Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
1.	**Establish multi-sectoral approach for planning, coordination and implementation of ARC**	**1.1: Selection of National Focal Point**	National Focal Point selected	Disease Control Unit (DCU), CDC, DGHS; DG DLS; DG Fisheries	Completed in 2012
		1.2: Selection of sectoral focal points for human health, animal health, fisheries and environment	Sectoral focal points for human health, animal health, fisheries and environment selected	All stakeholders	Completed in 2012
		1.3: Coordination with multi-sectoral stakeholders (inter- and intra-sectoral) by-			
		• Conducting regular meeting of National Steering Committee (NSC) (at list one per rear or earlier, if necessary) and National Technical Committee (NTC) (at least six monthly or earlier, if necessary)	At least one NSC meeting and 2 NTC meetings conducted per year	DCU, CDC, DGHS	2017-2022 (already in place and to be continued)
		• Sharing information and other relevant documents (formal/web-based open access)	Web-based system for document sharing developed	DCU, CDC, DGHS & other stakeholders	Dec, 2017
			Dissemination meeting conducted/ Documents posted in the Web-based system	DCU, CDC, DGHS & other stakeholders	2017-2022
		• Carrying out advocacy program in joint venture	Number of joint advocacy program conducted	Lead- DCU, CDC, DGHS & All stakeholders	2017-2022
		• Monitoring, evaluation and report preparation of NAP activities periodically to present to NSC and NTC	Number of M&E conducted	Respective stakeholder	2017-2022
			Number of reports prepared and presented to NSC and NTC	Respective stakeholder	2017-2022

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		• Review and update NAP, if necessary	Number of review and update of the NAP	All stakeholders	2017-2022
2.	Ensure Rational Use of Antimicrobial agents (AMs) in Human health, Livestock, Fisheries sectors and Environment (Antimicrobial Stewardship-AS)	**2.1: Ensuring rational use of AMs in human health sector (AS)**			
		2.1.1: Development/update of Standard Treatment Guidelines (STGs) for Infectious diseases (IDs) for use of AMs at different levels (tier-wise) of healthcare facilities (HCFs)	STG for IDs developed/ updated	Lead-DCU, CDC, DGHS	2017-2022
		• Analysis of available baseline data of infectious disease (IDs) burden and antimicrobial sensitivity (AMS) pattern to develop STG	Analysis of ID & AMS data done	Lead-DCU, CDC, DGHS	December, 2017
		• Development /update of STG for IDs in all levels of public HCF (e.g. tertiary/ specialized institutions, secondary and primary);	Number of tier-wise STGs developed	Lead- DCU, CDC, DGHS Support- Working group	2017-2018
		• Making STGs available in the website for open access	STG available in the website as open access	DCU, CDC, DGHS	2017-2022
		• Encouraging and promoting use of STG (developed by ARC program) by private HCPs/HCFs	Number of private HCFs completed development of STG	Lead- DCU, CDC, DGHS Support: HSM, DGHS	2017-2022
		• Update STGs annually based on AST data by all HCFs (both public and private)	Number update(s) of the STGs	DCU, CDC, DGHS	2017- 2022
		2.1.2: Ensuring practice of the STGs			

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		• Orientation and training (basic and refresher) of prescribers on STG	Number of orientation and training of the prescribers conducted	DCU, CDC, DGHS	2017-2022
		• Monitoring of practicing of STGs using a standard tool	A standard tool for monitoring of practicing STGs developed	DCU, CDC, DGHS	December, 2017
			Number of prescriptions monitored for practicing STGs	DCU, CDC, DGHS	2017-2022
		• Ensuring Medical audit	SOP for medical audit developed	DCU, CDC, DGHS	June, 2017
			Auditor team selected and trained	DCU, CDC, DGHS. Authority of respective hospitals	June, 2017
			Number of medical audits conducted	DCU, CDC, DGHS	2017-2022
		2.1.3: Ensuring quality laboratory reporting of antimicrobial susceptibility test (AST) for right selection of AMs			
		2.1.3.1: Ensuring quality testing at all Microbiology laboratories			
		• Strengthen/ establishment of standard Microbiology laboratories at selected public medical colleges/ district HCFs	Number of Microbiology laboratory(ies) strengthened	IEDCR, DGHS; DCU, CDC, DGHS Support- relevant lab partners	
		o Select HCFs for strengthening/ establishing Microbiology laboratory	HCFs selected		Done in 2016

