



	EJP (<i>please specify</i>) Comment: The European Commission have not yet published exactly which funding mechanisms will be available for Horizon Europe. It remains to be seen whether the EJP funding mechanism will be retained in its current form		
3	Competitors that can provide better services	2	2
1	Other priorities at National level far from the fields of competence of the One Health EJP	3	3
2	Regulations or policies that can negatively affect the One Health EJP, namely lack of clear guidelines	3	2
3	Competitors that can provide better services	2	1
4	Other priorities at EU/national/institutional level	2	1
5	Regulations or policies that can negatively affect the One Health EJP	2	1
2	BREXIT	2	2
1	Issue with data sharing	3	3
	Competitors that can provide better services	3	3
	Other priorities at EU/national/institutional level (<i>please leave only what you consider the MOST important and delete the other two</i>) far from the fields of competence of the One Health EJP	2	2
	Regulations or policies that can negatively affect the One Health EJP (<i>please specify</i>)	2	2
	Competitors that can provide better services	2	2
	Other priorities at EU/national/institutional level (<i>please leave only what you consider the MOST important and delete the other two</i>) far from the fields of competence of the One Health EJP	3	1
	Regulations or policies that can negatively affect the One Health EJP (<i>please specify</i>)	1	1
	Competitors that can provide better services	2	2
	Other priorities at national level (<i>please leave only what you consider the MOST important and delete the other two</i>) far from the fields of competence of the One Health EJP	2	1
	Regulations or policies that can negatively affect the One Health EJP (<i>Open access vs. Privacy legislation, especially for genomic data</i>)	3	2
	Technology and scientific knowledge evolve very fast. Difficult for limited resource projects to keep pace	1	3
	Competitors that can provide better services	2	2
	Other priorities at EU level (<i>please leave only what you consider the MOST important and delete the other two</i>) far from the fields of competence of the One Health EJP	3	1
	Regulations or policies that can negatively affect the One Health EJP (<i>please specify</i>) Administrative rules (DMP, ethics)	2	3
	Lack of money for the long-term research	3	3
	EC/MSs do not endorse the consortium		
	Competitors that can provide better services		



	Competitors that can provide better services	3	1
	Other priorities at national level far from the fields of competence of the One Health EJP If we have a major disease outbreak this could be 3	3	2
	Regulations or policies that can negatively affect the One Health EJP We need to be able to share data and material easily. GDPR; BREXIT - if UK cant move material (or indeed be part of the follow on projects	2	2
	Other (<i>please specify</i>)		
	The funding model-many countries have struggled to obtain matched funding and it have eliminated one partner. If we can't sort this out- we will not maintain the coverage we have	3	3
	Competitors that can provide better services	2	3
	Other priorities at EU/national/institutional level (<i>please leave only what you consider the MOST important and delete the other two</i>) far from the fields of competence of the One Health EJP	1	2
	Regulations or policies that can negatively affect the One Health EJP (<i>please specify</i>)	1	2
2	Competitors that can provide better services	2	2
1	Other priorities at EU/national/institutional level (<i>please leave only what you consider the MOST important and delete the other two</i>) far from the fields of competence of the One Health EJP	3	3
3	Regulations or policies that can negatively affect the One Health EJP (<i>please specify</i>)	1	1
	Competitors that can provide better services	2	2
	Other priorities at EU/national/institutional level (<i>please leave only what you consider the MOST important and delete the other two</i>) far from the fields of competence of the One Health EJP Commitments in relation to climate change	2	1
	Regulations or policies that can negatively affect the One Health EJP (<i>please specify</i>) Restrictions in animal production	2	1



2.4.1 Scoring of possible threats, by items

2.4.1.1 Competitors that can provide better services

		Probability		
		low	medium	high
Competitor				
seriousness	low	1	0	0
	medium	3	8	1
	high	2	0	1

Comment: no specific comments except the need to find how to best engage expertise from the academy

2.4.1.2 Other priorities far from the fields of competence of the One Health EJP

		Probability		
		low	medium	high
Priority				
seriousness	low		1	
	medium	3	3	
	high	2	4	5

At what level ?

