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MediPIET

Mediterranean and Black Sea Field
Epidemiology Training Programme Network

**Third Training of Trainers
One line course**

15th March – 15th April 2021

**Strengthening Country capacities on inter-sectoral
preparedness and response to face threats from a
One Health perspective”**

Organized with the collaboration of MediLAB Secure

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Background:

The statement “Health threats do not know borders” has been widely utilised when speaking about pathogens, emerging and re-emerging diseases and the need of preventing, early detecting, timely response in the frame of the International Health Regulation and to strengthen the IHR- core capacities within and among countries.

It is well known that more than 70% of the emerging diseases are from zoonotic or vector borne origin. This exchange of pathogens among human and non-human animal make the above statement relevant not only country borders related but also regarding “cross-species barriers”.

One Health approach has shown to be a powerful mean to establish multisectorial collaboration bringing together relevant disciplines and fields of knowledge. The Tripartite (WHO –FAO-OIE) is making fruitful efforts on this direction. However, the current pandemic has raised more than ever the need of all disciplines contribution to re-think the mode of approaching health threats, do research, reinforce workforce capacities to enlarge our views and work in a collaborative way. Bringing together human public health, veterinarians, entomologists, lab staff is crucial, however many disciplines are still missing in this picture. Social sciences, technologies, community’s engagement are still in a weak position to provide other inputs and valuable research outputs, complementary knowledge, skills and solutions to contribute to a better preparedness and response to face upcoming threats in a highly interconnected One World.

This training of trainers aims at opening our views and incorporate the multisectorial, cross-border and interdisciplinary dimensions to increase the possibilities of reaching a healthier one world.

About MediPIET

The Mediterranean and Black Sea field epidemiology training programme “MediPIET” (is a CBRN CoE Project 74 – 2018/400-697. Within the framework of the EU CBRN Risk Mitigation Centres of Excellence (CoE) initiative, Europe-Aid-DEVCO funds MediPIET (www.medipiet.org) to increase security in the EU neighbourhood. Building on the success of the previous MediPIET phase 2014-2017, this project supports capacity building for prevention and control of natural and man-made health threats through a regional training programme in intervention epidemiology.

Furthermore, the MediPIET project aims at consolidating an efficient workforce with the necessary competence in intervention epidemiology to carry out essential public health functions for

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prevention and control of national and cross-border challenges posed by communicable diseases. In detail, expected results are as follows: (i) Enhanced field epidemiology training capacity in participating countries; (ii) Enhanced capacities in public health institutions to train their workforce and collaborate with regional networks; (iii) Increased capacity of exchanging public health knowledge and methodologies between non-EU countries and EU partners; (iv) Sustainable country capacity and regional networking to deal with health security challenges.

The project is implemented by The Instituto de Salud Carlos (ISCI) as contractor, supported by a Consortium with the Fundación Estatal Salud, Infancia y Bienestar Social (FCSAI). (Period 2019-2021). It extends over the non-EU countries covered by the EU Enlargement and European Neighbourhood policies: Albania, Algeria, Armenia, Bosnia and Herzegovina, Egypt, Georgia, Jordan, Kosovo¹, Lebanon, Libya, Moldova, Montenegro, Morocco, Palestine², Serbia, the Republic of North Macedonia, Tunisia, and Ukraine. Additionally, Israel and Turkey participate in the project with an observer status.

About MediLabSecure

Funded under the same EU CBRN Risk Mitigation Centres of Excellence (CoE) initiative, Europe-Aid-DEVCO, the MediLabSecure project (www.medilabsecure.com) aims to prevent vector-borne diseases by reinforcing an international network of laboratories and public health institutions in 22 beneficiary countries to ultimately promote integrated surveillance of emerging arboviruses. Involved countries are: Albania, Algeria, Armenia, Bosnia and Herzegovina, Burkina Faso, Egypt, Georgia, Jordan, Kosovo¹, Lebanon, Libya, Mali, Mauritania, Montenegro, Morocco, Niger, Palestine², Senegal, Republic of North Macedonia, Serbia, Tunisia, Turkey

This network represents a cluster for awareness, risk assessment, monitoring and control of these vector-borne diseases. This cluster requires the interaction between five working groups (Human virology, Animal virology, Medical entomology, Public Health, Early warning tools/ Modelling). Each focuses on one discipline, while maintaining a One Health approach to ultimately promote integrated surveillance of emerging arboviruses in the project beneficiary countries.

