

Regional Strategic Roadmap on Health Security and Health System Resilience for Emergencies 2023-2027



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I. Foreword by the Regional Director

The global outbreak due to the severe acute respiratory syndrome (SARS) coronavirus in 2003 and the Indian Ocean tsunami in December 2004 are watershed events for global and regional health emergency management reform. The revision and subsequent endorsement of the International Health Regulations (IHR) 2005 to enable detection, reporting and containment at source of public health emergencies of international concern (PHEIC) was triggered by the SARS outbreak. The cluster approach and emergency funding through the United Nations Central Emergency Response Fund (CERF) were triggered by the Indian Ocean tsunami.



In addition to being an early adopter of these reforms, the WHO South-East (SE) Asia Region was an innovator, evidenced by the establishment of the SE Asia Region Health Emergency Fund (SEARHEF) and the development and implementation of standards for preparedness (South-East Asia Region Benchmarks for emergency preparedness and response) by the Regional Office.

The regional experience from responding to the pandemic of Influenza A H1N1 (2009) stressed the need to strengthen preparedness and response to emerging and re-emerging infectious diseases. Strengthening emergency risk management was thus declared one of the Flagship Priority Programmes of the SE Asia Region from 2014. The way the Nepal earthquake of 2015 was managed by the Member State, with regional and global support, showed that the emergency risk management initiatives and investments were bearing fruit.

In 2015, the Sustainable Development Goals with the inclusion of universal health coverage as one of the health targets, and the Sendai Framework for Disaster Risk Reduction 2015–2030, were adopted. The reforms of the WHO health emergencies portfolio were also initiated on account of the acknowledged gaps in responding to the 2014–2016 outbreak of Ebola virus disease in West Africa. These developments provided the background for formulating one of the Triple Billion goals of WHO's Thirteenth General Programme of Work 2019–2023 to focus on protecting "one billion more people" from health emergencies.

Taking cognizance of the global reforms in health emergency risk management and the Rohingya crisis in Bangladesh and other emergency risks in the Region, the ministers of health of the Region's Member States endorsed the Five-year Regional Strategic Plan to strengthen public health preparedness and response 2019–2023 and expressed the high-level political commitment through the Delhi Declaration on Emergency Preparedness in the South-East Asia Region of 2019. Enabled and motivated by these, Member States of the Region have progressed significantly in advancing core capacities mandated by the IHR 2005 for health emergency preparedness and response.

Now we are in the cusp of another momentous and essential course correction in the health emergency risk management architecture necessitated by the once-in-a-century global health emergency: the ongoing COVID-19 pandemic from 2020 onwards, which has caused untold suffering and unprecedented loss of lives and livelihoods, reduced life expectancies, eroded hard-earned health and developmental gains, stretched health and other critical systems to their limits, and unearthed and accentuated pre-existing global, regional and national inequities and fissures in the social fabric of communities the world over.

The intra-action reviews of the COVID-19 response undertaken by many Member States in 2020 and 2021 have unmistakably revealed that the levels of preparedness and response readiness that existed were not sufficient to effectively manage such a severe health emergency. The Seventy-fourth session of the WHO Regional Committee for South-East Asia in September 2021 recommended “further synthesis of the lessons learnt from the COVID-19 response at the regional level” and the “development of a Regional Roadmap to strengthen health security in the Region”.

This Regional Strategic Roadmap on health security and health system resilience for emergencies 2023–2027 is the result of rapidly taking the Regional Committee’s recommendation forward. It is based on distilling the lessons learnt from and recommendations generated for responding to the COVID-19 pandemic and other emergencies in the Region.

Regional-level consultations of representatives of Member States, development and technical partner agencies, and civil society organizations and experts were held in October 2021 to consolidate the lessons and recommendations and in June 2022 to discuss and provide feedback on the draft Regional Strategic Roadmap.

Global developments to strengthen pandemic and health emergency preparedness and response were also taken cognizance of to formulate the Roadmap. It is built on the experiences gained from the health security and health systems strengthening initiatives undertaken so far in the Region.

A companion document, called the *South-East Asia Regional Roadmap for diagnostic preparedness, integrated laboratory networking and genomic surveillance 2023–2027*, that specifically focuses on developing public health laboratory capacity at the national and regional levels has also been developed following a similar process as outlined above.

It is envisaged that Member States of the Region, supported by WHO and partners, will develop or revise and implement their national action plans on health security guided by these Regional Roadmaps to tangibly bolster health security capacity and build health systems that are resilient to emergencies through continued high-level political commitment, sustainable financing, effective intersectoral collaboration and robust multisectoral partnerships.

Let us learn from this pandemic and move forward together with hope and determination to build strong, sustainable, well-resourced and integrated health and other critical systems that are inclusive, equitable and coherent. Only such systems will help us reach our long-term goal of a regenerated planet with healthy and happy people, where everyone can realize their innate right to thrive, flourish and make valuable contributions to the common good.



Dr Poonam Khetrpal Singh
Regional Director

II. Abbreviations and acronyms

AAR	after-action review
AEFI	adverse events following immunization
AMR	antimicrobial resistance
APSED	Asia Pacific Strategy for Emerging Diseases
CCS	Country Cooperation Strategy
CERF	Central Emergency Response Fund
COVID-19	Coronavirus Disease 2019
EB	Executive Board
EOC	emergency operations centre
ERM	emergency risk management
EWARS	early warning, alert and response system
GGE	general government expenditure
GHE	government health expenditure
GOARN	Global Outbreak Alert and Response Network
GPW13	WHO Thirteenth General Programme of Work
HAI	health-care-associated infection
HCWM	health-care waste management
HICC	hospital/health-care infection control committee
HLP	High-Level Preparatory (Meeting)
IAR	intra-action review
ICT	information and communication technology
IHR	International Health Regulations (2005)
IHR-MEF	International Health Regulations – Monitoring and Evaluation Framework
IHR-NFP	International Health Regulations – National Focal Point
INB	Intergovernmental Negotiating Body
IPC	infection prevention and control
JEE	Joint External Evaluation
Mini-cPIE	COVID-19 Vaccination IAR
M&E	monitoring and evaluation
MEF	Monitoring and Evaluation Framework
NAPHS	National Action Plan on Health Security
NFP	National Focal Point

PHC	primary health care
PHEIC	Public Health Emergency of International Concern
PHEP	public health emergency preparedness
PHSM	public health and social measures
PoE	point of entry
PPE	personal protective equipment
PPR	prevention, preparedness and response
RCCE	risk communication and community engagement
SARS CoV-2	Severe Acute Respiratory Syndrome Corona Virus-2
SDGs	Sustainable Development Goals
SEARHEF	South-East Asia Regional Health Emergency Fund
SimEx	simulation exercise
SOP	standard operating procedure
SPAR	States Parties Annual Self-Reporting
SPRP	Strategic Preparedness and Response Plan
UHPR	Universal Health and Preparedness Review
WaSH	water, sanitation and hygiene
WGPR	Working Group on strengthening WHO Preparedness and Response to health emergencies
WHA	World Health Assembly
WHO	World Health Organization
WoG	whole-of-government
WoS	whole-of-society

III. Acknowledgements

The Regional Strategic Roadmap on health security and health system resilience for emergencies 2023–2027 was developed under the overall guidance of the Director of the WHO Health Emergencies Programme, by WHO Regional Office staff. Inputs from literature reviews, Member States' self-assessments and joint external evaluations of IHR (2005) core capacities, intra-action reviews of COVID-19 response at country and regional levels, and reports of regional consultations, were used in its preparation. Experts and partners provided valuable guidance on the lessons learnt from the COVID-19 response. The Health Emergencies Department of the Regional Office expresses its gratitude to all individuals who actively participated in, helped organize content and contributed to the formulation of the Roadmap.

IV. Introduction and background

The International Health Regulations (IHR) 2005 call for the presence and functioning, throughout their territories, and specifically at the designated points of entry (PoE) of the Member States, core capacities that are required for surveillance, reporting, verification and notification of multihazard public health events or emergencies and for mounting the comprehensive public health response necessary to contain them at source.

The monitoring and evaluation (M&E) framework of IHR 2005 delineates the different core capacities that are needed, their components and the minimum requirements for ascribing the levels of development of these capacities. Through mandatory States Parties Annual Self Reporting (SPAR) after self-assessment and voluntary Joint External Evaluations (JEE) among other mechanisms such as the after-action reviews (AAR) and simulation exercises (SimEx), the Member State core capacity profile including the gaps are well-articulated. Member States utilize this profile to develop and implement National Action Plans on Health Security (NAPHS) to strengthen core capacities and ensure compliance to IHR 2005.

An adequate health system with well-developed and balanced building blocks and service provision arrangements, with high if not universal coverage, is not only foundational for health security but is also critical for (i) fulfilling the surge in demand for services that emergency response entails; (ii) continuity of essential services to the population impacted by the emergency; and (iii) the ability to bounce back to normalcy rapidly and stronger following an emergency – key characteristics of a resilient health system.

WHO, as the United Nations specialized agency for global health and the custodian of IHR 2005, is mandated to support Member States, guided by the Country Cooperation Strategy (CCS) in collaboration with the ministries of health – the national health system stewards, partners and stakeholders to enable health systems with an optimal level of service coverage, health security and resilience to multihazard emergencies. To discharge its mandate, the WHO Thirteenth General Programme of Work (GPW13) 2019–2023 envisaged addressing health security by targeting at least a billion more people better protected from health emergencies while simultaneously targeting to ensure that one billion more people benefit from universal health coverage (UHC) and a billion more enjoy better health and well-being.

To contribute to the achievement of the health emergencies target of WHO GPW13, the WHO South-East Asia Region has been implementing the Five-year Regional Strategic Plan to Strengthen Public Health Preparedness and Response 2019–2023, building on the ongoing efforts since 2014 through one of the Regional Flagship Priority Programmes to strengthen Emergency Risk Management (ERM). The regional strategic plan is based on and aligned to WHO's Global Strategic Plan to improve Public Health Preparedness and Response 2018–2023 which was developed at the request of the World Health Assembly (WHA) in 2017.

The global and the regional strategic plans adopted a three-pillar approach to strengthen public health preparedness and response to emergencies – build, strengthen and maintain Member States' core capacities required under IHR 2005; strengthen event notifications and management in compliance with requirements under IHR 2005; and measure progress and promote accountability in implementing the strategic plan. The regional strategic plan factored in the health security profiles of the Member States of the Region derived from the IHR-JEEs undertaken by eight countries till 2018 and the IHRSPAR of 2018 completed by all 11 Member States.

Member States of the Region were making significant progress in building the IHR core capacities guided by the regional strategic plan as evidenced by the 2019 SPARs as also by the effective response to the public health emergencies that they faced in 2019 when suddenly they were impacted by the Coronavirus Disease (COVID-19) pandemic in 2020. While Member States with strong primary health care (PHC) oriented systems with capability for effective community and multisectoral engagement have been better able to respond to the pandemic, it has been revealed that the current level of preparedness for major health emergencies is not sufficient and a strengthened and resilient health system, incorporating multisectoral collaboration and a whole-of-society (WoS) approach is required at all Member States.

