

*DRAFT FOR DISCUSSION*

# **CAREC Health Strategy 2030**

## **REGIONAL INVESTMENT FRAMEWORK**

**2022–2027**

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## **ABBREVIATIONS**

ADB	–	Asian Development Bank
CAREC	–	Central Asia Regional Economic Cooperation
COVID-19	–	coronavirus disease
GMP	–	Good Manufacturing Practice
IPC	–	Infection Prevention and Control
NRA	–	National (Drug) Regulatory Authority
PSM	–	Procurement and Supply Chain Management
RIF	–	Regional Investment Framework
TA	–	technical assistance
WGH	–	(CAREC) Working Group on Health
WHO	–	World Health Organization



## 1. INTRODUCTION

1. Coronavirus disease (COVID-19) pandemic once again proved that improving health security is not a cost, it is an investment and financing preparedness can produce future savings. Without increased investments, capacities to detect, prepare and respond public health emergencies will continue to be insufficient. Despite efforts to strengthen national and regional health security, countries in the Central Asia Regional Economic Cooperation (CAREC) region have varied levels of capacity to achieve this. The recent crisis highlighted the need for countries to identify remaining gaps to ensure that health systems are prepared to withstand increased stress caused by a large health emergency and while saving lives also contribute to protected livelihoods.

2. Public health threats transcend national borders and, as the COVID-19 pandemic has demonstrated, lack of preparedness and coordinated action and response in countries and regions can result in devastating impacts to the population, societies and economies. Even before the COVID-19 pandemic, evidence suggested that infectious disease outbreaks were increasing in frequency, with rising health and economic costs.<sup>1</sup> The CAREC region borders some of the highest risk areas since South, Southeast and East Asia have high levels of trade and travel across the region. Therefore, much of the CAREC region remains at risk to outbreaks from emerging infectious diseases and transboundary spread of animal diseases.

3. Thus, the pandemic has further re-emphasized that global and regional cooperation is needed to overcome health threats<sup>2</sup> and better control pandemic situations. Local control measures alone can slow down but not stop outbreaks. We have learned that alongside collaboration with global institutions, regional cooperation may offer significant benefits to many low- and middle- income countries ranging from informal cooperation, setting up joint projects (e.g., building common infrastructure), coordinating policies and regulatory frameworks, to shaping joint policies and institutions.<sup>3</sup> Achieving regional health security is a crucial entry point for Regional Health Cooperation of CAREC countries. Therefore, the CAREC countries recognize the significance of regional cooperation in managing regional health risks and strengthening health systems resilience to be better prepared for future public health threats.

### 1.1. Strategic Context

4. CAREC 2030: Connecting the Region for Shared and Sustainable Development is the strategic framework for the CAREC Program leading to 2030. CAREC 2030 was endorsed by the 16th CAREC Ministerial Conference in Dushanbe in 2017, building on the gains achieved under CAREC 2020.<sup>4</sup> It is aligned with national strategies and development plans, international sustainable development goals, and the United Nations Framework Convention on Climate Change (COP21) global climate agreement.

5. The CAREC 2030 operational cluster on human development includes health and education. In health, it aims to help address pandemic risks and control communicable diseases,

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<sup>1</sup> K.F. Smith et al. 2014. Global Rise in Human Infectious Disease Outbreaks. *Journal of the Royal Society Interface*. 11 (101).

<sup>2</sup> Organization of American States. [Alliance for Multilateralism: We Need Strong Global Cooperation and Solidarity to Fight COVID-19](#)

<sup>3</sup> A. B. Amaya and P. De Lombaerde. 2021. Regional Cooperation is Essential to Combatting Health Emergencies in the Global South. *Globalization and Health*. 17(9).

<sup>4</sup> ADB 2012. *CAREC 2020: A Strategic Framework for the Central Asia Regional Economic Cooperation Program 2011-2020*. Manila

including the development of early warning systems and regional surveillance systems. In 2019 and 2020,<sup>5</sup> the CAREC Secretariat undertook a scoping study to explore the potential opportunities for promoting regional cooperation in the health sector. The study reviewed the CAREC health sector progress and challenges, and recommended establishing a regional health coordination mechanism and development of a regional health strategy with investment framework. The scoping study was presented and discussed with CAREC governments and development partners on 15 October 2020 and was published in July 2021. A CAREC Working Group on Health (WGH) was established in March 2021 to guide and fuel CAREC health cooperation, the development of a CAREC health strategy toward 2030 and guide the implementation of the regional investment framework.

6. The CAREC Health Strategy 2030 was endorsed on 17 November 2021 at the 20th CAREC Ministerial Conference. The strategy supports health cooperation to ensure that *“public health threats in the region are addressed comprehensively, efficiently and sustainably, through adopting a regional approach promoting cooperation between countries, multi-sectoral coordination, a focus on benefiting the population, and ensuring inclusion of vulnerable segments of the population.”* The strategy builds on four main pillars: (i) leadership and human resource capacity; (ii) technical preparedness (laboratories and surveillance); (iii) access to supplies and surge capacity; and (iv) protecting vulnerable population groups and border health. The strategy was developed in consultation with CAREC countries and development partners including WHO, World Bank and others.<sup>6</sup>

## 1.2. Rationale of Regional Investment Framework

7. **Purpose.** While the CAREC region remains exposed to infectious disease outbreaks and the nature of the COVID-19 crisis goes beyond short-term health and economic shocks, more investments are needed in the medium- and long-term to fill technical and financial gaps to strengthen overall regional public health goods, health systems’ resilience, pandemic preparedness, health security and social safety nets.

8. The Regional Investment Framework (RIF) 2022-2027 presented in chapter 3 is linked to and proposed by the CAREC Health Strategy 2030<sup>7</sup> and needs to be read together with the strategy.<sup>8</sup> The RIF supports the implementation of the CAREC Health Strategy 2030 and proposed to guide investments from various partners and meet the gap in effectively addressing key regional needs, including protecting vulnerable populations in border areas. The investment framework will serve as a tool for prioritizing projects and technical assistance (TA) and will allow for greater coordination among development partners and mobilization of resources. It will be updated on a regular basis to guide programming and mobilize resources to maintain its relevance and responsiveness as a planning and fundraising tool for health security investments in the CAREC region. The proposed activities and initiatives in the framework range from further research and studies to capacity development and piloting to project investments along the four strategic pillars of the CAREC Health Strategy.

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<sup>5</sup> ADB 2021. [Enhancing Regional Health Cooperation under CAREC 2030: A Scoping Study](#). Manila

<sup>6</sup> A consortium, led by GOPA Worldwide Consultants, was selected to manage a multidisciplinary team of international and national experts to provide capacity development, analysis, and support preparation of the CAREC Health Strategy 2030 and Regional Investment Framework.

<sup>7</sup> ADB. 2022. [CAREC Health Strategy 2030](#). Manila (page 40).

<sup>8</sup> More on the history of CAREC Health and the strategy development process can be found here: CAREC Program. [Health](#).

9. Investment projects will depend upon further dialogue with concerned countries as part of regular country programming exercises and policy dialogues in the near to medium-term. Regional investment projects and TA projects will be complemented with policy dialogue through the CAREC platform and development of knowledge solutions. Through an ongoing regional TA, ADB has started to implement selected regional activities and will support further capacity development, studies, concept papers on regional cooperation approaches and mechanisms, pilots of regional approaches, as identified in the RIF.

10. The CAREC Health Strategy and RIF reflect areas of mutual interest among the CAREC countries aimed at strengthening their overall pandemic preparedness and health security through regional cooperation. The proposed investment areas, projects and TA projects are based on a needs assessment carried out in 2021 and consultations with CAREC countries in 2021 and 2022. The establishment of a regional investment fund could be explored to mobilize development partners to maintain their commitment to regional health security in the CAREC region and, at the same time, maintain assistance to countries in enhancing pandemic preparedness and resilience of health systems.

11. Proposed criteria for selecting regional projects and TA include (i) involvement of two or more CAREC countries; (ii) benefits of proposed activity transcends national borders; (iii) clear evidence of country or regional ownership proven through respective national strategies and/or country feedback; and (iv) alignment with strategic pillars of the CAREC Health Strategy 2030.

12. Chapter 2 of this document elaborates on strategic areas for each pillar, based on the country assessments followed by a list of priority investment areas and TA proposals (2022-2027). The list is based on (i) analytical work conducted during the preparation of the strategy, (ii) feedback received from CAREC countries during the virtual consultation meetings conducted during 2021 and 2022, and (iii) other projects and/or initiatives relevant for health security under the strategies and actions plans of other operational clusters under CAREC.

