



**D6.12 Report on the Fourth
One Health EJP Summer School
(Y4)**

WP6: Education and Training

Responsible Partner: UoS (P23)



GENERAL INFORMATION

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	WP 3 <input checked="" type="checkbox"/>		
	OHEJP WP 4 <input checked="" type="checkbox"/>	OHEJP WP 5 <input checked="" type="checkbox"/>	OHEJP
	WP 6 <input checked="" type="checkbox"/>		
	OHEJP WP 7 <input checked="" 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 checked="" type="checkbox"/>		
	EFSA <input checked="" type="checkbox"/> ECDC <input checked="" type="checkbox"/> EEA <input checked="" type="checkbox"/> EMA <input checked="" type="checkbox"/> FAO <input checked="" type="checkbox"/> WHO-EU <input checked="" type="checkbox"/> OIE <input checked="" type="checkbox"/>		
	Other international stakeholder(s):		
	Social Media:		
<p>Other recipient(s): Subscribers to OHEJP Education and Training monthly bulletin</p>			

Contents

Introduction.....	5
Theme and Overview.....	6
Aims and Objectives	6
Virtual Format	7
Programme Structure	8
Experts and Speakers.....	8
Working Group Tutors	9
Logistical arrangements	9
Promotional Campaign	10
Applications and selection procedure	11
Delegates	11
Course Evaluation	12
Certificates of Attendance	13
Post-event communications	13
Blog Post	13
Highlights video	14
Testimonials	14
Photos.....	14
Internal Events Survey information	16
Annex 1: “Save the Date” Promotional Flyer	17
Annex 2: Full Promotional Flyer	18
Annex 3: Event Programme	20

Introduction

The One Health EJP (OHEJP) Summer School "*Environmental issues in One Health: from risk assessment to surveillance*" was held from 26th July to 6th August 2021.

The event was designed to meet the need to duly consider environmental factors in One Health (OH). Indeed, the environment needs recognition as a separate pillar of OH in the training of young scientists: the multifaceted aspects of environmental issues need to be illustrated and discussed regarding risk assessment, the roles of factors related to natural and human created ecosystems as well as the relationship between OH and sustainability.

This Summer School was organised by the Local Organising team at the Istituto Superiore di Sanità (ISS) in Roma – Italy, led by Umberto Agrimi (Director of the Dept of Food safety, Nutrition and Veterinary public health) and Alberto Mantovani (research director at the same Department). The event was organised and performed in collaboration with CeRSAG (Regional Centre for Global Health) in Orvieto-Italy, Istituto Zooprofilattico of Lazio and Toscana in Roma, Italy and the OHEJP Work Package 6 (WP6) team and Communications team based at the University of Surrey, UK.

The event was originally planned as a face-to-face event; however, the COVID-19 pandemic resulted in many challenges, including the restrictions on global travel and the need to ensure the safety of those attending. In addition, the strong and effective management of the pandemic placed severe limitations on all scientific meetings on-site. Consequently, the programme was adapted to fit an online format while maintaining a high-standard and its foreseen two-week duration.

The robust ISS structure ensured a secure and stable hosting internet connection to delegates, lecturers, chairs and tutors. The quality of different internet connections and bandwidths obviously varied depending on locations and IT facilities of participants; nevertheless, the connection framework ensured the participation of people located in Europe, Africa, Asia and North America without any major problem.

An obvious shortcoming was the lack of social events; however, two virtual meetings were organised before the Summer School by the ISS tutor groups on Teams to facilitate the delegates meeting. This helped promote informal exchanges and interactions among the delegates, and especially within the Working Groups.

The event represented a major success as it provided the first international training initiative entirely devoted to environmental issues; besides novelty, other main achievements include the international and multidisciplinary composition of faculty and delegates, the active participation of delegates into the Working Groups and the

involvement of many OHEJP partners as well as OHEJP Stakeholders. The testimonials from the delegates provide telling evidence of the Summer School success.

Theme and Overview

The connection between human and animal health is now well recognised in the One Health field, however, the environment is often neglected. To understand and illustrate the role of environmental issues, the multi-faceted aspects of environmental health were discussed – for example, risk assessment, the role of the ecosystem and related factors, the role of natural and man-made factors, the farm as an environmental modifier, and the issue of sustainability.

Accordingly, the programme considered the following themes:

- Vision of environmental issues in OH and relationships with Global Health and risk assessment.
- Factors related to the natural environment (ecosystem, wildlife) in zoonoses and antimicrobial resistance (AMR).
- Factors related to the man-made environment (urban, farming) in zoonoses and AMR.
- The environment-farm interface (feed safety, circular economy, toxic pollutants).
- OH and public health actions (epidemiology, human nutrition, risk communication).
- OH, sustainability and food security.
- OH interactions with society, including risk communication and the role of citizen science.
- OH approaches and field activities on zoonoses, AMR and chemical pollutants
- The governance of OH.

Aims and Objectives

The aims of this Summer School were to understand and learn how:

- to operationalise a OH-based approach to environmental issues.
- to identify and assess the environmental aspects in OH-directed projects and activities.

Accordingly, the Summer School aimed to provide:

- A conceptual framework to understand and manage the complexity of OH challenges, supported by case studies.
- Approaches to identify and characterise environmental factors in OH-issues such as zoonoses and AMR and estimate their impacts.
- OH-based approaches to risk factors other than zoonoses and AMR, such as environmental pollutants, identifying similarities and differences with approaches toward biological hazards.

- Tools and models to implement OH-based approaches in activities related to risk assessment, epidemiology and surveillance.
- Concepts to support the interactions of OH with current major drivers including climate change, globalisation, circular economy.
- Last but not least, an overview of different, highly qualified viewpoints providing the delegates with lively discussion and a cutting-edge scenario.