MediLabSecure is aiming to 1) Create a framework for networking to improve surveillance and monitoring of emerging vector-borne zoonotic diseases of viral origin. 2) Provide training for public health experts and improve national laboratories capacities to increase the communicable disease

¹ This designation is without prejudice to positions on status and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of independence.

² This designation shall not be construed as recognition of a State of Palestine and is without prejudice to the individual positions of the Member States on this issue.

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control in the Mediterranean, Black Sea and Sahel regions. 3) Enhance intersectoral and cross-border collaboration. 4) Strengthen integrated surveillance (animal health, human health, entomological and environmental data). 5) Provide tools for awareness, risk assessment and monitoring of the emerging viruses of interest.

About the Course

This course was originally planned to take place face to face during four days. Due to the COVID 19 pandemic, it has been reoriented to be carried out on line with asynchronous and synchronous sessions. This training of trainers provides participants an opportunity to refresh knowledge and skills regarding specific topics prioritized at regional level by the participating partner countries' institutions in the 2019 survey.

The duration of the ToT will be from 16 to 20 hours approximately and will last along four weeks to be followed on participants' own pace. The course is built with pre-defined units composed by lessons (20 -30 min pre-recorded lectures, exercises, reading materials, live session/webinars, forum or live discussions).

This specific workshop on One Health is focused on 4 main thematic units: 1) General overview on One Health, Preparedness and Response integrating One Health, and different ways to approach the One Health in practice 2) One Health added value to face pandemics such as COVID -19; 3) Zoonoses and Vector Born Diseases (Multisectoral collaboration, Integrated surveillance, joint risk assessment) 4) AMR (Multisectoral collaboration, Integrated surveillance, joint risk assessment). Networking will also be a key component of the course.

The ToT aims at highlighting the intersectoral collaboration for an efficient early detection of threats and a rapid response to minimize impact of any environmental, animal, human health threat.

Target audience

This 16-20 hour online course is addressed to mid-career and senior epidemiologists and professionals from the MediPIET and MediLab Secure participating institutions to understand the principles and processes of threats caused by environmental, animal and human agents to the

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human health and the need to adopt a wider perspective such as One Health approach and reinforce intersectoral operational collaboration.

Learning objectives

This Training for Trainers aims at refreshing and improving the knowledge and skills among attendees for a more operational and efficient collaboration among different sectors regarding risk management of threats coming from environmental, animal, vectors, food and water safety, human health as part of the preparedness activities at country and regional levels.

It also aims at providing supporting training contents and materials for cascading among the partner institutions from MediPIET and MediLab Secure at national, local levels in the participating countries.

It will also provide a space and an opportunity for exchanging good practices, identify common challenges and try to find common spaces for further collaboration for cross border threats preparedness posed by the existing or new emerging threats, such SARS-CoV 2.

Specific Objectives of the course:

- Raise awareness on the all hazards approach under the IHR country capacity development and the One Health perspective as a wider umbrella for facing health related risks. IHR & PVS
- Provide a general overview on the preparedness and response plans emphasizing the integration of the different sectors.
- Provide examples on how integrate the One Health approach for a more efficient response to emerging and re-emerging diseases.
- Increase the knowledge on how to include a One Health approach in the preparedness and response to face Zoonoses and Vector Born Diseases through specific operational tools aiming at fostering a Multisectoral collaboration, Integrated surveillance, joint risk assessment.
- Exchange knowledge and good practices of inter-sectoral collaboration among participants countries regarding zoonosis and VBD
- Increase the awareness and knowledge on how to include the OHA in the field of AMR for a Multisectoral collaboration, Integrated surveillance, joint risk assessment.
- Raise awareness on the kind of laboratory data sharing from the different sectors for an effective OHA.
- Exchange knowledge and good practices of inter-sectoral collaboration among participants' countries regarding AMR.

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- Key aspects for evaluation of the integration of the OHA.
- The added value of the OHA to face emerging diseases. The case of SARS CoV – 2
- Provide materials for further training courses development at country level in the region.

