

Situation locally



The first NAP AMR was endorsed in 2016 the Maldives and released in the year 2017 as NAP AMR 2017 to 2022. The 2017 NAP on AMR was structured around the five strategic objectives and five principles which are embodied by the GAP AMR.

Within the five strategic objectives of the GAP AMR, 12 specific objectives have been included. Each of these specific objectives has been described in terms of a Strategic Intervention, with a defined set of key activities to be carried out successfully to execute the strategic intervention and eventually to fulfil the strategic objective. Key Monitoring & Evaluation (M&E) indicators were listed for activities under each of the strategic interventions with the operational plan comprising of broad planning by activity. Formalized AMR multisectoral coordination mechanism with dedicated leadership, clear terms of reference, technical working groups, and adequate funding creates the basic foundation for NAP AMR implementation, AMR advocacy and sustainability. The NAP AMR 2017 states that the country response for Maldives will be mounted based on a well-appointed governance mechanism. Each of its aspects have been detailed with clearly assigned roles and responsibilities; this comprises of a High Level National Multi-Sectoral Steering Committee (NMSC), for Antibiotic Resistances. The NMSC will be supported by a National AMR Coordinating Committee (NACC) and multi-sectoral Technical Sub Committees (TSC) who will address the strategic objectives of GAP through specialised Working groups related to the five strategic objectives of GAP. The NAP AMR detailed out governance structure for its implementation with high-level National Multi-Sectoral Steering Committee (NMSC) chaired by Minister of health with involvement of other ministers from other relevant sectors was proposed. Unfortunately, the NMSC have not been formed and there is no dedicated unit in the country with dedicated staff to ensure NAP AMR implementation. NACC was formed and the technical committees and few meetings were conducted, but without a dedicated unit or staff support for the AMR program, and without a stronger political support, the country's implementation of NAP AMR lacks so far behind the targets.

Global analysis of TrACSS indicators also shows there is a lack of a programmatic approach to NAP implementation with a focus on ad-hoc interventions, showcased by certain indicators having more progress over the years, while others have seen little to no progress. The report highlighted lack of leadership capacity to ensure the effective functioning of AMR multisectoral coordination structures in the country.

Situation analysis by WHO was done on AMR related activities and NAP AMR implementation in 2016 and again in 2018 (World Health Organization 2019). Using the assessment tool used in 2018 current situation of analysis of 2023 was undertaken and comparison provided for the past two assessments done in 2016 and 2018 (table 3). The 2018 tool assessed the progress against 30 indicators as a proxy for strategic interventions/ programmes across eight focus areas. These included 20 indicators used in 2016 and 10 new introduced indicators). The focused areas of 2018 situational analysis tool included seven from the 2016 tool, are as follows:(1) NAP being in line with GAP-AMR governance; (2) raising of awareness; (3) national AMR surveillance system; (4) rational use of antimicrobials and surveillance of use/sales (community-based); (5) infection, prevention control and AMR stewardship; (6) research and innovation; and (7) One Health engagement. An additional area, (8) Overarching coordination mechanisms for One health engagement (was introduced in the 2018 tool).

The situation analysis was undertaken in 2023 for development of the NAPAMR by consultation with stakeholders from, MoH-(MDFA, QARD, HPA), MoAAW & MoFOR, MoCCEE Similar to 2018 assessment report, Phase 3 or initial implementation was used as the minimum threshold for assessing progress.





The key focus areas with the sub indicators were analysed against the five phases of implementation.

Table 2: Phases of implementation

*** Phase 1: Exploration and adoption**

oCountry initiates design of a program to combat AMR

*** Phase 2: Program installation**

oThe country decides to implement an AMR program after completing a set of core activities

*** Phase 3: Initial implementation**

oThe country initiates an AMR prevention and control program at national level

*** Phase 4: Full operation**

oThe country scales up to a successful model of an AMR program that utilizes accepted prevention and control programs. There is nationwide or large scale adoption of the program. There is evidence that the AMR program is functional and regularly generates outcomes

*** Phase 5: Sustainable program**

oThe country operates its AMR program efficiently and there is

Assessment on the 8 key focus areas using the NAP AMR assessment tool 2018 are below