Virtual Format

The decision to hold a virtual event was taken *force majeure*. Indeed, the event was originally planned as a face-to-face event; however, the COVID-19 pandemic brought many challenges, including the restrictions on global travel and the need to ensure safety of attending people. In addition, the strong and effective management of the pandemic placed severe limitations on all scientific meetings on-site.

Following an assessment of the situation in January 2021, the Local Organising team in agreement with WP6 informed that the training would be adapted to a virtual format.

In collaboration with IT service of the ISS, Microsoft Teams was selected as the virtual platform to host this event.

Individual meeting rooms were made available for:

- a) The plenary sessions
- b) The five Working Groups
- c) The exchange and interactions among delegates

In addition, all materials (pre-reading documents and lectures) were available in the Microsoft Teams platform for the delegates, faculty, tutors and chairs.

The organisers confidently claim that the overall organisation went smoothly, thanks also to the full commitment of all personnel involved.

Holding the event virtually presented some drawbacks related to the reduced interactions and informal contacts amongst all participants, hence reduced networking potential. Meanwhile some advantages need to be recognised. Firstly, the very possibility of the event: technology for holding a virtual meeting allowed the team to organise and hold this important and innovative OHEJP Summer School. The virtual format also resulted in a significant reduction in costs for travelling and accommodation, and an excellent consequence of this was that delegates from low- and mid-income countries could participate.

Programme Structure

Most lecturers provided at least one document for pre-reading, and these training resources contribute towards a positive legacy of the Summer School to the delegates for their future professional activities.

Two introductory sessions were organised by tutors one week ahead of the event to introduce delegates to each other and to familiarise with the use of Microsoft Teams.

The detailed structure of the programme is presented in Annex 3.

The programme was generally structured in the following format: lectures and discussions in the morning (with a coffee-break), followed by a lunch break. In the afternoons, delegates collaborated in their Working Groups, with the exception of day 5 and day 10 (plenary presentations of the Working Group outcomes) and day 8, where a plenary Workshop on Communication in One Health was delivered by the University of Surrey team. In addition, on days 1 and 2, before the start of the Working Groups, each delegate gave a short 3-minute presentation of their activities to facilitate networking.

Five Working Groups were organized on the following topics: a) aflatoxins and climate changes; b) West Nile virus, c) Shiga toxin-producing *Escherichia coli*; d) *Brucella canis*; e) mercury and methylmercury in fish. Throughout the Summer School, each Working Group was managed by two expert tutors. The aim of these afternoon sessions was to build a One Health approach to a given problem and discuss how to apply it to a situation in the real world. On the different topics, the activities followed the same general path: framing the problem, building a One Health-interdisciplinary team, assessing the problem, translating the science to policy, communication, surveillance. The tutors facilitated the discussion but left the delegates to be the real actors of the play and responsible of the outcome, that was finalised and presented on the last day.

Overall, the delegates enjoyed the opportunities offered throughout the Summer School to ask questions and contact lecturers. For some topics, such as risk communication and the interactions between human nutrition and OH, the discussion was especially lively and interactive, showing the successful involvement of delegates.

The post-event evaluation survey showed that the learning and training objectives were fully achieved: the comments ranged from favourable to enthusiastic.

Experts and Speakers

More than 50 scientists from all over the world were involved as lecturers and tutors, provided comprehensive multidisciplinary expertise from veterinary medicine to human epidemiology, from ecology to social sciences, from microbiology and virology to toxicology. The faculty enjoyed the commitment of the multidisciplinary potential of ISS (Depts of Food safety, Nutrition and Veterinary public health, of Environment and Health, of Infectious Diseases, of Cardiovascular, endocrine-metabolic and ageing-associated

diseases and Center for Global Health) and of the Istituto Zooprofilattico of Lazio and Toscana (on AMR and environmental epidemiology) as well as of the OHEJP partners and of the main [OHEJP stakeholders](#): OIE, FAO, WHO, EFSA, EEA. The director of the Animal Health Section of the Italian Ministry of Health and the ISS President enriched the programme by providing overviews of the challenges for the governance of OH. Hence, the faculty provided a broad range of different, highly qualified viewpoints, in line with multidisciplinary concept of OH.

Detailed biographies and photos of the speakers are available on the OHEJP website (<https://onehealthjep.eu/summer-school-2021/>).

Working Group Tutors

The 15 tutors belonged to the ISS (Depts of Food safety, Nutrition and Veterinary public health, and Center for Global Health) and of the Istituto Zooprofilattico of Lazio and Toscana. These tutors were lecturers, junior staff and PhD students. They were recruited on the basis of personal commitment (all volunteered to be involved), personal availability (August is the preferred summer break in Italy) and interdisciplinary expertise. Having 2-3 tutors available for each Working Group allowed tutors to be replaced by others in case of unavailability.

Logistical arrangements

The organisation of the event went smoothly thanks to the use of the Microsoft Teams platform. As scientists from the ISS and elsewhere are increasingly acquainted with virtual meetings and the local ISS team was very helpful, no inconveniences were encountered, and all lecturers and Working Groups joined the sessions without problems. Delegates were able to attend lectures and to actively contribute to the Working Groups. Some delegates, particular those in distant locations such as Nigeria, had occasional issues due to local connection problems.

The organisation of the event required ten main planning meetings involving the ISS and the University of Surrey, that were held monthly from September 2020 to July 2021. As a follow-up of the main planning meetings, there were as many internal ISS meetings, mainly focused to a) design the programme, b) identify the topics for Working Groups, c) identify the tutors and organising their tasks, d) managing the on-line platform.

The event took place over ten days within a two-week period, i.e., from Monday 26th - Friday 30 of July and Monday 2nd - Friday 6th August 2021, each day normally from 9am - 1pm and from 2pm - 5pm CEST. Please see programme (Annex 3) for specific daily arrangements.