EU/national/institutional	8
National	3
EU	2
EU>>national>>institutional	1
National>>EU/institutional	1
Divergent national/EU priorities	1

Comments:

Duplication: fear of One Health EJP doing things that are allocated to specific stakeholders or may affect them (EFSA/ECDC)

Vision: It is in the definition that One Health EJP is not aimed at addressing all the aspects of OH, but specifically, those related to foodborne zoonoses, antimicrobial resistance and emerging threats. If this is true, it is to be strongly hoped that other initiatives at European level will address other crucial and emerging aspects of OH (i.e. the sustainability of food production, the relationship between health and environmental chemical contamination, the relationship between food safety and food security, etc).

2.4.1.3 Regulations or policies that can negatively affect the One Health EJP

		Probability		
		low	medium	high
Regulation or policy				
Seriousness	low	4	1	1
	medium	3	2	1
	high		2	3

Comments:

Administrative/regulatory:

Open access vs GDPR (data sharing, genomics)

Divergences in national vs EU priorities

Lack of political will: One Health should have an institutional and "political" governance. As long as it remains an integration effort between different scientific sectors and not a structuralised condition, it is



difficult that the efforts spent by the scientific community alone, will be able to grant the One Health the necessary success and long-term sustainability.

Scientific and technological advancement: Technology and scientific knowledge evolve very fast. Difficult for limited resource projects to keep pace.

2.4.1.4 Other issues

Other		Probability		
		low	medium	high
Seriousness	low	1	2	
	medium		1	1
	high			4

Comments:

- *Structural to One Health EJP:*
 - Since it's not clear what services that the One Health EJP are planning to offer, assessing the impact of that happening is next to impossible.
- *Administrative:*
 - *DMP*
 - *Ethics/ GDPR*
 - Data sharing
 - *Rules :*
 - Difficulties in managing EJP funding model with national funders and partners
 - Lack of flexibility in finance model for involving other relevant partners and experts
- *Political:*
 - BREXIT
- *Funding*
 - Lack of money for long term research
 - EC/MSs do not endorse the consortium
 - *Co-funding:* The funding model-many countries have struggled to obtain matched funding and it have eliminated one partner. If we can't sort this out- we will not maintain the coverage we have
- *Other priority and context issues*
 - Commitments in relation to Climate change
 - Restrictions in animal production

2.5 Recommendations to the coordination for the future of the One Health EJP

1. Rate institutions according to level of collaboration within different projects so this value gets attention.
2. Some partners / task leaders forget that One Health EJP is a cooperative project. We have experienced that some partners do not delegate tasks in order to implement them together. Many times, we have to follow up with the project leaders the planning and implementation of tasks that should be communicated to us on frequent basis (COHESIVE). We recommend better follow up of the project from the OHEJP leaders and ensure inclusiveness of all partners.
3. Define clearly and realistically what the added value is, what the overall project and its many activities should deliver, measure it, and deliver.
4. Focus on activities that really have an integrative power.
5. Continue! Look for ways to extend the consortium, if possible, with EU financial support.
6. International network is extremely important in this area of One Health. But make sure there is a good balance of countries and human-veterinary medicine (in persons).