The COVID-19 pandemic has dramatically illustrated the impact of health emergencies not only on health but also on national economies and social welfare. Risks from natural and artificial hazards are also likely to result in major health emergencies of increasing frequency and impact given the weakened systems that the pandemic would leave in its wake coupled with the accumulating risk due to climate change. Cognizant of these ever-increasing risks and taking into consideration the lessons learnt from responding to the COVID-19 pandemic aided by the intra-action reviews (IAR), Member States, supported by all three levels of WHO and especially the regional and country offices and partners need to develop or update their NAPHS to strengthen the capacity to anticipate, prepare for and deal with future health emergencies.

The new Five-Year Regional Strategic Roadmap for Health Security and Health System Resilience for Emergencies 2023–2027 has been developed in a collaborative and participative manner. It has taken into consideration the global initiatives and developments to strengthen the pandemic and health emergency preparedness and response architecture, mechanisms, processes, global solidarity, and accountability. It is aimed to serve as guidance to the Member States of WHO South-East Asia Region in their efforts to strengthen national health security and health system resilience for emergencies and contribute to the consolidation of the collective, supportive, and augmenting capacities needed at the regional level.

The structure and content of the Regional Strategic Roadmap is also envisaged to assist Member States to swiftly outline the Strategic Preparedness and Response Plans (SPRP) needed to manage emergencies caused by specific hazards – especially infectious. It also outlines approaches for implementing the strategy at national level in the context of national systems, norms, and capabilities. A framework to ensure accountability for implementation of the roadmap that is aligned to the existing M&E framework for IHR 2005, health systems performance and Sustainable Development Goals (SDGs), etc. that would not place additional data generation and reporting burden on countries is also proposed.

V. Rationale for developing the new Regional Strategic Roadmap, its purpose and utility

Though the Five-Year Regional Strategic Plan to strengthen preparedness and response (2019–2023) for the South-East Asia Region would need to close in 2023, the COVID-19 pandemic which commenced in 2020 and is ongoing has (i) prevented the entirety of the plan from being implemented as envisaged; and (ii) thrown up challenges and lessons that necessitate early curtailment of the strategic plan. This calls for the formulation of a new strategic roadmap for the Region that incorporates the lived realities of the Member States and the lessons learnt and the related global developments.

The Seventy-fourth session of the WHO Regional Committee for South-East Asia held in September 2021 has recommended WHO to facilitate further synthesis of the lessons learnt from the COVID-19 response and work with Member States to develop a regional roadmap to strengthen health security in the Region. In compliance with this recommendation, a virtual regional meeting on “Learning from the COVID-19 response to strengthen health security and health systems resilience in the WHO South-East Asia Region” was held in October 2021 and attended by nine Member States, partners and selected experts from the Region. Through this meeting, key lessons learnt were captured and consolidated under 12 technical areas. Key recommendations from this meeting include further synthesis of lessons and informing reform and investment for more effective health security systems and health system resilience which is more oriented towards PHC; and contribution to upgrading the global and regional health security framework.

At the global level, the Working Group on strengthening WHO preparedness and response to health emergencies (WGPR) was established with a mandate derived from the World Health Assembly resolution WHA74.7 (2021) and by decision WHA74(16) (2021). The WGPR submitted its first report, which was adopted by consensus by the WGPR and welcomed at the World Health Assembly at its second special session (29 November–1 December 2021). This led to the formation of the Intergovernmental Negotiating Body (INB) to draft and negotiate a WHO convention, agreement or other international instrument on pandemic prevention, preparedness and response (PPR).

The WGPR made concrete recommendations to the Seventy-fifth World Health Assembly held from 22–28 May, for the thematic areas of political leadership, financing (national, regional and global levels including for WHO), strengthening IHR implementation, compliance and potential amendments and equity. The Seventy-fifth World Health Assembly approved the recommendations made by WGPR, changed the overall mandate of WGPR and renamed it as the Working Group on IHR which will work in close coordination with the INB. The 151st Executive Board of WHO has also approved the formation of a standing committee on health emergency preparedness and response which will have 14 members (including two from each region). The terms of reference of this standing committee are being finalized and the committee meeting is scheduled for October 2022. These global developments also entail the formulation of a new Regional Strategic Roadmap.

At the High-Level Preparatory (HLP) Meeting for the Seventy-fourth Regional Committee for South-East Asia, WHO was requested to continue supporting Member States in responding to the ongoing pandemic while strengthening the delivery of essential health services through accelerating progress on the Regional Flagship Priorities related to UHC and health emergencies. The linkages between the two Flagship priorities should also be strengthened, such as facilitating identification of priority actions to enhance resilience of health systems through COVID-19 IARs and their inclusion in the Regional Strategic Roadmap.

The South-East Asia Region Health Ministers' Declarations on "Collective Response to COVID-19" at the Seventy-third and Seventy-fourth sessions of the Regional Committee on "COVID-19 and Measures to Build Back Better" highlighted the importance of investments in PHC as the foundation for effective response to public health emergencies, strengthening of IHR core capacities and the achievement of UHC and the health-related SDGs. The new Regional Strategic Roadmap will be a vital vehicle for the realization of these declarations.

In practical terms, the roadmap is structured, and its contents detailed to assist Member States to develop or update and implement their NAPHS for strengthening the capacity to anticipate, prepare for and deal with future health emergencies by readily outlining the SPRP, which are needed to manage emergencies caused by specific hazards – especially infectious. The new roadmap is expected to further accelerate the implementation of the Delhi Declaration – Emergency Preparedness in the South-East Asia Region (2019) and inform development of future health security frameworks in the Region and inform our collective efforts towards a safer and more secure Region.

VI. Overview of IHR core capacity status and interventions to enhance capacity in the region

Despite challenges including the COVID-19 pandemic, Member States of the Region have made considerable progress in building the core capacities for complying with the IHR 2005. Countries have fully utilized existing core capacities to respond to the unprecedented ongoing pandemic to control transmission and save lives. However, the COVID-19 pandemic has revealed that the current level of preparedness is not sufficient to effectively manage severe health emergencies such as this pandemic. The Region adopted the International Health Regulations – Monitoring and Evaluation Framework (IHR-MEF) to measure progress, enhance accountability and foster continuous learning and improvement and to report annually on the progress in strengthening IHR capacities through enabling countries to implement NAPHS.

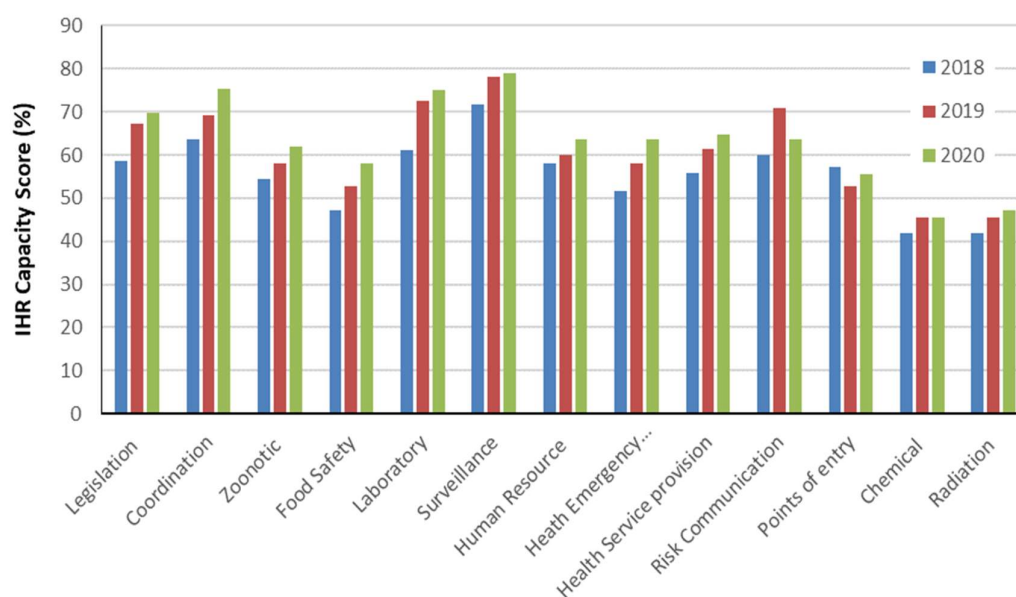
The 2021 round of the SPAR was submitted by all 11 Member States in early 2022, maintaining the 100% response rate observed in the Region since 2016. The newly introduced revised version of SPAR 2021 captured 15 capacities and 35 indicators compared to 13 capacities and 24 indicators in the first edition, which was used from 2018 to 2020. As per the 2021 SPAR, five Member States of the Region reported an average score of 41–60%, four an average score of 61–80% and two an average score above 80% for the 15 core capacities.

The lowest score was reported for policies for chemical events management followed by legal and normative instruments to manage emergencies, and capacities to address food safety and radiation emergencies. The highest average score was observed for surveillance capacity followed by risk communication capacity and health emergency management – all three of which have benefited by their augmentation for COVID-19 response.

Table 1. SPAR 2021 of Member States of the WHO South-East Asia Region

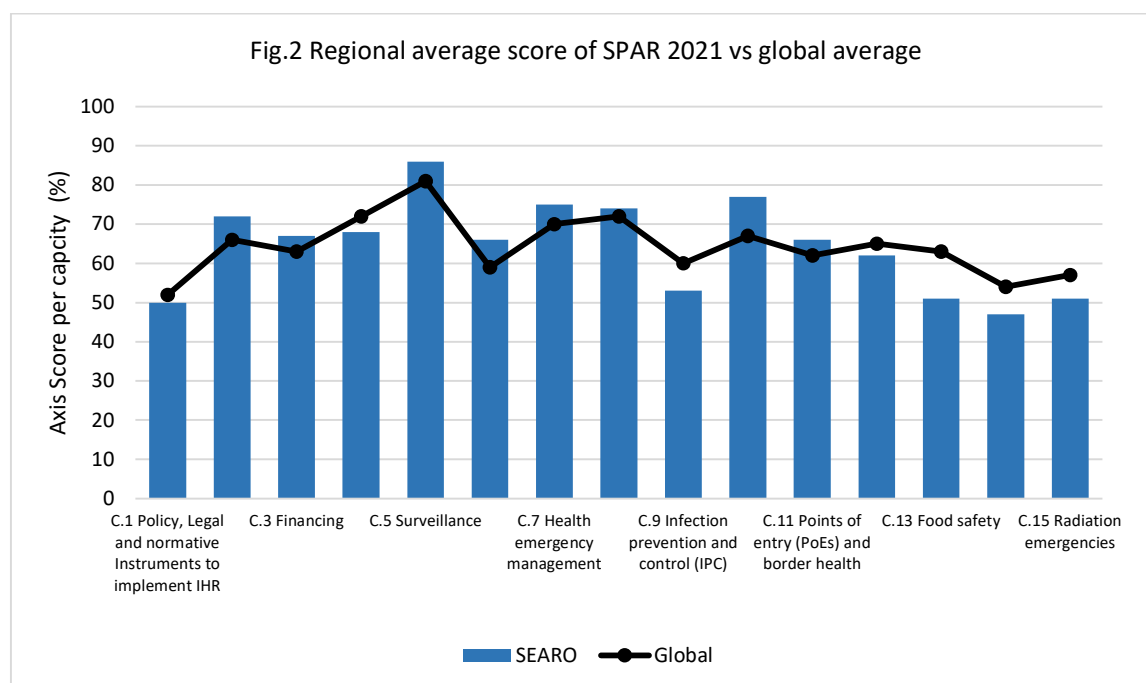
IHR Core Capacity & Hazards ->	Policy, Legal & Normative Instruments	Coordination & NFP Functioning	Financing	Laboratory	Surveillance	Human Resources	Health Emergency Management	Health Service Provision	Infection Prevention & Control	Risk Communication & Community Engagement	Points of Entry	Zoonotic Diseases	Food Safety	Chemical Events	Radiation Emergencies
Countries															
Bangladesh	60	80	70	76	80	50	73	80	53	67	67	80	60	60	60
Bhutan	30	47	70	56	80	30	53	67	47	73	67	60	60	20	20
DPRK	80	93	80	72	90	80	80	87	80	80	87	80	40	60	60
India	40	87	100	80	100	100	100	87	47	100	100	80	60	80	100
Indonesia	40	60	70	72	90	60	73	80	60	80	73	60	40	40	60
Maldives	40	73	40	76	80	60	80	60	47	60	53	20	20	20	20
Myanmar	30	67	60	64	70	50	67	47	53	80	40	60	60	60	40
Nepal	20	53	60	64	60	30	53	53	27	53	47	60	40	20	20
Sri Lanka	40	80	50	40	100	90	80	80	47	80	73	20	60	40	80
Thailand	100	87	80	88	100	80	93	100	80	93	80	100	80	80	80
Timor-Leste	70	67	60	60	100	90	67	67	40	80	40	60	40	40	20
REGION	50	72	67	68	86	65	74	73	53	77	66	62	51	47	51