Successful provisions were made to make the event engaging and interactive. Each delegate presented at the beginning of the afternoon sessions in the first week, accompanied by a poster with biography and photo of each delegate. Delegates agreed enthusiastically as this initiative made each of them a proactive part of the event. Involvement was also facilitated by two introduction sessions before the event, as get-together virtual meetings in Microsoft Teams, assisted by the tutors.

The momentum for interaction was provided by the Working Groups, where tutors acted as facilitators, and often as moderators, of the discussion whereas the interdisciplinary work burden was entirely borne by the delegates. With respect to this, the ISS team organised Working Groups with different composition with regards to both nationality and expertise, in order to make interdisciplinary interactions within each group as stimulating and challenging as possible. Of course, the lecture sessions allowed ample room for questions and comments (sometimes critical ones) by delegates both as short interventions and in the chat room: the chairpersons took care that no questions or comments in the chat were left unanswered.

Finally, permissions for photos and recordings, in line with GDPR, were obtained by lecturers, tutors and delegates before the event during registration.

Promotional Campaign

The promotional campaign was managed by the One Health EJP Communications Team and began in November 2020, with a 'Save the Date' promotional flyer, which was uploaded to the [Summer School 2021 webpage](#). This flyer communicated the theme, dates, location, and target audience of the event. As this was a global event, the first flyer was disseminated through the following channels: OHEJP internal consortium mailing lists, monthly education and training activities bulletin, newsletters, governance meetings, website, Twitter and LinkedIn. In addition, selected members of the organising team and the WP6 team also shared this content on their personal profiles to make the use of their large scientific networks.

In May 2021, the full flyer and programme were uploaded to the OHEJP website at the same time as event registration. The full flyer aimed provided more detailed information about the concept and theme of the workshop, the aims and objectives and target audience. It also provided a link to the application form created by the ISS Team along with the deadline of 31st May 2021. This was also disseminated through the same channels described for the save the date flyer.

Confirmed speakers were asked to provide short biographies and a photo. These were regularly uploaded to the website page as they were received to increase interest leading up to the event.

The promotional campaign was a huge success, receiving 280 applications, the largest number of applications received for the OHEJP Summer Schools to date.

Applications and selection procedure

The Application process was launched on 26th April and closed on 31st May. As described above, besides the OHEJP website, LinkedIn and Twitter were used to encourage the target audience to register. The target audience, as described in the Summer School flyer, were early career researchers (post-doc, PhD, junior staff members) throughout the EU and from neighbouring areas involved in all aspects of One Health. It was also specified that the event was free of charge and virtual.

For a maximum of 35 places, 290 applications were received. Criteria for selection were: balance of expertise, OHEJP and non-OHEJP (including non-EU delegates), early experience relevant to one health or environmental health and, last but not least, presentation of a clear and detailed application. The selection was responsibility of the ISS team with advice from the University of Surrey.

A reserve list was also created. During the period June-July, six delegates informed the organisers about their inability to participate, and they were all replaced with delegates from the reserve list, notwithstanding the short notice.

There was room for six VIP delegates, for which *ad hoc* contacts were developed with EFSA, FAO, OIE and EEA: these organizations replied with enthusiasm and indeed six VIP delegates were selected (3 from EFSA and one each from FAO, OIE and EEA).

Delegates

The 41 delegates (34 delegates plus six VIP delegates) provided perspectives from different countries including EU countries such as Denmark, Finland, France, Germany, Greece, Italy, Netherlands, Portugal, Spain, European non-EU countries such as Belarus and UK, and non-European countries, including Armenia, Georgia, Nigeria, Somalia, and US. Overall, 15 belonged to institutes within the OHEJP consortium.

Delegates were in their early career stages with a range of interdisciplinary backgrounds, skills, and experience, all relevant to develop the environmental pillar of One Health. Expertise included, amongst others, microbiology, veterinary medicine, ecology, toxicology, biotechnology, machine learning, human nutrition, human epidemiology and social sciences.

The six VIP places (FAO, OIE, EFSA, EEA) were also covered by early careers scientists with different backgrounds and from different geographical locations (Brazil, China, France, Germany, Russia, Switzerland). These delegates engaged in the collaborative discussions and integrated immediately with the other delegates. Their participation has strengthened the interchange between the OHEJP and these major international stakeholders.

Course Evaluation

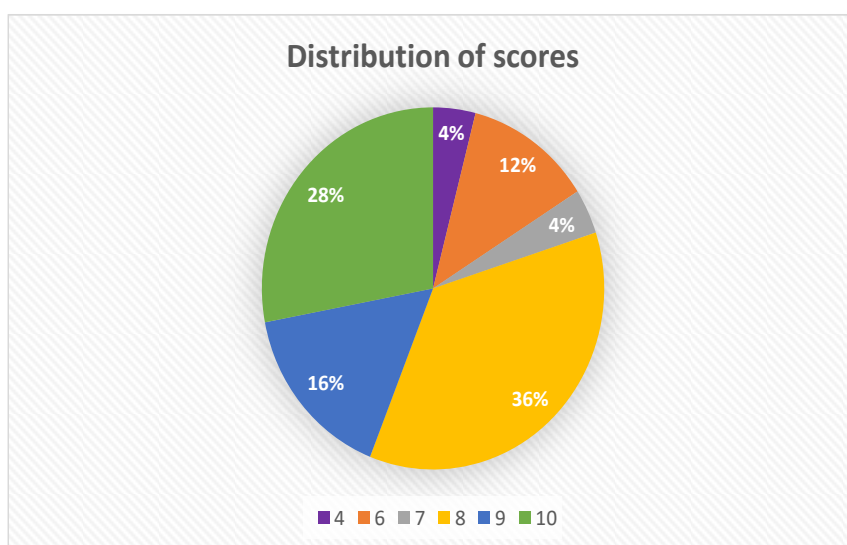
An evaluation form was created by the ISS team in collaboration with the University of Surrey. It was distributed by e-mail the day before the closing of the event as a 'Google Forms questionnaire'. Responses were anonymous and were collected within 15 days from the end of the Summer School.

