Strategic Preparedness, Readiness and Response Plan

to End COVID - 19 Emergency in 2022

Ministry of Health
July 2022
Version: 1.0

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To guide the coordinated action to take at national, regional, and global levels to overcome the ongoing challenges in response to COVID-19, address inequities, and plot a course out of the pandemic and the economic crisis.

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List of Abbreviations

AEFI	Adverse Events Following Immunization
BES	Biomedical Engineering Services
BH	Base Hospital
CCPI	Colombo Consumer Price Index
CKD	Chronic Kidney Disease
CPA	Centre for Policy Alternatives
DDG	Deputy Director General
DGH	District General Hospital
DGHS	Director General of Health Services
DPRD	Disaster Preparedness and Response Division
EOHFS	Environment, Occupation Health and Food Safety
EPI	Extended Programme on Immunization
GAVI	Global Alliance for Vaccines and Immunization
GDP	Gross Domestic Product
GOSL	Government of Sri Lanka
GRID	Global Response to Infectious Diseases
HDU	High Dependency Unit
HIV	Human Immunodeficiency Virus
ICU	Intensive Care Unit
MEOWS	Modified Early Obstetric Warning Score
MoH	Ministry of Health
MS	Medical Services
MSD	Medical Supplies Division
MSMIS	Medical Supplies Management Information System
MRI	Medical Research Unit
NBTS	National Blood Transfusion Service

NCD	Non-communicable Diseases
NCCP	National Cancer Control Programme
NCPI	National Consumer Price Index
NH	National Hospital
NRDPRU	National Renal Disease Prevention and Research Unit
NSACP	National STD/AIDS Control Programme
OOP	Out of Pocket
PCR	Polymerase Chain Reaction
PDHS	Provincial Director of Health Services
PHS	Public Health Services
PPE	Personal Protective Equipment
RDHS	Regional Director of Health Services
RDPRU	Renal Disease Prevention and Research Unit
RMNCAYH	Reproductive, Maternal, Neonatal, Child, Adolescent and Youth Health
RMSD	Regional Medical Supplies Division
SDG	Sustainable Development Goals
SLCP	Sri Lankan College of Paediatrician
SPRP	Strategic Preparedness, Readiness and Response Plan
TB	Tuberculosis
TH	Teaching Hospital
UHC	Universal Health Coverage
UN	United Nations
UNICEF	United Nations International Children's Emergency Fund
WHO	World Health Organization

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1. Introduction

1.1 Global outlook

The outbreak of Coronavirus was first reported in the city of Wuhan in Hubei province in China in December 2019. The outbreak was declared as a Public Health Emergency of International Concern (PHEIC) on 30th January 2020, and it was identified as a pandemic situation on 11th March 2020.

More than two years since the first SARS-CoV-2 infections were reported, the COVID-19 pandemic remains an acute global emergency.

As the pandemic continued to evolve the number of cases and deaths globally continued to increase. With the beginning of vaccination globally, there was a decrease in both cases and deaths. As of 29th July 2022, more than 572 million cases have been reported globally, resulting in over 6,390,401 deaths. Transmission of COVID-19 is highly clustered resulting in transmission of infection to a large number of people from a relatively small number of cases. More deaths have been observed in individuals over the age of 65 years. Males account for a higher proportion of deaths than females. As of 25th July 2022, a total of 12,248,795,623 vaccine doses have been administered.