Fig. 1. Regional SPAR capacity progress (SPAR 2018–2020)



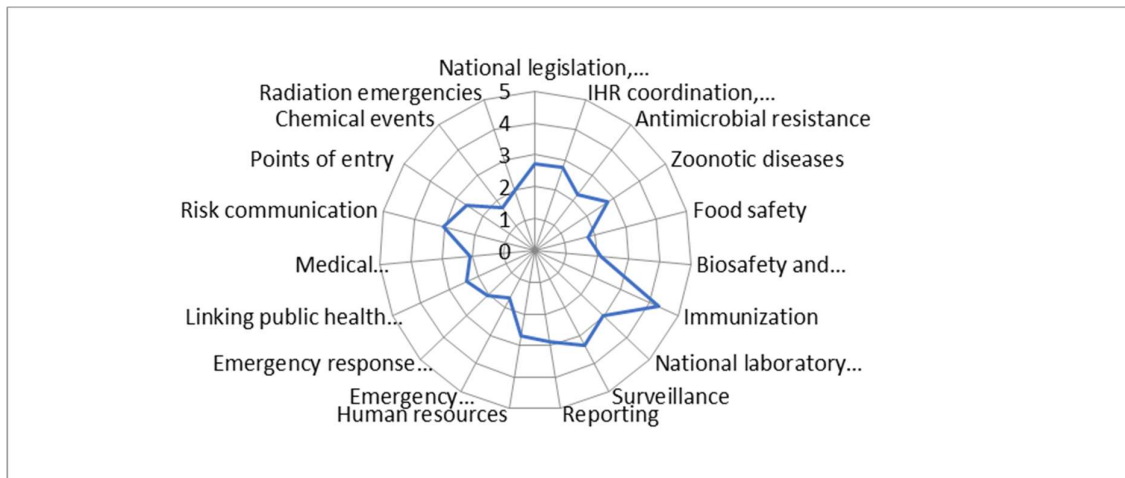
Regional average scores were lower than the global average in the capacity areas of policy; legal and normative instruments; laboratory; infection prevention and control (IPC); zoonotic diseases; food safety; chemical events; and radiation emergencies. Multisectoral involvement in responding to the SPAR questionnaire for quality assessment of capacities, and utilization of SPAR data for health sector planning and IHR capacity enhancement have been observed over the years.

Fig. 2. Regional average score of SPAR 2021 vs global average



Eight Member States – Bangladesh, Bhutan, Indonesia, Maldives, Myanmar, Sri Lanka, Thailand and Timor-Leste – have conducted the voluntary JEE between 2016 and 2018. JEEs planned in 2020 and 2021 were postponed due to the COVID-19 pandemic. The JEE tool has been revised based on the lessons learnt from the COVID-19 pandemic and recommendations from technical consultative meetings. The regional overview of IHR capacity over 19 technical areas as per the eight JEE conducted so far reflects significant progress in areas of national legislation, policy and financing; IHR coordination, communication and advocacy; immunization services; laboratory capacity, surveillance and reporting and risk communication.

Fig. 3. Regional average score of JEE from eight Member States of the WHO South-East Asia Region



However, the national focal points (NFPs) across the Region need to improve capacity in certain areas with more impetus and investments in emergency preparedness and response readiness to deal with any unexpected chemical or radio-nuclear emergency, enhancing biosafety and biosecurity in laboratory networks to curb increasing antimicrobial resistance (AMR) due to weak or improper medical countermeasures; delayed personnel deployment to manage emergencies; and improving prevention and control of disease transmission at the PoE.

Many Member States of the Region have conducted SimEx to test the functional response capacity to COVID-19 including COVID-19 vaccine drills. Several Member States used the WHO SimEx packages for COVID-19 before implementing their COVID-19 vaccine programmes and response activities. Many countries have also conducted AARs after varied public health emergencies for examining the response and to learn lessons for improvement to prepare for and manage future emergencies.

Long before COVID-19, the Region has prioritized the strengthening of preparedness and response through the South-East Asia “Regional Flagship Priority 6: Scaling up of capacities in Emergency Risk Management”. Since 2016, WHO has been working closely with Member States and partners to support the development of NAPHS to accelerate the implementation of interventions to enhance IHR core capacities and is based on a One Health and whole-of-government (WoG) approach for all hazards. The development and updates of the plans have been informed by data from the four components of the IHR-MEF and other internal assessments.

Following the IHR assessments, seven Member States – Bhutan, Indonesia, Maldives, Myanmar, Sri Lanka, Thailand and Timor-Leste – have developed and implemented the NAPHS, while Bangladesh was awaiting endorsement of its NAPHS. The plans are aligned with the national health sector plans linking activities using a “One Health approach” and encompass broader health system strengthening with full government and societal involvement.

Strengthening IHR core capacities through progressive implementation of NAPHS not only improves national health security, but also safeguards travel and trade, and helps to protect economic and social development. The operationalization of NAPHS in the countries has been challenged by competing priorities between health and non-health sectors, governance, political commitment and sustainable financing. Intersectoral cooperation and adequate financing is necessary for the sustained implementation of NAPHS. As a significant achievement, the “preparedness stream” of the South-East Asia Regional Health Emergency Fund (SEARHEF) was set up in 2016 for catalysing interventions prioritized in NAPHS.

Strengthening International Health Regulations – National Focal Point (IHR-NFP) capacities remains a high priority for the Region. Even during the pandemic, virtual IHR-NFP meetings were conducted periodically to share the best practices in COVID-19 response among the Member States as well as to provide updates on the prevailing epidemiological situation, innovative approaches in COVID-19 response and latest technical guidelines. In addition, the Regional IHR Knowledge Network has served as a common online platform for informal sharing of information, experience and good practices and peer-to-peer learning between NFPs and experts as well as for conducting online capacity-building webinars and hosting virtual meetings.

Recently, the Universal Health and Preparedness Review (UHPR) has been introduced and is being piloted to build mutual trust and accountability, by bringing Member States together as neighbours and strengthening national capacities for health emergency preparedness, UHC and healthier populations. The first pilot of the UHPR in the Region has been conducted in Thailand in April 2022.

VII. Summary of key findings from intra-action reviews of COVID-19 response; lessons learnt and recommendations

The COVID-19 pandemic has brought unprecedented social and economic disruptions globally, while cases and deaths have soared. As the acute, initial phase of the COVID-19 pandemic and response to it around the world moved into a protracted phase, there was a need to conduct periodic reviews of the COVID-19 response while the emergency is ongoing to identify opportunities to further strengthen country emergency preparedness and response capacities and course correct the response as needed.

IARs provide a unique opportunity to bring all stakeholders together from different parts of the government, private sector and civil society to collectively reflect on their response, identify best practices, challenges, lessons learnt and come up with immediate and mid- to long-term recommended activities to continually improve their COVID-19 preparedness and response, which also have a bearing on overall ERM.

In the South-East Asia Region, Bangladesh, Bhutan, India (Gujarat), Indonesia, Nepal, Sri Lanka and Thailand have reported on the multi-stakeholder IARs of COVID-19 response that they have conducted. Indonesia has also conducted six follow-up monitoring meetings periodically to monitor the implementation of the recommendations that emerged from the IAR. Some Member States have also conducted COVID-19 vaccination IARs (Mini-cPIE) to document the good practices and identify challenges that were faced during the vaccination roll out. Bringing stakeholders from different sectors together to engage in a productive dialogue about the pandemic response has also been emphasized as being of direct benefit for corrective actions through collective efforts. The findings and recommendations have important implications for strengthening national health security systems.

Building these regional and national health security systems require long-term vision and committed political leadership to provide direction and ensure sustainable financing. Member States, WHO and other partners worked together to identify the key learnings and gaps from the COVID-19 response to more effectively respond to the ongoing pandemic and prepare for future pandemics and other emergencies. Priority actions to further strengthen health security and health system resilience based on the lessons learnt were also identified.

The Seventy-fourth session of WHO Regional Committee for South-East Asia, held in September 2021, recommended “further synthesis of the lessons learnt from the COVID-19 response at a regional level” and “to develop a regional roadmap to strengthen health security in the South-East Asia Region”. Responding to these recommendations, WHO Regional Office for South-East Asia organized meetings with experts and with Member States and partners in October 2021.

Through the regional meeting, delegates of the Member State shared crucial lessons across 12 technical areas – 10 technical areas as per the WHO SPRP for COVID-19 plus two additional technical areas.

SPRP Pillar 1: Coordination, planning, financing and monitoring

High-level, multisectoral leadership that fosters a WoG and WoS response, a strong incident management system, legislation, functional emergency operation centres, and accountability framework are crucial. Strong investments in health security over the years including public health infrastructure returns with efficient and effective response to emergency. A more diverse workforce needs to be mobilized and private sector involvement has helped enable a strong multisector response. Learning, such as through IARs, informs continuous improvement of response.

SPRP Pillar 2: Risk communication, community engagement and infodemic management

A functional national action plan and standard operating procedures (SOPs) including coordination mechanisms for proactive and responsive communication are very important. Strong leadership and active communication using a single set of information from the government with appropriate use of local languages was particularly important in the evolving science of a new disease. Listening to and engaging with communities, key influencers and tackling misinformation and disinformation should be strengthened through multi-stakeholder engagement including the private sector.

SPRP Pillar 3: Surveillance, epidemiological investigation and contact tracing

Existing surveillance systems at the subnational level and field epidemiology training programmes provided an important foundation. More systematic synthesis of multiple information sources for risk assessment as well as decision-making and having a workforce plan including for surge capacities are priorities. Capacities at the district and PHC levels for surveillance were considered critical. Multiple platforms and infrastructure for reporting mechanisms need to be strengthened.