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		o Assessment using tools to identify gaps	Assessment completed		Done in 2016
		o Procurement & supply of equipment's & logistics to strengthen/ establish selected laboratories	Equipment's & logistics procured & supplied		July, 2018
		• Development of SOPs & Laboratory Quality Manual (LQM) for Microbiology laboratory o Assign working group o Development of SOPs for Microbiology laboratory o Development of LQM including Biosafety & Biosecurity	SOPs for Microbiology laboratory developed LQM developed	IEDCR, DGHS; DCU, CDC, DGHS; Working group Support: relevant lab partners	December, 2017
		o Training of laboratory personnel on SOPs & LQM	Number of laboratory personnel trained on SOPs & LQM	IEDCR, DGHS; DCU, CDC, DGHS	June, 2018
		• Ensure monthly report of AST by all selected laboratories	Number of monthly reports of AST received	IEDCR, DGHS; DCU, CDC, DGHS; Surveillance laboratories	2018-2022
		• Provide consumable logistics support	List and quantity of logistics provided	IEDCR, DGHS; DCU, CDC, DGHS	2018-2022
		2.1.3.2: Establish one or more national Reference Microbiology Laboratory(ies) (RMLs)			
		• Develop protocol for referral activities including: (i) Quality Management of the selected peripheral Microbiology laboratories; (ii) laboratory networking; (iii) Central data management,	Working group assigned Protocol for referral activities developed	DCU, CDC, DGHS; IEDCR, DGHS Support: relevant lab partners	September, 2017

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		dissemination, providing feedback & coordination with stakeholders (iv) open access of relevant data to healthcare professionals			
		• Select one/ more Microbiology laboratories as RMLs	Microbiology laboratory(ies) selected as RMLs	DCU, CDC, DGHS and other stakeholders	September, 2017
		• Procurement & supply of equipment's & logistics for the RMLs	Equipment's & logistics procured & supplied to RMLs	DCU, CDC, DGHS; IEDCR, DGHS	July, 2018
		• Training of laboratory personnel for referral activities o Development of training manual	Training manual developed Number of laboratory personnel trained	DCU, CDC, DGHS; IEDCR, DGHS Support: relevant lab partners	July, 2018
		2.1.4: Ensuring availability of AMs (according to STGs) at all levels of HCFs			
		• Generation of baseline data on infectious diseases (IDs) profile at all HCFs using MIS data	Baseline data on IDs profile generated	DCU, CDC, DGHS	December, 2017
		• Preparation of a list of essential AMs (according to STGs and IDs profile) for tier-wise distribution	List of essential AMs prepared	DCU, CDC, DGHS; Hospital Service Management, DGHS	March, 2018
		• Procurement of enlisted AMs following STG	Quantity of AMs procured	Hospital Service Management, DGHS; Tertiary Hospitals/Institutes Support- DCU, CDC, DGHS	2018-2022
		• Regular supply of AMs following STG	Number of HCFs getting regular supply of AMs	DCU, CDC, DGHS	2018-2022

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
			Number of AMs that could be supplied	Support- Hospital Service Management, DGHS	
		• Monitor availability of AMs using standard toolkit	Standard toolkit for monitoring availability of AMs developed Number of HCFs under monitoring	DCU, CDC, DGHS Support- Hospital Service Management, DGHS	2018-2022
		2.1.5: Enforce and enhance regulatory provisions for use of AMs			
		• Enlistment of over-the-counter (OTC) drugs	List of OTC drugs prepared	DGDA	December, 2017
		• Identify existing acts and ordinances regarding AMs	Number of existing acts and ordinances identified	DGDA; DCU, CDC, DGHS; DLS	July, 2017
		• Limit (step-wise) sale of AMs without prescription (phase-out OTC sale of antibiotics that are critically important for human health)	Number of points-of-sale (POS) piloted for sale of AMs without prescription	DGDA DCU,CDC, DGHS Pharmaceutical Society, Ministry of Industry and Commerce, Ministry of Home	2017-2022
		• Strengthen/ enact acts and ordinances regarding AMs	Number of acts and ordinances strengthened/ enacted	DGDA; DCU, CDC, DGHS; DLS	December, 2017
		2.1.6: Ensure good pharmacy practices (GPP) at all points of sale of AMs			
		• Develop protocol/ guideline for GPP	Working group assigned Protocol/ guideline of GPP developed	DGDA DCU,CDC, DGHS	December, 2017