Table 3: Situation analysis of NAPAMR implementation

S.No	Focus area and sub-indicators	2023	Explanation on the score change for 2018 to 2023	2018	2016
1	National AMR plan and governance				
1.1	NAP in line with GAP-AMR	4	-	4	2
2	Raising awareness				
2.1	Campaigns to raise public awareness	3	-	3	2
2.2	Education and training strategies for professionals	3	-	3	1
3	National AMR surveillance system				
3.1	National Human AMR surveillance	2	-	2	2
3.2	National laboratory network strengthening	2	-	2	1
3.3	Early warning system	1	-	1	1
4	Rational use of antimicrobials and surveillance of use / sales (community based)				
4.1	A national AMR containment policy for control of human use of antimicrobials: AMR stewardship	3	Stewardship policy and guideline document development but dissemination and implementation poor	2	2
4.2	National regularity authority or drug regulatory authorities	4	-	4	3
4.3	Surveillance of antimicrobial use and sales in human	3	Monitoring of antimicrobial import being done and entered in GLASS-AMC since 2017 but not sales from pharmacies or utilization at facility or community level	3	2



4.4	Regulation of finished antibiotic products and active pharmaceutical ingredients (APIs)	3	-	4	2
4.5	Regulation of OTC sales and inappropriate sales of antibiotics and Apls by pharmacies	4	-	4	2
5	Infection Prevention and Control and AMR stewardship program				
5.1	AMSP in healthcare setting	2	In GMR assessed (n=2) AMS activity average score 42% peripheral: <10% (need better clarification from responders from Atoll)	1	1
5.2	IPC program in healthcare setting	3	Central 2 major hospitals assessed 4 components (IPC program, leadership support, education and training and HAI score GMR (n=2) 84% Peripheral <10%	2	2
5.3	National HAI and related AMR surveillance	3	HAI prevention and surveillance guideline developed- one training conducted	2	1
5.4	Sanitation and hygiene	4	-	4	2
5.5	Vaccination	2	Rota viral vaccine and pneumococcal vaccine in pipeline as per National Immunization program- NIP, Ongoing discussion to put influenza vaccine on Universal insurance scheme- Vaccination like COVID-19, influenza and optional (rota and pneumococcal) vaccine awareness and acceptance very good . Parent buy these vaccines currently. COVID-19 vaccination first, second, third and fourth dose 88%, 85%, 37% and 0.35% of above 12 years respectively (as per publicly release date on 10.6.23 via the official the Health Protection Agency (HPA), Maldives, twitter account and viber group).	1	NA





6 Research and innovation					
6.1	R&D and innovation on AMR prevention, containment and research funding	1	AMR research priority areas not defined and there is no plan or budget dedicated for such research	2	1
7 One health engagement					
7.1	A national AMR containment policy and regulatory framework for control and registration of use in animal sector	3	Policy available, currently implementation not fully operational as per the policy and available guidelines	1	2
7.2	National surveillance of AMR ,and use and sale of antimicrobials at national level in the veterinary sector	AMU-2 AMR-1	Monitoring antibiotic use in veterinary practice in installation phase	AMU-2 AMR-1	3
7.3	Biosecurity (infection prevention and control) in the animal sector	2	Policy and guideline available. In process of initiating the implementation	1	1
7.4	AMR awareness generation and education in the animal sector	1	-	1	1
7.5	A national AMR containment policy and regulatory framework to control release of AR and AMR into the environment and management	1	-	1	NA
7.6	National surveillance of AR and AMR in waste water from manufacture and human/animal/fish use and disposal in institutions and the home	1	-	1	NA
7.7	Raising awareness on AMR and education in the environmental sector	1	No specific AMR awareness from the Environmental sector. Currently in exploratory phase	2	NA
8 Overarching coordination mechanisms for One Health engagement					
8.1	Overarching AMR coordination mechanisms between all relevant sectors	2	-	2	NA