7. Emphasize the huge investment in time and money that has allowed the One Health EJP to achieve the success it has.
8. Closer central coordination of the projects, with mandatory use of infrastructure and terminology developed as part of other One Health EJP projects whenever relevant.
9. Pinpoint the issues that need to be uniform at a global scale, and the ones that will depend upon the country particularities and can be flexible.
10. Create opportunities to make feasible the continuity and running of this consortium, so it won't be an isolate event without further developments and landmarks.
11. Create at a global level a societal responsibility for prevention, surveillance and preparedness to respond to menaces.
12. Implementation of GDPR in 2018 caused serious delays in the MOMIR project. The project description has been too ambitious at the beginning and needed to be adjusted in order to be more realistic in relation to the budget and the timeline. We recommend that new EU regulations that can lead to risks for the project are taken into consideration with relation to funding and approval of project changes from the One Health EJP leaders.
13. Move from inventory-based activities to visionary activities on how to achieve One-Health in Europe, for which political commitment is needed in the One Health EJP (several ministries are required for sustainable programmes) and where the regional/sectorial organisation at ministerial/funding level may be in contrast with culture of research communities.
14. Open to partners in the field of environment and human science.
15. Include vector-borne diseases (and the relevant stakeholders in wildlife, entomology, climate).
16. Better develop the capacity of the One Health EJP to be able to talk to governments and EU policy-makers in order for science to lead on food safety and sustainability.
17. The One Health EJP should produce a first draft within the very near future on what systems, infrastructure, tools and/or processes it considers should be maintained post- One Health EJP.
18. Unnecessary overlap with relation to glossaries in ORION, NOVA and COHESIVE projects. There is a risk of double work and a need for better coordination among task leaders.
19. Avoid duplication. Make all work package leaders pro-actively engage in communication with the stakeholders.
20. Consider more long term, and more scientifically risky, research topics.
21. Involve social sciences.
22. Consider the expansion of the collaborative network to include more expertise in environmental and ecological impacts.
23. The One Health EJP sustainability work needs to include the demonstrated practical impact(s) of the current One Health EJP activities on national and/or EU One Health activities.
24. Improve the management of the scientific projects and their outputs.
25. Ensure that clear data sharing plans are in place.
26. Ensure that funding is used to facilitate collaboration with other networks.
27. Participation of countries and institutes should be supported – especially for countries where refunding is problematic. A solution for this problem should be found.
28. Reduction of level of bureaucracy; the funding mechanisms is already minimal so a large amount of time spent on bureaucracy will create apathy among participants and a lack of enthusiasm.
29. Develop methods to actual measure the success of the One Health approach.
30. Administrative and reporting load is too high for short internal projects with limited resources.
31. Take actions to have clear agreements of mutual support with most relevant parallel efforts (e.g. COMPARE).
32. Strengthen PH institutes participation.
33. Enroll environmental experts.



34. Involvement of other MSs.
35. Retain a network based on reference laboratories in the human, animal health and food sectors.
36. Consider adding vector-borne disease to the scope.
37. Retain an One Health EJP like partnership- where we have more control. I don't think a federated virtual institute would be acceptable to Ministries in UK.
38. The next proposal needs to show evolution. So integrative projects should share knowledge developed in current research.
39. We should write some impact narratives- to show the benefit of some of the approaches. This may be something which has been introduced successfully in one country and we want to spread it
40. Decrease the management.
41. Decrease administrative activities.
42. Decrease the number of emails circulated.
43. Expand partnerships of PMs and try to attract new PO.
44. Consolidate in a new EU partnership model.
45. Major mutual knowledge among partners and research community (Med/Vet). Major involvement of PO to allow the passage to an active involvement into the funding process (real common pot).
46. To include partners from other Member States and non-European countries.
47. To enhance the links with public health and food security.
48. More inclusive approach regarding the participation of organisms of public research.

2.5.1 Comments on recommendations

Inside the One Health EJP Current activities:

- Increase mutual knowledge among partners and research community
- Expand partnerships of PMs and try to attract new PO
- Major involvement of PO to facilitate an active involvement into the funding process
- Strengthen coordination of the OHEJP and JP
- Clear data sharing plans are in place, go on implementing
- Improve management of the scientific projects and their outputs
- Decrease the administrative management burden
- Decrease the email flow
- Every WP leaders (if relevant) should be pro-active in engaging communication with stakeholders
- Improve networking, collaboration and inclusiveness
- Poor co-funding capacity for some countries should be solved

*Last but, surely **not least for sustainability***

- Strengthen evaluation and measurement, in order to describe practical impact(s) of One Health EJP activities
- Evaluate and avoid redundancies
- Measure activities and focus on integrative ones (those sharing and exploiting knowledge developed by research)
- Evaluate (and prioritize) systems, infrastructure, tools and/or processes that should be maintained post- One Health EJP

2.6 Synthesis of the SWOT analysis

Due to the limited number of responders and the response rate, the results of the SWOT can provide only a partial picture. Nevertheless, the responses were sharp and detailed, and the outcomes represent a useful indication. Therefore, the outcomes of the SWOT analysis need to be followed up by future activities by WP7 as well as other WPs of the One Health EJP. This section presents a synthetic analysis of the outcomes in order to provide a first set of indications.

Strengths and opportunities.



Whereas the identification of relevant themes has been lengthy due to some redundancy, respondents have clearly and sharply identified clusters of strengths and related opportunities:

One health implementation through collaboration across sectors.

The One Health EJP develops solid international collaboration opportunities between researchers.

The One Health EJP offers a multidisciplinary base for construction of consortia for participation in other calls.