Overall, 25 delegates replied (about 63% of the 40 participants; one registered participant could not take part to the Summer School): the analysis of the response showed high or very high satisfaction scores.

In detail, about 96% of delegates (24 out of 25) declared to have received all the necessary information prior to the event; also, 96% of delegates (24 out of 25) considered that the purpose of the Summer School was fully met, whereas only one participant (4%) thought that the purpose was partly fulfilled.

The delegates were also requested to evaluate the event in terms of score and the distribution of the answers is reported in the pie graph below.

The average score was **8.3/10**, that results from (interpretation of scores from the overall answers of each delegate): poor satisfaction (score 4): 4%, fair- to-good satisfaction (score 6-7): 16%; very good satisfaction (score 8) 36% and high-very high satisfaction (scores 9-10) 44%. Overall, 80% expressed very good to very high satisfaction by attributing scores 8-10.



While most delegates expressed satisfaction, they showed their commitment also by providing some constructive criticisms to specific aspects of the event and suggestions on how to improve further events. Indeed, a specific section on suggestions was included in the evaluation form.

In particular, the followings deserve attention when organising future events:

- Greater involvement of delegates
 - *'I would suggest opening more the discussion like in the Working Groups but **all together so we all could share from different backgrounds**'*
- Take care to time management in a virtual course
 - *'Perhaps, a **better time management** among lectures-presentations would be appreciated'*
 - *'The only suggestions would be maybe to do **shorter lectures and/or with longer breaks**, as sometimes was really tiring to attend for such a long time in front of the screen, which made a bit difficult to follow the lectures'*
- More attention to practical cases (an important suggestion)
 - *'The lectures on case studies on previous One Health approaches were very useful. Also having **more lectures on how to approach One Health in practice, such as how to start, how and who to contact to form the OH team, etc** could improve applicability'*

Certificates of Attendance

Certificates of attendance templates were created by the University of Surrey and approved. These were completed and distributed by the ISS team to all delegates who had attended the Summer School sessions, upon check by the ISS team.

Post-event communications

Blog Post

Work Package 6 colleagues worked closely with the local organising team and the Communications Team to publish a blog post promoting the successes of the event, with a link to the post-success video created with the Purple Patch external company.

The published blog post can be found on the One Health EJP website [here](#). This blog post was shared through the One Health EJP social media channels Twitter and LinkedIn, the consortium newsletter published in December 2021, and the monthly education and training activities bulletins published in November and December 2021.

Highlights video

Click [here](#) to view the video available on our website.

Permission to publish photos, recordings and testimonials were obtained, and adhere to GDPR regulations. The highlights video content was defined through collaborative discussions between the local organisers, the Work Package 6 team and the Communications Team. The key messages and supporting evidence (recordings, video testimonials) were selected and the, and an external company was recruited to create and produce this branded success video.

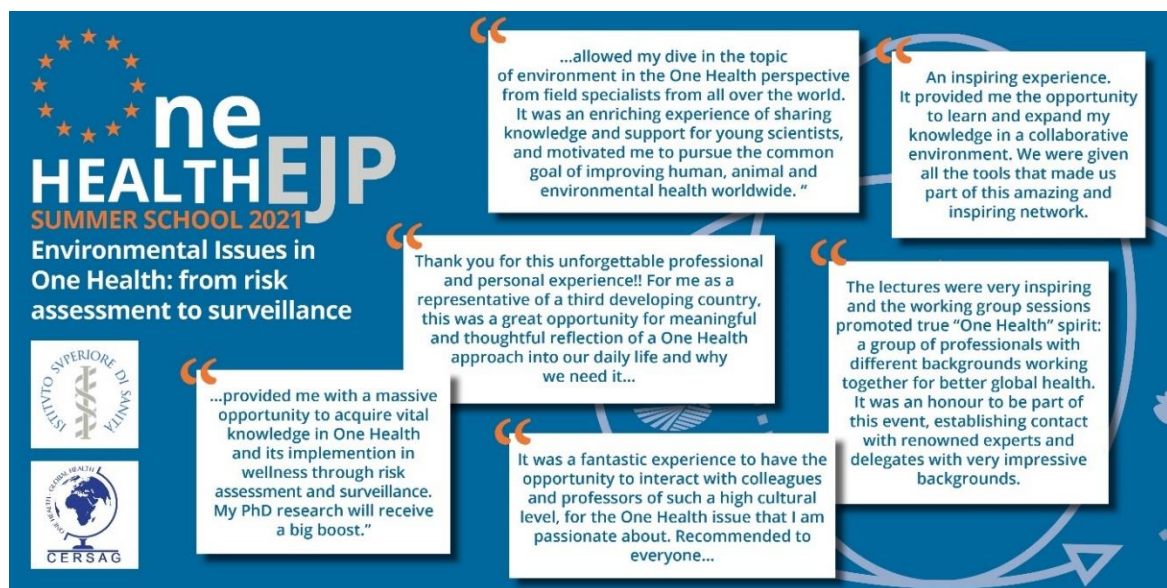
This video has been subsequently shared through the One Health EJP social media channels Twitter and LinkedIn, OHEJP consortium newsletter and the November and December 2021 issues of the education and training activities bulletin.

Testimonials

Over 20 testimonials were collected through the evaluation forms, which demonstrated the success of the content, delivery, and interactivity of the event.

