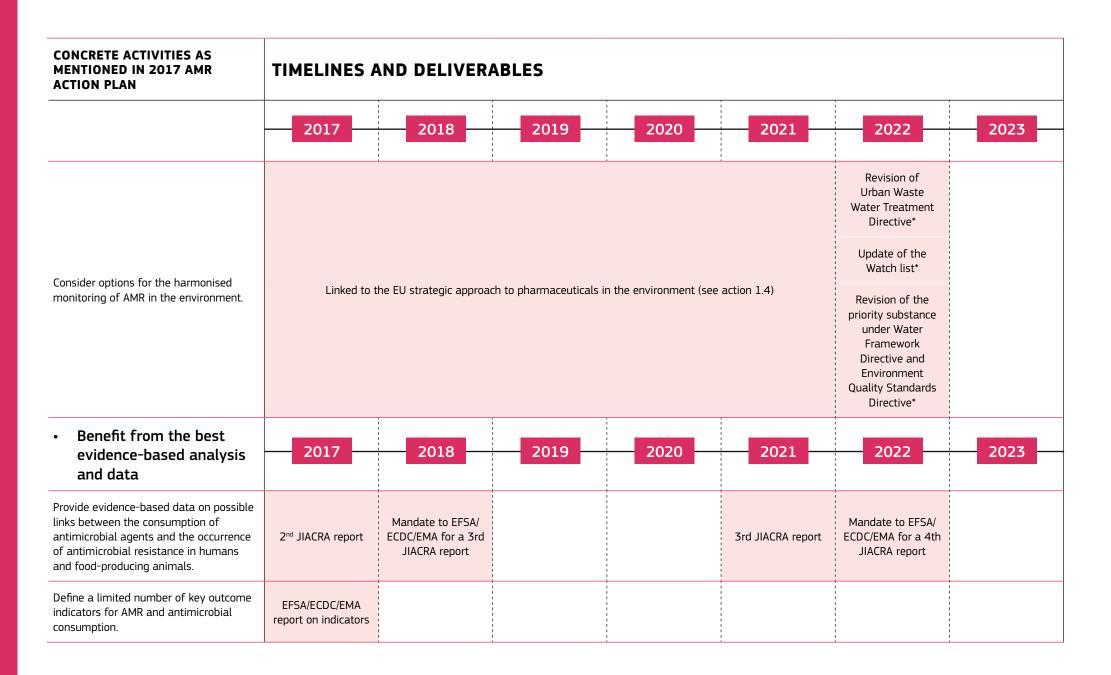
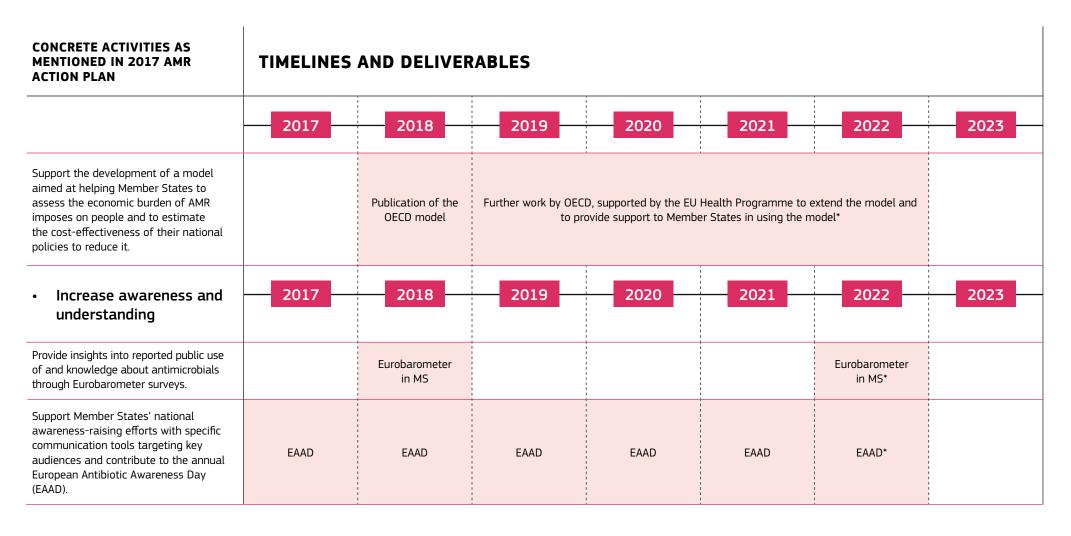
1. MAKING THE EU A BEST PRACTICE REGION