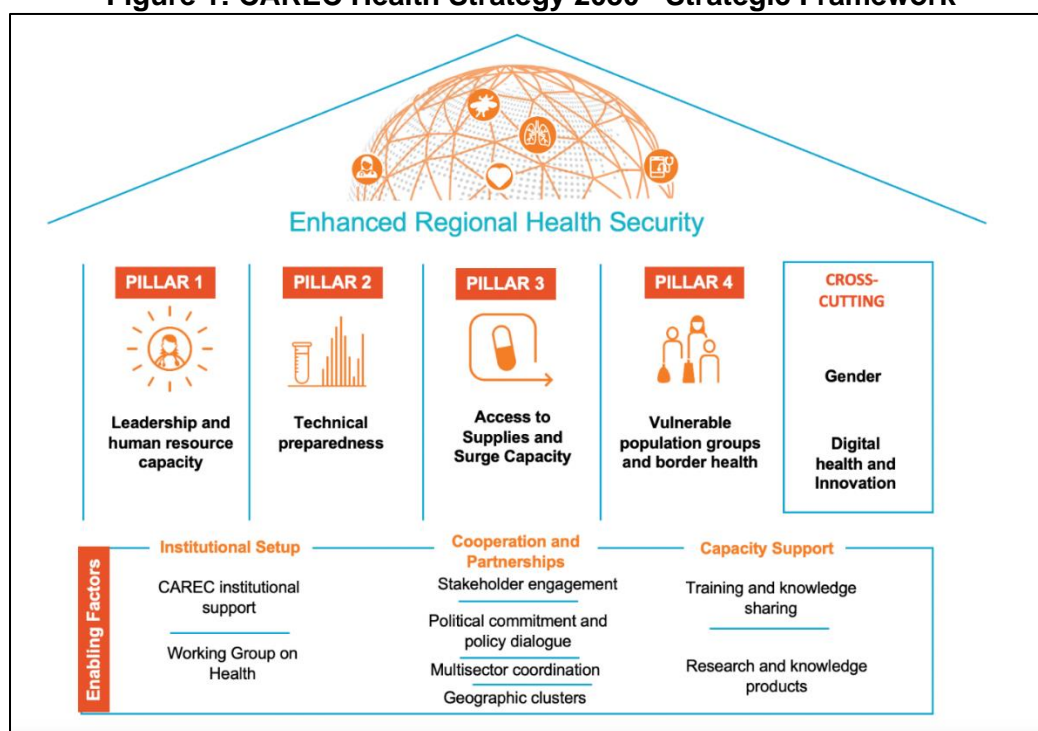
13. The RIF will be discussed with countries and development partners for further updates and finalization during the WGH meeting in 11–13 October 2022. The RIF will be a living document and the CAREC WGH will be responsible for monitoring its implementation on an annual basis. Adjustments may be made, as needed, based on countries' emerging needs and priorities.

## 2. PROPOSED AREAS FOR STRATEGIC ENGAGEMENT

14. **Strategic priority areas** are proposed for investments and support, based on the four pillars defined in the CAREC Health Strategy 2030 assessments carried out in 2021 and feedback received from countries during consultations in 2021 and 2022:<sup>9</sup>

- (i) Leadership and Human Resource Capacity, (**Pillar 1**), with a focus on coordination and governance and workforce capacity and skills.
- (ii) Technical Preparedness (**Pillar 2**), with a focus on surveillance response and laboratory infrastructure.
- (iii) Access to supplies and surge demands (**Pillar 3**), with a focus on regulatory mechanisms and procurement and supply chain mechanisms.
- (iv) Vulnerable population groups (**Pillar 4**), with a focus on health services across borders and population health.

**Figure 1: CAREC Health Strategy 2030 - Strategic Framework**



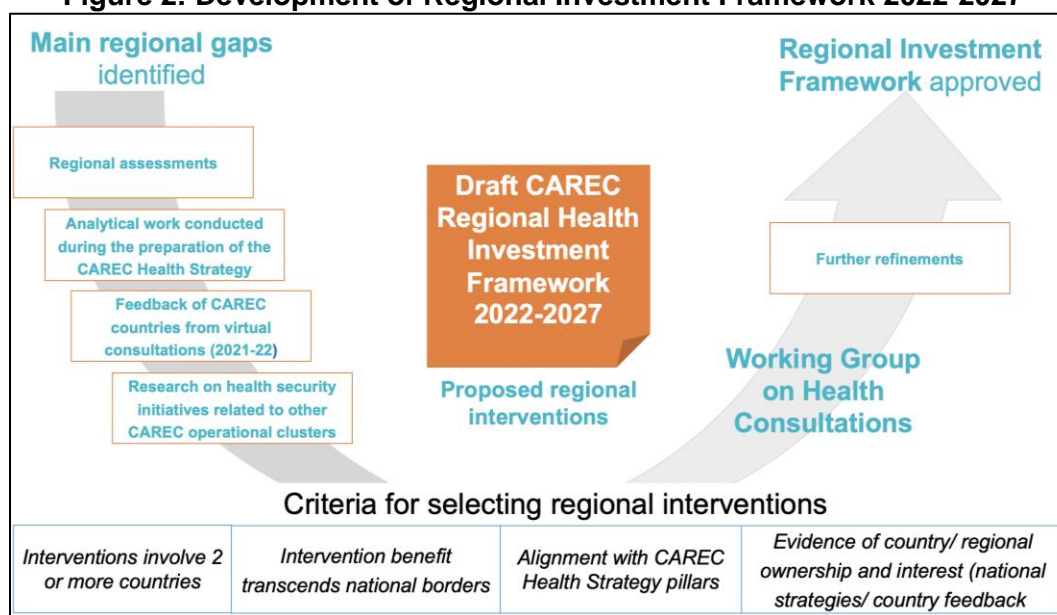
15. The results of the national assessments carried out in 2021 were used to identify the gaps and needs for each country. In addition, the International Health Regulations self-assessments and the Global Health Security Index assessment results were consulted to add information and analyze common gaps in the region.

16. The following flowchart explains how main regional gaps were filtered through pre-defined criteria to further describe strategies areas for engagement.

<sup>9</sup> As the assessments were conducted from June to August 2021, when still a large amount of COVID-19 support was being planned and prepared in the countries, some of the identified needs and gaps might require updates now.



**Figure 2: Development of Regional Investment Framework 2022-2027**



## 2.1. Leadership and Human Resource Capacity

### 2.1.1. Coordination, Governance and Financing for Preparedness and Response

17. Effective health security, including emergency preparedness and response capacities, require several areas to be well organized, coordinated and managed. Among those are early detection of potential outbreaks or events that could result in a public health concern, outbreak investigation, risk assessment (including risk communication) and rapid response, including the availability of functional Emergency Operation Centers (EOCs). Rapid financing in emergency situations needs to be available.

18. In face of new emerging diseases and zoonoses, not only the health sector will be required to respond, but collaboration with other sectors is required. In most CAREC countries, this multisector collaboration has been lacking, but also the response management of the health sector and the functioning of EOCs or similar structures has not been effective enough. This is largely because of weak governance, gaps in policy and legislation enabling all the aforementioned to be implemented quickly and effectively.

19. One of the most fundamental gaps is insufficient **implementation of the International Health Regulations** mentioned by half of the CAREC countries. The assessment revealed that frameworks, legislation and policy instruments to implement the regulations, for example in terms of governance and rapid response structures and to implement National Action Plans for Health Security, were weak or have gaps, and equipment and infrastructure is insufficient.

20. More than half of the CAREC countries mentioned gaps in **multisector coordination and collaboration** within a country. This can refer to:

- (i) coordination between public and private sector;
- (ii) coordination and collaboration between different ministries and sectors (e.g., for One Health) and between national and sub-national levels; and
- (iii) coordination of the respective agencies in different sectors by an EOC.

21. While many countries set up whole-of-government coordination mechanisms during COVID-19 response, in most countries the health sector is usually still leading preparedness and response efforts for infectious diseases alone, which might limit effective cross-sector coordination and collaboration. Without a formal coordination framework in place, it might be a challenge for one line ministry (e.g., Ministry of Health) to coordinate and enable the effective collaboration with other ministries and government agencies. Coordination and collaboration within countries is often limited to the health and animal health sectors, however, effective coordination requires a whole-of-government approach, involving line ministries such as the Ministry of Finance. Availability, **timeliness and use of data** at the national and regional level is critical for effective multisector and cross-border response coordination (see Pillar 2).

22. While some coordination between health and animal sectors exists, usually, a formal framework, clearly defined roles and responsibilities of all relevant sectors, as well as relevant communication and coordination arrangements are not in place. Therefore, nearly all CAREC countries want to improve **One Health governance**. The greatest needs are perceived in multisector One Health collaboration, especially in interdepartmental coordination of surveillance for One Health (see Pillar 2) and information exchange between sectors and line ministries, including communication and reporting, as well as cross-border coordination and collaboration of One Health activities between the CAREC countries.