The event cultivated a collaborative environment between delegates and lecturers from interdisciplinary backgrounds, skills and experience from animal, human and environmental health domains across the globe, providing a true One health perspective.

Examples of Delegate Testimonials collected



Photos

Permission to publish photos and recordings was obtained during the event registration process (filling in the evaluation form). The face and names of any participants or lecturers who had not provided permission were blurred to adhere to the GDPR regulations. Permission to publish written and video testimonials was obtained during the evaluation process.

ONE HEALTH ONE PLANET

Strategic Research and Innovation Agenda on Antimicrobial Resistance

One Health EJP Summer School 2021 Programme

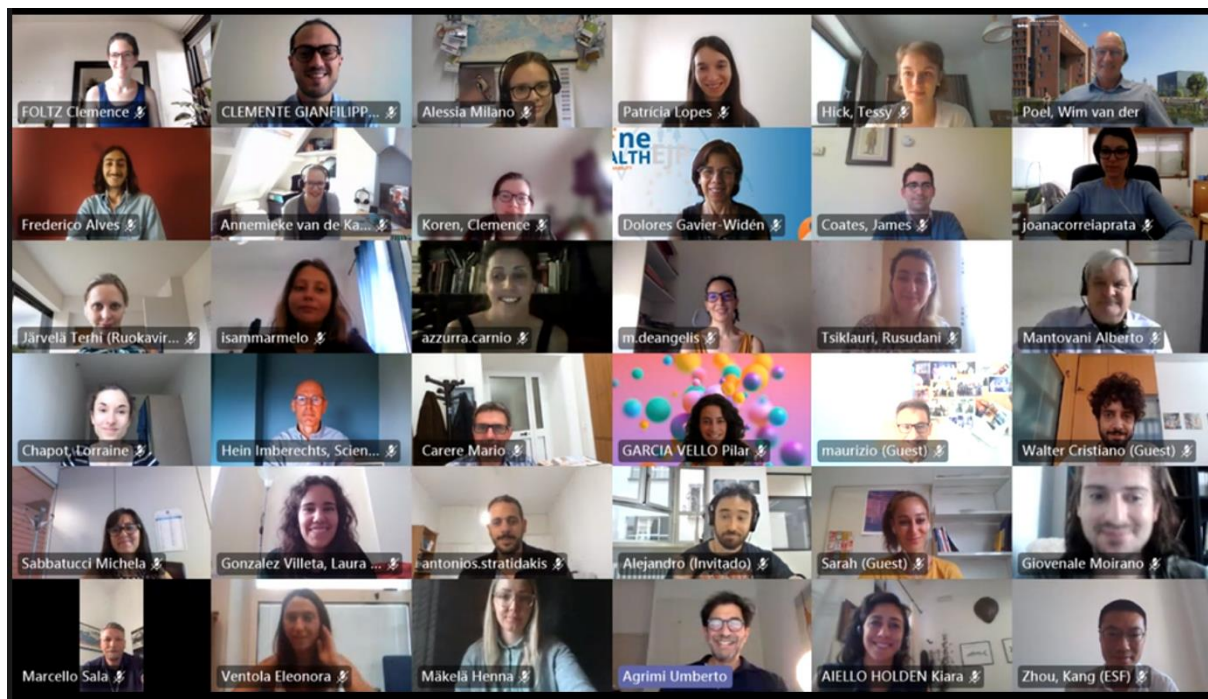
Environmental Issues in One Health: from risk assessment to surveillance

Introduction to the School Environmental issues in One Health

Umberto Agrimi
Istituto Superiore di Sanità, Rome

Changing agri-food systems: more complexities in food safety...

Climate Change Implications for Global Food Safety

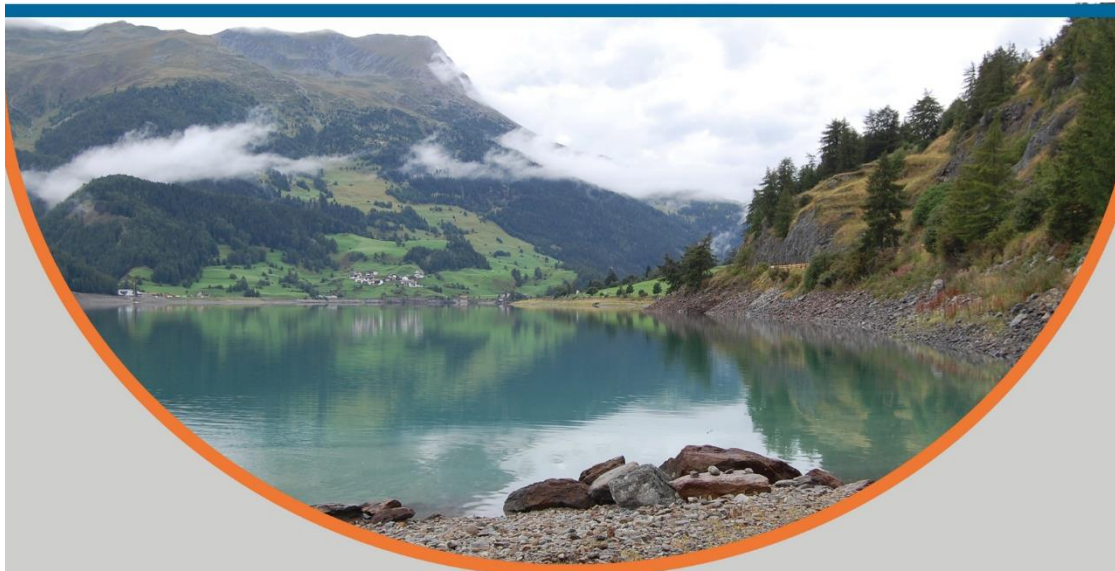


Internal Events Survey information

The European Commission (EC) requires all dissemination and communication activities, and events to be reported. This information has been reported through the [Internal Events Survey](#) on the OHEJP website, which collects data and is reported to the EC.