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		• Monitor and evaluate GPPs using standard tools	Standard tool for monitoring & evaluation developed Number of POS practicing GPP	DGDA DCU,CDC, DGHS	2018-2022
		• Conduct awareness building and motivation among AMs sellers at POS, regarding use of AMs	Number of AMs sellers had awareness and motivation on use of AMs	DGDA DCU,CDC, DGHS;	2017-2022
		• Training of drug-sellers regarding handling of AMs	Number of drug-sellers trained	DGDA DCU, CDC, DGHS	2017-2022
		2.1.7: Ensuring good manufacturing practice (GMP) of AMs in human sectors			
		• Ensuring quality of AMs at manufacture level	Manufacturer has certificate from DGDA for AMs product	DGDA DCU, CDC, DGHS	2017-2022
		• Ensure safe and effective disposal of AMs wastes		DGDA	2017-2022
		2.2: Ensure rational and prudent use of AMs in livestock (animal health) and fisheries sectors (esp. aquaculture)			
		2.2.1: Develop and update STGs and list of essential AMs for animal health and fisheries sectors	Working group assigned STG developed STG updated	Department of Livestock (DLS) Support: Working Group	December, 2017
		2.2.2: Ensure practicing of STGs			
		• Conduct advocacy and training on STGs among prescribers	Number of users having advocacy and training on STG	DLS	2018-2022

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		• Ensure monitoring and surveillance of practicing of STGs	Number of HCFs practicing STG	DLS	2018-2022
		2.2.3: Ensure availability of AMs (according to STG) in all animal HCFs	Number of animal HCFs in which AMs are available	DLS	2018-2022
		2.2.4: Implement regulations (Animal Disease Act, 2005; Animal disease rule, 2010; Fish feed and animal feed Act, 2010; Fish feed rule, 2011; Fish Hatchery Act, 2010; Fish Hatchery Rules, 2011, Fish & Fishery Product (Inspection and Quality Control) Ordinance, 1983; Fish & Fishery Product (Inspection and Quality Control) Rules, 1997 (amended 2008) ; Animal feed rule, 2013; National livestock Policy, 2007; National Poultry Development Policy, 2008, and international regulations in use of AMs in animal and fisheries	Number of events of implementation of regulations related to ARC in animal health and fisheries sectors	DLS, DOF	2017-2022
		2.2.5: Strengthen the DGDA veterinary cell			
		• Ensure participation of veterinary specialists in approval of new molecule of AMs	Number of approvals of new molecule where veterinarian specialist participate	DLS, DGDA	2017-2022
		2.2.6: Restrict the use of AMs in animal by traditional healers and non-veterinarians			

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		• Conduct advocacy and orientation to the traditional healers, non-veterinarians and animal owners regarding use of AMs	Number of traditional healers, non-veterinarians and animal owners having advocacy and orientation on use of AMs	DLS	June, 2018
		2.2.7: Establish one or more national Reference Microbiology Laboratory(ies) (RMLs) for animal			
		• Develop protocol for referral activities including: (i) Quality Management of the selected peripheral Microbiology laboratories; (ii) laboratory networking; (iii) Central data management, dissemination, providing feedback & coordination with stakeholders (iv) open access of relevant data to healthcare professionals	Working group assigned Protocol for referral activities developed	DLS, LRI, BLRI Support: Microbiology Lab, DU, BAU, CVASU	September, 2017
		• Select one/ more FDILs as RMLs	FDILs selected as RMLs	LRI, BLRI, DLS	September, 2017
		• Procurement & supply of equipment & logistics for the RMLs	Equipment & logistics procured & supplied to RMLs	DLS, LRI	July, 2018
		• Training of laboratory personnel for referral activities o Development of training manual	Training manual developed Number of laboratory personnel trained	DLS, LRI, BLRI Support: Microbiology Lab, DU, BAU, CVASU	July, 2018
		2.2.8: Ensure maintenance of the withdrawal period of AMs used in animal health and fisheries to prevent residual effect in human health			