23. **Emergency response structures** are important for the management of large-scale emergency response situations and require strengthening. During the COVID-19 response, some countries have set up EOCs on an ad-hoc basis. They have undergone changes as the pandemic unfolded, because there was a lack of preparedness and expertise for such a situation. EOCs will need to become better prepared in order to ensure a more rapid and effective response management in future. This will require clarification about where the EOC should be housed (e.g., within the Ministry of Health, Prime Minister's Office, Disaster Management Agency), whether it should be established, staffed and equipped on a continuing or temporary basis. Rules, regulations and Standard Operating Procedures (SOPs) too are required to ensure smooth and effective operation from the very beginning.<sup>10</sup> Rapid response teams need to be set up, prepared and trained and different relevant disciplines (e.g., surveillance/epidemiology, laboratory, animal and human health experts, communication officers, potentially security forces, etc.) need to be involved.

24. All the above will also require the development of stronger Health Security or Pandemic Preparedness and Response **Plans**, outlining the respective functions with their required roles, responsibilities, capacities, as well as communication and collaboration arrangements. The plans need to be regularly tested in different types of simulation exercises (e.g., drills, table-top exercises, functional exercises, etc.) to ensure that all relevant actors are aware of their respective roles and the arrangements, to identify bottlenecks and to ensure that plans will be updated to respond to changing environments and contexts.

25. A major cause undermining sufficient coordination, governance and response during emergency situations is **chronic underfunding** of health systems. In almost all CAREC countries, government health expenditure as a share of gross domestic product (GDP) had

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<sup>10</sup> Several considerations are required for the establishment of an EOC. If an EOC is located within the health sector only, coordination and collaboration with relevant agencies and stakeholders of other sectors may be challenging. Besides, EOCs within the health sector often lack the experience and capacity to manage massive emergencies and to involve different sectors. Disaster management agencies may be more suited for such a context, but they do not necessarily have the capacities and understanding of how to respond to public health emergencies.

already fallen tremendously prior to 2019.<sup>11</sup> Except for in a few countries (People's Republic of China and Georgia), domestic general government health expenditure as percentage of GDP is less than 2.5%, while the recommendation to achieve universal health coverage is 5%.<sup>12</sup> Even though all CAREC countries significantly increased government spending on health during the pandemic through amending the national budget laws or creating dedicated funds to mobilize and channel resources more effectively, release of funds was slow.

26. The assessment results underline these findings. More than half of the CAREC countries mentioned a lack of health system funding as a major gap; four CAREC countries underlined the need for more emergency funding capacities. Concrete aspects mentioned were insufficient budget for COVID-19 response and lack of financial protection of vulnerable populations, low and even declined government health expenditure as percentage of GDP and lack of mechanisms for budget execution and fund release for emergencies. Three CAREC countries mentioned that the financial burden on the population (out-of-pocket expenses), especially for those being vulnerable, has increased during the COVID-19 pandemic, which underlines the need for financial protection mechanisms (see Pillar 4).

27. **Proposed solutions.** There is much to be gained from effective cross-border collaboration at the regional level starting with regular policy dialogue and exchange. One opportunity is to further strengthen the CAREC WGH. Leadership courses in health security and global health governance could be developed for CAREC countries to better navigate multi-level, multisector and cross-border coordination in collaboration with educational institutes or networks.

28. Options for regional collaboration in this area could include carrying out joint simulation exercises across borders (see Pillar 4), strengthening regional networks of EOC building on ongoing initiatives to support each other; and developing a regional mechanism for regular meetings to potentially identify minimum standards for such preparedness plans and simulation exercises and to potentially develop a regional Health Security/Pandemic Preparedness and Response Framework through the CAREC WGH or another suitable institution. Such a framework could include details on roles and responsibilities of different agencies, communication arrangements etc. Given the need for One Health communicated by a majority of CAREC countries, more coordination of human health, animal health, environmental health and other sectors at the regional level could be considered. A regional framework could include multisector One Health collaboration, with a focus on information exchange structures for One Health for willing CAREC countries.

29. Rapid access to funding during and after emergencies or shocks is as critical as direct funding to the appropriate interventions for effective and timely response whether funding is from national or donor sources or from financial markets. Emergency Response funds (prepared) could be considered, that can be accessed quickly, and specific administrative procedures could be developed to fast-track allocation and transfer of funds in an emergency case. Pre-agreements with development partners of supporting such an emergency fund and the disbursement procedures could also help to ensure sufficient financial means to become quickly available, specifically in countries that may not be able to keep large amounts earmarked on a permanent basis for such purposes.

<sup>11</sup> B. Rechel et al. 2011. Lessons from Two decades of Health Reform in Central Asia. *Health Policy and Planning*. 27 (4). pp. 281-287.

<sup>12</sup> World Bank. Data. [Domestic General Government Health Expenditure \(% of GDP\) - Uzbekistan, Mongolia, Azerbaijan, Tajikistan, China, Kyrgyz Republic, Pakistan, Georgia, Kazakhstan, Turkmenistan, Afghanistan](#) (accessed 30 January 2022).

30. Taken together and based on the recommendations of the proposed CAREC **Infectious Diseases Financing Mechanism**, CAREC countries can be supported through developing and piloting innovative and flexible risk financing solutions to support mitigating adverse impacts of future health emergencies and pandemics. Improved access to such funds would require a TA to help governments secure timely financing during emergencies.

### 2.1.2. Workforce capacity and skills

31. Health systems resilience is weakened if workforce capacity and skills are not in place. Several aspects came into play during the pandemic. Among those which hampered the responsiveness of CAREC's resource capacity most were weak planning and distribution of human resources for health (HRH), insufficient training, lack of accreditation of profession and deficiencies in mental support for health workers.

32. The assessment revealed that all CAREC countries had issues with weak **management, planning and forecasting of healthcare capacity**, including budgeting, procurement and human resources distribution (including forecasting, deployment, and retention), throughout the country, and they were lacking proper tools for doing so. The three most commonly mentioned needs were (see also Pillar 3):

- (i) the importance of developing appropriate financial planning skills in emergencies promoting autonomy in budget executions and transparency at sub-national level;
- (ii) the availability of special procedures for the transfer of funds and procurement of needed supplies during emergencies and capacities and skills to apply them appropriately; and
- (iii) having capacities for human resource (HR) forecasting and planning of appropriate distribution of HR in place, including preparations to enable surge capacities.

33. Another major gap perceived by most CAREC countries is the lack of **technical capacities** of health care workers in areas such as surveillance, laboratory, infection prevention and control, case management, advanced medical capacities for intensive care units, etc. As an extensive emergency response will require significantly different approaches and capacities, it was felt that while most countries had emergency or pandemic preparedness and response plans, relevant public health officials and health care workers lacked the experience and capacities to effectively apply the relevant measures. In many countries it was mentioned that the rapid response teams were not rapid or effective and, in most cases, they did not include the required mix of professionals from different technical areas (risk communication, epidemiology, case management, etc.) and sectors (e.g., human and animal health).

34. The assessment revealed the need for **several technical skills** to be developed, among others are:

- (i) capacities for early warning and rapid response;
- (ii) train laboratory and surveillance staff, especially at lower levels and across sectors (including One Health training);
- (iii) train health care workers and others (X-ray technicians, lab staff, cleaners, health care waste handlers, etc.) to appropriately apply infection prevention and control measures to protect themselves and others from cross-contamination and infection;
- (iv) train health workers quickly on new guidelines (e.g., on COVID-19) and most up-to-date treatment protocols, including those for managing more severe cases and those with underlying diseases and conditions (this could also mean setting up

- mechanisms to quickly deploy training on new protocols needed in potential future emergency situations such as through e-learning); and
- (v) increase intensive care and surge capacities (including for medical oxygen).

35. In addition, there is a specific need to strengthen **Intensive Care capacities**, which require special training and arrangements. It is not possible for medical staff without any experience and training in the use of special Intensive Care Unit (ICU) equipment and procedures to supplement ICUs as surge capacity.

36. Mechanisms for recruitment of additional workforce to **meet surge demands** in emergency situations were largely absent. For filling the HRH gaps, most CAREC countries employed a common strategy such as engaging recent graduates or final-year-students at medical colleges and universities in the provision of health care services. While this might enable filling most urgent gaps to treat uncomplicated cases of COVID-19, emergency and acute care capacities, particularly in intensive care units, cannot be easily supplemented by inexperienced staff without specific training on attending patients on ventilators and other forms of life support.

37. Other aspects mentioned in the assessment and perceived as a gap was the lack of **mental health support of health workforce**. The pandemic revealed a need for more mental health support of health workers because they were experiencing a high level of physical and mental stress due to high workload, risk of and contracting COVID-19, or the need for being quarantined and away from their families. Consequently, staff were overworked, had a high risk of becoming infected and felt inadequately prepared and supported to carry out their tasks. Besides, **salaries** and training for managers and planners (**leadership training**) was perceived as major gap by some CAREC countries.

38. **Proposed solutions.** Specifically, **forecasting and planning capacities** of staff in health care facilities, public health agencies and departments at relevant ministries working on human resources, administration, finance, and procurement are needed. These could be conducted as short- or medium-term national level or regional training sessions. In addition, it will be useful to explore whether curricula of respective educational institutions could be revised to equip future batches of relevant staff with those skills. Digital health solutions such as human resource registries will be able to support forecasting and planning capacities.