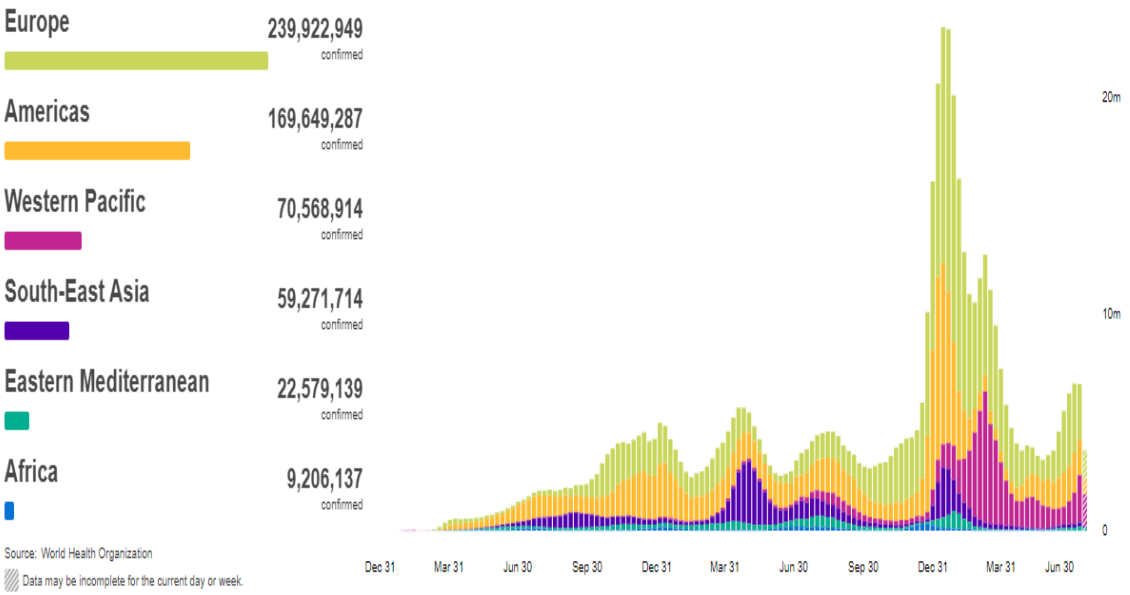

Figure 1.1: Global situation of COVID-19 across the six WHO regions as of 25th July 2022

1.2 Sri Lanka outlook

The first case in Sri Lanka was detected on 27th January 2020. Since then, the virus continued to spread throughout the country resulting in more than six hundred thousand infections (665,400 confirmed cases) and more than sixteen thousand deaths (16,548 deaths) as of 29th July 2022. Sri Lanka successfully managed two waves of the pandemic but, struggled to contain the third wave that began in April 2021.

Already facing fiscal constraints, the pandemic placed additional resource demands on the country. Responding to COVID-19, Sri Lanka implemented the whole-of-government approach with four lines of operation: Tri-Forces, police, and intelligence; medical and health care; community engagement; and economic and psychosocial well-being. After vigorous measures including lockdowns, travel restrictions, mass vaccination and intensive capacity build-up of COVID-19 treatment facilities, Sri Lanka succeeded in containing the outbreak.

At present, in Sri Lanka, the detection of new cases of COVID-19 has reduced significantly as shown in Figure 1.2. Similarly, COVID-19 patients receiving inward care in Sri Lankan hospitals have reduced to a value around 500 cases by July, 2022.