Training opportunities, implementing dissemination in the broader sense.

Last but not least, the One Health EJP produces capacity building on One Health

To summarize, the establishment and activity of an EJP consortium on One Health is generally perceived as a winning strategy. The strengths and related opportunities, therefore, must be taken into account for envisaging strategies for the sustainability beyond the due EJP term.

2.6.1 Weaknesses and threats.

A critical overview of weaknesses and related threats is of high interest and relevance for the One Health EJP sustainability. Beyond the already mentioned redundancies, the major weakness clusters (which can also become threats) are:

2.6.1.1 Related to the One Health EJP conceptual framework:

1. Imbalance towards animal health and food safety with respect to the human health sector

Comment. This is a usual problem with OH initiatives. The involvement of the medical expertise is important, but still lagging behind. A strong effort should be devoted to fill this gap for any future concept of the One Health EJP to be successful. Also applies to the following point.

2. Lack of the “environment” component and “ecological/complex” approach. Poor consideration of specific overarching drivers such as climate change.

Comment: environmental issues are increasingly present -albeit still to a limited extent- in several One Health EJP, such as PhD projects. What is still missing is a consistent vision of “environment” with the goals and conceptual frame of the One Health EJP. Such vision can be particularly relevant in regard of such topics as emerging threats (early warnings, comprehensive surveillance systems) or AMR (risk assessment).

3. Lack of effective stakeholder involvement. In particular the agencies have so far (time of SWOT) only been “assisting” the activities, but their actual contribution has been very limited, definitely less than foreseen when the One Health EJP was planned.

Comment: this issue needs to be further elaborated. As it is critical for EJP long-term sustainability. A step forward can be to distinguish:

3.a) non optimal approach to the involvement of One Health EJP institutional stakeholders with regard to specific activities, including both projects and training

3.b) lack of effective involvement for other stakeholders. An overall strategy/governance of such involvement within the One Health EJP is needed

4. Lack of measurement of the added value/products/deliverable of the One Health EJP consortium and non-optimal interaction with One Health EJP project owners at national level

Comment the lack of understanding by project owners of the added value of the One Health EJP products and networking is a critical issue for financial sustainability and commitment

2.6.1.2 Related to the management of the One Health EJP

1. The administrative superstructure that makes it difficult to use resources

Comment: whereas the complex and cumbersome administrative structure is mainly inherent to the EJPs in general as envisaged in H2020, it should not be overlooked that this is perceived as a problem by many respondents. The lack of flexibility of the administrative procedures within the consortium might also contribute to the deficient stakeholder involvement. Thus, an effort to reduce its impact is definitely worthwhile, also because it influences the following point.

2. Difficult co-ordination, notwithstanding the strenuous efforts by the individuals in charge. Consequences: too many structures, with difficult and lengthy decision-making and managing of internal calls.



Comment: The latter point (management of the internal calls) may have been caused, at least partially, by the large overlaps between the actions taken by different projects funded internally. This aspect should not be overlooked, as it represents a weak link of the strong scaffold of the One Health EJP and is perceived as a problem by many respondents. Thus, a streamlining of the structure has to be considered.

3. Getting more comprehensive at EU level; and get a more global breath

Comment: Greater involvement and participation of EU countries involves dealing with the co-funding issue but is of evident importance for the long-term sustainability of the OHEJP. The more global approach for a EU-targeted project could target primarily the acceding/neighbouring countries and pivot on training activities.

4. The main threats, actually, stem from the weaknesses of the One Health EJP if they are not be adequately addressed. In addition, there is a widespread awareness that BREXIT would be a risk and a rather serious one (grade 2-3). Other threats are definitely less likely: the possibility of real competitors on the One Health EJP topics is low. On the other hand, a closer connection with project owners is required in order to maintain the focus on the One Health EJP topics, because these could be challenged by other priorities.

Comment. Indeed, the rampaging COVID-19 (appeared after the SWOT) could boost the attention toward a OH approach to emerging infectious threats. Of course, to exploit this opportunity a fast and effective EJP response is needed.