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		• Conduct advocacy/ orientation of all stakeholders	Number of advocacy/ orientation meeting conducted	DLS	2017-2022
		• Monitor and evaluate maintenance of withdrawal period	Number of organizations monitored and evaluated for maintenance of withdrawal period	DLS	2017-2022
		• Conduct AMs residual test regularly	Number of tests for AMs residual conducted	FDILs, DLS, DOF	2017-2022
		2.2.9: Ensure enforcement to control irrational and non-therapeutic/ sub-therapeutic (e.g. growth promoter) use of AMs in the livestock and fisheries sectors			

		• Eliminating use of critically important AMs for humans in food animals
		  ○ Identification of critically important AMs used in food animals;
		  ○ Limiting sale of critically important AMs in animal food supplements by point of sale (POS)/ online selling agent
			Number of critically important AMs used in food animals identified
			
			Number of POS/online selling agent of AMs under surveillance
				DLS, DGDA, DOF	2017-2022

		• Update and enact rules and regulations for production, import, marketing and use of AMs	Number of rules and regulations updated and enacted	DLS	2017-2022
		• Monitor and evaluate production, import, marketing and use of AMs	Number of occasions/events monitored and evaluated	DLS	2017-2022

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		• Conduct awareness building and motivation among animal and poultry owners and workers, including prevention of self-medication, feed and drug sellers of veterinary and fisheries sectors, including traditional healers regarding use of AMs	Number of events of awareness building and motivation conducted	DLS, DOF	2017-2022
		• Conduct training of all stakeholders	Number of training sessions conducted Number of stakeholders participated	DLS	2017-2022
		2.2.10: Ensuring good manufacturing practice (GMP) of AMs in animal and fisheries sectors			
		• Ensuring quality of AMs at manufacture level	Manufacturer has certificate from DGDA for AMs product	DGDA DLS	2017-2022
		• Ensure safe and effective disposal of AMs wastes		DGDA	2017-2022
		2.3: Development of National Antibiotic Policy			
		• Assign multi-sectoral working group	Working group assigned	Lead-DCU, CDC, DGHS Support- DLS, DoF, DoE, DU	June, 2017
		• Development of draft National Antibiotic Policy including- (i) Tier-wise prescription of AMs by registered and unregistered physicians, (ii) Provision of reserve AMs,	Draft National Antibiotic Policy developed	DCU, CDC, DGHS & Working group	December, 2017

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		(iii) List of AMs for sale at OTC, (iv) Step-wise prevention of sale of AMs at OTC Legislative part of AMs prescription by registered/ unregistered physicians and over the counter (OTC) sale of AMs			
		• Consultation from national relevant experts to develop the final draft	Consultative workshop arranged & suggestions accommodated	DCU, CDC, DGHS & Working group	January-May, 2018
		• Approval of National Antibiotic Policy by NTC and NSC	National Antibiotic Policy approved	Lead-DCU, CDC, DGHS Support-DLS, DoF, DoE	June, 2018
		• Estimation of consumption of antibiotic both in human and livestock	Number of annual report for estimated antibiotic consumption	DGDA; DCU, CDC, DGHS	2017-2022
3.	Promote and strengthen infection prevention and control (IPC) measures in both human and animal health sectors to minimize emergence and spread of AMR	3.1: Augment IPC activities at all HCFs			December, 2017
		3.1.2: Formation/ activation of national and local IPC committees in each HCF with TOR	National IPC committee formed/ activated Number of local committees formed/ activated	DCU, CDC, DGHS; DLS	
		3.1.2: Develop and implement IPC guideline and tier-wise SOPs			
		• Assign working group (include tier-wise HCP) to develop national IPC guideline and tier-wise SOPs	Working group assigned National IPC guideline developed Number of tier-wise SOPs for IPC developed	DCU, CDC, DGHS; DLS	December, 2017