39. The variety of technical training needs required to strengthen the relevant capacities would include various modalities, from short training activities (1–2 weeks), to supporting longer training sessions in the countries or in other countries, including pre-service education, and other courses covering the above-mentioned fields. Some countries or institutions in the CAREC region might have capacities to support certain training activities of other countries. Developing or strengthening Continuous Medical Education (CME) and accreditation mechanisms are required to ensure standards of medical education and high quality of the health sector workforce and could serve as an additional channel to enhance health workers' skills for health security.

40. There might be a need to train and rotate nurses and doctors for periods of time to work in ICUs to enable them to acquire at least a basic understanding. This could then be topped up in times of need by a compact short-term training, enabling them to support the permanent staff in ICUs.

41. COVID-19 has shown more clearly that existing curricula in educational institutions and training facilities need to be upgraded and reviewed to ensure that within the respective

professional groups topics of importance for pandemic response will be sufficiently covered. This will help to ensure that the workforce of tomorrow will not continue to have the same skills gaps as is currently the case in many countries. Priority should be given to building the capacity of national training institutions to plan and implement such training programs and courses in the most sustainable manner. Institutions in the CAREC region that have capacities to offer training for other countries need to be identified and training offered with regard to health security in the region mapped. The development of common competency frameworks and curricula for selected skills and technical areas could be a first step toward harmonization of standards and could in future support mutual recognition of skills. For some gaps revealed during the assessments, training courses do not exist or are just evolving, for example to establish and strengthen quarantine and other border health aspects at points of entry. There is an opportunity to develop such training courses or modules for the whole region.

42. Support is needed to establish a **psychological support system** for health care workers and train counselors and other staff accordingly, in addition to providing them with skills and logistical needs to deal with pandemics and other public health emergency situations. Besides providing mental support, it will be necessary to review working conditions and arrangements to help reduce the stress and burden of health care workers who are most affected by quarantine and lock-down measures and are at the “frontline”. Different options can be considered and identified to enable health care workers to remain physically or at least remotely in contact with their families.<sup>13</sup>

## 2.2. Technical Preparedness

### 2.2.1. Surveillance and Detection

43. Technical preparedness is strengthened through effective surveillance and response to public health threats. Recognizing the importance of effective surveillance and epidemiology, outbreak and case investigations with specimen collection, laboratory testing and forecasting to plan needed healthcare resources for the current pandemic was an important element to responsiveness. Countries that recognized this need and had systems, tools and capacity in place were able to respond quicker.

44. The assessment revealed, however, that in many countries, different gaps hindered effective surveillance response. Among those mentioned by almost all CAREC countries were shortcomings in **HRH capacities and training**. Specifically, countries underlined gaps in qualification of staff to conduct analysis of surveillance data at primary health care level, a general shortage of human resources and managerial capacity, and lack of funding to implement proper training for surveillance (e.g., FELTP).

45. Another factor hampering technical preparedness was insufficient **data analytics and data use** including **lab-based surveillance**. The use of digital tools for surveillance is limited, with most countries relying on the initial collection and reporting of results using paper-based systems. Limited interoperability between infectious disease surveillance and general health databases prevents the speed and accuracy of reporting for suspect and confirmed cases and the utilization of the data to inform and guide the response management. Concrete technical factors mentioned in the assessment were the need to improve data collection by integrating health information systems with data centers, expanding 5G networks and leveraging artificial

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<sup>13</sup> Rest and recreational leave would be an option, similar to arrangements for humanitarian workers living and working in difficult conditions.



intelligence to improve early warning systems, and the availability of electronic data collection, reporting and analysis equipment especially at lower levels.

46. One important factor for proper management of data mentioned in the assessment is **integrated surveillance**. The analysis revealed a lack of integrated surveillance between human and animal health (One Health, see also Pillar 1) and the respective sectors, including in rural areas, in at least half of the CAREC countries. Integrated surveillance also touches upon cross-border aspects. The assessment further showed that countries are lacking **cross-border surveillance** and reporting, among others due to lack of funding and even exchange of relevant information. The lack of integrated surveillance includes lack of skills of veterinarians to report zoonotic diseases, as well as insufficient intersectoral training of staff and systems for the regular exchange of data and other information (see Pillar 1, workforce capacities).

47. **Funding of surveillance** in general was an aspect which some countries mentioned. Gaps in funding influenced the performance of the surveillance system and its regular monitoring, thus there is a need to support CAREC countries through additional funding options.

48. **Proposed solutions.** Support is needed to strengthen qualification of staff including at the primary care level, in surveillance data analysis to detect outbreaks or changes in disease occurrence at all levels through expanded training options, including those for reinforcing managerial response capacities. Further, investments in digital health foundations (infrastructure, interoperability etc.), tools and data analytics and use will be needed to improve early warning and speed and accuracy of reporting and data use to inform response management (see crosscutting topic: digital health). Further, there is a need for integrating human and animal health surveillance systems, improving coordination and collaboration between both animal and human health sectors (see Pillar 1) and developing capacity of HRH on zoonotic disease surveillance within countries, but also among neighboring countries, including the establishment and training of joint rapid response teams.

49. An important basis for data sharing across border is to standardize data. It is proposed to develop a health security dashboard through CARINFONET to improve data sharing and reporting and support signal detection which could later be expanded to other interested CAREC countries after an initial pilot phase. In the process of developing the dashboards, capacity development will jointly identify relevant indicators related to health security and surveillance, enhance readiness for data sharing and working toward data standardization, identifying data gaps, improve statistical analysis and signal detection, including opportunities for joint analysis at country and regional level, and considering to use data for (joint and collaborative) evidence-based and data-driven policy- and decision-making. Best practices and evidence on data standardization and on regional level for health data analyses will be collected.

### 2.2.2. Laboratory Infrastructure

50. A sufficient laboratory infrastructure and its management according to international quality and biosafety requirements is key for detecting infectious diseases and efficiently responding to them.

51. The assessment revealed that countries are facing numerous needs with respect to laboratory services, first and foremost in **Quality assurance**. Even though WHO's Better Labs for Better Health initiative has been mainly implemented in the Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan, all CAREC countries reported remaining gaps in Laboratory Quality Management Systems (LQMS), such as Quality Control and Quality Assurance measures

of national laboratory networks, especially with regard to the establishment of unified quality assurance and quality control measures for national laboratory networks.

52. Another obstacle to efficiency of laboratory infrastructure is the limited number of skilled laboratory technicians, as mentioned under pillar 1. More than half of CAREC countries mentioned **shortage and underperformance of workforce**, specifically at provincial and district level. This impacted both on sampling and SARS-CoV-2 laboratory testing as the virus started to spread.

53. Analysis of the daily rate of positive tests in CAREC countries indicates that existing systems for sampling and testing have been overloaded resulting in many people not being tested. This likely means that the true number of cases has been underestimated and may also delay response measures and the disruption of the chain of infection. In general, laboratory test results can be interpreted to reflect point prevalence<sup>14</sup> as long as the daily test positivity rate is below 5%, as recommended by WHO. Experience across CAREC countries during the COVID-19 pandemic show frequent periods when the daily test positivity rate has surged high above that, reaching 30–40% for long periods of time in many countries. Scaling up sampling and scaling up capacity for laboratory testing when the daily number of positive cases increases above 5% is therefore important to ensure that reported confirmed cases does not just represent the “tip of the iceberg”.

54. Some countries mentioned specifically the need to develop capacities for genome sequencing to monitor mutation of the virus and changes in its infectiousness or susceptibility to vaccines (e.g., WHO recommends that countries ship at least 5% of their COVID-19 samples to reference sequencing laboratory or keep producing sequencing data if they have the capacity).

55. The lack of a unified **network of laboratories** in certain countries is also influencing efficiency. A few countries mentioned that the **lack of specimen referral and transportation** has weakened efficiency of their laboratory system.

56. **Proposed solutions.** Taken together, support is needed in training laboratory technicians in testing (e.g., polymerase chain reaction analysis) and genome sequencing so that better performance, especially in outbreak situations, is achievable. This should be combined with both entry level and in-service training of the local public health professionals in bioinformatics and epidemiology given that genomic surveillance is delivered by a multidisciplinary team requiring the appropriate knowledge and skill mix in the respective technical areas. Therefore, support is needed in enabling CAREC countries to establish and/or strengthen national laboratory networks through improving LQMS Implementation for enhanced, precise, reliable, and timely results. There is a need to establish regional networks between clinical laboratories, public health institutions and academia, also across borders, to enhance regional health security. Improving specimen referral and transportation in selected countries. This will also provide a foundation for establishing sequencing laboratory network to produce and share the respective sequencing data.

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<sup>14</sup> Point prevalence, according to the Centers for Disease Control and Prevention, refers to the “number of current cases (new and preexisting) at a specified point in time”.