SPRP Pillar 4: Points-of-entry, international travel and transport, and mass gatherings

Multidisciplinary technical and operational support, improved multisectoral coordination, partnerships and risk-based approach are priorities for efficient and safe mobility management at PoE with capability to rapidly surge. Regular risk assessment, infrastructure investment, digitalization and harmonization with national surveillance system at PoE, and strengthening cross-border collaboration and information sharing are critical priorities.

SPRP Pillar 5: Laboratories and diagnostics

Existing national policies and laboratory systems positively contributed to the enhanced response. Investments in laboratory capacity enabled quick development of diagnostic tools and capacity for COVID-19 testing and the expansion of the coordinated COVID laboratory network. Formalizing workforce surge mechanisms, digitalizing laboratory reporting platforms and establishing a Diagnostic Technical Advisory Group at the national and regional levels, including strengthening collaborative platforms for genomic surveillance, were also recommended to develop and strengthen the laboratory system and diagnostics through concerted efforts.

SPRP Pillar 6: Infection prevention and control

An integrated national IPC strategy, guidelines and a national programme that includes surveillance for hospital/health-care-associated infections (HAIs), through adequate training of health personnel and volunteers, is crucial to guide IPC implementation. Integration of IPC with safe water, sanitation and hygiene (WaSH) at health facilities, and efficient health-care waste management (HCWM) would serve as the base for enhanced response during an emergency. Timely and sustained supplies of personal protective equipment (PPE) and stockpile need to be ensured for equity in pandemic countermeasures.

SPRP Pillar 7: Case management, clinical operations and therapeutics

The capacity to scale up health-care systems through mobilizing surge staff (both health and non-health) of diverse skillsets and ensuring compliance with rapidly changing guidelines and referral procedures were critical. Improved access to real-time data is needed to support evidence-based decision-making. Adaptable care pathway, referral mechanisms, and coordinated continuum of prehospital, acute/hospital, post-acute and rehabilitative care is needed. Private sector involvement is foundational for pandemic surge response in many Member States. Community-based and home-based care models supported by home visits and telemedicine made important contributions and good civil–military cooperation also played a crucial role in effective health-care management.

SPRP Pillar 8: Operational support and logistics and supply chains

Significant disruptions and increased demand for essential goods posed major challenges. Logistics reporting system with facilitated information sharing and supply management between the subnational and national levels and emergency funding for health-care infrastructure, logistics and procurement needs to be strengthened. Global shortages and non-availability of resources delayed procurement and logistics services when demand for essential goods increased for efficient countermeasures. Better financing; strengthening public–private partnerships; establishing subnational emergency logistic warehouses, national and regional stockpiles, and local manufacturing capacities; contingency plans for supply chain management; and real-time logistic information management systems were identified as critical needs.

SPRP Pillar 9: Maintaining essential health services and systems

Innovative mechanisms to maintain health services and access were adopted, such as telemedicine, home delivery of treatment, volunteerism, and multi-month dispensing. Evaluation of best practices and regulatory framework for new service delivery models are needed. National programmes with contingency plans and tested modalities for maintaining services during emergencies were able to adapt global tools more efficiently during the pandemic.

SPRP Pillar 10: Vaccination

High-level political commitment, multisectoral oversight bodies, a vaccine deployment plan, and mechanisms to expedite emergency use authorization were key factors for success. Ensuring risk communication and community engagement (RCCE) to address vaccine demand issues and hesitancy, systems to facilitate evidence-based corrective actions, and functional adverse events following immunization (AEFI) surveillance are critical needs.

Technical area – public health and social measures (PHSM)

Multisectoral processes that use a WoS approach, with community engagement and two-way listening, were crucial to ensure effective PHSM. A risk-based approach for calibrating PHSM at the subnational level is required to timely adjust the response measures.

Technical area – resilient health system

Enhanced investments in PHC-oriented health systems that fully engage communities are a priority. Mechanisms to mobilize surge staff, engaging private practitioners during an emergency, while ensuring continuity of health services, are needed.

The consultations with the Regional Director’s expert working group also identified policy and system enablers for more effective preparedness, response and resilience.

PHC-oriented resilient health systems

PHC system, including community health-care workers, have vital roles in the pandemic response. Long-term investment and early engagement enhance their effectiveness. Mechanisms to mobilize surge staff, engaging private practitioner, is needed. The availability of business continuity plans informed by experiences in managing previous emergencies helped rapid adaptation.

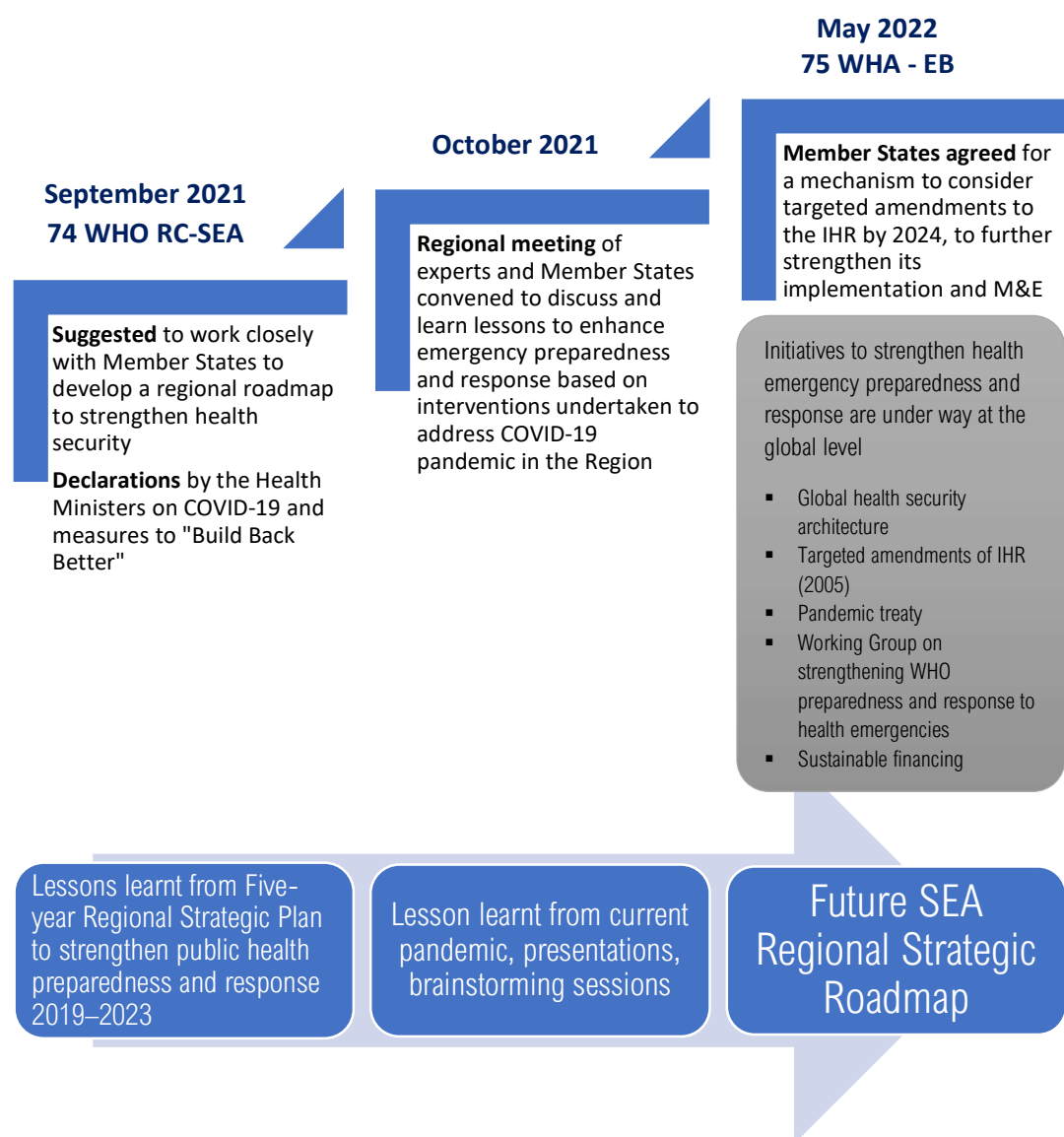
- **Public and private partnerships:** More effective engagement of the private sector has major potential to improve pandemic response, from provision of health care, production of pandemic products, logistic and supply management to risk communication.
- **Digital technology for surveillance and response:** Digital and information technology should be further applied to improve surveillance, data management, contact tracing, care, and treatment (telemedicine) and planning for PHSM and vaccination.
- **Psychosocial care and support:** Mental health and psychosocial services should be an integral part of emergency response from the very beginning of any health emergency. The roles of partners have been critical to reach vulnerable populations and to address range of psychosocial issues.
- **Regional platform for alert, preparedness and response:** The mechanisms for regional surveillance and timely information-sharing across countries of the Region must be improved. Regional stockpiling and supply chain systems should be explored and established.
- **Local manufacturing and equitable access to emergency products:** More robust mechanisms for equitable distribution of emergency products are crucial. Strengthening of local manufacturing capacities for quality-assured pandemic products within the Region may need to be explored.

Lessons from the COVID-19 pandemic response confirmed and augmented the repeated lessons from other emergencies in the Region and clearly stressed the need for ERM that is broad-based, utilizing the WoG and WoS approach to engage relevant stakeholders beyond the health sector.

This demands collaboration, mutual accountability and concerted actions between national leaders, policymakers, local governments, academia, professional associations, civil society organizations and global initiatives for the effective implementation of NAPHS, including securing human resources with multiple skillsets and domestic financing.

An enabling environment for NAPHS implementation through international cooperation and partnerships also plays a crucial role in the Region to strengthen health security and health system resilience to emergencies by augmenting IHR core capacities and enhanced development of the health system building blocks to improve UHC and ensure effective and efficient services needed by people across the life course.

VIII. Process of development of the new Regional Strategic Roadmap



- A draft Regional Strategic Roadmap was prepared by the WHO secretariat at the regional level and was deliberated upon at a regional meeting conducted in a hybrid mode on 29–30 June and 1 July 2022.
- The feedback and outputs from the regional meeting were used to finalize the draft strategic roadmap along with the approaches to operationalize the roadmap and to monitor and evaluate its implementation.
- The finalized Regional Strategic Roadmap was shared during the HLP Meeting in July 2022 for consultation, consideration and updating using the feedback provided.
- The HLP delegates recommended that the updated Regional Strategic Roadmap be tabled before the WHO Regional Committee for South-East Asia at its meeting in September 2022, to be considered and endorsed for implementation.

IX. The new Regional Strategic Roadmap for Health Security and Health System Resilience for Emergencies 2023–2027

IX.1. Strategic vision

People and economies in the WHO South-East Asia Region are protected from the impact of public health emergencies.

IX.2. Goal

To strengthen national and regional health security and health system resilience, to anticipate, prevent and manage health emergencies while maintaining essential health services, through enhanced health systems, governance and collaboration within and across the countries of the Region.

IX.3. Strategic objectives

- i. Strengthen the whole of government and whole of society approach to enable more effective public health emergency preparedness (PHEP), readiness and response.
- ii. Strengthen country health security systems to reduce risks, anticipate, detect early, prevent and respond to public health emergencies as well as recover from their impact.
- iii. Strengthen governance, financing and enabling functions and health system resilience for emergency preparedness and surge response.
- iv. Strengthen health system resilience to enable continuity of essential health services.
- v. Strengthen regional alert, preparedness and response systems, through improved regional collaboration.