8.2	Inclusion and engagement of all relevant sectors in the NAP-AMR	1	-	2	NA
8.3	A platform and/or mechanism for sharing of AMU monitoring data from all relevant sectors	1	-	1	NA
8.4	A platform and/or mechanism for sharing of AMR surveillance data from all relevant sectors	1	-	1	NA
8.5	AAW is nationally coordinated and celebrated, with involvement of and contribution from all relevant sectors	3	Need better coordination between sectors specially to bring the environmental sector more on board	3	NA
8.5	A mechanism for co-sharing of resources for AMR initiatives in the country	1	Need to establish proper mechanism to share resources for AMR. Digitalization and inter sector/interdepartmental connection strengthening needed	2	NA
NA- not assessed 1+ - Discussion in Phase 2 allocation inconclusive					



Situation analysis of progress in AMR prevention and containment 2016 - 2023

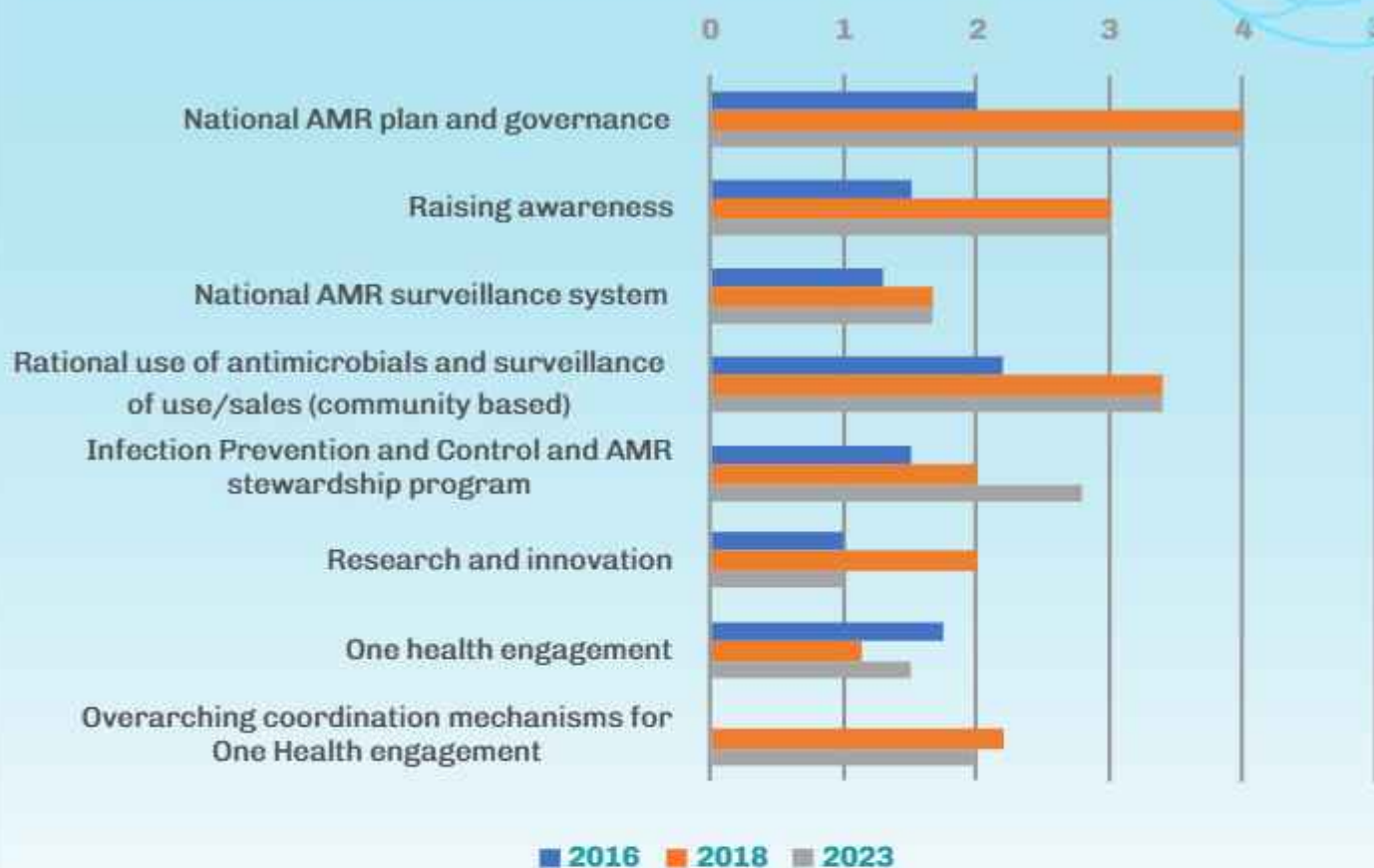
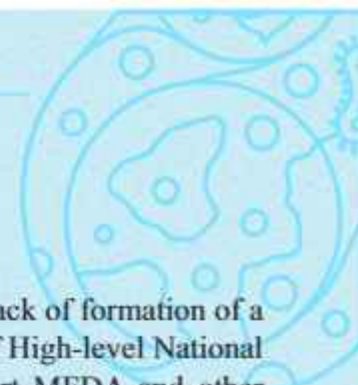