## 2.3. Access to Supplies and Surge Demands

### 2.3.1. Regulatory Mechanisms

57. Policies, regulations and tools for forecasting need for supplies, efficient procurement and effective and functioning supply chains are critical to make sure health products get to the right place at the right time, especially during emergencies. Without effective regulatory mechanisms and standards for medications and supplies, access to medical supplies cannot be guaranteed.

58. The assessment revealed that inadequate **regulatory oversight** resulted in delayed marketing and import authorizations in the CAREC region, and a higher probability of substandard products reaching the market. There is a common perception that **insufficient investment** of resources in regulatory systems results in weak and slow regulation of medicines, vaccines, and other medical products. Specific factors mentioned by CAREC countries are:

- (i) **lack of special budgeting procedures** to enable the fast transfer of funds to support effective and timely procurement of health products and supplies for adequate response management;
- (ii) **lack of special fast-track rules for procurement and distribution** of required supplies in the amounts needed to enable fast response. The lack of such special rules and reluctance of relevant staff to deviate from regular bureaucratic procedures was mentioned of having significantly slowed down the COVID-19 response and negatively impacted its effectiveness. One example emphasizing the importance of fast-track rules for procurement and distribution during a pandemic is the right amount of medical oxygen at health facilities for emergency and inpatient care; and
- (iii) **lack of rules and regulations around Good Manufacturing Practices (GMP)** (international standards of good distribution system, good storage practices and good pharmacy practices).

59. Support is needed in regulatory oversight through strengthening the implementation of GMP certification, defining oversight mechanism for quality management and control as well as defining budgeting procedures for the fast transfer of funds for procurement-related matters.

60. A specific aspect of regulation are capacities of national (drug) regulatory authorities (NRAs). Most CAREC countries are heavily dependent on importation for their medicines supply. Therefore, NRAs must assess the quality of products originating from many diverse and distant manufacturing sites. It is neither possible, cost-effective, nor desirable, that all NRAs develop and maintain the capacity to conduct regular foreign inspections of all the concerned manufacturing sites. This calls for effective procedures for desk assessment of foreign certifications and for establishing collaboration procedures among NRAs to share resources and experience about foreign manufacturing sites.

61. An assessment in some countries in the CAREC region<sup>15</sup> revealed that there is little collaboration between NRAs resulting in duplicative and redundant work being performed by authorities with different capacity, resources and skills e.g., in assessing product or manufacturing sites. It was also found that some CAREC countries test very large numbers of samples during laboratory testing while simultaneously testing results show extremely low sample failure rates

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<sup>15</sup> Assessments have been carried out in Azerbaijan, Kyrgyz Republic, Tajikistan, Pakistan and Uzbekistan.

(less than 3%). It is neither possible nor necessary to test the quality of all imported batches of pharmaceutical products. The main consequences are that people face unnecessary hurdles accessing the medical products they need, government procurement agencies are hindered by inadequate information to make evaluations and decisions, substandard or falsified products more easily reach the market, and business and trade are hindered by inefficient regulatory systems.

62. Some CAREC country NRAs participate in WHO collaborative registration initiatives<sup>16</sup> which are beneficial because they permit to avoid repetition of assessment work by relying on assessments conducted by advanced regulatory systems. However, the number of WHO-prequalified products is small compared to the number of products approved by best-resourced NRAs. SRA-approved products tend to be expensive and it can happen that manufacturers are not interested in marketing their products in small markets. Therefore, most less-resourced NRAs receive applications and must deal with a majority of products that are not WHO-prequalified or SRA-approved leading to an overwhelming number of foreign certifications to be critically reviewed.

63. **Proposed solutions.** To strengthen NRAs, optimize the use of resources and eliminate unnecessary duplication of work, one way could be the establishment of effective collaboration and exchange of information among NRAs within the CAREC and Caucasus region about products and manufacturing sites. **Regional reliance**,<sup>17</sup> i.e., the work done by a trusted authority (e.g., an assessment or inspection report) is shared with a receiving authority who uses the reports to make its own decisions without duplicating the work is one way to cooperate effectively. While reliance on reports or decisions made by well-resourced authorities is most appropriate for new and complex medical products (such as vaccines and other biologicals), regional cooperation through reliance among authorities of countries with similar market landscapes is the most appropriate approach for the assessment of generics and manufacturers with a 'regional' projection.

64. Therefore, the **establishment of an operational mechanism of collaboration** consisting of appropriate administrative tools (legal and regulatory framework and procedures for sharing and making use of information) and an IT platform is proposed, that eventually will allow NRAs to exchange information, avoid duplication of work, foster cross-reliance, and filter out substandard products.<sup>18</sup> While working to establishing an operational mechanism of collaboration, NRAs will be able to identify respective weaknesses and strengths. This may lead them to decide to gradually convert existing strong institutions into regional resources or centers of excellence for the benefit of all participating authorities in the medium to longer run. Initial activities could include organizing collaborative activities such as joint assessment of applications regarding medical products identified as common priority by participating NRAs; gradually developing

<sup>16</sup> Some CAREC and Caucasus NRAs participate in WHO's Collaborative Registration Procedure for WHO-prequalified pharmaceutical products: Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Pakistan, and Uzbekistan. Only Georgia participates in WHO Collaborative Registration Procedure for products approved by a broadly-recognized regulatory body (e.g., European Medicines Agency, US Food and Drug Administration). Only Kazakhstan has a WHO-prequalified quality control laboratory.

<sup>17</sup> WHO. 2021. [WHO Expert Committee on Specifications for Pharmaceutical Preparations: Fifty-fifth Report](#). WHO Technical Report Series, No. 1033. Geneva. Annex 10, page 237.

<sup>18</sup> Other benefits of such a mechanism could include: (i) add "content" to existing regional regulatory harmonization initiatives; (ii) permit immediate dissemination of alerts on safety concerns, quality defects, and falsified products; (iii) streamline availability and exchange of manufacturer-related information facilitating timely action in situations involving defective medicines; (iv) act as a platform for referencing and benefiting from evaluations and decisions made by better-resourced authorities within and beyond the regional level; and (v) enable businesses and citizens to access information on medicines approved across a number of countries.

mechanisms of regular collaboration with well-resourced regulatory authorities (e.g., European Medicines Agency, Swiss-Medic) to regularly obtain their support and sharing of information (e.g., assessment reports, testing results, inspection reports) to be used as reference for national or joint assessment work; and developing and implementing a dedicated IT platform to support joint assessments and facilitate information interchange with minimal manual intervention.

65. At the country-level, resources of NRAs could be optimized by streamlining desk evaluation of documents such as GMP certificates and Certificates of Pharmaceutical Product issued within the scope of WHO Certification Scheme<sup>19</sup> and ensuring that a risk-based approach is used as overarching, paramount principle when designing and implementing sampling and laboratory testing activities.

### 2.3.2. Procurement and Supply Chain Management

66. An effective health system requires a well-functioning procurement and supply chain mechanism to ensure equal access to quality affordable medicines and supplies. In CAREC countries, challenges to commodity supplies include low data quality and use, and a lack of appropriate human resource capacity contributing to poor forecasting and demand planning. The assessment revealed that the existing electronic information systems to support procurement, storage, distribution and dispensing of pharmaceuticals remain outdated and ineffective undermining data use for supply/demand planning and forecasting and reporting the stock outs in a timely manner. There are insufficient to no courses on procurement and supply chain management, including the training courses on forecasting, stock management, warehouse management, and distribution.

67. Complex, time-consuming and centralized procurement practices and low demand were found to contribute to constrained supply, limited competition, and high pricing. In many countries there is a limited supplier base and most countries rely on importation of supplies which makes it difficult to respond quickly to emergencies. Inadequate or poorly enforced regulatory mechanisms and delays in the registration and importation of products lend themselves to increased poor quality and falsified medicines entering the markets; while the lack of centralized storage and storage management and cold chain equipment and respective guidelines and SOPs are contributing to an inadequate infrastructure for storage and distribution. These issues negatively impact the day-to-day operations and make it challenging for governments to respond in emergency situations. Weaknesses in GMP and their respective accreditation mechanisms were also identified.

68. **Proposed solutions.** Across the CAREC region there are many opportunities for member or a subset of countries to collaborate on procurement and supply chain, including collaborative procurement, regional distribution centers, knowledge management, and data. The level of collaboration can vary from basic information sharing to harmonization of PSM competencies and training, standardizing data and processes in the short- to medium-term to more integrated collaboration which could include use of regional distribution centers and/or conducting joint procurements in the longer run. Information sharing provides interested CAREC member countries an opportunity for more informed decision-making i.e., commodity prices, supplier performance etc. The standardization of data, policies and regulations helps to streamline

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<sup>19</sup> WHO. 2021. [WHO Expert Committee on Specifications for Pharmaceutical Preparations: Fifty-fifth Report](#). WHO Technical Report Series, No. 1033. Geneva. Annex 9 page 205.

processes and improve end-to-end supply chain visibility enabling more efficient and effective health supply chains.