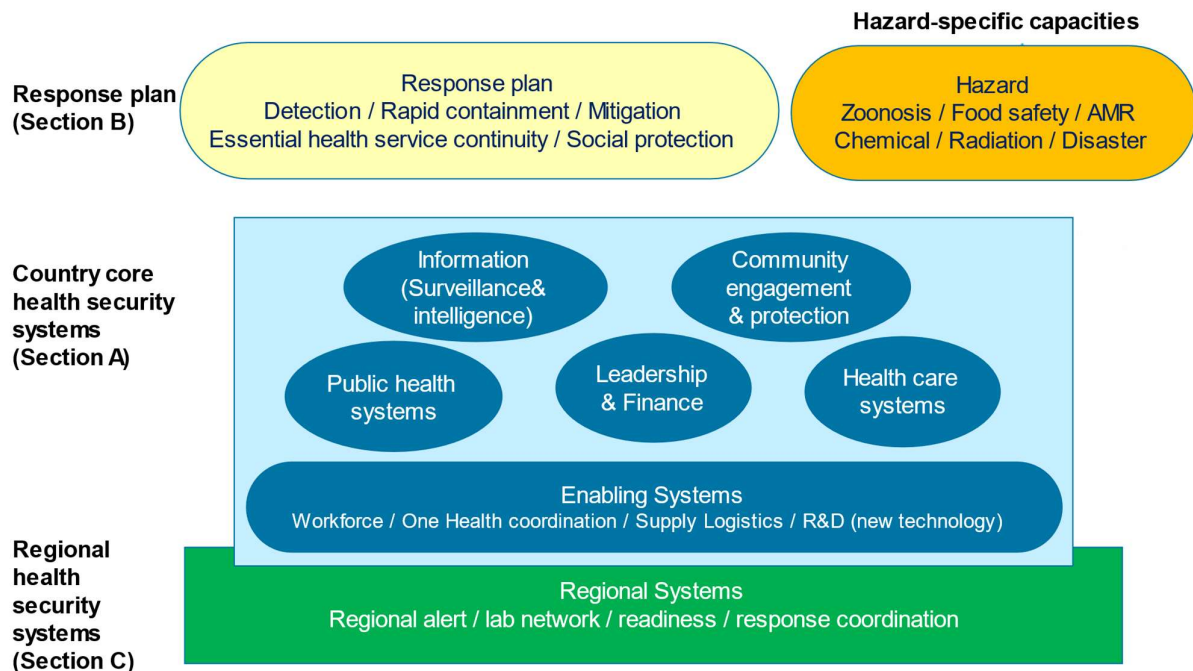
IX.4. Key principles

- i. Response to all hazards, including health emergencies will require strong leadership and coordinated action from different sectors. Therefore, this strategy is founded on a multisectoral, multidisciplinary, risk-based, all hazard approach, guided by strong leadership.
- ii. Prevention, control, and impact reduction of all hazards is possible only through collaboration with communities, and the most vulnerable people – who are more susceptible to their impact – must be protected.
- iii. Member States must be able to anticipate and respond to all hazards adequately as the cost of economic and social disruption far exceeds the cost of preparedness and early response.
- iv. WHO has to act as the knowledge partner to synthesize existing knowledge, provide technical support and facilitate collaboration between Member States.

IX.5. Elements/sections of the Regional Strategic Roadmap

The elements/sections of the strategic roadmap are organized around three focus areas:

- A) strengthen the capacity of Member States to quickly detect and respond to all hazards;
- B) guidance on the steps to be taken during the public health emergency to reduce its spread to wider geographies and populations and reduce the impact on them; and
- C) regional and global initiatives and linkages.



5. A. Strengthen the capacity of the Member States to detect, control and mitigate the impact of emergency risks

During an emergency, systems which are prepared and have depth in capacity are able to cope better. These capacities have to be built before the hazard occurs and the emergency sets in. For this, Member States, supported by WHO, need to envision different types and scale of risks, and plan to prepare for them. This is cost-effective considering the potential impact of emergencies and the beneficial impact on everyday resilience to maintain quality of living.

The objectives of this focus area are to strengthen systems for early detection, control and mitigating the impact of any hazards that may arise in future, using lessons learnt from the experience of managing past emergencies in the Region. The core strategies may be categorized as: leadership and finance, information, public health systems, systems for providing health care, community engagement and enabling systems.

5.A.1. Leadership and finance

1.1. Leadership is the lynchpin of an effective response to all hazards

The value of leadership, from the national to local implementation level, in managing all risks was demonstrated during many disasters and emergencies in the past including COVID-19. In addition to strong and visible leadership at the national level, Member States need to have systems to nurture leaders including IHR-NFP at all levels and ensure they have adequate resources and administrative powers to implement their mandate. This can be done within the current regulatory and administrative framework, by strengthening existing mechanisms to achieve this objective. Member States need to ensure that:

- a. Preparedness, readiness and response capacities to cope with all hazard emergencies are elevated to the level of heads of state and government to ensure sustained political commitment for a WoG and WoS approach, to make the required resources available and facilitate the regulatory and administrative changes needed to respond to health and other emergencies. Programme managers at various levels are trained on the national vision, values and strategies to respond at their levels and are delegated the authority to mount an emergent response appropriate to local needs.
- b. Multihazard response plans and procedures are put in place that clearly define the roles, responsibilities, systems and mechanisms for initiating and managing an emergency response, using a multisectoral risk management approach. Disease outbreaks and other health emergencies are integrated effectively in multisectoral policies, actions and practices, such as national disaster risk reduction strategies.
- c. Strengthen the IHR-NFP with credibility and operational reliability through proactive communications with key stakeholders at all levels across all sectors and establish mechanisms for providing and receiving feedback within IHR-NFP and among relevant stakeholders with shared vision, responsibility, accountability and credibility.

1.2. Creating a regulatory and administrative framework for managing emergencies

Managing emergencies must be backed by regulatory and governance frameworks to empower authorities to take appropriate measures and ensure that prevention does not lead to violation of civil rights.

To ensure this Member States should:

- a. Frame or strengthen acts and rules to prescribe and regulate the measures needed to manage hazards and designate entities empowered to act based on them. Since restrictions can create economic and social hardships, they must be communicated to the community before emergencies occur.
- b. Institute regulatory controls for managing institutions in the public and private sectors, which must be involved in managing the emergency, including health-care institutions and agencies providing such needed items as earth-moving equipment, transportation systems and plants for providing clean water.
- c. Strengthen existing structures and mechanism to optimize collaboration and regulation with the private sector, civil society organizations, nongovernmental organization, community-based organization, influencers and academic institutions to facilitate their participation in managing emergencies.
- d. Develop a set of regulations which become applicable during emergencies to fast-track licensing of diagnostic kits, drugs and vaccines and emergency accreditation of workforce and facilities as per the national policy and norms.
- e. Prescribe exceptional administrative and financial practices that are to be used during times of emergency and define the conditions under which these would be activated.

1.3. Mobilize additional financial resources for strengthening systems and coping with emergencies

Additional finances are required for strengthening systems as part of all risks preparedness and to respond to emergencies when they occur. These require two different mechanisms: financing preparedness can be integrated into annual budgets over a medium time period while emergency response will need sudden infusion of resources. The provisions of public finance mechanism and systems for resource mobilization from the private sector and partner agencies have to be modified to accommodate the requirement of both.

The Member States need to:

- a. Invest additional resources to strengthen systems to forewarn, contain and mitigate the impact of hazards occurring in the Region. For health emergencies these would also include the PHC system, especially for delivering the essential public health functions and supporting services.
- b. Make provisions for funds, when needed, to mitigate the socioeconomic disruption caused by the emergency and to remove the sequelae, such as radiation or chemical poisoning.
- c. Develop flexible decision-making and spending rules to address the financial demands of the response to the emergency, while retaining financial prudence.
- d. Ministries of health should advocate for securing domestic funding including the private sector and support from international and national development partners for implementation of the NAPHS through appropriate decision-making committees.

5.A. 2. Information, surveillance and intelligence

Efficient risk assessment and surveillance systems with the One Health approach

Surveillance, investigation and risk assessment inform decision-making to minimize the health and socioeconomic consequences of all relevant hazards and public health threats. Early warning function and public health intelligence are fundamental to guide timely and effective public health actions. Mechanisms to enable the One Health approach through joint efforts and information exchange is needed, engaging all relevant sectors. Sufficient numbers of adequately trained experts to anticipate and assess the magnitude of the hazard, such as meteorologists, geoscientists and epidemiologists are needed to ensure performance and quality of surveillance systems, investigation, risk assessment and rapid response, not only at the national level, but also at subnational levels.

The Member States need to:

- a. Ensure that surveillance systems provide effective early warning and are adaptable to evolving information needs before and during emergencies:
 - i. Ensure that surveillance systems are in place for relevant hazards, and that systems are efficient, adaptable and capable to provide timely information.
 - ii. Strengthen early warning functions, including through effective event-based surveillance and rapid response capacities.
 - iii. Enhance capacities and resources for field and cluster investigation to inform evidence-based response actions.
 - iv. Strengthen genomic surveillance of pathogens with epidemic and pandemic potential.

- v. Strengthen data management capacities to cope up with the volume of information being collected to analyse the epidemiological situation to make timely public health decision.
 - vi. Capitalize on effective use of digital and information technology for surveillance and information management.
- b. Strengthen collaborative public health intelligence through synthesizing and analysing multisource information for risk assessment and response decision- making:
 - i. Strengthen systems for collaborative public health intelligence that synthesizes multisource information from various sectors.
 - ii. Strengthen risk assessment to guide risk-based public health actions. Where relevant, strengthen analytics and risk forecasting for evidence-based decisions.
 - iii. Enhance One Health surveillance and joint risk assessment, connecting information from human, animal, wildlife, fishery and environmental sectors.
 - iv. Develop vulnerability and risk maps inclusive of an emergency and disaster risk calendar for each administrative unit to inform operational readiness for natural hazards.
- c. Strengthen the epidemiologist workforce for effective surveillance, investigation, rapid response and risk assessment at the national and subnational levels:
 - i. Review and strengthen programmes to enhance the epidemiologist workforce through sustainable field epidemiology training programmes, aligned with country specific strategy and plans.
 - ii. Strengthen capacities and systems in surveillance, investigation and risk assessment, as well as of multidisciplinary rapid response teams, at the national and subnational levels.
 - iii. Plan in advance for surge capacities for surveillance, contact tracing, quarantine and isolation, allowing evidence-driven and risk-based calibration of public health social measures and more targeted response.
- d. Strengthen the regional collaborative information-sharing platform for alert and risk assessment:
 - i. Strengthen IHR NFPs and IHR event communication.
 - ii. Strengthen timely international sharing of information on acute public health events.

5.A.3. Public health systems

3.1. Strengthen systems at PoE and to efficiently manage international travel and transport

While international transport, travel and trade contribute to economic development and welfare of populations, they may also pose public health risks. High traffic at air, water and ground crossings in the country could play a key role in the international spread of diseases through persons, conveyances and goods. The current COVID-19 pandemic has highlighted that timely implementation of appropriate measures in response to public health risks at PoE through a risk-based approach, including protecting the staff posted there, can delay risk of importation of new variants and spread of new infectious diseases.