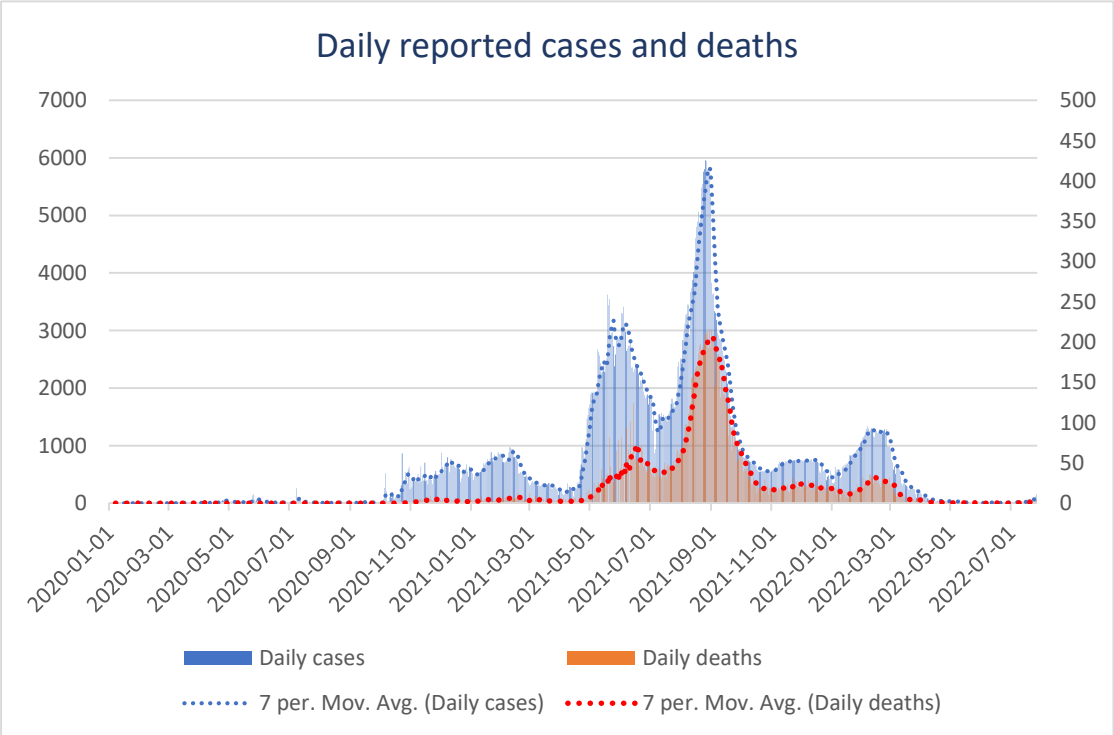

Figure 1.2: Epidemiological Curve – COVID-19 cases and deaths

1.3 Variant driven COVID-19 waves in Sri Lanka and sequencing efforts

As SARS-CoV-2 spread globally, genomic data were used to understand transmission dynamics at a local, national and international level. Sri Lanka experienced three COVID-19 waves thus far with an initial Wuhan variant driven wave resulting in 3,396 cases and 13 deaths. The first wave lasted from 27.01.2020 to 03.10.2020. The second wave driven by B.1.411 variant, spanned from 04.10.2020 to 14.04.2021 and resulted in 92,341 cases and 591 deaths. The third wave had three peaks the first of which was driven by the Alpha variant followed by Delta and Omicron variant.