69. Digitization of the supply chain promotes transparency across the supply chain making decision-making more informed and quicker, ultimately increasing supply chain efficiency and help reduce supply chain costs.<sup>20</sup> Support is needed in strengthening electronic logistic management information systems to ensure adequate information support at all levels starting from central procurement and storage through last mile distribution. To be effective, accurate and timely data collection, aggregation and analysis is critical. There are opportunities to accelerate these benefits through regional collaboration around data standards, data sharing and use. A centralized MIS and/or Control Tower can be used across all health products for data aggregation and analysis improving product visibility and traceability across the entire supply chain and helps to inform better decision-making in the areas such as forecasting, replenishment, inventory management, procurement, and distribution planning. This allows for improved performance, governance, and resilience, especially during emergencies and can inform better regional collaboration.

70. Investment in PSM human resource capacity is critical to a well-functioning PSM system, ensuring the right decisions can be made in a timely manner, while also ensuring future system designs is appropriate. Opportunities exist for regional coordination around conducting joint training activities, aligning PSM competencies, knowledge sharing providing benefits across the region. These could eventually inform harmonized competencies and certified training across the region provide for more seamless cross-border activities, reduced costs, and improved knowledge sharing.

71. Given the multiple PSM areas where countries can collaborate in the region, the **establishment of a Regional CAREC PSM Institute or Center** could provide a platform to enable regional collaboration. The Regional Institute could help facilitate activities such as information sharing, alignment of standards, facilitation of discussions on key topics of interest and hosting of regional PSM trainings etc. It could coordinate critical information sharing such as product pricing, availability and, quality to improve transparency, epidemiological data, and demand. Countries could also share lessons learned or PSM challenges countries are facing with peers from other countries, building a regional network of PSM experts that can be leveraged. Further, it could facilitate the establishment of transparent, standardized data and provide countries with access to high quality and essential resources to improve regional capacity and knowledge of PSM practices from industry and academic experts, training professionals and from the peer network. For the longer term opportunities for collaborative procurement activities the use of regional distribution centers could be explored, which have the potential to improve the availability, accessibility, and affordability of medicines and supplies across the region in looking to assure sufficient supply and stocks, especially during emergency situations.

## **2.4. Vulnerable Population Groups and Border Health**

### **2.4.1. Cross-border Health Security**

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<sup>20</sup> More efficient and effective data management can be achieved through the digitization of the supply chain. This requires robust product master data, so data that is collected across the entire supply chain is easier to analysis and use. Different management information systems (MIS) are used across the supply chain from e.g., Warehouse Management Systems and Inventory Management systems used to manage stock and warehouse activities to Transport Management Systems which are used for distribution.

72. The assessment revealed that almost all countries are lacking point-of-entry health capacities. This includes entry point screening and quarantine capacity, SOPs on notification procedures, as well as sufficiently equipped and staffed quarantine facilities in border areas.

73. Another gap mentioned by half of the CAREC countries is deficient cross-border patient management. Continuity of care is hampered by several factors, including a lack of a platform to exchange patient record information across borders, a lack of cross-border referral systems as well as a lack of follow up mechanisms for infectious diseases. The lack of information on health care services available across borders, including those services specifically for the vulnerable, also affects cross-border patient management.

74. Almost all CAREC countries mentioned severe gaps in multisector collaboration for cross-border management. Among specific factors mentioned are the lack of cross sector collaboration and coordination on border biosafety and health issues at all levels, including formal frameworks (agreements, plans) for such a collaboration between different Ministries and the Border Guard Services on biosecurity and health issues.

75. Joint risk communication approaches in border areas are another area requiring improvement. Almost no CAREC country had properly implemented a risk communication policy for border areas in their emergency response plans during the COVID-19 pandemic. Only one country, according to the national assessment, decided to strengthen its risk communication strategy by transparently targeting people living with disabilities and bordering communities, who experienced language barriers.

76. **Proposed solutions.** There is a need to improve entry point screening and quarantine capacity, SOPs on notification procedures, as well as sufficiently equip and staff and train quarantine facilities in border areas and build on activities that have started in these areas. Support in establishing platforms for patient information exchange is needed, as well as on collecting solid information on health care services available across borders. In addition, support in developing frameworks and providing training for multisector collaboration for cross-border health management is required. These could be combined with joint risk assessments including better understanding particular risks of vulnerable population groups such as women, persons with disabilities and mobile populations, and joint simulation exercises in border areas which would contribute to multisector and cross-border coordination and emergency response planning. Lastly, support in developing culturally sensitive risk communication strategies for communities residing in border areas, is thus needed, emphasizing gender-sensitive risk communication strategies.

#### 2.4.2. Border Health and Financial Protection of Migrants

77. Border areas are often in remote, hard-to-reach areas or can be along busy economic corridors and high travel zones with ongoing trading activities, mobile populations passing through, and markets attended by local traders from the region. National and cross-border health services where migrant and mobile populations reside and pass through need to be strengthened. Mobile and migrant populations may be even more vulnerable to infection and outbreaks because they are often poor and live in crowded and often unhygienic conditions. Many CAREC countries have pointed out the relevance of large nomadic populations moving across countries and not always using official border-crossings. They also move large amounts of livestock, which can be affected by diseases, but can also be their origin and a carrier, enabling the spread of diseases.

78. Similarly, while not moving around with livestock as nomads, large migrant populations live and work in different CAREC countries. A significant number might not be formally registered, and many have little or no **access to health services** for different reasons. Allowing proper treatment for vulnerable population groups is necessary to reduce the disease burden.

79. CAREC countries also have special economic zones (SEZs) and industrial zones that attract and employ a substantial number of migrant worker populations. As these zones are also usually situated outside of capital regions, these workers' access to health services and their health-related knowledge attitudes and practices are generally less developed than in urban settings and pose additional health risks. It is important to understand and address the health issues of these workers for their welfare and to optimize benefits for businesses and the associated communities.

80. **Proposed solutions.** As reflected in the CAREC Health Strategy's results framework, it is proposed to conduct further research on the health and socioeconomic status and health needs of border communities and mobile populations, including women and vulnerable groups, residing in selected border areas. This research should also include health-related risks and social determinants of health based on where they work and live. Resilience to infectious diseases and non-infectious diseases depends on how healthy the population of a country is, and what risk factors exist. Further research on the sex-differentiated effects of the outbreaks and pandemics, especially on female health workers, female patients, and on households with female heads residing in border areas is also proposed. This shall be complemented by research on health services and their quality in selected border areas along with border health facility assessments to better understand the infrastructure, equipment, staffing and other aspects available. It is recommended to include options for expanding service availability using other service delivery mechanisms into the assessment (mobile teams and service delivery points, telemedicine), and for improving emergency preparedness and response capacities in health facilities in border areas and infection prevention and control.

81. Based on the assessment and research, upgrading needs of health facilities and health and sanitary services in border areas, with improved services for border communities and mobile populations, and establishment or strengthening of laboratories in or in proximity of border areas will be identified (see Pillar 2). Support in upgrading of border health facilities, shall encompass technical standards as well as health workforce capacity. Such support should also include bilateral arrangements to connect health facilities and enable sharing of patient information and referral of cases across borders, ensuring access to health care services. Continued development of **telemedicine and the use of digital tools for health** will further enhance access to health services and ensure support for health care workers located in remote and hard-to-reach areas.

82. Strengthening facilities in border areas also includes improving infection prevention and control, better linkages to laboratories and support to outbreak prevention, detection and control, screening, and case management of infectious diseases in border areas. Interventions could further support strengthening and empowering communities residing in border areas, build community capacity for disease management and control (including environmental health).

83. The recently approved Kyrgyz Republic Regional Health Security project already includes a component on border health and is reflected in the RIF.<sup>21</sup>

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<sup>21</sup> ADB. 2022. [Kyrgyz Republic: Strengthening Regional Health Security Project](#).



84. It is recommended to do an additional study on **financial protection of labor migrants** in selected CAREC countries, and assess possibilities to on the portability of benefits. Support in improving accessibility of health services could include the definition of a benefit catalog for migrants crossing borders, including access to medical services and diagnostics. It could also include defining agreements between CAREC countries on the portability of benefits for migrants crossing borders.

85. Timely and regular conduct of health impact assessments through a multisectoral approach (involving the health ministry, special economic zones (SEZ) authority, environment ministry, other agencies), will help to identify, mitigate and manage the health risks and impacts on migrant workers in SEZs. Scoping exercises and risk assessments should be conducted as part of a HIA to identify and prioritize health and issues and their determinants and inform the development and implementation of measures to manage health risks and impacts.