Name of the activity:	One Health EJP Summer school 2021		
Date:	26 th July to 6 th August 2021		
Place:	Online (Microsoft Teams)		
Specify the Dissemination and Communication activities linked to the One Health EJP project for each of the following categories			
	Yes / No		Yes / No
Organisation of a Conference	No	Participation to a Conference	No
Organisation of a Workshop	Yes	Participation to a Workshop	No
Press release	No	Participation to an Event other than a Conference or a Workshop	No
Non-scientific and non-peer-reviewed publication (popularised publication)	No	Video/Film	Yes (1)
Exhibition	No	Brokerage Event	
Flyer	Yes (2)	Pitch Event	No
Training	Yes	Trade Fair	No
Social Media	Yes	Participation in activities organised jointly with other H2020 projects	No
Website	Yes	Other	No
Communication Campaign (e.g. Radio, TV)	No		
Specify the estimated number of persons reached, in the context of this dissemination and communication activity), in each of the following categories			
	Number		Number
Scientific Community (Higher Education, Research)	36	Media	0
Industry	0	Investors	0
Civil Society	0	Customers	0
General Public	0	Other	0
Policy Makers	5		

Annex 1: "Save the Date" Promotional Flyer



Save the Date!
One Health EJP Summer School 2021
Environmental Issues in One Health:
from risk assessment to surveillance

Date: 26th July to 6th August 2021

Location: Virtual event

Audience: Early career researchers (post-doc, PhD, junior staff members) throughout the EU and from neighbouring areas involved in all aspects of One Health including biological as well as environmental hazards

Fees: Free online event

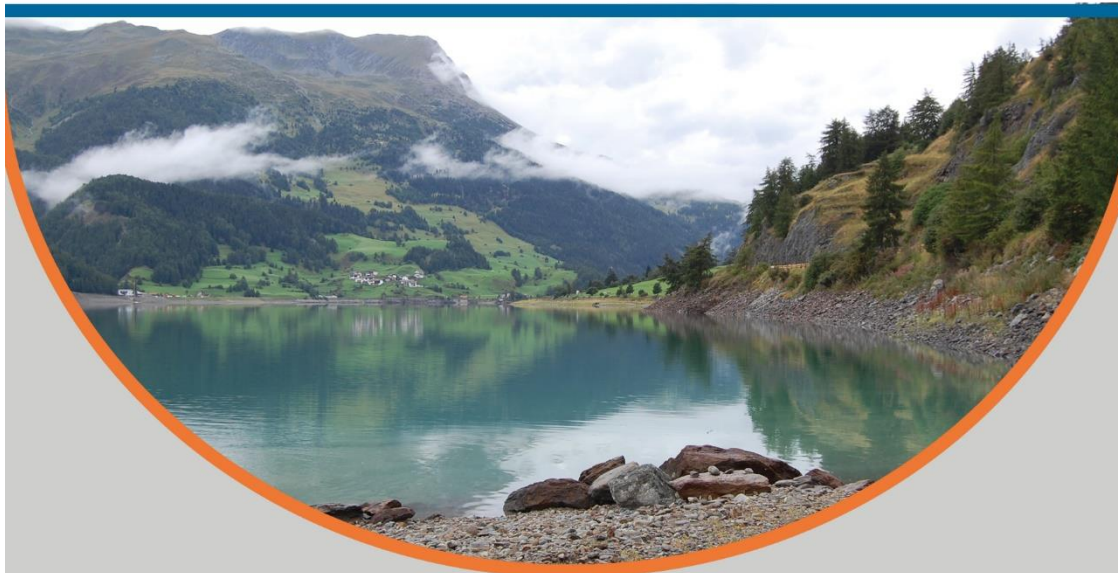


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 ONE Health EJP

#OneHealthEJP #OHEJPSummerSchool2021

Annex 2: Full Promotional Flyer



One Health EJP Summer School 2021 Environmental Issues in One Health: from risk assessment to surveillance

Date: 26th July to 6th August 2021

Location: Virtual event

Audience: Early career researchers (post-doc, PhD, junior staff members) throughout the EU and from neighbouring areas involved in all aspects of One Health including biological as well as environmental hazards

Fees: Free online event



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Why this topic?

One Health consists of the triad of human health, animal health, and the environment, but the latter is often neglected.

The environment and its changes, which often recognise a human origin, are key in understanding the dynamic of many biological and chemical risks for health. The relationship between health and environmental issues such as climate change, biodiversity loss, environmental pollution is complex and multifaceted. The One Health approach can give a holistic perspective to understand these relationships and provide the suitable methodology for the assessment and management of the many health risks which recognise the environment as a driver.



Aims of the Summer School

The Summer School will provide interdisciplinary training on One Health topics including environmental risk assessment, climate change, zoonoses and antimicrobial resistance in the natural environment, the use of genomics in surveillance, wildlife, feeds, food security, epidemiology and risk communication. Lecturers will provide up-to-date insights on environmental issues in One Health from multiple viewpoints, including interventions of experts from [EFSA](#), [EEA](#), [FAO](#), [OIE](#) and [WHO](#).

Working groups will be organised at the start of the Summer School and will meet daily to foster the interactive potential of the training.

See full programme [here](#).

Am I Eligible?

The event is targeted towards early career researchers (post-docs, PhD students, junior staff members) involved in all aspects of One Health. Researchers internal and external to the One Health EJP consortium are also welcomed to apply, from institutions throughout the EU as well as outside the EU.