1.1 BETTER EVIDENCE AND AWARENESS OF THE CHALLENGES OF AMR

CONCRETE ACTIVITIES AS MENTIONED IN 2017 AMR ACTION PLAN	TIMELINES AND DELIVERABLES									
 Strengthen One Health surveillance and reporting of AMR and antimicrobial use 	2017	2018	2019	2020	2021	2022	2023			
Review EU implementing legislation on monitoring AMR in zoonotic and commensal bacteria in farm animals and food.	Mandate to EFSA for technical advice		EFSA opinion	Adoption of the new legislation						
Review EU implementing legislation on reporting communicable diseases in humans.		New implementing act with updated AMR case definitions								
Identify and assess under the Animal Health Law, resistant bacteria that cause transmissible animal diseases and, if necessary, develop harmonised rules for their surveillance.			Mandate to EFSA for technical advice once list of transmissible disease is adopted under Animal Health Law							
Improve AMR detection in the human health sector by providing EU support for networking collaboration and reference laboratory activities.			collabo	nme funding to support ration and reference lab ctivities in human healt	oratory					





1.2 BETTER COORDINATION AND IMPLEMENTATION OF EU RULES TO TACKLE AMR

 Improve the coordination of Member States' One Health responses to AMR 	2017	2018	2019	2020	2021	2022	2023
Make available regular information on AMR in the context of the AMR One Health network, which gives an overview of the AMR epidemiological situation at Member State and EU level.		2nd meeting 3rd meeting	4th meeting 5th meeting		6th meeting	7th meeting 8th meeting*	
Support the implementation of national One Health action plans through joint Commission and the ECDC visits to Member States upon request.	Joint One Health visits with ECDC	Joint One Health visits with ECDC	Joint One Health visits with ECDC			Joint One Health visit with ECDC*	
Launch a joint action to tackle AMR and healthcare-associated infections to support collaborative activities and policy development by Member States.	Launch	Interim	reports		Final conference and report		



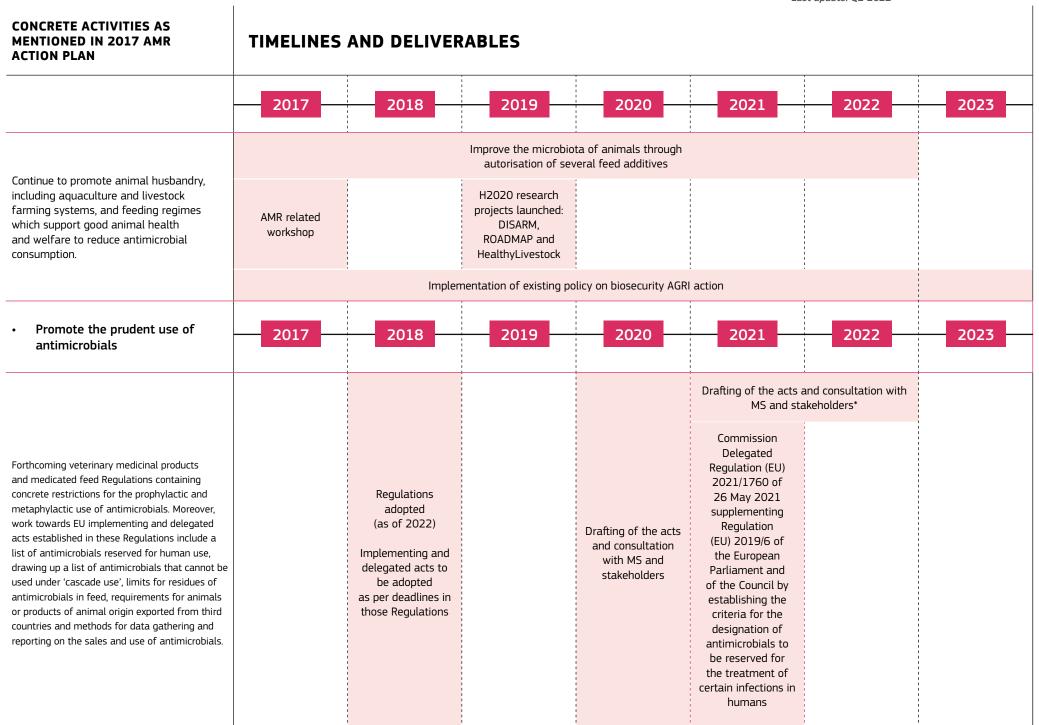
CONCRETE ACTIVITIES AS MENTIONED IN 2017 AMR ACTION PLAN	TIMELINES	AND DELIVER	RABLES						
	2017	2018	2019	2020	2021	2022	2023		
Make increased use of the EU Health Security Committee and the Commission Working Group on AMR in the veterinary and food areas to strengthen coordination and to share information.			lar exchanges on AMR ii focused on Covid-19 du						
			Meeting of working group on AMR in food	Meeting of working group on AMR in food					
Seek to co-fund and collaborate with the WHO on activities to help EU Member States develop and implement national One Health action plans against AMR.		New WHO EURO activities co-funded by EU health programme							
 Better implementation of EU rules 									
Assess the effectiveness of the implementation of EU legislation on, inter alia, monitoring AMR in food-producing	Interim Overview report		Overview report						
animal populations and food by continuing to carry out regular audits in Member States.	Audits	Audits							
Develop training programmes on AMR for Member State competent authorities under the Better Training for Safer Food (BTSF) initiative and for health professionals.		BTSF training activities							
Advise Member States on the possibility to use the Structural Reform Support Service (SRSS) funding to Member States for designing and implementing policies against AMR.		SRSS support presented to MSs in the AMR One Health network							