The Member States need to:

- a. Designate PoEs under IHR, conduct appropriate risk assessment, develop, and Implement contingency plan and risk communication strategy at PoE, provide infrastructure, equipment for screening, PPE and build the capacity of regular and potential surge staff.
- b. Improve multisectoral coordination and adopt a risk-based approach for management at PoE including appropriate surge capacity management, effective and efficient referral mechanism for ill travellers and screening and management of illness in PoE staff.
- c. Ensure the SOP, framework and/or mechanisms are in place to make evidence-based and risk-based decisions to adjust border measures, guided by a thorough evidence-based risk assessment, without excessive interference on international traffic and trade.
- d. Strengthen cross-border collaboration and the information-sharing mechanism at normal times that can be scaled-up during emergencies.
- e. Ensure efficient linkages of PoEs with national surveillance and public health laboratory systems and conduct international contact tracing in a coordinated and collaborative manner by rapid information sharing through the IHR-NFPs with relevant Member States and WHO.

3.2. Vaccination

Vaccines remain the most effective biomedical response to preventing the spread of vaccine-preventable infections that often appear after the disruption of systems caused by emergencies. Where vaccines against potential diseases are available, they must be deployed immediately. New vaccines pose a diverse set of challenges. Since most health systems are not oriented towards adult vaccination and since child immunization is an essential health service that should not be disrupted, additional capacities have to be added for adult vaccination as part of the preparedness efforts.

To ensure uptake of vaccination:

- a. Augment vaccination systems, including cold chain, transportation services, vaccination centres and trained additional human resource to roll out adult vaccines when required, without impacting routine immunization services.
- b. Prepare a list of persons eligible for vaccination, classified in order of priority of risk, publish the list and notify eligible persons. Develop systems for registration, allocation of dates, arranging vaccinators, managing adverse events from vaccination, if any. These systems can be tested by rolling out available adult vaccines during normal times. Care should be taken to ensure that the marginalized, infirm and people residing in locations hard-to-reach, access compromised areas and high-risk populations have access to vaccines.

- c. Reinforce accountability, good management, human and financial resources, a resilient, well-trained and well-supervised workforce, and good data systems to monitor and track the implementation of COVID-19 vaccination and to adjust the strategy as necessary.
- d. Publish the data regarding efficacy, side-effects and any other relevant data for vaccine advocacy, to remove vaccine hesitancy and educate resource persons to answer queries on vaccines. Systems for monitoring and promptly investigating AEFI and continued monitoring of vaccine efficacy by linking with data on post-vaccination infections and hospitalization are also needed to encourage trust in vaccines and to prevent AEFI.
- e. Strengthen international agreements and collaborations for cross-border immunization, surveillance, vaccine effectiveness studies and information-sharing, including use of agreed upon vaccination certificates.
- f. Strengthen systems for post-introduction evaluation, seroprevalence, vaccine effectiveness studies, research and development, production capacity and cold chain, etc.

5.A. 4. Systems for providing health care

4.1. Preparations to deal with surge of patients

Health systems in general and hospitals in particular are designed to carry redundancies to manage surges in patient load. However, emergencies can cause surges that far exceed the planned redundancy. Preparedness to handle such surges include developing contingency plans for scaling up the availability of the components of health care, designing systems to manage the inflow and providing quality services when the capacity of the health system to provide services have been reduced as a result of the emergency. SimEx, developing contingency plans and training workforce on managing known health crises and injuries and providing supportive care for unfamiliar conditions or pathogens have to become a part of the preparation. Since most health emergencies, especially new pathogens, radiation and chemical hazard will have unknown sequelae, Member States should put in place systems for surveillance of health impact on affected persons.

To manage health impact of emergencies, the Member States must:

- a. Conduct scenario-building and SimEx periodically to manage the large influx of patients, based on risk assessment of multihazards to achieve clarity for the managers and staff on their roles during a crisis. Define standard management pathways for known health issues and generic clinical management protocol for supportive care and develop capacity-building modules and training sites to rapidly orient the health workforce.
- b. Develop the incident management centres to manage the impact of health emergencies including allocation of patients and resources. As the severity of their condition would vary, patients can be managed at a hierarchy of health facilities, based on a principle of subsidiarity, to optimize resources with predefined criteria for escalation. These centres can also be equipped to provide regular information to the public.
- c. Prepare contingency plans for rapidly expanding infrastructure through make-shift hospitals, quarantine and isolation centres, using green field or repurposed buildings; human resources, through task-shifting or training new persons; equipment and consumables, by repurposing the production of units manufacturing similar products to items needed for the response to the health emergency.
- d. Scale up capacity for health-care systems through surge staff (both health and non-health) and dissemination and compliance with rapidly changing guidelines and SOPs for case management, referral mechanisms and isolation and quarantine measures are critical for effective case management

- e. Develop innovative health-care delivery mechanisms, such as home-based care, expansion of telemedicine and alternatives to hospitals, including mobile clinics could be utilized to overcome the delayed health-seeking behaviour due to fear of stigma.
- f. Institute regulatory and negotiated processes to engage the private sector to access additional resources for treatment and systems to engage with partners such as civil society organization, academic institutions and development partners to mobilize additional technical and material resources when needed.

4.2. Infection prevention and control and antimicrobial resistance

IPC is critical for preventing and containing the transmission and evolution of pathogens and to protect the caregivers and the affected individuals from HAIs. An integrated national IPC strategy, guidelines and a national programme that includes HAIs surveillance, through adequate training of health personnel and volunteers, is crucial to guide IPC implementation. Integration of IPC with safe WaSH at health facilities and efficient health-care waste management would serve as the base for enhanced response during an emergency. Timely and sustained supplies of PPE and stockpile need to be ensured for equity in pandemic countermeasures.

AMR is a persistent threat to human and animal health even during normal times. One Health-oriented tracking of resistance of pathogens in animals and environment and in health-care associated settings, which is an integral part of AMR surveillance, is a potent mechanism to identify zoonotic and new pathogens. Hence, strengthening surveillance as part of IPC and AMR has a beneficial impact on early detection of infectious diseases. If treatment is not provided under a strict AMR policy, without following prescription protocols during a health emergency, it could lead to worsening of AMR and in treatment outcomes.

The Member States need to:

- a. Implement an integrated national antimicrobial surveillance and prevention programme and a national programme on IPC governed by national strategies, and guidelines with dedicated/role-assigned staffing. The information on pathogens gathered as part of AMR and IPC surveillance should be monitored for emergence of any pathogen of concern and zoonoses with potential for spill-over.
- b. Ensure arrangements for treatment of chronic infectious diseases such as HIV and TB, uninterrupted supply of antimicrobials to the patients is critical during emergencies both for their survival and to prevent prolonged coinfections due to immune compromise that would lead to the emergence of variants.
- c. Establish for each healthcare set up, however small or big, a hospital/health-care infection control committee (HICC) or team, with a designated IPC officer. All health-care facilities should have their own IPC manual with guidelines on patient and health-care worker safety, prevention and control of infections, and rationale usage of antimicrobials and additional members as required to manage HCWM and health facility WaSH.
- d. Develop regulations and legal frameworks to enforce IPC requirements and policies, supported by accreditation systems or other mechanisms that have been agreed upon at an international level.
- e. Establish and implement surveillance for HAIs across the health facility and in special care setting prone to higher levels of secondary and nosocomial infections.

5.A.5. Community engagement

5.1. Invest in building trust of communities in government and health authorities

Trust in government is an important determinant of a successful response to all emergencies. Trust emerges from willingness of governments to take communities into confidence, share accurate and real-time information and demonstrated competence in responding to past emergencies. Member States could strengthen their RCCE strategies to build trust. Systems and structures to involve of communities in planning, decision-making and implementation especially in managing essential public health functions and social determinants of health, can be leveraged to respond unitedly to an emergency.

To effectively collaborate with communities, the Member States should:

- a. Strengthen enabling policy and environment, with financial resources and supported by governance, for community engagement, especially public health, which can also be mobilized for emergency preparedness and response.
- b. Listen to and engage with communities, individuals and key influencers (e.g. civil society organizations, faith-based communities, internet-based communities) to develop solutions and successfully address rumours and misinformation.
- c. Improve risk communication systems and capacity to enable timely and transparent communication, linked to surveillance, risk assessment, and remedial measures to be taken. Communication with communities should explain the need and criteria for the PHSM, the periodicity and way information will be provided, how their queries and grievances will be addressed and how the adverse impact of emergency on the population will be monitored and mitigated.
- d. Document and disseminate reviews of performance including achievements and failures and lessons learnt for managing future emergencies once the emergency has passed.

5.2. Building capacity for infodemic management and utilization of socio-behavioural and cultural insights in emergency risk management

It is critical that during disease outbreak responses – whether of emerging infectious diseases such as COVID-19 or other communicable diseases – systems for dynamic listening are in place: for authorities to be able to answer what people are asking, address what worries them and counter misinformation, disinformation or mal-information that increase exponentially labelled as an “infodemic”, which oftentimes spreads faster than the epidemic itself. With the fight against infodemics heavily concentrated in social media, comprehensive mechanisms, tools and capacity to conduct digital listening has to be in place, capable of two-way real-time as well as anticipatory listening and proactive and effective RCCE.

During the regional meeting to strengthen implementation of the “Risk Communication Strategy for Public Health Emergencies in the WHO South-East Asia Region: Learning from best practices and lessons from COVID-19 response” in August 2021, the Member States, partners and the WHO Secretariat agreed to establish an infodemic alliance engaging multiple partners at the regional and country levels.

Systems and capacities for gathering of behavioural and sociocultural insights on a periodic and continual basis is also critical to understand both catalysts and barriers/challenges in service and response intervention utilization of different areas of the country and segments of the population. Such insights need to be effectively utilized in the design and/or the modification of interventions to ensure optimal coverage.

The Member States need to:

- a. Establish a dedicated national set-up and system for risk communication with a national strategy and guideline with optimal functional authority and oversight.
- b. Establish an infodemic management mechanism as an essential function of risk communication in synergy with information and communication; and management and service provision systems used for disease surveillance, behavioural change communication and health promotion.
- c. Establish collaboration with partners and institutions with expertise including in anthropology, sociology, communication, etc. for gathering, analysing and synthesizing information on behaviour and sociocultural practices to generate practical insights for designing, modifying interventions and interrogating their performance.
- d. Set up a forum to facilitate multisectoral coordination for risk communication and collecting feedback from the community and analyse them to inform RCCE strategies. Tailor the communication materials to suit local context and target audience.

5.A.6. Enabling systems resilience

Resilience is the capacity of the system to continue to discharge the core functions and deliver core outputs, despite being subjected to shocks. Resilience may be characterized as absorptive, adaptive and transformative. All systems carry surge capacity to absorb some degree of shock. Some resources are amenable to being repurposed, during the time of crisis, to adapt the system to handling the shock. But given the experience of COVID-19, systems must be designed to be transformed to meet challenges of unknown nature and magnitude. Resilience is needed in every building block of the health system and the way they function together as a unit.