How can I apply?

To apply, please complete the application form [here](#).
The deadline to apply is 31st May 2021.



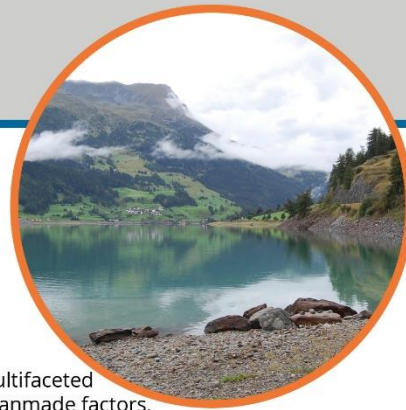
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Annex 3: Event Programme



One Health EJP Summer School 2021 Programme

Environmental Issues in One Health: from risk assessment to surveillance

Environment is one pillar of One Health, and this is the first training initiative of the OHEJP entirely devoted to environmental issues.

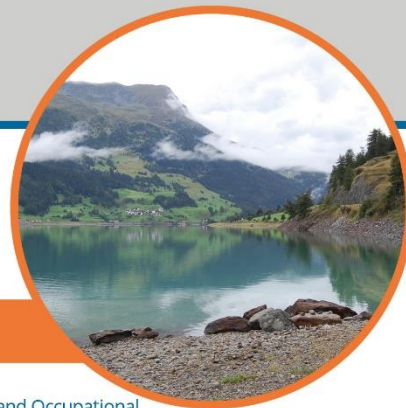
Environmental issues need to be illustrated and discussed in their multifaceted aspects: risk assessment, role of ecosystem-related factors, role of manmade factors, the farm as environmental modifier, and the issue of sustainability.

Monday 26th July Vision and Challenges

09.15-10.00 CEST	Introduction to the One Health European Joint Programme Hein Imberechts, Scientific Coordinator One Health European Joint Programme, Sciensano, Belgium
10.00-10.45	Introduction to the course: Environmental issues in One Health Umberto Agrimi, Italian National Institute of Health, Rome, Italy
10.45-11.00	<i>Question time</i>
11.00-11.45	Assessment of environment-related risk factors Alberto Mantovani, Italian National Institute of Health, Rome, Italy
11.45-12.30	Climate changes and eco-health Laura Mancini, Italian National Institute of Health, Rome, Italy
12.30-12.45	<i>Question Time</i>
12.45-14.00	Lunch
14.00-14.45	One Health in the context of global health strategies Maria Grazia Dente, Italian National Institute of Health, Rome, Italy
14.45-15.30	New challenges of One Health epidemiology Paolo Vineis, Imperial College, London, United Kingdom
15.30-15.45	<i>Question Time</i>
15.45-17.00	Working groups

Tuesday 27th July Factors related to the natural environment (ecosystem, wildlife) in zoonoses and AMR

09.15-10.00	Genomics in the assessment and surveillance of biological hazards in the environment Stefano Morabito, Italian National Institute of Health, Rome, Italy
10.00-10.45	Zoonoses and wildlife hosts: the role of the environment in the emergence and spread of pathogens Dolores Gavier-Widen, National Veterinary Institute, Uppsala, Sweden
10.45-11.00	<i>Question time</i>
11.00-11.45	Environmental scenarios for the extended pathways of exposure to Shigatoxin-producing <i>E. coli</i> infections Gaia Scavia, Italian National Institute of Health, Rome, Italy
11.45-12.30	One Health aspects of SARS-CoV2 emergence and spread Wim van der Poel, Wageningen University, Wageningen, The Netherlands
12.30-12.45	<i>Question time</i>
12.45-14.00	Lunch
14.00-17.00	Working groups



One Health EJP Summer School 2021 Programme

Environmental Issues in One Health: from risk assessment to surveillance

Wednesday 28th July Factors related to the man-made environment in zoonoses and AMR

09.15-10.00 CEST	The evolving ecology of vector-borne diseases Stephan Zientara, French Agency for Food, Environmental and Occupational Health & Safety – ANSES, Maisons-Alfort, France
10.00-10.45	One Health strategies to reduce AMR Bruno Gonzales-Zorn, Complutense University of Madrid, Spain
10.45-11.00	<i>Question time</i>
11.00-11.45	The EU chemicals strategy for sustainability: Fipronil as key study for a One Health environment and health risk assessment Gianfranco Brambilla, Italian National Institute of Health, Rome, Italy
11.45-12.30	Citizen science to expand One Health community and engage stakeholders Maurizio Ferri, Italian Ministry of Health, Pescara, Italy
12.30-12.45	<i>Question time</i>
12.45-14.00	<i>Lunch</i>
14.00-17.00	Working groups

Thursday 29th July The environment-farm interface

09.15-10.00	Feeds, environment, One Health and sustainability Marta Lopez Alonso, University of Santiago de Compostela, Spain
10.00-10.45	Pollution and circular economy: advantages and drawbacks Marco Vighi, IMDEA Water Institute, Madrid, Spain
10.45-11.00	<i>Question time</i>
11.00-11.45	Climate changes, mycotoxins, animal and human health Barbara De Santis, Italian National Institute of Health, Rome, Italy
11.45-12.30	From environment to human diet: the case study of perfluoroalkyl substances (PFAS) Francesco Cubadda, Italian National Institute of Health, Rome, Italy
12.30-12.45	<i>Question time</i>
12.45-14.00	<i>Lunch</i>
14.00-17.00	Working groups