1.3 BETTER PREVENTION AND CONTROL OF AMR

CONCRETE ACTIVITIES AS MENTIONED IN 2017 AMR ACTION PLAN	TIMELINES	AND DELIVER	RABLES				
 Strengthen infection prevention and control measures 	2017	2018	2019	2020	2021	2022	2023
Support good practices in infection prevention and control in hospital environments.		Work by OECD supported by EU health programme to report on cost effectiveness of AMR/infection prevention measures including hand hygiene and hospital cleaning					
Support activities for infection prevention and control in vulnerable groups, in particular to tackle resistant tuberculosis strains.			Report from HA-REACT joint action from EU Health programme on HIV and co- infection prevention and harm reduction which includes activities to address tuberculosis	iining to be carried out	Report from INTEGRATE joint action from EU health programme on integrating prevention, testing and link to care strategies across HIV, viral hepatitis, TB and STIs in Europe*		
Promote the uptake of vaccination in humans to prevent infections and subsequent use of antimicrobials.		Part of policy initia		of Joint Action Vaccin ncil Recommendation o preventable diseases)	n strengthened cooperat	ion against vaccine	





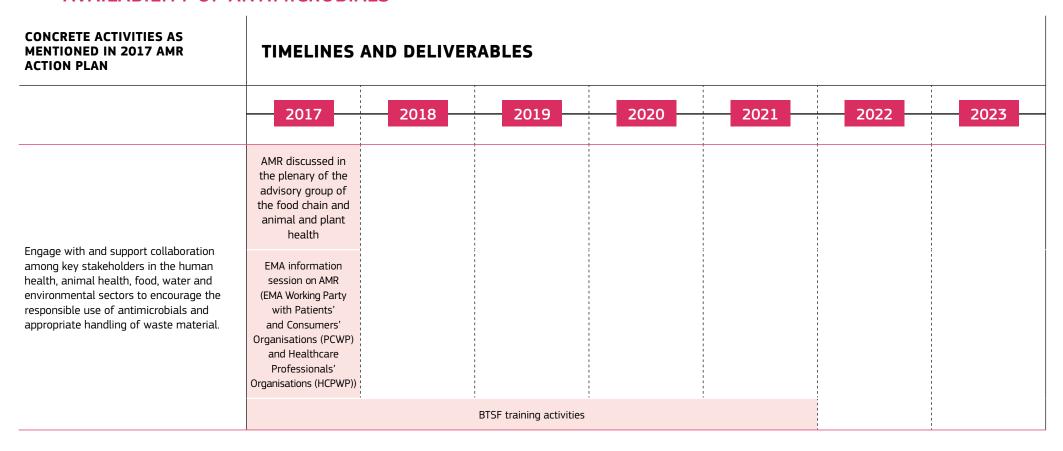


 Promote the prudent use of antimicrobials 	2017	2018	2019	2020	2021	2022	2023
Forthcoming veterinary medicinal products and medicated feed Regulations containing concrete restrictions for the prophylactic and metaphylactic use of antimicrobials. Moreover, work towards EU implementing and delegated acts established in these Regulations include a list of antimicrobials reserved for human use, drawing up a list of antimicrobials that cannot be used under 'cascade use', limits for residues of antimicrobials in feed, requirements for animals or products of animal origin exported from third countries and methods for data gathering and reporting on the sales and use of antimicrobials.					Commission Delegated Regulation (EU) 2021/578 of 29 January 2021 supplementing Regulation (EU) 2019/6 of the European Parliament and of the Council with regard to requirements for the collection of data on the volume of sales and on the use of antimicrobial medicinal products in animals	Commission Implementing Regulation (EU) 2022/209 of 16 February 2022 establishing the format of the data to be collected and reported in order to determine the volume of sales and the use of antimicrobial medicinal products in animals in accordance with Regulation (EU) 2019/6 of the European Parliament and of the Council	
Develop EU guidelines for the prudent use of antimicrobials in human medicine.	EU guidelines published						
Assist Member States implement EU guidelines for the prudent use of antimicrobials in veterinary medicine.	Fact-finding missions on prudent use in veterinary sector	Fact-finding missions on prudent use in veterinary sector	Overview report				
veterinary medicine.	Interim Overview report						