Figure : Situation analysis in AMR prevention and containment (shows an average of phase-grading for all indicators in different focus areas; for 2016 using 20 indicators and for 2018 and 2023 30 indicators assessed), purely for pictorial representation Key findings from the Situation Analysis for 2023

Main points

- Lack of poor governance structure for AMR related activity
- Many regulatory provisions related to AMR in place or being established; implementational weakness noted in some areas which are already in place
- Poor AMR related surveillance in all sectors (human, animal, agriculture, food and environmental)
- Work being done for strengthening of IPC related measures in all sectors
- Lack of monitoring and reporting framework for AMR related activities



There is lack of governance structure for NAP AMR activities as evidenced through lack of formation of a dedicated unit with dedicated staff for AMR related activities and lack of formation of High-level National Multi-Sectoral Steering committee (NMSC). Even without proper structural support MFDA and other stakeholders have undertaken some AMR containment efforts, evidenced through the formation of a National Multi-sectoral AMR Coordination Committee and initiation some NAPAMR stipulated activities. A fully functional national drug regulatory authority had been set up to oversee regulation and licensing, pharmacovigilance and market authorisation. Similarly, Water, Sanitation and Hygiene (WASH) related initiatives in human health along with high vaccination coverage were found to be significant infection control mechanisms within community settings. Compared to 2018 assessment improvement in areas of infection control initiatives in healthcare institutions by Ministry of Health Quality Assurance Division with the development of the national IPC and HAI prevention and surveillance guidelines (refer table 4). The Situation Analysis also threw light on other initiatives that are being taken to develop and draft national standards and guidelines, such as the national drug policies, updated essential medicines lists and standard treatment guidelines.

Traditionally, lack of animal populations and commercial orientation of food animal production systems based on terrestrial animals has led to limited development and capacity of veterinary health services. Accordingly, majority of the food consumed in Maldives is imported into the country. Recently, the Government of Maldives laid emphasis on diversification into poultry and goat farming as well as aquaculture with the objective of attaining greater food security and the country have seen expansion of the veterinary health sector in the last few years. During the last two years agricultural and animal health sector have been working on policies and guidelines for strengthening infection prevention and control and antibiotic utilization measures in this field. These guidelines, which are planned to go for implementation soon, include; Guideline on Good Farming Practices In Aquaculture, Hatchery Sanitation Guidelines, Guidelines For Importation Of Hatching Eggs, Waste disposal related to animal farms; Collection, Procedure For Identifying Disease Area And Quarantine Area And Disease Reporting, Preservation and transportation of specimens for Laboratory diagnosis of Animal Diseases; Establishment of central and regional Veterinary Investigation and Diagnostic Laboratory network etc.

During the discussion with stakeholders, it was noted that the environmental sector, MoCCEE, is in the process of updating different policies and guidelines related to environmental protection including proper waste management system in the country, though currently there is limited awareness on AMR related environmental surveillance and therefore no plans in pipelines for such in the country. Strengthening surveillance for AMR in human, animals, food industry and environment require one health concept, with improved coordination, knowledge and data sharing between these sectors.

Efforts from all sectors clearly highlighted strong elements that having potential to be leveraged as building blocks for an effective NAP AMR implementation and emphasize the need for proper infrastructural support system to coordinate, update and sustain these activities.