Friday 30th July Way forward: from bench to field and society

09.15-10.00	Historical and socio-economical aspects to consider when implementing One Health Alexandru Supeanu, National Sanitary Veterinary and Food Safety Authority, One Health Romania, Bucharest, Romania
10.00-10.45	One Health in practice: from signalling to response and control Kitty Maassen, National Institute for Public Health and the Environment, Bilthoven, The Netherlands
10.45-11.00	<i>Question time</i>
11.00-11.45	From warthog to wild boar: a transcontinental journey of an African virus Vittorio Guberti, Italian Institute for Environmental Protection and Research, Ozzano Emilia, Italy
11.45-12.30	Field epidemiology: how to perform a One Health assessment in the farm Marco Cristofori, Regional Health Authority, Umbria, Italy
12.30-12.45	<i>Question time</i>





One Health EJP Summer School 2021 Programme

Environmental Issues in One Health: from risk assessment to surveillance

12.45-14.00 CEST	<i>Lunch</i>
14.00-14.45	One Health components in strategies to ameliorate human nutrition Marco Silano, Italian National Institute of Health, Rome, Italy
14.45-15.00	<i>Question time</i>
15.00-17.00	Student session: the students present the outcomes of the Working Groups

Saturday 31st and Sunday 1st August Free days

Monday 2nd August Workshop on One Health, sustainability and food safety

09.30-10.15	Climate change implications for global food safety Vittorio Fattori, Food and Agriculture Organization of the United Nations, Food Systems and Food Safety Division, Rome, Italy
10.15-11.00	Environmental issues in One Health: the viewpoint of the World Health Organization Sinaia Netanyahu, World Health Organization, WHO European Centre for Environment and Health, Bonn, Germany
11.00-11.45	E-waste: from human biomonitoring to safer environment and better management Chiara Frazzoli and Beatrice Bocca, Italian National Institute of Health, Rome, Italy
11.45-12.30	<i>Question time</i>
12.30-14.00	<i>Lunch</i>
14.00-17.00	Working groups

Tuesday 3rd August Assessment and surveillance of microbiological hazards: environment (water bodies), food, biomonitoring, epidemiology

09.15-10.00	Protection of wildlife health to achieve One Health goals: the viewpoint and framework of the World Organization on Animal Health (OIE) Budimir Plavsic, World Organisation for Animal Health, OIE Regional Representation in Moscow, Russia
10.00-10.45	The neglected zoonoses cystic and alveolar echinococcosis Adriano Casulli, Italian National Institute of Health, Rome, Italy; WHO Collaborating Centre for the Epidemiology, Detection and Control of Cystic and Alveolar Echinococcosis
10.45-11.00	<i>Question time</i>
11.00-11.45	Monitoring results of Q fever in the EU Frank Boelaert, European Food Safety Authority
11.45-12.30	Zoonotic viruses from food to water Giuseppina La Rosa, Italian National Institute of Health, Rome, Italy
12.30-12.45	<i>Question time</i>
12.45-14.00	<i>Lunch</i>
14.00-17.00	Working groups on the topics of the morning session with tutors

Wednesday 4th August Field One Health activities at Istituto Zooprofilattico Sperimentale

10.00-10.45	Monitoring and surveillance of antimicrobial resistance: a "One Health Perspective" Antonio Battisti, Istituto Zooprofilattico Sperimentale Lazio e Toscana, Rome, Italy
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One Health EJP Summer School 2021 Programme

Environmental Issues in One Health: from risk assessment to surveillance

10.45-11.00 CEST	<i>Question time</i>
11.00-12.00	The case of Sacco valley: a multidisciplinary One Health approach to environmental pollution Marcello Sala and Paola Scaramozzino, Istituto Zooprofilattico Sperimentale Lazio e Toscana, Rome, Italy
12.00-12.15	<i>Question time</i>
12.15-13.30	<i>Lunch</i>
13.30-17.00	Communication in One Health Roberto La Ragione, Piyali Basu, Elaine Campling, Jade Passey, School of Veterinary Medicine, University of Surrey, Guildford, United Kingdom

Thursday 5th August Assessment and surveillance of toxicological hazards: environment, food (roles of National Reference Laboratories) biomonitoring, epidemiology

09.15-10.00	Risk assessment of environmental contaminants in food based on surveillance and monitoring data Marina Patriarca and Angela Sorbo, Italian National Institute of Health, Rome, Italy
10.00-10.45	An approach for the risk assessment of pesticides in the environment and for human health Angela Santillo, Italian National Institute of Health, Rome, Italy
10.45-11.00	<i>Question time</i>
11.00-11.45	Environmental health: how are chemical exposure, human biomonitoring and climate change linked? Joana Lobo Vicente, European Environment Agency, Copenhagen, Denmark and Susana Viegas, National School of Public Health, NOVA University Lisbon, Portugal
11.45-12.30	Epidemiology in highly contaminated sites Ivano Iavarone and Roberto Pasetto, Italian National Institute of Health, Rome, Italy
12.30-12.45	<i>Question time</i>
12.45-14.00	<i>Lunch</i>
14.00-17.00	Working groups on the topics of the morning session with tutors

Friday 6th August Wrap-up day: the governance of One Health

09.15-09.45	Introduction Silvio Brusaferrò, President of Italian National Institute of Health
09.45-10.30	One Health approach in the surveillance of zoonoses and foodborne diseases Valentina Rizzi, European Food Safety Authority
10.30-10.45	<i>Question time</i>
10.45-11.30	The governance of One Health: science to society translation of the environmental component of One Health Annemarie Kaesbohrer, University of Veterinary Medicine, Vienna, Austria
11.30-12.15	The institutionalization of One Health Pier Davide Lecchini, Italian Ministry of Health, Rome, Italy
12.15-12.45	<i>Question time</i>
12.45-14.00	<i>Lunch</i>
14.00-16.30	Student session: the students present the outcomes of the Working Groups
16.30-17.00	Concluding remarks Umberto Agrimi, Italian National Institute of Health, Rome, Italy