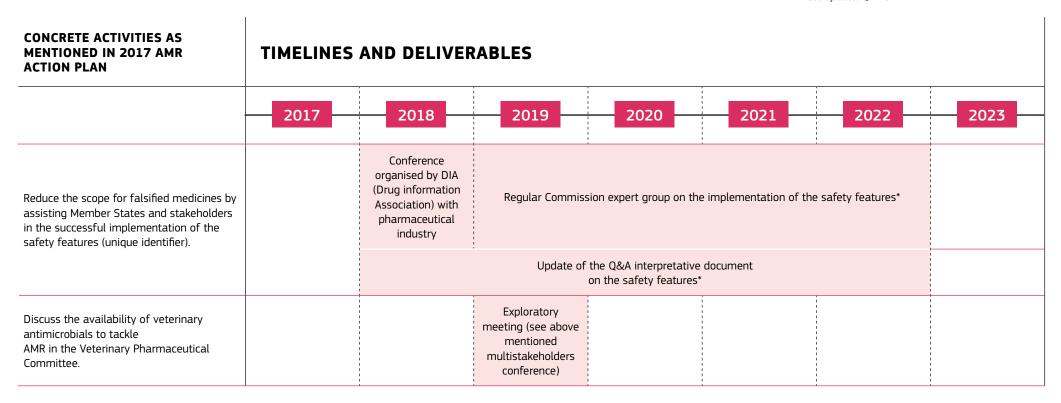
1.4 BETTER ADDRESSING THE ROLE OF THE ENVIRONMENT

CONCRETE ACTIVITIES AS MENTIONED IN 2017 AMR ACTION PLAN	TIMELINES	TIMELINES AND DELIVERABLES									
	2017	2018	2019	2020	2021	2022	2023				
information on the benefits and risks of	EMA finalised	Exploratory meeting with EMA on the		EMA review of medicines containing fosfomycin							
	a review of the vancomycin- containing medicines	topic of availability of veterinary antimicrobials and their prudent use		Regular update meetings with EMA on the topic of availability of veterinary antimicrobials and their prudent use							
Adopt an EU strategic approach to pharmaceuticals in the environment.			EU strategic approach to pharmaceuticals in the environment (PIE) adopted	Implem	nentation of EU strateg in the envir	ic approach to pharm onment (PIE)	naceuticals				
Maximise the use of data from existing monitoring to improve knowledge, including by using the Information Platform for Chemical Monitoring (IPCheM).				Project to pror	mote IPCHeM in regulat	tory processes*					
Reinforce the role of the Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) in providing scientific advice to the European Commission on environment-related AMR issues.		Video material describing the role of SCHEER circulated to relevant sectors in the Commission									

1.5 A STRONGER PARTNERSHIP AGAINST AMR AND BETTER AVAILABILITY OF ANTIMICROBIALS



CONCRETE ACTIVITIES AS MENTIONED IN 2017 AMR ACTION PLAN	TIMELINES AND DELIVERABLES							
	2017	2018	2019	2020	2021	2022	2023	
Work with stakeholders to ensure the availability of human and veterinary antimicrobials and continued access to established products; provide incentives to increase the uptake of diagnostics, antimicrobial alternatives and vaccines.			Discussion in the IVD Technical Group (IVD TG) and possibly in the Medical Device Coordination Group on how to promote the uptake of diagnostics			Multi-stakeholder conference on the themes of availability of veterinary antimicrobials (old, new and future) and on their prudent use, at EU level but also in the context of broader international cooperation*		
		Implementation	of Regulation (EU) 2017/7	46 on in vitro diagnos	tic medical devices			
Reduce the scope for falsified medicines by assisting Member States and stakeholders in the successful implementation of the safety features (unique identifier).	Presidency Safer Europe Without Falsified Medicines Conference organised by industry and the Estonian Presidency							



2. BOOSTING RESEARCH, DEVELOPMENT AND INNOVATION ON AMR

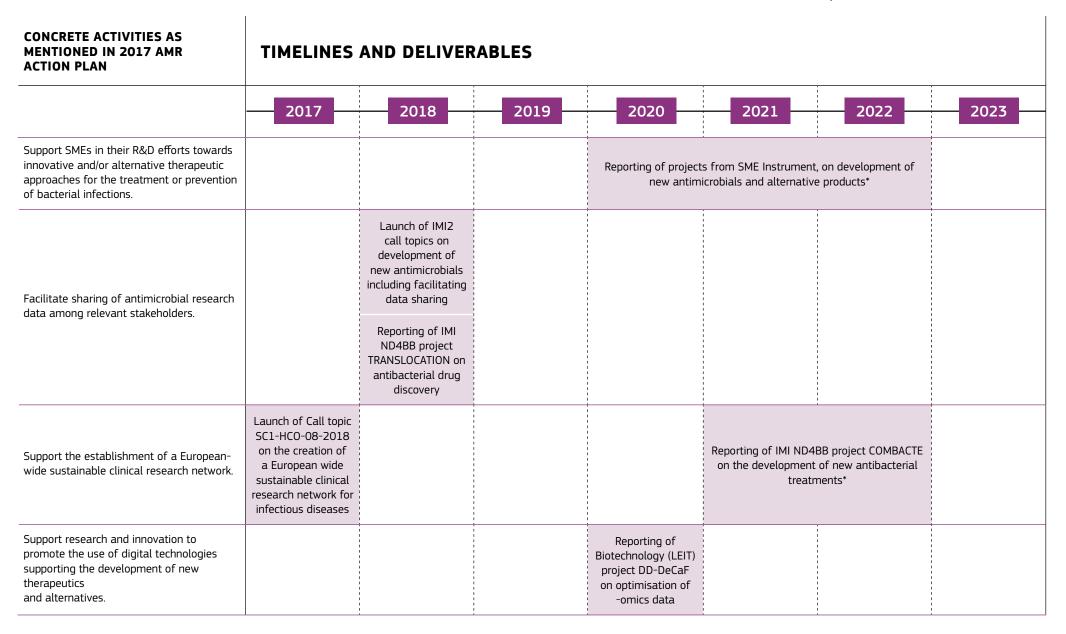
2.1 IMPROVE KNOWLEDGE ON DETECTION, EFFECTIVE INFECTION CONTROL AND SURVEILLANCE