Faculty and Project team

This Training of Trainers is organized by MediPIET (Instituto de Salud Carlos III (ISCIII) & Fundación Estatal, Salud, Infancia y Bienestar Social, F.S.P. (FCSAI)) Consortium, Madrid, Spain with the strong collaboration of the MediLab Secure project, mainly Istituto Superiore di Sanità, Rome, Italy (ISS), Institut Pasteur of Paris, France (IP) and the National Institute for Animal Research, Madrid, Spain (INIA-CISA).

The contents of the course has been coordinated by Ms Concha Martin Pando (MediPIET Capacity building expert, cmartinpando@fcsai.es) in collaboration with Maria Grazia Dente (mariagrazia.dente@iss.it) and Silvia Declich (silvia.declich@iss.it) from the Istituto Superiore di Sanità/MediLAB Secure with the support of the MediPIET team, the scientific coordinators Dr Iro Evlampidou (iro.evlampidou@fcsai.es), Dr Adela Páez Jiménez (apaez@fcsai.es), Dr Angeliki Lambrou (alambrou@fcsai.es) and Dr Juan Donado (jdonado@fcsai.es), with the scientific contribution of Dr Isabel Noguer (inoguer@isciii.es), ISCIII Scientific Leader for MediPIET Consortium, and the strong support of Ms. Maite Manzanera (mmanzanera@fcsai.es), the MediPIET Team Leader. The content of the course is based on the needs prioritized by the partner institutions at country level. Some of the members of the Training Centre Forum had been invited to take part in the organization of the course.

Management, administrative and logistics matters are ensured by Ms Maite Manzanera (mmanzanera@fcsai.es), MediPIET Team leader, and Ms Eva Valdés (evaldes@fcsai.es), MediPIET Logistician. Mr Cesar Jimenez, Communications Officer (c.jimenez@isciii.es) is responsible for MediPIET webpage update and communication issues.

From MediLAB Secure side, Dr. Vanessa Lagal (vanessa.lagal@pasteur.fr) from Institut Pasteur contributed to coordinate the registration of the MLS Network members.

Faculty (still to be updated)

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Name Surname	Institution / Country
Prof. Fernando VALLADARES	Research Council. Spain
Dr Javier SEGURA	WHO Euro. Healthy Cities Network Scientific Committee
Prof. Rafael RUIZ DE CASTAÑEDA	Institute of Global Health. The University of Geneva Switzerland
Prof. Victor RUBIO	Psychology Fac. Autonomous University of Madrid. Spain
Dr Antonio VARGAS	Action Against Hunger. Spain
Dr Maria Grazia DENTE	Istituto Superiore di Sanità. Italy
Dr Elisa PÉREZ RAMÍREZ	INIA-CISA. Spain
Dr Júlia VERGARA-ALERT	CReSA. Autonomous University of Barcelona. Spain
Prof. Woutrina A SMITH	University of California, Davis. USA
Prof. Lonnie KING	College of Veterinary Medicine. Ohio State University. USA
Prof. Cesar de la FUENTE	University of Pennsylvania. USA
Dr. Almudena SÁEZ	Robert Koch Institute. Germany (Intervention cancelled)
Dr. Eric BERTHERAT	WHO HQ. Switzerland
Dr Carmen VARELA	ECDC. Sweden
Prof. Rafael CANTÓN	Ramon y Cajal Hospital. Spain
Prof. Israel CRUZ	Institute of Health Carlos III. Spain
Dr Silvia DECLICH	Global Health Institute -Istituto Superiore di Sanità. Rome, Italy
Dr Serge NZIETCHUENG	FAO. Nairobi, Kenya
Vicky HOUSSIÈRE	Health Emergency Programme, WHO-HQ. Geneva, Switzerland
Prof. Imane JROUNDI	Faculty of Medicine, Mohamed V University, Rabat, Morocco
Ms. Begoña LAGASABASTER	UN Women Representative in Libya and Tunisia
Dr Samer SAWALHA	Ministry of Health. Ramallah, Palestine
Ani MANUKYAN	National Centre for Disease Prevention and Control, Yerevan, Armenia
Dr Abdelaye KEITA	Institute of Public Health, Bamako, Mali
Dr Manal FAHIM	Ministry of Public Health and Population, Cairo, Egypt
Dr Silvia GARCÍA COBOS	National Centre of Microbiology. Institute of Health Carlos III
Dr Adriana CABAL ROSEL	Austrian Agency for Health and Food Safety - AGE
Dr Pilar RAMÓN	Coordination of AMR. PAHO-WHO. Washington, USA
Dr Jorge PINTO FERREIRA	Deputy Head of the Antimicrobial Resistance and Veterinary Products Department. International Organization for Animal