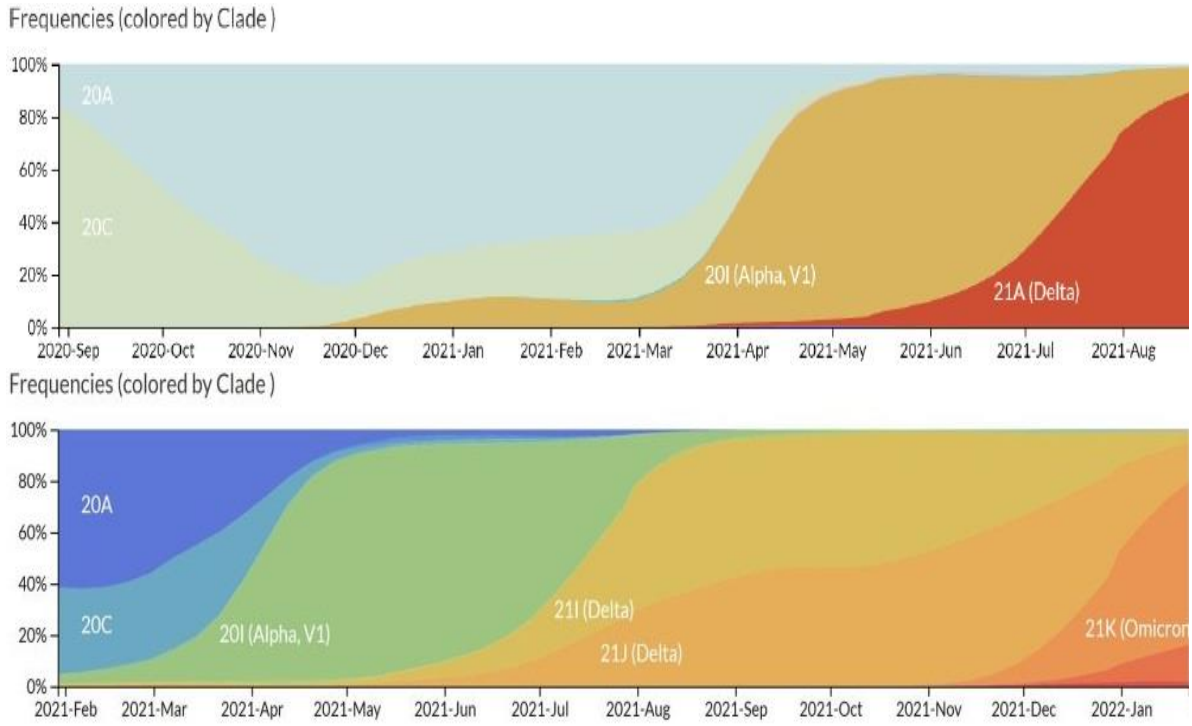

Figure 1.3: Change in the SARS-CoV-2 variants in Sri Lanka over time

Genomic sequencing for SARS-CoV-2 started as early as January 2020 and has been continued throughout the waves. The virus strains identified in March 2020 belonged to clades B.1, B.2, B 1.1, and B.4, demonstrating that SARS-CoV-2 strains were introduced to Sri Lanka from multiple locations. B.1.411 was first detected in week 39 in 2020 and since B.1.411 has dominated the outbreak in Sri Lanka until week 12, 2021. According to the graph (Figure 1.3) on the timeline of the emergence and displacement of different variants in Sri Lanka the earlier dominant alpha variant has now been displaced by delta variant (B.1.617.2) which has become dominant towards the latter part of August 2020.

Allergy, Immunology and Cell Biology Unit of the Department of Immunology Molecular and Molecular Medicine of the University of Sri Jayewardenepura found delta

variant with 4 mutations in the western province of Sri Lanka. The frequency of the mutated delta appears to increase over the time, suggesting that it could be more transmissible than the original delta (delta without these 4 mutations).

B.1.1.7 was detected at the beginning of 2021 and its prevalence has rapidly increased in Sri Lanka. The first case of these was an imported infection on the January 02, 2021, with a further 26 imported cases detected between January and March 2021. By the end of April 2021, B.1.1.7 was the predominant variant circulating in many parts of the country. The introduction and spread of the B.1.1.7 led to an exponential rise in the number of cases, along with the number of deaths. Despite strict quarantine for returning travellers, where several imported B.1.1.7 cases were detected, a period of relative quiescence has been followed by an explosive increase in cases across the country. During a period of 1 month, it appeared that the B.1.1.7 lineage had almost completely replaced the circulating B.1.411 due to is higher transmissibility.

In Sri Lanka, during last week of December 2021 and the first week of January 2022 SARS-CoV-2 virus BA.1, BA.2 and B.1.1.529 sub lineages were detected in several locations. The most recent variant, B.1.1.529 later named Omicron, was reported from South Africa in November 2021. With the rapid spread and hence increased hospitalization rates, the Technical Advisory Group on SARS-CoV-2 Virus Evolution (TAG-VE) declared Omicron variant as a Variants of Concern (VOC). Latest VOCs have largely replaced other co-circulating SARS-CoV-2 variants and Omicron is currently the dominant variant circulating, accounting for >98% of viral sequences shared on GISAID after February 2022. Omicron has taken around two months to take hold in the country, whereas in other countries it became dominant in just two weeks after the first detection.

SARS-CoV-2 vaccine rollout commenced in Sri Lanka from 29th January 2021 in a limited capacity among frontline workers followed by a full launch by March – April 2021. The National Development Vaccine Plan identified the priority groups and vaccination progressed giving priority to high risk and vulnerable groups. The genomic surveillance capacities in the country have been strengthened through the support provided by stakeholders. The genomic intelligence generated through the continuous surveillance has informed the public health decision making and has also to the global body of knowledge on SARS-CoV-2 variant through the GISIAD platform and research.