## **2.5. Crosscutting Topic: Digital Health**

86. Investing in digital health foundations is critical to achieve a sustainable, interoperable and secure digital health landscape generating critical data to support various health sector goals. In the above description digital health is mentioned as an important area across all pillars. However, it is necessary to also invest in digital health foundations in order to support sustainability and coordination of investments and avoid fragmentation. The COVID-19 pandemic revealed that having a sound technical infrastructure in place was critical to quickly roll out digital solutions to support pandemic response. Such investments cannot be made within a short timeframe but require careful planning and roll out. An assessment in six CAREC countries showed that critical foundational gaps such as strategy, gaps in legislation, weak governance for digital health, insufficient digital literacy among health workers, no enterprise architecture infrastructure, and core registries and insufficient adoption and implementation of standards. It is therefore suggested to include investments in digital health foundations as a separate area.

82. While such investments are usually at country-level, regional collaboration could include strengthening and leveraging peer-to-peer country networks to exchange knowledge and lessons learned and extend peer-to-peer advice and support.

### 3. Proposed Regional Health Investment Framework (2022-2027)

87. The below table is the proposed RIF which will be further discussed from 11-13 October 2022. The framework includes selected TA activities such as studies, pilots and capacity development and also makes proposals for project investments based on the priorities identified in the discussion above. The project suggested project investments for each pillar could be envisioned as standalone projects or as project components to be combined with other proposed investment components from other pillars depending on country needs and resulting from further country programming and policy dialogue. To the extent possible projects can build on existing initiatives as identified in the CAREC Health Strategy and as will be updated during the October meeting.

#### 3.1. Strategic Pillar 1 – Leadership and Human Resource Capacity

Projects/Activities	Proposed Modalities	Possible Countries/Clusters	CAREC Health Strategy Results Framework <sup>a</sup>
<b>Governance, coordination and financing for health security</b>			
<b>Enhance Health Security Preparedness and Response capacity</b>  (Coordination, Governance, Financing; Workforce capacity and skills)	Project, project component and/or TA	<i>Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Mongolia, Pakistan, PRC, Tajikistan, Turkmenistan, Uzbekistan</i>	Multisectoral Framework is established at national and regional levels  Number of joint activities conducted under the CAREC Health Strategy  Number of health-related personnel trained through CAREC support to address issues related to health security
<b>Brief description</b>	Strengthen health systems, and coordination and collaboration capacities for Health Security/Pandemic Preparedness and Response through: Defining a multisector-multistakeholder coordination and collaboration framework and architecture to enable effective and focused collaboration across sectors and stakeholders. At regional level, include relevant regional sector representation (human health, animal health, disaster management, environment, etc.) where available Establishing/strengthening Emergency Operation Centers (EOC), including developing the legal and policy framework for a long-term perspective, defining relevant aspects, such as institutional arrangements and set up, infrastructure and equipment, staffing and specific training and strengthening. At regional mechanism this could include establishing relevant regional networks (EOC network, etc.) and meeting forums/mechanisms Strengthen information exchange and joint outbreak and response mechanisms between neighboring countries This project would include an additional module focusing on regional mechanisms that should be explored and developed.		
<b>Improving project readiness for health security</b>  (Coordination, Governance, Financing; Workforce capacity and skills)	Regional TA Facility	All countries interested in regional health security projects	NA



<b>Brief description</b>	The intervention will help countries not yet fully experienced with ADB-financed health projects supporting project readiness. A facility could support project preparation and design, institutional strengthening for ADB-financed projects which could be scheduled for approval between 2024-2027. Further, the facility will improve project efficiency and sustainability. As additional preparation or assistance to other projects, it might support specific assessments to update on the most current status and to identify the remaining gaps and needs, as there might have been additional support been provided in the various areas. In addition to the assessments, this facility could add or validate important details for the other projects, such as implementing partners, potential development partners, etc.		
<b>Piloting pandemic risk financing</b> (Coordination, Governance, Financing)	TA	<i>Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Mongolia, Pakistan, Tajikistan, Turkmenistan, Uzbekistan</i>	Number of joint country activities conducted under the CAREC Health Strategy
<b>Brief description</b>	Identify or develop and pilot financial instruments addressing new risks such as pandemics in the CAREC region. Explore options for (public health) emergency funds to be established, their funding modalities (joint trust funds, etc.) and specific disbursement procedures to enable fast-tracking of allocation and disbursement during emergency situations.		
<b>Workforce Capacity and Skills</b>			
<b>Strengthening HR capacity for Appropriate and Effective Health Response Measures</b> (Workforce capacity and skills)	Regional TA or project component	<i>Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Mongolia, Pakistan, Tajikistan, Turkmenistan, Uzbekistan</i>	Number of health-related personnel (sex-disaggregated) trained through CAREC support to address issues related to health security
<b>Brief description</b>	The intervention aims to improve workforce skills of relevant personnel related to <ul style="list-style-type: none"> <li>- forecasting, planning and management of HRH, procurement, fund release and allocation and other administrative issues for emergency response situations (incl leveraging digital tools such as HRH registries)</li> <li>- training of HCW at all levels (PHC, hospitals etc.) and other health personnel in the technical areas relevant to medical treatment, IPC, Intensive Care should be conducted, based on specific capacity development needs for each country.</li> </ul> In addition, establishment/strengthening of telemedicine and digital health tools could be included, to ensure support for HCW in facilities located in remote and hard-to-reach areas. Health security -related training as part to be strengthened as part of established or to be developed CME systems.		
<b>Improve availability of training and capacity development in health security</b> (Workforce capacity and skills)	TA	<i>Regional</i>	Number of health-related personnel (sex-disaggregated) trained through CAREC support to address issues related to health security
<b>Brief description</b>	Conduct analysis of available regional health security training Develop a coordinated regional training repository and calendar for regional level meetings		

CAREC = Central Asia Regional Economic Cooperation, HCW = health care workers IPC = infection prevention and control, NA = not applicable, PHC = primary health care, PRC = People's Republic of China, TA = technical assistance.

<sup>a</sup> As defined in ADB. 2022. *CAREC Health Strategy 2030*. Manila.

Source: Authors

### 3.2. Strategic Pillar 2 – Technical Preparedness

Projects/Activities	Proposed Modalities	Possible Country/ Cluster	CAREC Health Strategy Results Framework
<b>Laboratory infrastructure and capacity and surveillance</b>			
<b>Enhanced Laboratory Capacity and Surveillance to Emerging Health Threats</b> (Surveillance, Laboratory Infrastructure and Capacity)	Project or project components	Azerbaijan, Georgia, Kyrgyz Republic, Tajikistan, Turkmenistan, Uzbekistan	Number of CAREC countries with diagnostic laboratories that have recognized capacity for providing high quality PCR analysis
<b>Brief description</b>	Strengthen surveillance and laboratory systems to reduce the risk of emerging health threats. Strengthen national and regional laboratory networks and laboratory systems for testing. Strengthen Quality Management and Control, accreditation, provision of equipment and supplies, as well as capacity building of laboratory personnel. Depending on the assessed needs, make investments in the establishment of laboratories at different levels, including enabling reference laboratories to conduct genome sequencing. Where possible, build on and support the continuation of the project “Better Labs for Better Health” country work. Expand reach of Georgia’s (Lugar Centre) and establishing a regional Centre of Excellence could be considered. Include support from WHO collaborating center on avian influenza in PRC.		
<b>Regional Health Security Dashboard</b> (Surveillance)	TA (to be supported under ADB TA)	Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, Uzbekistan	Number of CAREC countries using harmonized surveillance data and common analysis criteria  Number of CAREC countries with capacity to collect sex-disaggregated routine surveillance data on EIDs
<b>Brief description</b>	Develop and pilot a regional health security dashboard, work on data standardization and common analysis criteria under CARINFONET.		
<b>Pilot mobile labs</b> (Surveillance, Laboratory Infrastructure and Capacity)	TA (potentially some support from ADB TA)	<i>Countries to be identified</i>	
<b>Brief description</b>	Pilot mobile laboratories in remote and hard-to-reach areas		
<b>Strengthening Regional One Health</b> (Coordination, Governance, Financing; Workforce capacity and skills; Surveillance; Laboratory Infrastructure and Capacity)	Project	Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Mongolia, Pakistan, Tajikistan, Turkmenistan, Uzbekistan	NA
<b>Brief description</b>	Strengthen regional One Health to assist participating countries to enhance regional health security, particularly through strengthening One Health surveillance mechanisms and capacity building along border areas. Support the development of formal multisectoral One Health frameworks, policies and SOPs in order to enable effective collaboration between the human, animal and environmental health sectors. Develop data sharing mechanisms and arrangements (including legal requirements), and strengthen use of digital tools.		

	Develop joint training modules for relevant staff (epidemiologists, etc.) of the three sectors and implement in order to create a new One Health workforce. Include the development of curricula in the educational institutions relevant for the involved sectors and potentially new education programs for One Health for a pilot cohort. Create and train joint investigation teams, comprising of relevant professionals of the three sectors.
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CAREC = Central Asia Regional Economic Cooperation, NA = not applicable, PCR = polymerase chain reaction, PRC = People's Republic of China, SOP = standard operating procedure, TA = technical assistance.