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		• Distribute national IPC guideline and tier-wise SOPs to all HCFs	Number of HCFs distributed with IPC guideline and SOPs	DCU, CDC, DGHS; DLS	December, 2017
		• Ensure orientation and training on national IPC guideline and SOPs to all HCPs	Number of HCPs oriented and trained on IPC guideline and SOPs	DCU, CDC, DGHS; DLS	2018-2022
		3.1.3: Ensuring standard IPC practice among HCPs of human and animal health sectors			
		• Ensuring use of PPE by all HCPs o Orientation and training on use of PPE by the HCPs	Number of HCPs provided with orientation and training on use of PPE	DCU, CDC, DGHS; DLS	December, 2017
		o Make PPEs available to all HCFs	Number of HCFs where PPEs are available	DCU, CDC, DGHS; DLS	2018-2022
		o Monitor and evaluate use of PPE by the HCPs	Number of HCPs practicing use of PPE		2018-2022
		• Ensuring hand hygiene by all HCPs			
		o Training of all HCPs on hand hygiene	Number of HCPs trained on hand hygiene	Director, Hospital, DGHS DCU, CDC, DGHS; DLS	2018-2022
		o Making hand hygiene materials available to all HCFs	Number of HCFs provided with hand hygiene materials	Director, Hospital, DGHS DCU, CDC, DGHS; DLS	2018-2022
		o Monitoring & evaluation of hand hygiene practice	Number M&E conducted	Director, Hospital, DGHS DCU, CDC, DGHS; DLS	2018-2022

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		• Making sure proper use of antiseptics and disinfectants o Provide orientation and training o Make antiseptics and disinfectants available to all HCFs o Monitor and evaluate	Number of HCPs provided with orientation and training Number of HCFs where antiseptics and disinfectants are available Number of HCFs practicing appropriate use of antiseptics and disinfectants	DCU, CDC, DGHS; DLS	2018-2022
		• Ensuring effective immunization practice by the HCPs o Provide orientation and training o Making vaccines available to all HCFs o Monitoring and evaluation	Number of HCPs provided with orientation and training Number of HCFs where vaccines are available Number of HCFs having effective immunization	DCU, CDC, DGHS; DLS Support-EPI program, DGHS	2018-2022
		• Ensuring standard waste management system o Development/ update guidelines (national/HCF-wise) for hospital waste management o Provide orientation and training (basic and refresher) to the HCPs o Making waste management tools available to all HCFs o Monitor and evaluate	Guideline developed Number of HCPs provided with orientation and training Number of HCFs where waste management tools are available Number of HCFs having standard waste management	DCU, CDC, DGHS; DLS Support-Hospital Service Management, DGHS	December, 2017 2018-2022 2018 2018-2022
		• Ensure 3-monthly report of IPC practice by local IPC committee to national IPC committee	Number of reports submitted to national IPC committee	DCU, CDC, DGHS; DLS	2018-2022

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
				Support-Hospital Service Management, DGHS	
		3.1.4: Ensure Standard IPC practice to prevent surgical site infection (SSI):			
		• Develop/ update National Guideline for the prevention of SSI;	National Guideline for the prevention of SSI developed	DCU, CDC, DGHS	2017-2022
		• Organize training/ orientation for the surgical team members (surgeons, nurses, technical support staff, anesthetist and other health professional who are directly involved in surgical care).	Number of training/orientation conducted	DCU, CDC, DGHS	2017-2022
		3.2: Augment IPC practice at community level			

		• Ensure human and animal vaccination
		  o Provide orientation and training
		
		  o Make vaccines available to all HCFs
		
		  o Monitor and evaluate
			Number of community members /farmer-owners provided with orientation and training
			
			Number of HCFs where vaccines for human/ animal vaccination are available
			
			Number of adults having adult vaccination
				DCU, CDC, DGHS; EPI, DLS	2018-2022

		• Promote hygienic practices at community level o Conduct advocacy meeting to community peoples including community leaders, school teachers, religious leader	Number of advocacy meeting conducted in each district	DCU, CDC, DGHS; DLS	2017-2022