Rationale of the action Plan

Antimicrobial resistance is a multifaceted problem and requires a comprehensive response. Considering the crosscutting nature of the problem and its wider implications, efforts must be made from all stakeholders to prevent and contain resistance. There is a need to strengthen the national level response to AMR and ensure the implementation of National action plan and national policies to ensure rational use of antimicrobials. This national action plan shall help in prioritizing the limited national resources, strengthening the governance structure and promote a united drive against AMR.

Scope

This national action plan shall be applicable to all sectors related to human health, animal health and agriculture practice dealing with antimicrobials. In addition, this action plan is applicable to the environment sector which relates to impact of antimicrobials released into the environment. The future actions and activities on AMR shall be within the strategies outlined in this document

Guiding principles

The national action plan is based on the following guiding principles:

1. Awareness of the antimicrobial resistance at the global, regional and national level
2. Promoting the rational use of the available antimicrobial agents;
3. Preventing emergence of resistance through appropriate control and regulatory measures;
4. Changing the behaviour of the prescribers and communities in the use of antimicrobials; and
5. Promoting the active participation of various stakeholders and bringing them on board to take ownership in the national effort

Considering the key findings from the 2023 situational analysis of NAP AMR 2017 implementation, the main changes brought to the current NAP include;

- Addition of 2 more main objectives in addition to five already in the NAP as per GAP
 - Establishment of governance structure for AMR
 - Strengthen implementation of regulatory aspects of NAP AMR
- Establishment of National AMR coordination unit (NACU) in MFDA with relevant staff including AMR program manager and Assistant AMR program manager
- Establishment of National AMR Steering Committee and AMR Coordination Committee to be chaired by representative from main stakeholders on a rotational basis (MoH, MOAAW, MOFOR and MoCCEE)
- Integrate AMR related activities into the other existing programs to function with support and guidance from related technical subcommittees.
- Establishment of a communication pathway from stakeholders to main National AMR coordination unit (NACU) in MOH and vice versa.
- Establishment of AMR related surveillance reporting pathway and mechanism for analysing and data sharing
- Developed the Monitoring and evaluation frame work with measurable out comes for each activity in NAP AMR

Objectives



While developing the NAP-AMR for Maldives, a strategic plan has been formulated, keeping in mind its geographical aspects as also its public health and other socio-cultural and economic status. The NAP AMR has been based on the implementation of seven strategic objectives, each of which has its objectives, strategic interventions and key activities:

Objective 2: Strengthen the regulatory system related to AMR

Objective 3: Improve awareness and understanding of AMR through effective communication, education and training

Objective 4: Establish Surveillance and monitoring system for AMR

Objective 5: Reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures

Objective 6: Optimize and monitor use of antimicrobial medicines

Objective 7: Develop the economic case for sustainable investment by taking into account the needs of the country regarding new medicines, diagnostic tools, vaccines, research, and other interventions



Objective 1: Establish Governance structure for NAPAMR implementation

The country response for Maldives will be mounted based on a well-appointed governance mechanism as proposed in the NAPAMR 2017 with some additional key changes included in the structure i.e. formation of the National AMR coordination unit (NACU) in MFDA and integration of some activities into existing national programs.

NACU will be responsible unit for overall coordination and monitoring of NAP AMR implementation and NACU will report to National AMR Coordination Committee (NACC). A focal person each for human and animal health shall be designated to provide technical assistant related to functioning of NACU. The focal person of the MoH shall act as the national focal point for AMR.

A national multi-sectoral governance mechanism will serve as the central intervention around which all the AMR-related activities occur, ensuring a one health approach by formation of the National Multi-Sectoral Steering committee (NMSC) at the top. The NMSC will be supported by a National AMR Coordinating Committee (NACC) and multi-sectoral Technical Sub Committees (TSC). The TSC depending on its role will be linked to lead agencies implementing the objectives and TSC may seek to form special Taskforce to address any issue. Each of its aspects have been detailed with clearly assigned roles and responsibilities. Implementation of the NAP AMR and its associated committees will be supervised by NACU.