Part II

Stakeholder mapping

Interactions with the stakeholders is curated by WP5. A description of the stakeholder categories is presented in [D5.1](#), a deliverable published at the beginning of the One Health EJP. A list of stakeholders is shown in Table 1 of D5.1. Established stakeholders of the One Health EJP now include EU stakeholders (ECDC, EFSA, EEA, EMA), international stakeholders (FAO, OIE, WHO-Euro), and other EU-funded One Health activities (e.g. JPI-AMR). These stakeholders are member of the One Health EJP Stakeholders' Committee, a committee which meets regularly and with dedicated points of contacts with the One Health EJP.

Key EU stakeholders are ECDC and EFSA: those with a clear link to One Health EJP activities at a level relevant for One Health EJP objectives. These agencies have been deeply involved from the early stage of the One Health EJP, for example in shaping internal scientific calls, and a number of bilateral collaborations exist between projects and ECDC and EFSA. ECDC and EFSA have been from the beginning part of the Stakeholders' Committee.

National stakeholders are also represented in One Health EJP committees (e.g. line ministries in the Programme Owners Committee, CEOs of the partner institutes in the Programme Managers Committee). In addition, mirror groups are set up in some partner countries to facilitate the science-policy interface.

During the course of the One Health EJP, some stakeholders were identified for being increasingly relevant based on evolving policy needs (e.g. growing attention to the environmental side of One Health). Documents were published to highlight the relation between stakeholders' needs and One Health EJP expertise – for [EEA](#), [EMA](#), and [FAO/OIE/WHO](#) – which led to the agencies joining the Stakeholders Committee.

The One Health EJP is kept up to date with evolving needs of the stakeholders by a number of WP5 activities. One of such activities is the regular scanning of stakeholders' documents. Key activities and documents issued by the stakeholders have been scanned and documented throughout the course of the One Health EJP. WP7 has used the information in these reports for the preparation of for example the SRIA.



Part III

Analysis of outcomes of the OHEJP likely to be utilised by stakeholders also beyond the EJP

An objective of the One Health EJP was to ensure that the EJP main scientific outputs, protocols, databases, and other strategic integration activities will be sustainable beyond the lifetime of the project. To address this objective, WP7 worked together with WP1, WP3, WP4 and WP5 in collaboration with the project leaders to produce a list of outcomes resulting from One Health EJP JIP and JRP that will address some of the needs of principal stakeholders, namely, ECDC, EFSA, DG-HEALTH and DG-AGRI. This list of outcomes describes protocols, databases and other tools and solutions expected to contribute to the work of not only the 4 named stakeholders, but also others. The list is presented in the table below. Whenever available, links to the source of the outcome is given.

Table 3. Selection of outcomes of the One Health EJP intended to be utilised by stakeholders

JIP	Integrative Strategy Matrix	JRP		
		Foodborne Zoonoses	AMR	Emerging Threats
<p><u>MATRIX: Solutions for European countries to support and to advance the implementation of One Health Surveillance (OHS)</u> including an evaluation tool of OHS capacities and capabilities, a roadmap to advance OHS and a manual for OHS dashboards. Primarily intended for European countries but also relevant to the OHEJP stakeholders e.g. to facilitate evaluation activities across countries and/or hazards.</p> <p><u>COHESIVE:</u> Gathered information on factors enhance or hinder exchange of signals. Pathway analysis of detection of outbreaks. Foresight prediction of risks horizon scanning and therefore for designing and implementing surveillance activities.</p>	<p>Design and implementation of surveillance activities</p>	<p><u>AIR-SAMPLE: The use of air filters to detect <i>Campylobacter</i> in broiler houses and publications</u></p> <p><u>NOVA:</u> Code to model disease spread and explore disease surveillance options. Generalised modelling framework that allows assessment of spatial risk and disease introduction from wildlife.</p>		
<p><u>OH-HARMOINY-CAP:</u> OHLabCap. Tool to collect information on capabilities, capacities and interoperability at the National Reference Laboratory (NRL) and the primary diagnostic level focusing on six high priority bacteria, ten high priority parasites and AMR for <i>Salmonella</i> and <i>Campylobacter</i>.</p>	<p>Laboratory methods</p>	<p><u>METASTAVA. Guidelines</u> for informed implementation of high throughput sequence based metagenomics (mNGS) methodologies in a diagnostic context</p> <p><u>TOXOSOURCES: Harmonised and validated method</u> (see also here) for</p>	<p><u>IMPART: Results</u> of a multicentre evaluation study will be used as input for the EURL-AR to update/improve their protocol for detection of ESBL/AmpC and carbapenemase-producing</p>	<p><u>TOX-Detect:</u> database of protein profiles (MALDI-ToF spectra library) of food-borne toxogenic bacteria like <i>Staphylococcus</i> spp., <i>Bacillus</i> spp. and <i>Clostridium</i> spp. Available at ANSES and the EURL for Staphylococci. It is not possible</p>