Source: Authors

### 3.3. Strategic Pillar 3 - Surge Demand and Access to Supplies

Projects/Activities	Proposed Modality	Possible Country/ Cluster	CAREC Health Strategy Results Framework
<b>Procurement and supply chain mechanisms</b>			
<b>Establish Regional Hub for strengthening procurement and supply chain management</b> (Procurement and supply chain mechanisms)	TA or other modalities	<i>To be discussed, potentially regional</i>	Number of joint country activities conducted under the CAREC Health Strategy  Number of regional procurement mechanisms developed (from information sharing to actual procurement)
<b>Brief description</b>	Carry out feasibility study and design of a centre to serve as a platform to facilitate and manage a community of practice facilitating knowledge sharing, harmonizing workforce development and capacities, convening resources and securing regional alignment in standards and policies. Pilot with capacity development and resource sharing and study possibilities for alignment of data standards and PSM processes and qualifications. In the short-term, centre could facilitate capacity development activities including training and mentoring, coordinate information sharing across countries sharing best practices, lessons learned, product pricing, supplier performance etc.; support alignment of data standards, PSM processes, PSM qualifications etc.; convene discussions on specific topics of interest, including but not limited to market information, digitization, innovation, and opportunities for more integration coordination such as collaborative procurement, regional distribution centers etc. In longer term, center could support collaborative supply planning, collaborative procurement, a joint situation room, facilitate regional distribution centers and stock piles, product verification, joint research.		
<b>Enhancing access to medical supplies</b> (Procurement and supply chain mechanisms)	Project or project component	Azerbaijan, Georgia, Kyrgyz Republic, Mongolia, Pakistan, Tajikistan, Turkmenistan, Uzbekistan, (PRC)	Regional cooperation mechanism established to strengthen regulatory capacity  Number of regional procurement mechanisms established Regional supply chain risk management plan developed
<b>Brief description</b>	Strengthen procurement systems and logistics management, regulatory mechanisms, standards and procedures for medicines, laboratory equipment and supplies. Invest in the foundations of supply chains. It could include the establishment or strengthening of Quality Management systems as well as GMP standards. In some countries it might also involve investment into warehouse capacities Consider investments in virtual control rooms		

<b>Enhancing capacities of NRAs and advancing regional reliance (Regulation)</b>	TA (some support under ADB TA), Project component	Azerbaijan, Georgia, Kyrgyz Republic, Mongolia, Tajikistan, Uzbekistan	Regional cooperation mechanism established to strengthen regulatory capacity
<b>Brief description</b>	<p>Establishment of operational collaboration mechanism consisting of appropriate administrative tools (legal and regulatory framework and procedures for sharing and making use of information) and an IT platform, to allow NRAs to exchange information, avoid duplication of work, foster cross-reliance, and filter out substandard products.</p> <p>Organize collaborative activities such as joint assessment of applications regarding medical products identified as common priority by participating NRAs</p> <p>Develop mechanisms of regular collaboration with well-resourced regulatory authorities (e.g., EMA, Swiss-Medic) to regularly obtain their support and sharing of information</p> <p>Develop and implement a dedicated IT platform to support joint assessments and facilitate information interchange with minimal manual intervention.</p> <p>NRAs to identify respective weaknesses and strengths in this process and may consider to gradually convert existing strong institutions into regional resources or centers of excellence for the benefit of all participating authorities in the medium to longer run</p> <p>At the country-level, optimize resources by streamlining desk evaluation of documentation such as GMP certificates and Certificates of Pharmaceutical Product issued within the scope of WHO Certification Scheme and ensure using a risk-based approach when designing and implementing sampling and laboratory testing activities</p>		

CAREC = Central Asia Regional Economic Cooperation, EMA = European Medicines Agency, GMP = Good Manufacturing Practice, IT = information technology, NRA = National (Drug) Regulatory Authority, PSM = Procurement and Supply Chain Management, TA = technical assistance, WHO = World Health Organization.

Source: Authors

### 3.4. Strategic Pillar 4 - Vulnerable Population Groups and Border Health

Projects/Activities	Proposed Modality	Possible Country/Cluster	CAREC Health Strategy Results Framework
<b>Cross-border health security</b>			
<b>Improvement of cross-border health security</b>	Project or project component, TA	Kyrgyz Republic, Pakistan, Azerbaijan-Georgia border <i>Additional countries to be identified</i>	Number of joint country activities conducted under the CAREC Health Strategy
<b>Brief description</b>	<p>Improved point-of-entry screening and quarantine capacity through investments in infrastructure and equipment, staffing and related training.</p> <p>Improve cross-border patient management and platform to exchange patient records to ensure continuity of care.</p> <p>Strengthen multisector and cross-border coordination and emergency response planning, including joint simulation exercises and risk assessments.</p> <p>Carry out training for staff of different sectors for detection and screening for infectious diseases and contaminants (people, livestock, foodstuffs and other goods), including establishing regular joint meetings and cross-sectoral communication and information sharing channels.</p> <p>Improve cross-border data sharing and disease notification and better linkages to laboratories (see Pillar 2).</p> <p>Coordinated and culturally sensitive risk communication for communities residing in border areas</p>		
<b>Border health</b>			

<b>Improved understanding of issues in border health facilities and health of communities residing in border areas</b>	TA (some support from ADB TA); project activity (e.g. Kyrgyz project)	Kazakhstan, Kyrgyz Republic, Tajikistan, Uzbekistan, Kyrgyz Republic, Pakistan	<p>Research conducted on needs of CAREC cross-border communities and mobile populations, including women and vulnerable groups</p> <p>Research conducted on the sex-differentiated effects of the outbreaks and pandemics, especially on female health workers, female patients, and on households with female heads</p>
<b>Brief description</b>	<p>Research on</p> <ul style="list-style-type: none"> <li>• health status and needs border communities and mobile populations. including women and vulnerable groups. This research should also include their access to health services and health-related risks and social determinants based on where they work and live</li> <li>• sex-differentiated effects of the outbreaks and pandemics, especially on female health workers, female patients, and on households with female heads residing in border areas</li> <li>• services availability and quality in border areas and border health facility assessments</li> </ul>		
<b>Improve health services in border areas</b>	Project or project component	<p>Kazakhstan, Kyrgyz Republic, Tajikistan, Uzbekistan, Mongolia, Pakistan</p> <p><i>Additional countries to be identified</i></p>	Number of joint country activities conducted under the CAREC Health Strategy
<b>Brief description</b>	<p>Strengthen health services in border areas. Minimum package of actions defined in response to public health threats in border areas and points of entry. Upgrading of border health facilities with improved services for border communities and establishment/strengthening of laboratories in or in proximity of border areas (also pillar 2).</p> <p>Strengthen health worker/volunteer capacities for culture/gender-sensitive service delivery</p> <p>Strengthen empowerment of communities residing in border areas. Build community capacity for disease management and control (including environmental health)</p> <p>Improve infection prevention and control and overall quality of care in border areas</p> <p>Improve preparedness and response capacities in health facilities in border areas</p> <p>Improve access to telemedicine and teleconsultations for communities residing in remote and hard-to-reach border areas</p> <p>The proposed intervention aims to improve access to health and sanitary services as well as social protection for migrants and mobile populations.</p> <p>It should include bilateral arrangements to connect health facilities and enable sharing of patient information and referral of cases across borders, ensuring access to health care services.</p>		
<b>Improved Social Protection for Migrants</b>			
<b>Feasibility study on financial protection and portability of benefits for migrants (labor migrants)</b>	TA (some support from ADB TA planned)	<i>Countries to be identified</i>	<p>Research conducted on needs of CAREC cross-border communities and mobile populations, including women and vulnerable groups</p> <p>Number of regional collaboration initiatives for cross-border support to migrants with chronic infectious diseases (e.g., TB, HIV)</p>
<b>Brief description</b>	Conduct feasibility study on financial protection and portability of benefits for labour migrants to better understand their situation and scope how to build on existing bilateral arrangements.		

CAREC = Central Asia Regional Economic Cooperation, TB = tuberculosis

Source: Authors

### 3.5. Crosscutting: Digital Health

Projects/Activities	Proposed Modality	Possible Country/Cluster	CAREC Health Strategy Results Framework
<b>Strengthen Digital Health Foundations</b>			
<b>Strengthen capacity on implementing digital health foundations</b>	TA (some support from ADB TA planned)	<i>All countries invited</i>	Number of nationally agreed vision and road maps for the interoperability of information systems
<b>Brief description</b>	Carry out digital health webinars on a variety of topics such as standards and interoperability, developing an enterprise architecture, planning for digital health investments. This is planned to start under ongoing ADB TA		
<b>Increase investments in digital health foundations</b>	Project or project components	<i>Countries to be identified</i>	Number of nationally agreed vision and road maps for the interoperability of information systems
<b>Brief description</b>	Strengthen digital health foundations based on country's digital health and health sector needs.		

ADB = Asian Development Bank, TA = technical assistance

Source: Authors