Table : Objective 1- Establish Governance structure for AMR implementation



Objective 1: Establish Governance structure for NAPAMR implementation

Strategy	Activities	Performance indicator	Target	Timeline	Lead agency	Implementing partners
1.1 The government shall allocate adequate resources for the operationalization of the National Action Plan	1.1.1 NAPAMR 2024-2029 released	1.1.1.1 NAPAMR 2024-2029 endorsement by Minister of Health after proper sensitization and advocacy (targeted for all relevant policy level stakeholders)	1	4Q2024	MoH	QARD, MFDA, HPA, MoAAw & MoFOR, MoCCEE, MoHE, MoF, MoE
		1.1.1.2 NAP AMR disseminated	Awareness session for main four stakeholders. Online access, Print 100	4Q2024		
	1.1.2 Develop a budget plan for implementation of NAPAMR activities (including monitoring and evaluation) and identify funding sources	1.1.2.1 Consultation with key stakeholders undertaken to develop costed budget plan WHO costing and budgeting tool)	1	4Q2024		QARD,HPA, MoAAw & MoFOR, MoCCEE, MoHE, MoF, MoE
1.2 A High Level National Multi Sectorial Steering Committee (NMSC) shall be instituted at the highest level of the government for policy related decisions	1.2.1 Institute National multi-sectorial steering Committee for AMR	1.2.1.1 TOR of NMSC updated and endorsed by Minister of Health	1	4Q2024	MFDA Minister of Health	MoH, MFDA, QARD, HPA, MoAAw & MoFOR, MoCCEE, MoF, MoE
		1.2.1.2 NMSC formed and endorsed by Minister of health	1			



1.2 A High Level National Multi Sectorial Steering Committee (NMSC) shall be instituted at the highest level of the government for policy related decisions	1.2.2 Conduct Steering Committee meetings	1.2.2.1 Number of meetings conducted NMSC	Minimum 8 (bi-annually)	4Q2024 (starting date)	NMSC NACU	MFDA MoAAW & MoFOR MoCCEE MoE MoHE MFDA MoAAW & MoFOR MoCCEE MoE MoHE
		1.2.2.2 Costed budget plan endorsed by NMSC	1	4Q2024		
		1.2.2.3 Number of documents endorsed & reviewed	8(1 per meeting)	4Q2024 (starting date)		
1.3 There shall be a designated National AMR Coordination unit (NACU) within MoH with provision of adequate infrastructural support	1.3.1 National AMR Coordination Unit (NACU) established in relevant department of MoH with proper communication pathway between NACU and other stakeholders	1.3.1.1 ToR for the NACU developed & endorsed by MoH	1	4Q2024	Minister of Health MFDA	MFDA MoAAW & MoFOR MoCCEE MoE MoHE MoH HR
		1.3.1.2 Provision of adequate number of staff in NACU	2 technical & 1 admin staff (minimum)	4Q2024		
		1.3.1.3 Develop and online integrated platform for AMR related data collection	1	4Q2024		
	1.3.2 Designate AMR focal points in relevant agencies to support NACU	1.3.2.1 FP in MFDA (National AMR focal Point and from Human health)	1	4Q2024	MFDA	
		1.3.2.2 FP from MoAAW, MoFOR & MoCCEE (from animal/plant health & environment)	1	4Q2024	MOH MFDA	MoAAW, MoCCEE



1.4 Form the AMR National coordination committee (NACC) and TSC. NACC function to advise the government on all matters related to AMR	1.4.1 Re-establish AMR National coordination committee (NACC)	1.4.1.1 Endorse NACC TOR by NMSC	1	4Q2024	MFDA NACU	QARD, HPA MoAAW & MoFOR, MoCCEE MoE, MoHE
		1.4.1.2 Identify members of NACC and hold first meeting of NACC	1			
	1.4.2 Develop TSC	1.4.2.1 Develop the 5 relevant TSC according to NAPAMR structure	1	4Q2024	NACC MACU	MFDA QARD HPA MOAAW & MOFOR MoCCEE
		1.4.2.2 Establish lead agencies to collaborate with TSC according to NAPAMR structure	1	4Q2024		
	1.4.3 Conduct regular meetings of NACC	1.4.3.1 Number of meetings held	14 (minimum)	4Q2024 (start date)	NACU	MFDA
		1.4.3.2 Endorsed documents / recommendations given	14 (1 per meeting)			