JIP	Integrative Strategy Matrix	JRP		
		Foodborne Zoonoses	AMR	Emerging Threats
		<p>detecting <i>Toxoplasma gondii</i> contamination in fresh produce. Novel <i>Toxoplasma gondii</i> genotyping method for European needs. Method development (see also here) for stage-specific <i>Toxoplasma gondii</i> serology. Publication</p>	<p>Enterobacteriales from caecal samples and meat. New ECOFFs of veterinary antibiotics for <i>Staphylococcus hyicus</i>, <i>Pasteurella multocida</i> and <i>Mannheimia haemolytica</i></p> <p>FARMED: A shotgun metagenomics approach to detect and characterise unauthorised genetically modified microorganisms in microbial fermentation. Long-read metagenomics approach to characterise microbiome and identify abundant AMR genes</p> <p>WORLDCOM: Novel rapid experimental and bioinformatic methods to predict and detect AMR from microbial samples and genomic sequences</p> <p>MedVetklebs: The ZKIR Assay, a Real-Time PCR method for the detection of <i>Klebsiella pneumoniae</i> and closely related species in environmental samples.</p>	<p>to make it available on open access because this library can be used by a private manufacturer.</p> <p>MAD-Vir: Metagenomics PanVirus microarray</p> <p>TELE-Vir: Field-deployable point-of-evidence (poi) toolbox for identification and characterization of emerging virus threats for human and/or domestic and wild animals. Based on DNA and RNA metagenomic sequencing using a MinION device (Oxford Nanopore Technologies).</p> <p>IDEMBRU: Toolbox to ensure rapid detection, identification and characterisation of emerging <i>Brucella</i> species and reservoirs</p> <p>MEEmE: Standardisation of existing parasitological and molecular methods, development of new molecular tools, and production of epidemiological data on the presence of <i>Echinococcus multilocularis/granulosus</i> in the food chain</p> <p>PARADISE: Novel genotyping schemes and innovative</p>



JIP	Integrative Strategy Matrix	JRP		
		Foodborne Zoonoses	AMR	Emerging Threats
				detection strategies applicable to food matrices for <i>Cryptosporidium</i> and <i>Giardia</i> . Optimization of workflows for the analysis of genomics and metagenomics datasets
<p>CARE: EUROpanelOH. A reference database of strains and genomes for effective quality control analysis in food safety and public health protection across sectors</p>	<p>Reference material and data</p>	<p>LISTADAPT: Algorithm for selecting strains based on metadata information to explore the diversity of strains circulating in a country</p>	<p>ARDIG: A collection of ~500 <i>E. coli</i> genomes that can be used as reference material for validating AMR genotypes in future.</p>	
<p>ORION: One Health Surveillance Codex. High-level framework for understanding and information exchange between One Health Surveillance sectors, a requisite for integrated One Health Surveillance data analyses</p> <p>COVRIN: Models for risk assessment of SARS-CoV-2.</p> <p>COHESIVE: The COHESIVE Information System (CIS) to store and analyse WGS data and related metadata of pathogens from different organizations of a Country. Specially designed to allow different organizations share data, evaluate integration of the systems and the possibility to provide EU harmonized output (demo)</p>	<p>Interpretation of surveillance data</p>	<p>ADONIS: Multiple-criteria decision analysis (MCDA) model to determine the main determinants that may explain the trend in the incidence of human <i>S. Enteritidis</i> infections and interventions expected to have the largest impact on decreasing the incidence of human <i>S. Enteritidis</i> infections</p> <p>BeONE: Integrated surveillance dashboard in which molecular and epidemiological data for foodborne pathogens can be interactively analysed, visualised and interpreted by the relevant experts across disciplines and sectors</p> <p>DISCoVeR: Models and methods for attributing human foodborne infections (<i>Salmonella</i>, <i>Campylobacter</i>, STEC, and AMR) to animal, food and environmental sources.</p>	<p>ARDIG: Comparability between AMU and AMR national surveillance data and recommendations to improve AMR surveillance to enable comparison between different sectors</p> <p>FULL-FORCE: Integrating data on plasmid structure and variability into the surveillance of drug-resistant organisms, with focus on IncK, IncI1 and IncHI2 plasmids from <i>E. coli</i>, and the pESI megaplasmid from <i>Salmonella</i> Infantis.</p>	