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Name Surname	Institution / Country
	Health- OIE. Paris, France
Dr Maarten VAN DER HEIJDEN	AMR Division. World Health Organization. WHO HQ Geneva, Switzerland.
Dr Jorge Raul MATHEU	Global Initiatives and Instruments, Department of Global Coordination and Partnership of AMR, AMR Division. WHO-HQ. Geneva, Switzerland.
Dr Samah FAROUK HEFNY	Animal Health Research Institute of Egypt
Dr Mohammad MANASSRA	Veterinary Services and Animal Health. Palestine

List of Participants institutions

Institution/ Country	Network
IPH. Albania	MediPIET
NCDC. Armenia	MediPIET
PH. Bosnia & Hercegovina	MediPIET
MoPHP. Egypt	MediPIET
MoPHP. Egypt	MediPIET /MediLAB Secure
NCDC. Georgia	MediPIET
IPH. Kosovo	MediPIET
MoAgric. Lebanon	MediPIET
NCDC. Libya	MediPIET
NAPH. Moldova	MediPIET
MoH. Morocco	MediPIET
MoH. Palestine	MediPIET
IPH. Serbia	MediPIET
PHC-MoH. Ukraine	MediPIET
MoH. NIGER	MediLAB Secure
NC Muraz B. Virology Dpt. Burkina Faso	MediLAB Secure
CC University. Microbiology. Bosnia & Herzegovina	MediLAB Secure
MoAgric. Montenegro	MediLAB Secure

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Institution/ Country	Network
National Research Office. Mauritania	MediLAB Secure
Animal Health Research Institute. Egypt	MediLAB Secure
Fac. Agriculture. University of N. Sad. Serbia	MediLAB Secure
IPH. Mali	MediLAB Secure
Department of Environmental and Plant Protection. Faculty of Agriculture, University of Novi Sad. Serbia	MediLAB Secure
Food and Veterinary Agency, R. North Macedonia	MediLAB Secure
Food Safety & Veterinarian Institute. Albania	MediLAB Secure
Veterinary Services and Animal Health. Palestinian	MediLAB Secure
National Center for Disease Control and Prevention. Georgia	MediLAB Secure
Animal Virology. Veterinary Central Lab. Mali	MediLAB Secure
Istituto Superiore di Sanità, Italy	MediLAB Secure

Main contents

Units	Content	Delivery mode
Unit 1	General Introduction	
	One Health concept. Animal, Human and Environmental considerations. General aspects regarding preparedness & Response from a One Health perspective	Live session 16th March. 12hs (CET)
	Training aspects and Core Competencies for a One Health workforce	Pre recorded
	Different areas of OHA application	Pre recorded
	Experiences and examples of One Health.	Pre recorded
Unit 2	The added value of the One Health approach. The COVID 19 as an example	
	Impact of COVID 19 in different sectors and vulnerable populations.	Videos
	One Health inputs for COVID 19 Response	Pre recorded
Round Table	What do other field of knowledge provide to One Health	Live session

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	approach? The example of the COVID 19 pandemic and its impact on people.	26 March 1:30 – 3 pm (CET)
Unit 3	Multisectoral collaboration to face Zoonoses & VBD	
	Regulatory framework. The Tripartite Alliance and its operational tools (multisectorial coordination, Integrated Surveillance, Joint Risk Assessment).	Pre-recorded lectures and open access videos provided by the Tripartite.
	Regional Networks. Medi Lab Secure	Pre recorded
Workshop	Countries' experiences exchange. Brucellosis in Armenia/ CCHF in Mali / Avian Influenza in Egypt	Live Session. Tuesday 9 th April.
Unit 4	Antimicrobial Resistance and One Health	
	Regulatory framework. Integrated surveillance and monitoring.	Pre recorded
	AMR, the importance of OHA, clinical perspective	Pre recorded
	Lab aspects. Sequencing based surveillance	Pre recorded
	Research and Innovation. Computer-based antibiotics development & research	Pre recorded
	Regional Networks. FED-AMR: A European One-Health project targeting the dissemination of free extracellular DNA as a source of Antimicrobial Resistance	Pre-recorded lecture
Workshop	Countries best practices exchange on AMR reduction strategies. Egypt / Palestine. Regional Project. PAHO- WHO	Live session. 15 th April. 1:30 – 3 pm (CET)
	LIVE SESSION. Evaluation of the ToT & Closure	28 th April. 11:30 (CEST)
Total hours		20 – 23 hours course