CONCRETE ACTIVITIES AS MENTIONED IN 2017 AMR ACTION PLAN	TIMELINES	AND DELIVER	ABLES				
	2017	2018	2019	2020	2021	2022	2023
	Funding of research projects under the ERA- NET SusAn on animal production	Launch of One Health EJP which includes research on new intervention tools on AMR	Launch of Call topic on clinical management of AMR				
Support research into the development and assessment of interventions that prevent the development and spread of AMR.		Funding of projects coming out of Call topic SFS-46-2017 on alternative production systems to address anti- microbial drug usage, animal welfare and the impact on health					
	Funding decision on projects from the JPIAMR 5th call on prevention and intervention strategies to control AMR infections						
Support research into understanding the epidemiology of AMR, in particular the pathways of transmission between animals and humans, and their impact.	Funding decision on project addressing the clinical burden of Clostridium difficile infection under under IMI2, Call 9				Report of projects selected under 3rd JPIAMR ERA- NET Co-fund call to bridge the knowledge gap on AMR transmission mechanisms		

CONCRETE ACTIVITIES AS MENTIONED IN 2017 AMR ACTION PLAN	TIMELINES	AND DELIVER	ABLES				
	2017	2018	2019	2020	2021	2022	2023
Support research into the development of		Launch of One Health EJP which includes research on early signalling and assessing zoonotic threats		Reporting COMPARE, on the rapid identification, containment and mitigation of emerging infectious diseases and foodborne outbreaks			
Support research into the development of new tools for early (real-time) detection of resistant pathogens in humans and animals.		Launch of Call topic SC1-BHC-13-2019, on mining of big data for early detection of infectious disease threats	Reporting DIAGORAS, on bedside diagnosis of oral and respiratory tract infections, and identification of antibiotic resistances for personalised monitoring and treatment				
Support research into new eHealth solutions to improve prescription practices, self-management of health, care solutions, and improve awareness of AMR.		Launch of Call topic SC1-DTH-10-2019- 2020, on digital solutions for health and care services					

2.2 DEVELOP NEW THERAPEUTICS AND ALTERNATIVES

CONCRETE ACTIVITIES AS MENTIONED IN 2017 AMR ACTION PLAN	TIMELINES	AND DELIVER	RABLES				
	2017	2018	2019	2020	2021	2022	2023
on I c fc mei HIV, rep	Funding decision on EDCTP2 projects on treatments for cryptococcal meningitis, malaria, HIV, tuberculosis and reproductive tract infections	Reporting of project PneumoNP on nanotherapeutics to treat antibiotic resistant Gram- Negative pneumonia	Launch of IMI2 call topics on development of new antimicrobials and alternative products for humans		arded under IDFF to deve nicrobials and alternative		
		Reporting of project NAREB on nanotherapeutics for antibiotic resistant emerging bacterial pathogens	Reports of projects fr transnational o	Reporting of position an TBiotic program 1st and 2nd join an TB drug candid to clinical program concept*			
Support research into the development of new antimicrobials and alternative products for humans and animals as well as the repurposing of old antimicrobials or the development of new combination therapies.		Launch of Call topics SC1-BHC-14-2019 on stratified host-directed approaches to improve prevention, treatment and/or cure of infectious diseases and SC2- SFS-11-2019- 2019 on antimicrobials and animal production				Reporting of IMI ND4BB projects on development of new antimicrobials and alternative products for humans*	
		Reporting of project FormAMP on innovative nanoformulation design of antimicrobial peptides					



2.3 DEVELOP NEW PREVENTIVE VACCINES

CONCRETE ACTIVITIES AS MENTIONED IN 2017 AMR ACTION PLAN	TIMELINES AND DELIVERABLES								
	2017	2018	2019	2020	2021	2022	2023		
Support research and innovation to promote the use of digital technologies supporting the development of new therapeutics and alternatives.					Reporting of projects from Call topic SC1- PM-16- 2017 on in-silico trials for developing and assessing biomedical products				
	Launch of Call Topic SC1-BHC-15-2018, on new anti- infective agents	Launch of Call Topics SC1- BHC-14-2019, on stratified				Reporting of projects OptiMalVax and MultiViVax on Malaria vaccine development*			
Continue to support research into the development of new effective preventive vaccines for humans	(including vaccines) for prevention and/ or treatment of neglected infectious diseases	host-directed approaches to improve prevention, treatment and/or cure of infectious diseases, SC2- SFS-31-2019 (ERA-		Reporting of projects TBVAC2020 and EMI- TB on advancing tuberculosis vaccine candidates		Reporting of the European AIDS Vaccine Initiative (EAVI) 2020*			
and animals.		NET) on veterinary vaccinology and SC2-SFS-12-2019 on swine fever vaccines	Reporting of project SAPHIR on novel vaccine strategies for animal production	Reporting MycoSynVac, on development of a Mycoplasma vaccine for animal use		Reporting of project TracVac on Developing a Chlamydia Trachomatis vaccine*			
					ans awarded under IDFI elopment of new vaccii				