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		o provide orientation and training to community people on hygienic practice (e.g. cough etiquette, hand washing and personal cleanliness) through Little doctor program o Monitor and evaluate	Number of training & orientation program conducted Number of monitoring visit done		2017-2022 2017-2022
4.	Establish AMR surveillance system	**4.1: Surveillance of AMR in human/ animal health and environment sector**			
		4.1.1: Surveillance of AMR in human health			
		4.1.1.1: Establish a web-based national surveillance system and laboratory network on AMR and information dissemination system		DCU, CDC, DGHS Support: MIS, DGHS; IEDCR, DGHS; relevant lab partners	
		• Designate central coordination body and focal point with TOR	Central coordination body and focal point designated with TOR	DCU, CDC, DGHS	June, 2017
		• Select regional surveillance laboratories	Number of regional laboratories selected	DCU, CDC, DGHS	June, 2017
		• Select and train regional surveillance personnel and focal point with TOR	Number of surveillance personnel and focal point trained	DCU, CDC, DGHS	July, 2018
		• Develop protocol for surveillance o Assign working group o Develop protocol	Protocol for surveillance developed	DCU, CDC, DGHS	December, 2017
		• Support logistics required for surveillance	Number of logistics supported	DCU, CDC, DGHS	December, 2018

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		• Develop software/ apps for laboratory networking and information dissemination system	Software/ apps developed	DCU, CDC, DGHS	June, 2018
		4.1.2: Establish a national surveillance system on AMR at veterinary, fisheries and environment sectors and information dissemination system			
		• Designate central coordination body and focal point with TOR	Central coordination body and focal point designated with TOR	DLS; DOF; DOE;	2018
		• Select regional surveillance laboratories	Regional surveillance laboratories selected	DLS; DOF; BFRI; BLRI; DOE;	December, 2018
		• Develop protocol for surveillance	Protocol for surveillance developed	DLS; DOF; BFRI; BLRI; DOE; Support: relevant lab partners	December, 2017
		• Select and train regional surveillance personnel and focal point with TOR	Number of regional surveillance personnel and focal point trained	DLS; DOF; BFRI; BLRI; DOE;	July, 2018
		• Support with logistics required for surveillance	Logistics supported	DLS; DOF; BFRI; BLRI; DOE; Support: relevant lab partners	2018-2022
		• Develop software/ apps for laboratory networking and information dissemination system	Software/ apps developed	DLS; DOF; DOE; Support: relevant lab partners	December, 2018
		4.2: Monitor use of AMs			
		4.2.1: Monitor HCPs regularly regarding practice of STGs	Number of HCPs monitored	DCU, CDC, DGHS and other stakeholders	2017-2022

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		4.2.2: Pilot survey of AMs prescription	Number of prescription survey conducted	DCU, CDC, DGHS and other stakeholders	2017-2022
		4.2.3: **Estimation of consumption of antimicrobials both in human and animal health sector**	Number of report generated annually regarding estimation of AMs consumption in human and animal health sector	DGDA;	
		4.3: Pharmaco-vigilence and ADR			
		• Address issues of adverse drug reaction (ADR) of the AMs to provide ADR card to AMs consumers o Use BDNF as source of information o Coordinate with DGDA ADR cell	Number of ADR card issued	DGDA DCU, CDC, DGHS	2017-2022
		• Activate drug information cell	Drug information cell activated	DGDA Support- DCU, CDC, DGHS	July, 2017
		• Ensure ADR reporting (coordinate with DGDA ADR cell)	Number of events of ADR reported	DGDA; Support-DCU, CDC, DGHS	2017-2022
		4.4: Ensure medical audit following STG			
		• Assign auditor group for medical audit	Auditor group assigned	DCU, CDC, DGHS Institutional authority	July, 2017
		• Train auditor group for medical audit	Developed training module Auditor group trained	DCU, CDC, DGHS Relevant expert	June, 2018
		• Conduct medical audit annually	Medical audit conducted	DCU, CDC, DGHS Audit team	2018-2022

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		4.5: Monitor manufacture of quality-assured AMs			
		4.5.1: Ensure the quality of AMs during manufacturing, storage and marketing	Quality of AMs ensured	DGDA	2017-2022
		4.5.2: Conduct regular post-marketing survey on quality of the AMs			
		• Survey group assigned and trained	Survey group assigned and trained	DGDA	July, 2018
		• Post-marketing survey conducted	Number of post-marketing survey conducted	DGDA	2018-2022
5.	**Promote basic, experimental and operational research in the area of AMR**	**5.1: Promote basic, experimental and operational research**			
		5.1.1: Encourage basic, experimental and operational research in areas that enhance application of various measures to combat AMR	Number of research projects supported Number of research activities finished Number of publication	DCU, CDC, DGHS; DLS; DOF; DOE; BFRI; BLRI & relevant partners	2017-2022
		5.1.2: Support research and development of new AMs, especially for neglected tropical diseases (NTPs) and facilitate their cost-effective production in the public sector and making them affordable for the poor	Number of projects to which supports are given for development of new AMs	DCU, CDC, DGHS; DLS; DOF; BFRI; BLRI & relevant partners	2017-2022
		5.2: Promote education on AMR			