6.1 Health workforce

Health workers, who are the frontline defence against health emergencies, will be adversely affected by the hazard causing the health emergency, due to its impact on themselves or their families and the stress of the response. The need for health workers will go up at the same time when their availability will come down. Therefore, it is important to protect the health, well-being and social security of health workers. The flexibility to rapidly scale up their numbers is constrained by the long period of training they require and entry restrictions into the cadre.

To address the need for additional health workforce, the Member States can:

- a. Map human resources at different geographical locations, identify unutilized capacities in the system that can absorb additional load and develop protocols for redeployment from unaffected regions. To task shift for meeting the health needs of the emergency, define competencies needed for supportive care or care specific for known emergencies and develop training modules to rapidly build this among health staff.
- b. Mobilize additional resources from the private sector and public volunteers. Establish emergency accreditation procedures to train and certify staff and volunteers to carry out the needed tasks. Procedures for regulatory approvals of task-shifting and engaging volunteers must be approved in advance.
- c. Develop systems for health workers to seek support as they face multiple stressors during an emergency, including personal protection, treatment, social support, preventing burnout and addressing mental health issues.

- d. Create knowledge systems for the workforce to learn from each other and to synthesize their learning into policy and implementation so that their experience can inform modification of policies, strategies and implementation plans. Develop a continuity plan with clear protocols for hand over by transitioning personnel and induction of new personnel.
- e. Follow evidence-based best practices from Member States to ease the workload of health-care workers and minimize the exposure to hazards through interim rosters and duty shifts

6.2 Augmenting systems to support the response

All components of systems will come under stress during an emergency. Member States need to anticipate this and build resilience by leveraging the strengths of different sectors, increased investment and creating systems for optimal utilization of available resources.

The Member States need to:

- a. Strengthen the systems that play a supporting role in managing emergencies, with flexibility to scale up rapidly, for procurement and supply chain management, transportation arrangements for patients, laboratory samples and materials and information and communication technology (ICT) systems.
- b. Test supply chains for resilience to disruptions in national and international supplies. Considering supply chain security, Member States may consider strengthening local manufacture, even if it is more expensive than imports and stockpiling of critical drugs and devices. Special procedures must be prescribed for procurement during emergencies, with the required scalability and flexibility.
- c. Strengthen incident management rooms with details of assets available to manage the relevant emergencies, access to data on their deployment and personnel trained on managing to optimize utilization of resources.
- d. Identify clear channels of communication and set up schedules for sharing information on status of the emergency and response with the authorities, partner institutions, media and the public.

6.3 Strengthening diagnostic preparedness and laboratory systems at different levels

Well-functioning, sustainable laboratory services, operating according to international principles of quality and safety are needed for decision-making in all aspects of health services. Public health laboratory systems with adequate and appropriate equipment, supplies, reagents, protocols and personnel are needed for confirmation of the alerts and estimation of the magnitude of likely impact. For known risks, early warning systems can alert authorities to mobilise. For infectious diseases, appropriate laboratory services to detect known pathogens can be installed for prompt screening and confirmation of suspected pathogens. In both, quality and speed are vital. Facilities for genomic surveillance at least at national level augmented by a collaborative regional network of institutions with the requisite expertise would be essential as per the learning from COVID-19. Multisectorial collaboration and networking with effective links between laboratories and surveillance and response systems is needed for the timely detection of outbreaks and emerging pathogens. Mechanisms for rapid information and sample sharing at national, subnational and international levels are essential for public health decision making and development of medical countermeasures.

To strengthen diagnostic preparedness and laboratory systems, Member States shall:

- a. Strengthen national leadership, governance and multisectorial collaboration to advance national diagnostic strategies, advocacy and political commitment
- b. Ensuring adequate financing and resource mobilisation to build and modernise laboratory networks for health emergencies and improved clinical care
- c. Build agile and resilient laboratory systems through training, establishing tiered networks, interoperable data management systems and integrated laboratory and surveillance systems
- d. Promote research, development of and access to new and innovative technologies through the establishment of a regional diagnostic advisory group, strengthening of regulatory processes and enhancing national biorepositories
- e. Maintaining resilient laboratory systems through institutionalising quality improvement exercises, laboratory network optimisation and establishing a monitoring and evaluation framework for functional laboratory systems

6.4 Harnessing technology for service delivery and efficiency

Innovative technologies can be leveraged to increase the effectiveness and safety of response to the emergency. Developing systems for collection and analysis of large volume of data and extracting factors aggravating the impact, developing alternative scenarios on future impact based on analysis of current data, identifying potential solutions, tracking, and tracing contacts and providing clean up, therapeutic and diagnostic services with lesser physical involvement of workers can be planned in advance.

The Member States can:

- a. Landscape the emerging innovative technologies to assess their utility for managing emergencies by reducing risk to workers, including robotics, telemedicine, remote diagnostics and remotely guided intensive care units, increasing reach of preventive and management efforts and pilot their application in the field.
- b. Support the application of digital technologies by electronic health records, applying artificial intelligence for analysis and decision support for care and prevention efforts and for scenario-building. Digital applications for providing psychological support to health workers, infected and affected persons and manage risk communications can also be assessed.
- c. Make arrangements to train the workforce to adopt and use appropriate technologies. Similarly, an economic evaluation on the lines of health technology assessment is needed before adopting new technologies.

6.5 Building capacity for conducting and utilizing research

The South-East Asian Region has many challenges, which have not been adequately researched. Member States need to invest more in research into them. Since addressing emergencies is a global public good the Member States of the Region should share research knowledge and facilities and collaborate for research into common problems.

The Member States should:

- a. Build national capacity for research into climate change and their impact in the Region, predictors of natural disasters, epidemiology, microbiology, clinical and pharmaceutical research, vaccinology, and policy and system response to emergencies. They need to encourage research at every level of the system managing response including building capacity for embedded research by practitioners.

- b. Train and encourage policy-makers and managers to pose research questions for implementation research that can contribute best to policy-making and strategies on prevention and management of multihazards as part of their work.
- c. Collaborate regionally for research, designing and funding research that would be of interest to more than one country, helping to build capacity for and mentoring countries that need them and sharing the results of their research.

5.A.7. The role of WHO

WHO will support Member States to strengthen emergency preparedness by:

- a. Facilitating the establishment of the Regional Health Emergency Council of Heads of States to address obstacles to equitable and effective preparation and response ensuring collective, WoG and WoS action, aligned with global and regional health emergency goals, priorities and policies; to foster compliance with and adherence to global and regional health agreements, norms and policies; and to identify needs and gaps, swiftly mobilize resources, and ensure their effective deployment and stewardship.
- b. Reviewing international and regional good practices to prepare options for each of the areas listed above that Member States are keen to pursue. These would be made available to Member States who will also be assisted through scenario-building of potential health threats to help them select the approaches most suited to their situation. Helping Member States to choose, adapt and contextualize technological innovations that have proved to be effective in other countries and regions and in comparable situations and arrange for mentorship to adopt them.
- a. Assisting Member States for initial capacity-building on the chosen interventions. This will involve facilitation of learning from each other and connecting with centres of excellence at the regional and global levels and with WHO Collaborating Centres.
- b. Developing and implementing proof of concept pilots with feasible interventions chosen by Member States, preferably in most countries for validation. WHO will help document the steps and develop the instruments used to scale-up successful pilots.
- c. Facilitating collaboration between Member States for mutual learning and collaboration on implementation. This will include cross-learning between national academic institutions, laboratories and practitioners and joint research on issues of regional interest conducted by institutions in countries of the Region.
- d. Mediating between Member States with greater capacity in production of drugs, consumables and vaccines to factor in requirement of countries with less resources in their growth and production plans and WHO will intermediate to ensure security of supplies. WHO will facilitate laboratories in some countries to act as reference laboratory for other countries who request such support.
- e. Carrying out policy advocacy for the measures recommended in this document and to bring national leaders together to generate consensus on advance preparation for responding to health emergencies.
- f. Advocating for creating shared plans for addressing health emergencies that have the potential to strike more than one country of the Region including earthquakes, floods, heat waves or radiation hazards and acting as the coordinating agency for the shared planning exercise.

5.B. Steps to be taken during the health emergency to reduce its impact on the population and to protect the vulnerable

Emergencies will occur despite all efforts at prevention. While advance preparations are necessary, managing the response efficiently, through carefully monitoring the evolution of the emergency and scaling up the response commensurate with it, is needed to reduce the impact of the emergency.

B.1. Reduction of the impact of emergencies

When hazards that can be anticipated by early warning and public health systems occur, the protocol for containment must be initiated immediately, with a WoS and WoG approach, to contain the negative fallouts. Even when an emergency has arisen from an expected hazard, the preparedness measures must be promptly activated and efficiently executed.

To ensure this, the Member States should:

- a. Activate the regulatory mechanism to implement appropriate PHSM measures, through risk-based approach in the country to contain the impact of the infectious disease.
- b. Establish and maintain systems for:
 - i. Screening people at PoE into the country, observing IPC measures and for keeping persons from known epicentres under observation, for infectious diseases from other countries. For natural calamities and industrial disasters look for markers of the diseases such as contaminated food and water, vector population, ground and water radiation and pathogens in wastewater. The public health authorities should have systems for generating geographic information system (GIS)-based heat maps showing clustering of diseases in the community.
 - ii. Adopting public health measures to reduce the health impact of all hazards and providing counselling and psychosocial support to the affected persons.
 - iii. Monitoring IPC in health-care settings by strict enforcement of universal precautions, and surveillance for HAIs.
 - iv. Ensuring continued epidemiological investigation to monitor emergence of variants.
- c. Activate prevention measures such as:
 - i. clearing of debris including carcasses of dead animals, cleaning drinking water sources;
 - ii. decontamination, emergency sanitation, wastewater, and solid waste management systems to prevent further deterioration of health of the affected population; and
 - iii. instituting M&E systems to assess the change in the epidemic situation based on real-time information and developing strategies to respond to the emerging situation.
- d. Carry out analysis of data and social and behavioural surveillance to identify factors, sites and activities that worsen health impact of emergencies and take steps to monitor and restrict them. Identify and protect persons vulnerable to infections due to their occupation or health status

B.2. Treatment of persons with health issues and sequelae

An adequately prepared health system is able to anticipate the surge of persons with health issues during any major emergency and mobilize for meeting the surge in demand. The SOPs, which had been part of the training of the workforce and managers during the SimEx, supported by strengthened enabling systems are to be put into operation at this juncture.

To manage health impacts of emergencies, the Member States must:

- a. Operationalize the emergency operations centres (EOCs) for incident management and the linked information, transportation and management systems. Start registration and categorization of suspected and confirmed patients along with their degree of severity and begin the allocation to different management centres based on criteria for escalation.
- b. Implement the contingency plans for rapidly expanding the capacity to respond to the emergency based on an assessment of the current and emerging scenario.
- c. Activate the regulatory and negotiated processes to engage with the community and the private sector to mobilize additional resources.
- d. Institute systems for registration and follow up of recovered persons for sequelae of the impact of pathogen, chemical or radiation emergencies, starting with known sequelae and detecting new ones that emerge. The data may be analysed to see if there are any emerging patterns.
- e. Document and disseminate lessons learnt from current health emergency to fine-tune the response to future ones.