2.4 DEVELOP NOVEL DIAGNOSTICS

CONCRETE ACTIVITIES AS MENTIONED IN 2017 AMR ACTION PLAN	TIMELINES	MELINES AND DELIVERABLES							
	2017	2018	2019	2020	2021	2022	2023		
Support increasing the knowledge base concerning the barriers that influence the wider use of vaccination in medical and veterinary practice.		Launch of Call Topic SFS-11-2018-2019, on antimicrobials and livestock production							
	Launch of IMI2 call, on diagnostics development and validation	Reporting of project VIROGENESIS on virus discovery and epidemic tracing	Reporting of poject Poc-ID on Point-of- Care diagnostics for Infectious Diseases		Reporting of project FAPIC on developping a fast assay for pathogen identification and characterisation*				
Support research into the development of new diagnostic tools in particular on-site tests in humans and animals.		Launch of One Health EJP, incl. research on new diagnostic tools on AMR		Loans awarded under	IDFF to development of	new diagnostic tools*			
					Reporting PREPARE, on outbreak preparedness	Reporting of EDCTP2 projects, on diagnostic tools for poverty-related diseases*			
Support the use of IT solutions in developing tools for diagnosing human and animal infections.					from SME Instrument, or gnosing human and anir				



2.5 DEVELOP NEW ECONOMIC MODELS AND INCENTIVES

CONCRETE ACTIVITIES AS
MENTIONED IN 2017 AMR
ACTION PLAN

TIMELINES AND DELIVERABLES

			•		:		
	2017	2018	2019	2020	2021	2022	2023
Encourage the uptake of diagnostics in medical and veterinary practice.	Launch of Call Topic SC1-HCO-12-2018, on Innovation Procurement						
Increase the evidence base for understanding the societal costs and benefits of different strategies for fighting AMR.		Reporting of IMI DRIVE-AB project					
Support research into the development of new economic models, exploring and analysing incentives to boost the development of new therapeutics, alternatives, vaccines and diagnostics.		Reporting of IMI DRIVE-AB project				HERA study aiming at collecting evidence and providing options for action in order to bring more AMR medical countermeasures to the market*	
		TATFAR discussion on incentives					
Analyse EU regulatory tools and incentives – in particular orphan and paediatric legislation – to use them for novel antimicrobials and innovative alternative medicinal products that currently do not generate sufficient returns on investment.	Report from the European Commission to the European Parliament and the Council on the 10 years of the paediatric Regulation	Study on the economic impact of the supplementary protection certificate, pharmaceutical incentives and rewards in Europe	Study on orphan medicinal products legislation	Evaluation of the o	orphan and paediatric m	edicines legislation*	
Encourage Member States to explore results and recommendations of EU research projects on new economic business models.			Discussion with Men	nber States in the Pharm	nacuetical Committee		
Develop new or improved methodological HTA approaches and foster methodological consensus- building.	Launch of Call Topic SC1-BHC-26-2018, on HTA research to support evidence- based healthcare						