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		5.2.1: Incorporate AMR, rational use of AMs and IPC in the medical, dental, health technology, nursing, veterinary and pharmacy curricula	Incorporation of AMR, ARC,IPC & relevant in the medical, dental, health technology, nursing, veterinary and pharmacy curricula	DCU, CDC, DGHS, DLS & professional councils	2017-2022
		5.2.2: Emphasize on the topics of hygiene, sanitation, and IPC including biosafety and biosecurity in school curricula as well as in teachers' training curricula	Incorporation of specified topic in the relevant curricula	DCU, CDC, DGHS; DLS; Education Boards	2017-2022
6.	Establish advocacy, communication and social mobilization (ACSM)	6.1: Develop ACSM materials for ARC	ACSM material developed	Lead- DCU, CDC, DGHS **Support: All other stakeholders**	December, 2017
		6.2: Advocacy and orientation of ARC in human health, veterinary, fisheries and environment sectors through one-health approach		All stakeholders	2017-2022
		6.2.1: ACSM on IPC • Provide orientation of the HCP on IPC • Dissemination of information on IPC through electronic and print media, posters, festoons and banners	Number of advocacy /orientation meeting conducted Range of coverage through media	All stakeholders	2017-2022
		6.2.2: Advocate healthy lifestyle, cost-effective and essential immunization and other non-pharmaceutical measures to reduce IDs burden			
		6.2.3: ACSM on rational and prudent use, prevention of irrational and non/sub-therapeutic use of AMs in animal	Number of advocacy /orientation meeting conducted	DLS and DOF	2017-2022

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		health and fisheries sectors (aqua culture)	Range of coverage through media		
		6.2.4: Development of News Letter on Antibiotics, Antimicrobials and AMR and circulate among the health professionals (Health, Live Stock, Fisheries, Pharmaceuticals and Health Managers at all levels)	At least two News Letter annually	CDC to take the lead role involving the DLS and Fisheries	2018-2022
		6.3: Develop Trainers pools: Identify doctors, pharmacists and other health professionals to be drawn from central, divisional health offices and district civil surgeon offices and conduct Training of Trainers (TOT)		All stakeholders	2017-2022
		6.3.1: Develop trainer's guideline for TOT and training module for the trainees by a working group	Trainers guideline & training module developed	DCU, CDC, DGHS; DLS; DOE; DU; Academia	
		6.3.2: Conduct TOT to make 10-15 trainers at each district civil surgeon office; district livestock office	Number of trainers (10-15) trained in each district civil surgeon office/Medical College Hospital		
		6.3.3: Conduct training of HCPs to make 10-15 trainers at each district civil surgeon office	Number of HCPs of Medical college & district hospitals & each upzilla health complexes trained		
		6.3.4: Conduct training and orientation for the staffs who are engaged in selling medicines and other health products from the retail drug shops (pharmacy)	Number of pharmacy staffs trained	DGDA	

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline
		6.3.5: Promote behavioural change in prescribers (qualified and unqualified), nurses, pharmacists, drug retailers and community (users) regarding use of AMs through intense training, counseling, monitoring & evaluation	Number of monitoring & evaluation report	All stakeholders	
		6.4: ACSM on IPC practice at community level			

		• Hand washing, cough etiquette, waste management and worm infestation
		• Hygiene and biosafety in animal raring and aqua culture
		• ACSM by massive, repetitive, intense and persistent (MRIP) fashion
		   o Yard meeting
		   o Media
			Number of advocacy /orientation meeting conducted
			
			Range of coverage through media
				All stakeholders	2017-2022

Road map of National Action Plan of ARC:

Sl. No.	Strategic Objective	Activities related	Output indicator(s)	Responsible authority	Timeline