Ministry of Health
Ministry of Agriculture & Animal Welfare
Ministry of Fisheries and Ocean Resources
Ministry of Climate Change, Environment & Energy
Ministry of Education
Ministry of Finance

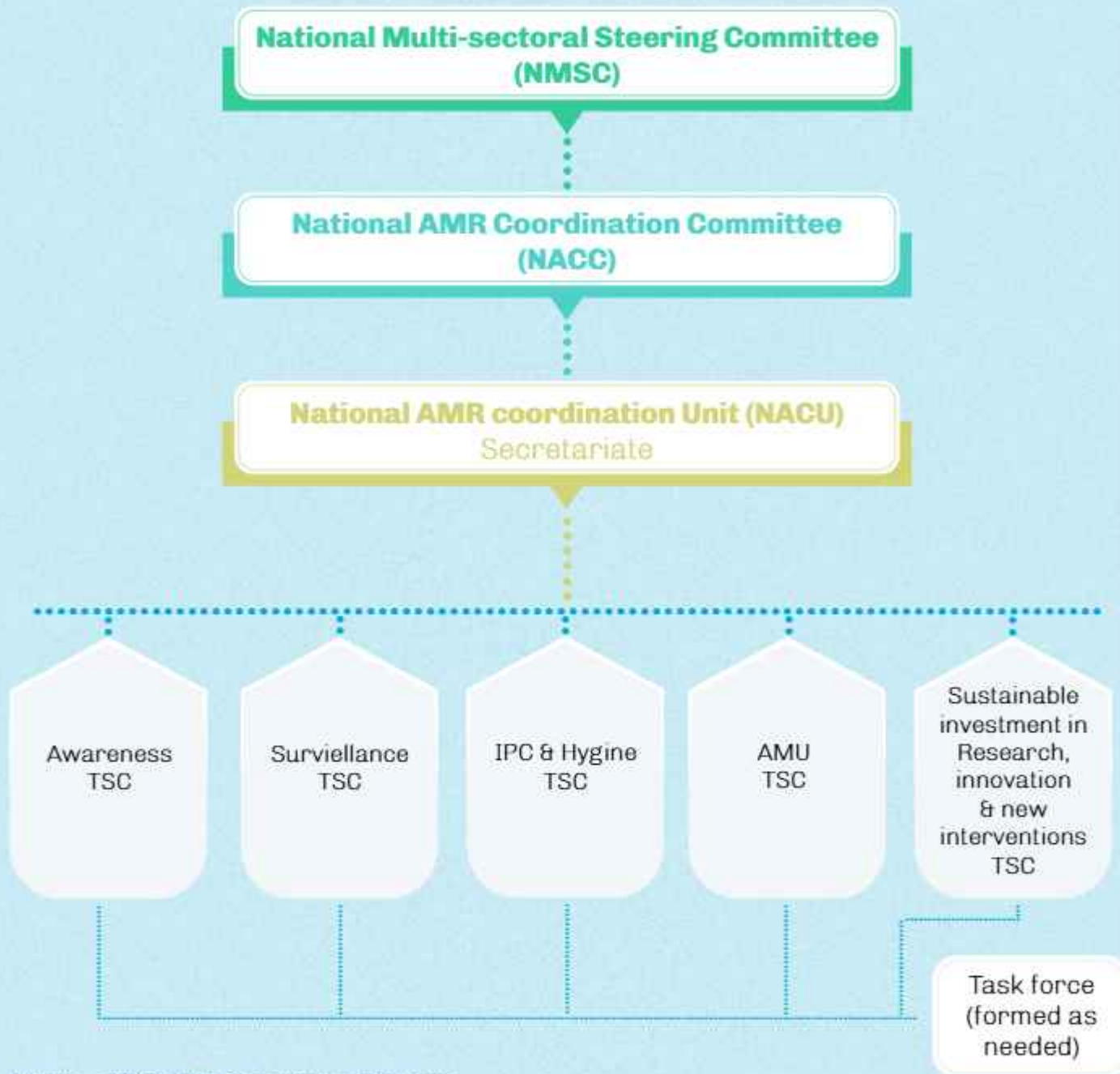


Figure : NAP AMR Governance Structure