2.6 CLOSE KNOWLEDGE GAPS ON AMR IN THE ENVIRONMENT AND ON HOW TO PREVENT TRANSMISSION

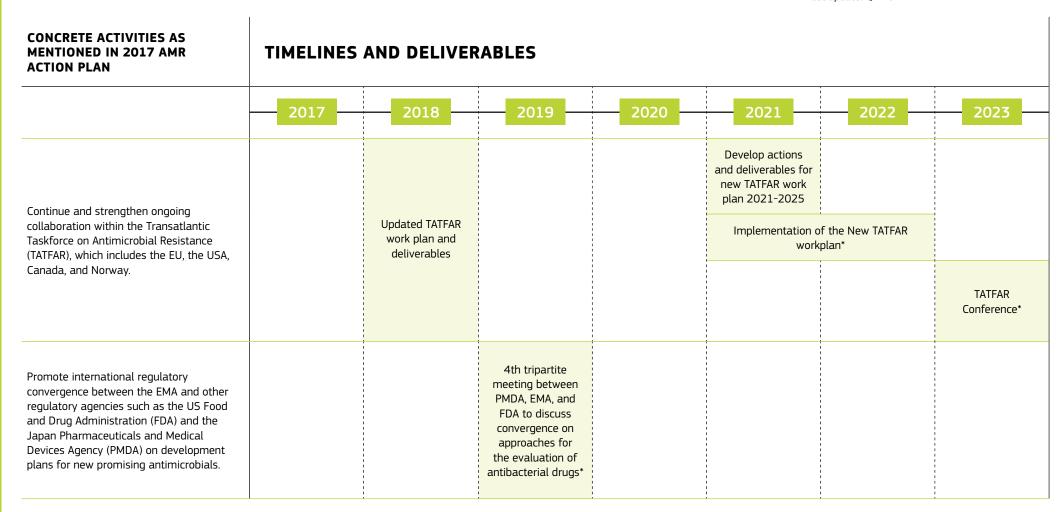
CONCRETE ACTIVITIES AS MENTIONED IN 2017 AMR ACTION PLAN	TIMELINES AND DELIVERABLES								
	2017	2018	2019	2020	2021	2022	2023		
Support research into knowledge gaps on the release of resistant microorganisms and antimicrobials into the environment and their spread.		Launch of One Health EJP, incl. research on resistance spread	Reporting of project EFFORT on microbial drug resistance and transmission		Reports of projects from JPIAMR 3rd ERA- NET Co-fund call on transmission dynamics*				
Explore risk assessment methodologies to evaluate the risks to human and animal health from the presence of antimicrobials in the environment.		Launch of One Health EJP, incl. research on resistance spread				Mandate to EFSA/ ECHA/EMA/ECDC on the impact of the non-medicinal use of azole fungicides on the development of azole-resistant Aspegillus spp*			
						mission strategic approach n the environment (PIE)*			
Support research into and the development of new tools for monitoring antimicrobials and microorganisms resistant against antimicrobials in the environment.				Implementation of Commission strategic approach to pharmaceuticals in the environment (PIE)*					
Support the development of technologies that enable efficient and rapid degradation of antimicrobials in wastewater and the environment and reduce the spread of AMR.			ERA-NET for JPI Water and JPIAMR						

3. SHAPING THE GLOBAL AGENDA

3.1 A STRONGER EU GLOBAL PRESENCE

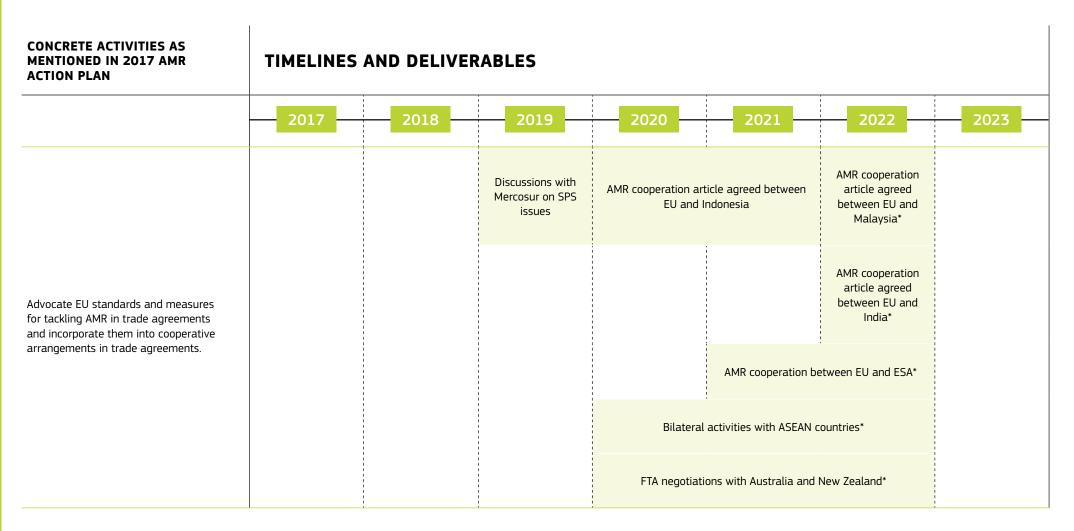
CONCRETE ACTIVITIES AS MENTIONED IN 2017 AMR ACTION PLAN	TIMELINES AND DELIVERABLES										
	2017	2018	2019	2020	2021	2022	2023				
Continue to actively contribute to the normative work of the WHO, the OIE, the FAO, and the Codex Alimentarius on the development of ambitious international frameworks and standards/norms/ guidelines/methodologies related to AMR.	Signature of a letter of intent for reinforced cooperation between FAO and EC between FAO DG and V. Andriukaitis Commission	Involvement of FAO	in new BTSF activities	for non-EU countries	New CODEX guidelines on integrated monitoring and surveillance of foodborne AMR						
		Review upcoming normative work (e.g. as outlined in resolution of the World Health Assembly) and assess EC involvement			Revised CODEX code of practice to minimize AMR						
Reinforce technical cooperation with the WHO and its members in key areas of the WHO Global Action Plan on AMR.											