B.3. Maintain essential health services

Due to increased salience and the political costs attached to a health emergency, important and time-sensitive health services may be ignored. Not providing such services including child immunization, treatment for noncommunicable diseases, tuberculosis, malaria, HIV/ AIDS, mental health, and such lifesaving support as ensuring emergency treatment, continuity of chronic care, post-transplant, and post-cardiovascular emergency treatment, and providing other critical medicines, has severe long-term consequences and Member States should develop systems for protecting them even during the direst emergencies. Also essential for sustaining the response and preventing long-term fallouts is to provide mental health services to address the impact of the crisis on individuals.

To protect continuity of essential services, the Member States should:

- a. Define elective procedures and treatments that may be deferred to free up resources and essential health services which must be maintained during the emergency. A service delivery map detailing where the essential services, including medicines and devices would be provided during the emergency, must be prepared.
- b. Ensure that repurposing of staff for response does not hamper the continuity of essential services. Public–private partnership is essential to fill staffing gaps.
- c. Develop monitoring and implementation systems to ensure that the defined set of essential health services are maintained.
- d. Set up systems for mental health support to communities and responders affected by the crisis and the stress of responding, especially addressing the needs of vulnerable populations.

B.4. Manage infodemics

While robust risk communication strategies to provide reliable information from trustworthy sources could create an atmosphere of confidence, experience shows that infodemics will occur with the starting of an emergency. Managing them should begin immediately too, as beliefs once established are difficult to remove and can be built on. This process will need to continue till the crisis is over.

The Member States can defuse infodemics by:

- a. Monitoring messages on mainstream and social media and responding promptly to any false or malicious messages and maintaining regular interaction with the media and community.
- b. Maintaining easy access to important information on trusted sites and promote their use by the community and respond to queries regarding messages circulating in the media or community.

B.5. Special attention to addressing the needs of persons more susceptible to the impact of social and economic disruption and less access to services

The impact of emergencies will be fall disproportionately on vulnerable and marginalized communities. They also have less access to prevention and treatment services and are often last in the line to access vaccination. Due to their increased vulnerability, addressing their needs will have a beneficial impact on the health emergencies and increase trust and willingness to comply with social restrictions. Since such groups have traditionally been distrustful of authority, they are likely to comply with restrictions only if their needs are seen to be taken care of.

To facilitate this, the Member States should:

- a. Engage with communities who traditionally have less access to health and social support services (e.g. indigenous communities, migrant workers, slum-dwellers) to monitor and address the impact of the crisis and effectiveness of mitigation and treatment.
- b. Understand and address trust issues regarding messaging on prevention, treatment and vaccination measures and in partnership with community organizations or volunteers, facilitate access to services.
- c. Strengthen psychosocial and mental health services, as part of the health system, and by identifying community-based solutions for different populations, such as children, adults, health-care workers and vulnerable populations.
- d. Prioritize impact-reduction measures, including screening and vaccination, for the marginalized by keeping service sites in accessible locations and engaging with community leaders to increase uptake of services.

B.6. The role of WHO

WHO shall support the process by:

- a. Convening the Regional Health Emergency Council of Heads of States, as often as required, to coordinate the response in the Member States and the Region.
- b. Sharing SOPs to manage the different hazards the Region is subjected to, standardize treatment protocols, validate clinical outcomes for experimental therapies to address new threats, collect and share experience between Member States on prevention, treatment and management strategies.
- c. Remaining in touch with Member States to share any health threat that they face and during the crisis, provide continuous technical support to evaluate the evolution of the emergency and recommend strategies to deal with them.
- d. Acting as the conduit between international and national expertise and facilitate collaboration between Member States to share experience and material and technical resources. Support documenting the lessons learnt from managing the health emergency in the Region.

5.C. Regional and global initiatives and linkages

- C.1 Establish a Regional Health Emergency Council in line with the Global Health Emergency Council, where the heads of governments of Member States can decide on various coordination issues such as vaccine implementation, trade and travel measures.
- C.2 Improve national alert functions and share information immediately on detection of the threat nationally and with WHO and continue to share information, till the outbreak is assessed to be over, through further strengthening existing mechanisms such as the Global Outbreak Alert and Response Network (GOARN), Regional DVA hosted in EOCs.
- C.3 Contribute to strengthening the regional and global information-sharing platform, and regional risk assessment. This includes strengthening systems for sharing epidemiological, clinical, pharmaceutical, biological, and genomic information and/or samples for genomic sequencing in a timely manner. Collaborate to promote digital platforms for sharing real-time information, registration for and administration of vaccines.
- C.4 Establish a Regional EOC-NET for timely information-sharing and conducting regular capacity enhancement through training and SimEx (table-top exercises and drills).
- C.5 Establish integrated regional network of laboratories to augment capacity for quality-assured diagnostics and genomic surveillance by further strengthening WHO Collaborating Centres and National Centres of Excellence to share facilities with and build capacities of countries that do not have them.
- C.6 Establish a network of policy-makers, practitioners and researchers to collaborate on knowledge generation and dissemination through strengthening knowledge management networks such as the South-East Asia Regional Knowledge Network for IHR Focal Points on a regular basis. Develop and maintain regional repositories of best practices.
- C.7 Support collaboration on production, procurement and distribution of drugs, consumables, and vaccines. The Regional Office to stockpile essential supplies to protect from market disruptions and trade restrictions.
- C.8 Collaborate with other Member States to examine and support the development of the next iteration of the bi-regional health security framework for the Asia Pacific Region for identified priority technical areas, building on the experience of the Asia Pacific Strategy for Emerging Diseases - III (APSED-III).

IX.6. Implementation approaches

The Regional Strategic Roadmap recognizes that in addition to health emergencies common to the entire Region, Member States face differing threats and have different levels of capacity. However, the fundamental principles of implementation remain the same across countries.

WHO will initiate the establishment of the Regional Health Emergency Council of Heads of States who will provide guidance, directly or through subcommittees, on taking the recommendations of this strategic plan forward.

6.1. The foundational role of knowledge gained from past experience and research

Aside from newly emerging pathogens, the South-East Asia Region has faced many health emergencies ranging from cyclones, floods, earthquakes, heatwaves, chemical spills and infectious diseases. Equipment and analytical tools that can predict some of these have also been developed and many Member States have demonstrated capacity to anticipate and take preventive action. The Region has also gained experience in managing health emergencies once they have occurred. The first step in taking this plan forward is to analyse these documents and draw lessons from them. WHO will help Member States identify the knowledge required for advance preparedness.

6.2. Analysis of vulnerability and overcoming the gaps identified

The roadmap lists out the areas where health system strengthening could be needed. Member States can analyse the capacity of the systems to meet the threats and needs of different areas of the country. Gaps if any, identified in the review will indicate the additional investments needed. Matching them to financial and absorptive capacity of the country an action plan with timelines needs to be published. Analysis of regulations, financial and governance arrangements appropriate to dealing with the emergency can identify areas that need rectification or additional work in this area. The competencies required to deliver the tasks listed in the action plan need to be defined, assessed and augmented where needed. WHO shall, in consultation with Regional Health Emergency Council of Heads of States, provide technical support for these assessments and studies.

6.3 Achieving the capacity for transformative resilience

This is needed to address threats that are as yet unknown or scale up to levels never needed in the past, which needs out of the box thinking and a willingness to cut through regulatory and organizational boundaries. SimEx and scenario-building can project the levels to which systems will be stretched and widespread discussions can be held to develop modalities for transformation that would be acceptable.

6.4 Community engagement

Systems for engaging the community as partners are available in many sectors in countries of the Region. It is also an important component of the South-East Asia Regional Strategy for Primary Health Care: 2022–2030. Since communities are necessary partners in managing health emergencies, lessons learnt in other nations and sectors can be transferred to deal with health emergencies. The method and time of engagement, mediating agencies to facilitate engagement, the information to be communicated to communities, etc. need to be worked out.

Modalities of engagement can be fine-tuned over time, starting with predictable, known emergencies such as a periodic infectious disease. Communities should be invited to assess and communicate the efficacy of the engagement.

A policy decision needs to be taken on the extent to which information will be shared with the community when a health emergency breaks. In the absence of real-time reporting of factual data, it is difficult to instil trust in the government, which is a necessary condition for successful management of a pandemic.

6.5 Harnessing technology

A scoping exercise, based on secondary sources, of the technologies currently available to manage emergencies can be done for the entire Region by WHO. From this, the countries select the technologies suitable for them which can be customized by expert institutions in their area, who can also hand-hold its adoption.

6.6 Research

Institutions to lead on research on each topic identified in the action plan can be identified in each country. For those countries that do not have institutions with adequate capacity, WHO can arrange for mentoring from institutions in neighbouring countries.

6.7 Financing

As Member States of the Region face financial stress after the pandemic, the general government expenditure (GGE) may not grow fast enough to provide the needed finances for strengthening PHC and for the system strengthening recommended in the action plan if government health expenditure (GHE) is maintained in the same proportion as in the past. But considering the economic value of spending on health care, as demonstrated by COVID-19, governments must prioritize health expenditure by allocating a larger share of GGE to health expenditure. A policy decision on this can be taken in the Regional Health Emergency Council of Heads of States.

IX.7. Monitoring and evaluation framework

There is a robust monitoring and evaluation framework for IHR. This is familiar due to the continuous engagement on this topic between WHO and Member States over the years. Its global indicators, captured in the mandatory and voluntary reporting, are adequate to help Member States assess their core capacities and preparedness to respond to public health risks and emergencies of national and international concern. Like the previous Regional Strategic Action Plan, the purpose of this document is to help Member States assess their threats, using an all risks, multihazard approach, and gauge their capacities and develop an action plan to protect their populations.

Since the regional roadmap is focused on strengthening national systems, most of the focus areas and strategies will not require additional data collection or reports with unique indicators other than the ones currently under use. If any critically important indicators are not available in the IHR M&E framework, they shall be sourced from existing reports on health system and ERM performance reports.

7.1. Indicators of decentralized systems

Since the purpose of this roadmap is to improve national systems to mount a WoS and WoG approach, the indicators may need to capture the complexity of the system, e.g. the role of the private sector and their levels of engagement. Responding to crises are also the task of provincial, town and village governments to finance and provide services and provide social support measures. Therefore, the national indicators must have the provision to drill down to lower levels, especially as emergencies are often localized and information specific to the location becomes vital.

7.2. A better understanding of the systems software

The current indicators are focused on the hardware of systems, such as infrastructure, equipment and workforce. But the quality of the response to an emergency also depends on the efficiency of the interaction between the hardware and software of the systems, such as trust, morale and the support for innovation. Since socioeconomic differences, gender, migration status and other vulnerabilities limit access to health and social security systems, disaggregated data on inequity in access on account of vulnerabilities will also be useful in planning for preparedness to respond to an emergency. Similarly, learning systems that back feed learning from the field into policy and implementation decisions, and decentralized leadership of health systems are other topics that may need to be monitored for the future. If such indicators are needed, they will be finalized in consultation with the Member States.

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The Regional Strategic Roadmap for health security and health system resilience for emergencies 2023–2027 has been developed following the recommendation of the Seventy-fourth Session of the WHO Regional Committee for South-East Asia in 2021 and drawing on the lessons learnt from the ongoing COVID-19 pandemic response. The Roadmap focuses on interventions needed to strengthen emergency preparedness and response capacity of Member States by building sustainable health security systems and enhancing health system resilience for emergencies. It also includes regional initiatives and platforms linked with global initiatives that are critical to augment and support Member State capacity at the regional level.