Units detailed programme

UNIT 1		General Introduction.
ID	Lessons	Lectures and experts
U1	1.1.	One Health. Animal, Human environmental considerations LIVE SESSION: Opening, Keynote speech: <i>"One Health perspective on Biodiversity and Pandemics"</i> . Prof. Fernando Valladares. Researcher and Biodiversity specialist. Spanish Scientific Council. CSIC. Spain
U1	1.2.	What is Global Health about? Videos
U1	1.3.	Global Health at the Human-Animal-Ecosystem Interface. The One Health Approach. Prof. Dr Rafael Ruiz de Castañeda. Institute of Global Health. The University of Geneva. Pre-recorded lecture

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U1	2.	Health and Development
	2.1.	The relationship between health and development by Petra Lantz (UNDP) Materials from the Université de Genève. Open access video
U1	2.2.	SDG: Sustainable Development Goals. WHO video
U1	3.	Training & Capacity Building
	3.1.	Fostering interdisciplinary work to enhance One Health: The European Experience: EPIET & EUPHEM. From the presentation done at the 10 th TEPHINET Global Scientific Conference (Atlanta, Oct. 2019). <i>Video provided by</i> Dr Carmen Varela Santos. Head of Section Public Health Training. European Centre for Prevention and Disease Control. ECDC
U1	3.2.	Core Competencies for a One Health Workforce. Prof. Dr. King. Dean Emeritus, College of Veterinary Medicine. Ohio State University. USA. Pre-recorded lecture
U1	3.3.	“University Networks on the Front Lines for Community Engagement and One Health Innovation”. Prof. Dr W. A. Smith. School of Veterinary Medicine, University of California, Davis. USA. Pre-recorded lecture
U1	4.	Healthy cities from a One Health approach. Dr Javier Segura del Pozo. PH Officer. Member of the Scientific Committee of the European Healthy City Network. WHO Europe. Pre-recorded lecture
U1	5.	Behavioral aspects & health improvement "Put the mask on". The role of human behavior and other psychosocial variables in promoting health and preventing illness. Prof. Dr. Victor Rubio. Psychology. Autonomous University of Madrid. Spain. Pre-recorded lecture
U1	6. 6.1	One Health applied to humanitarian field Management of Malnutrition as an example of a multidisciplinary approach, the need for a ONE Health vision. Dr Antonio Vargas. Responsible of the Nutrition programme. Action Against Hunger. Spain. Pre-recorded lecture (French) Optional.
U1	6.2.	SIG-Sahel project, an integrated nutritional surveillance system. Dr Antonio Vargas. Responsible of the Nutrition programme. . Action Against Hunger. Spain. Pre-recorded lecture (French) Optional
U1	7	Preparedness & Response from OH perspective Key components of the OH in the Preparedness and Response. Dr Serge Nzietchueng. One Health Coordinator. FAO (Tripartite). Kenia. Pre-recorded lecture