CONCRETE ACTIVITIES AS MENTIONED IN 2017 AMR ACTION PLAN	TIMELINES AND DELIVERABLES									
	2017	2018	2019	2020	2021	2022	2023			
Boost support for the International Conference on the Harmonisation of Technical Requirements for the Registration of Pharmaceuticals for Human Use (ICH) and the Veterinary International Conference on the Harmonisation (VICH) on relevant international guidelines/standards/ norms related to AMR.	Promotion of the new EU Action Plan against AMR during the IPRF meeting in the margins of the ICH meeting in Geneva in November 2017		Text on AMR in the UN political declaration on Universal Health Coverage		to update existing d other possibilities armonisation*					
Work towards continued high-level political attention and commitment to AMR action, including in the United Nations forums, the G7 and the G20.	AMR featuring in the G7 Health Minister Communique and G20 Health Ministers' Declaration	AMR on G7 and G20 Agenda	AMR on G7 and G20 Agenda	AMR on G20 Agenda	AMR on G7 Agenda	AMR on G7 Agenda				
	Approval by G7 CVOs of a common approach on the definitions of therapeutic, responsible and prudent use of antimicrobials in animals									
Look for synergies with the UN Strategic Approach to International Chemicals Management's work on the emerging policy issue of pharmaceuticals in the environment.				EU Chemical Startegy for Sustainability		of EU Chemical Sustainability*				
Analyse the feasibility of setting up a global AMR clinical studies network in collaboration with G7 members.										





3.2 STRONGER BILATERAL PARTNERSHIPS FOR STRONGER COOPERATION



IMPROVE KNOWLEDGE ON DETECTION, EFFECTIVE INFECTION CONTROL AND SURVEILLANCE

CONCRETE ACTIVITIES AS MENTIONED IN 2017 AMR ACTION PLAN	TIMELINES AND DELIVERABLES										
	2017	2018	2019	2020	2021	2022	2023				
Engage with major global players and strategic countries (e.g. Brazil, China, India), contributing towards achieving objectives of the WHO global action plan on AMR. F2F outreach including AMR*	Seminars on AMR with Argentina, Brazil, Chile & Colombia	Seminars on AMR with Paraguay, Peru & Uruguay	AMR activities with China and India*	F2							
	Seminar with India on the use of veterinary medicines and AMR	Overview report regarding national policies and measures against AMR in third countries	Follow-up seminars in South East Asia including Australia and New Zealand*	AMR							
	Identification mission on AMR cooperation with South-American partner countries		AMR activities in Latin American countries under FPI project								
Support EU candidate countries, potential candidate countries and neighbouring countries to which the ENP applies in the alignment with, and capacity building for the implementation of EU legislation related to AMR and EU standards.			ECDC/EFSA and EU- Enlargement multi- country workshop / ECDC/EFSA and EU- ENP multi-country workshop								
Invite the European Parliament, Member States and stakeholders to share views on actions to be taken to ensure that efforts to combat AMR made by EU producers, including farmers, do not place them at a competitive disadvantage.											

3.3 COOPERATING WITH DEVELOPING COUNTRIES

CONCRETE ACTIVITIES AS MENTIONED IN 2017 AMR ACTION PLAN	TIMELINES AND DELIVERABLES										
	2017	2018	2019	2020	2021	2022	2023				
Continue to contribute to reducing AMR in least developed countries through infectious disease programmes such as the Global Alliance for Vaccines and Immunisations (GAVI)				Implementation thro	i ough Commission pledges	*					
Assist in the development of AMR strategies in the areas of food safety and animal health through regional training workshops on AMR			New BTSF activities for non-EU countries								
Support partner countries' policy initiatives on AMR, where appropriate, through international cooperation and development instruments (e.g. Global Public Goods & Challenges, the European Development Fund).	undertaking survey	s on prescribing and us	oject on mapping the global threat of AMR, DEVCO supports WHO to develop a point prevalence protocol for on prescribing and use of antimicrobial medicines in hospital setting, build capacity to implement antimicrobial mes in hospitals in SSA, address the prevention, detection and response to substandard and falsified products								
Support the development of resilient health systems in partner countries			Supporting Wh		ealth systems through devo	elopment funding					

3.4 DEVELOPING A GLOBAL RESEARCH AGENDA

CONCRETE ACTIVITIES AS MENTIONED IN 2017 AMR ACTION PLAN	TIMELINES AND DELIVERABLES							
	2017	2018	2019	2020	2021	2022	2023	
Improve global coordination of research activities.		Launch of G20 Research hub						
Support the establishment of a virtual research institute under JPIAMR.					Reporting of proje expansion of			
Continue collaborative research with Sub-Saharan Africa in the context of the European and Developing Countries Clinical Trial Partnership (EDCTP) in particular in relation to tuberculosis, HIV/ AIDS, malaria and neglected infectious diseases.			Reporting of EDCTP2 projects on research capacity development in support of the EVD response Reporting of EDCTP2 projects on maximising the impact of EDCTP research and translation of research results into policy and practice					
Foster international research collaboration on AMR in the animal health sector in the STAR-IDAZ International Research Consortium.			•					