JIP	Integrative Strategy Matrix	JRP		
		Foodborne Zoonoses	AMR	Emerging Threats
		<p>TOXOSOURCES: Methods to evaluate the relative contributions of the different sources of <i>T. gondii</i> infection.</p> <p>MedVetklebs: High Prevalence of <i>Klebsiella Pneumoniae</i> in European Food Products: A Multicentric study (see also here) comparing culture and molecular detection methods</p>		
<p>COHESIVE: One Health Risk Analysis System (also available here) for zoonoses (OHRAS). Guidelines to set up or strengthen One Health collaboration in risk analysis of zoonoses including AMR</p> <p>COHESIVE: FoodChain-Lab web application, joint output of COHESIVE and EFSA projects helps tracing suspicious food items along complex global supply chains during foodborne incidents. FoodChain-Lab Web unifies visualisation, analysis and reporting of tracing data collected from several actors in one modular framework. It is applied by several Member States, EFSA and US FDA and is included in the Tripartite SISOT toolbox.</p> <p>COHESIVE: The shiny Risk application to support probabilistic quantitative risk assessments. Provision of a rich state-of-the-art toolbox. Shiny Risk is part of the European Food Risk Assessment Training Programme (EU-FORA).</p> <p>COHESIVE: The decision-support tool helps risk assessors choose approaches. Facilitates improved understandings of different risk assessment methods</p>	<p>Cross-sector communication of data</p>	<p>BIOPIGEE: Education, interchange and training activities through information material, websites and workshops</p> <p>NOVA: Models for the combination and analysis of data from multiple information sources for One Health syndromic surveillance systems. Description and conclusions about data access, opportunities, and barriers in surveillance of foodborne zoonoses.</p>	<p>FULL-FORCE: Tool box for Single Molecule Real Time sequencing, aimed at the integration of mobile genetic elements typing in One Health AMR surveillance</p> <p>FED-AMR: Analysis of more than 500 samples from different European regions over a one year crop-growing season from 11 different ecological compartments, provides new and detailed information about the role of exDNA as an AMR source, microbial- and antimicrobial resistance genes diversity, and interactions and factors influencing emergence and spread of AMR and resistant microorganisms in an agricultural environment.</p>	



JIP	Integrative Strategy Matrix	JRP		
		Foodborne Zoonoses	AMR	Emerging Threats
<p>for practitioners new to risk assessment or to its applications in One Health.</p> <p>ORION: One Health EJP Glossary, the One Health Linked Data Toolbox and the Health Surveillance Ontology (HSO) . The OHEJP Glossary includes core terminology relevant for the three domains: Animal Health, Food and Public Health. The solutions promote specifically data interoperability to improve data FAIRness (Findability, Accessibility, Interoperability and Reusability).</p>			<p>The findings will be analysed and critically scrutinised in the light of a systematic evidence map and mechanistic models currently conducted to identify critical control points for intervention and reduction of AMR spread and public health risks.</p> <p>RaDAR: Modelling methodology to for AMR specific source attribution, disease burden and risk assessment</p>	
<p>COHESIVE: Systematic review on economic analysis of food-borne zoonoses. Facilitates improved understanding of economic analysis in One Health and helps practitioners apply similar approaches to future investment appraisals of activities against the spread of foodborne zoonoses.</p>	<p>Action (prevention & response)</p>	<p>MoMIR-PPC: Overview of preventive and control measures against Salmonella at the poultry primary production level. Development and characterization of prebiotics (Alperujo) and probiotics able to prevent <i>Salmonella</i> colonisation in pig and chicken. Identification of risk factors associated with prolonged convalescent <i>Salmonella</i> shedding in humans.</p> <p>BIOPIGEE: Catalogue of effective biosecurity measures for the control of Salmonella and HEV in primary pig production and abattoir, a support tool for primary production and a guidance document for abattoirs</p>		