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Unit 2.		The added value of the One Health approach. The COVID 19 as an example
ID	Lesson	Lectures and Experts
U2	1	<p>Roulette café. Networking activity.</p> <p>Read the one-page comment of Richard Horton in The Lancet on “Offline. COVID 19 is not a pandemic”.</p>
U2	2	<p>The social dimension of the COVID 19 impact.</p>
	2.1.	What is the Impact of the Pandemic on Women and Girls? Interview to Caren Grown, Global Director Gender. World Bank Group. Open access video
U2	2.2.	Children's Mental Health during the COVID-19 Pandemic. McMaster Demystifying Medicine Program Copyright McMaster University 2020. Open access video
U2	2.3.	The mental health of first responders during COVID 19. University Medical Centre, New Orleans. USA. Open access video
U2	2.4.1.	Impact of COVID-19 in the food supply chain: Disruptions and recovery strategy. FAO. Read the article
U2	3.	<p>One Health inputs for COVID 19 Response & Recovery.</p> <p>FAO COVID 19 Response and Recovery programme. Read the Card</p>
	3.1.	Are we there yet? The transition from response to recovery for the COVID-19 pandemic.
	3.2.	Bapon (SHM) Fakhruddin, et al, read the article
U2	4.	<p>Animal models and COVID 19</p>
	4.1.	SARS-CoV-2 in animals: situation update. Dr Elisa Pérez , Research assistant. Animal Health Research Center (INIA-CISA). Madrid, Spain. Pre-recorded lecture
U2	4.2.	Animal models for the study of SARS-CoV-2. Dr Julia Vergara . Researcher. Co-leader of the coronavirus research line at IRTA-CReSA. Member of the WHO Working Group on COVID-19 Animal Models. Pre-recorded lecture
U2	5.1.	Exploring the patterns of a multisectoral approach in fighting COVID-19 pandemic in SNNPR, Ethiopia: A qualitative case study approach. Dr Abraham Ali, Policy Study and Research Institute, SNNPR. Read the article
U2	5.2.	COVID 19 Risk Communication and Community Engagement. Ms. Vicky Houssière . Health Emergency Programme, WHO (MediPIET@Home Webinars series)
	6.1.	<p>Round Table:</p> <p><i>What do other fields of knowledge provide to the One Health approach? The example of the COVID 19 pandemic and its impact on people.</i> 26th March 1:45 to 3 pm (CET)</p> <p>Moderator: Dr Imane Jroundi, Univ. Mohamed V. Morocco</p> <p>Panellists:</p>

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		<p>Begoña LASAGABASTER OLAZABAL, UN Women (UNW) Representative to Tunisia and Libya</p> <p>Javier Segura del Pozo, PH Officer, Member of the Scientific Committee of the Healthy Cities Network- WHO Euro</p> <p>Victor Rubio, Prof. of the Faculty of Psychology. Autonomous University of Madrid <i>This session was not recorded. It becomes thus optional for ToT participants.</i></p>
U2	6.2.	<p>Extra Activity MediLAB Secure and MediPIET WEBINAR: Public Health and Social Measures in the context of the Covid-19 pandemic: adherence issues in North Africa and the Middle East Region. Tuesday 30th March at 3:00 pm – 4:15 pm CEST</p>

UNIT		Multisectoral collaboration to face Zoonoses & VBD from a OHA
Unit 3.	Lesson	Lectures and Experts
U3	1	Regulation Framework for OHA:
	1.1.	IHR 2005, the Terrestrial Animal Health Code and the Convention on the Biological Biodiversity. Dr Serge Nzietchueng . One Health Coordinator. FAO-KE. Pre-recorded lecture
U3	2.	Tripartite (WHO-FAO-OIE) . Training materials and Videos for this Lesson 2 have been provided by the Tripartite.
	2.1.	Operationalizing the collaboration between sectors. Bridging international frameworks: Introduction to IHR & PVS. Tripartite (WHO-FAO-OIE). <i>M1</i> .
U3	2.2.	Guidance and operational tools to support countries in building collaborative capacities. The Tripartite Zoonoses Guide and Associated Tools. Tripartite (WHO-FAO-OIE) <i>M2</i>
U3	2.3.	Navigating the Tripartite Zoonoses Guide (TZG). Tripartite (WHO-FAO-OIE)
U3	2.4.	The Joint Risk Assessment: a Training for Implementers. Tripartite (WHO-FAO-OIE)
U3	3.	Diseases-specific lectures:
	3.1.	Leishmaniasis control: integrative approach. Dr Israel Cruz . Head of the International Health Department of the National School of Public Health. Institute of Health Carlos III, Spain. Pre-recorded lecture
U3	3.2.	Leishmaniasis Control programme in Palestine. Dr Samir Sawalha . Head of Vector Control at the Ministry of Health of Palestine. Pre- recorded lecture
U3	3.3.	Plague control in Peru: the One Health concept in action. Dr Eric Bertherat , WHO-

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		HQ. Geneva, Switzerland. Pre-recorded lecture
U3	3.4.	Haemorrhagic Fever Diseases Control. The Role of the Anthropologist in the field. Dr Almudena Sáez. Robert Koch Institute. Lecture cancelled
U3	4. 4.1.	Regional Experiences: One Health Networks: the case of MediLabSecure. Dr Maria Grazia Dente . Istituto Superiore di Sanità. MediLAB Secure WP leader. Pre-recorded lecture
U3	5.	LIVE SESSION: Workshop. Countries Experiences on Multisectoral collaboration for Zoonosis & VBD Control. Moderator: Dr Maria Grazia Dente , from the National Center for Global Health, Istituto Superiore di Sanità (ISS) and co-leader of the Public Health WP of MedilabSecure Project. <ul style="list-style-type: none"> - <i>Multisectoral collaboration on Brucellosis control.</i> Ani Manukyan, Fellow of Cohort 3. National Centre for Disease Control. Armenia - <i>Title still pending: Dr Abdelaye KEITA</i>. Institut of PH of Mali-Human Virology and Dr Adama Fane, from Veterinary Central Laboratory - Animal Virology - <i>One Health implementation and accomplishment Egypt 2011-2021.</i> Dr Manal Fahim, Coordinator of the Influenza and Acute respiratory Diseases Surveillance. Department of Epidemiology and Surveillance, Ministry of Public Health and Population. Egypt

Unit 4		
Unit	Lesson	Lectures and Experts
U4	1	General Intro: Regulatory framework
	1.1.	International Instruments on the Use of Antimicrobials in the Human Health Sector. Maarten Van der Heijden . Legal and Policy Expert at World Health Organization. WHO HQ. Geneva, Switzerland. Pre-recorded lecture.
U4	1.2.	Overview and monitoring of OIE instruments on the use of antimicrobials in animals. Dr Jorge Pinto Ferreira . Deputy Head of AMR and Veterinary Products Department. OIE. Paris, France. Pre-recorded lecture.
U4	2.	General Intro: Integrated Surveillance and Monitoring Integrated Surveillance on AMR and the ESBL Ec Tricycle project. WHO. Jorge

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		MATHEU. Team Lead of Global Initiatives and Instruments, Department of Global Coordination and Partnership of AMR, AMR Division. WHO-HQ. Geneva, Switzerland. Pre-recorded lecture.
U4	3.	Tackling Antimicrobial Resistance: the importance of a One-Health approach. Dr Silvia García Cobos. Researcher at the Reference and Research Laboratory on Antimicrobial Resistance and Healthcare Associated Infections. National Centre of Microbiology. Institute of Health Carlos III. Madrid, Spain. Pre-recorded lecture.
U4	4.	A One Health Antimicrobial Resistance from the Clinical Perspective. Dr Rafael Cantón. Head of AMR Department at Ramón y Cajal Hospital. Madrid, Spain. Pre-recorded lecture.
U4	5.	Sequencing-based One Health approaches to track infection sources and antimicrobial resistance: examples of L. monocytogenes and mcr genes. Dr Adriana Cabal Rosel. Co-leader of the FED-AMR Joint Action. AGES - Austrian Agency for Health and Food Safety. Viena, Austria. Pre-recorded lecture.
U4	6	Towards computer-made antibiotics. Prof. César de la Fuente. Machine Biology Group. Dept of Bioengineering. University of Pennsylvania, USA. Pre-recorded lecture.
U4	7.	Regional Experiences: FED-AMR: A European One-Health project targeting the dissemination of free extracellular DNA as a source of Antimicrobial Resistance Dr Adriana Cabal Rosel. Co-leader of the FED-AMR Joint Action. AGES - Austrian Agency for Health and Food Safety. Viena, Austria. Pre-recorded lecture.
U4	8.	LIVE SESSION: Exchange of experiences on AMR from a OHA. Good practices and Lessons learnt". Moderated by: Professor Dr Imane Jroundi, from the Faculty of Medicine of the Mohamed V University of Rabat, Morocco. <ul style="list-style-type: none"> - Anti-Microbial Resistance (AMR) update in animal in Egypt The way forward and challenges. Dr Samah Farouk Hefny, from the Animal Health Research Institute of Egypt. - AMR in Palestine: A Good Example for Inter-Sectoral 'One Health' Approach. Dr Mohammad Manassra, from Veterinary Services and Animal Health of Palestine. - Lessons learnt from the project “Working Together to Fight AMR”. Dr Pilar Ramón, Responsible of the Antimicrobial Resistance Special Programme. Pan American Health Organization/World Health Organization.

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