1.4 Current economic crisis

According to the World Bank, Sri Lanka's economic outlook is highly uncertain due to the fiscal and external imbalances. Like several of its neighbours in the region, Sri Lanka is navigating rising inflation and growing difficulties to finance fiscal deficits and trade deficits. The most recent reported foreign currency reserve levels in the country were at an abysmal $50 million, having plummeted an astounding 99%, from $7.6 billion in 2019. Sri Lanka also suffered a large decline in exports in 2020, but goods exports are back to the pre-pandemic level at present. The depreciation and deficiency of foreign currency reserve threaten to delay the import of raw materials required for export productions. Sri Lanka's health sector, which had already been hit by the pandemic, has also suffered. There are medicine shortages, particularly for heart, stroke, and cancer patients. In certain hospitals, routine operations are on hold and only emergency operations have been permitted.

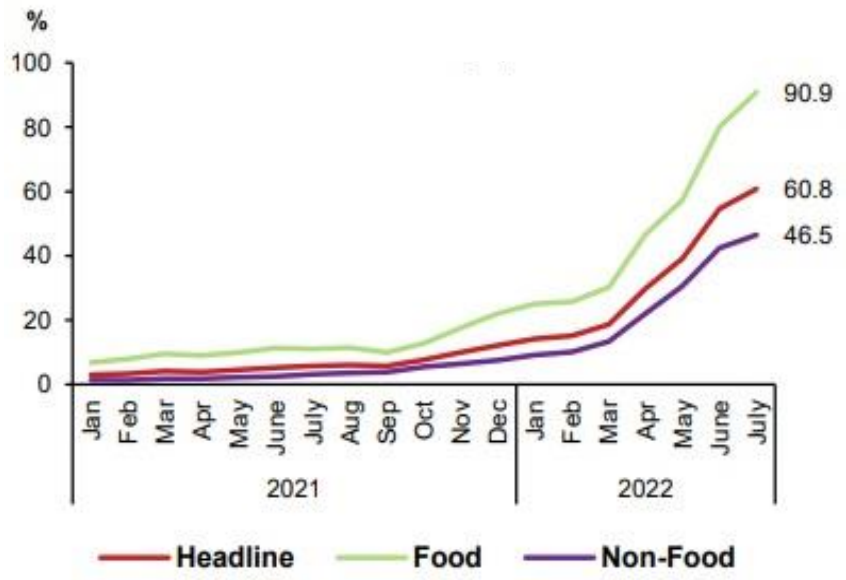

Figure 1.4: Movement of CCPI based Inflation (Year-on-Year% Change)

In Sri Lanka, difficulties in the macro economy, especially in the external sector have spill-over effects to the financial sector. The country is facing high inflation, reaching 54.6% for the month of June 2022 with the rise of 40.0 index points (220.2 in June vs. 180.3 in April 2022) of the National Consumer Price Index (*Measures of Consumer Price Inflation | Central Bank of Sri Lanka),* and a dire lack of foreign currency reserve. Headline inflation, as measured by the year-on-year (Y-o-Y) change in the Colombo Consumer Price Index (CCPI, 2013=100) increased to 60.8% in July 2022 from 54.6%

in June 2022. This increase in Y-o-Y inflation was driven by the monthly increases of both Non-Food and Food categories. Accordingly, Food inflation (Y-o-Y) increased to 90.9% in July 2022 from 80.1% in June 2022, while Non-Food inflation (Y-o-Y) increased to 46.5% in July 2022 from 42.4% in June 2022 (Figure 1.4) and Health (Y-o-Y) increased to 25.6% in July 2022 from 24.4% in June 2022. With the lack of investor confidence in the broader economy, the Colombo stock market has been in free fall since early 2022. Meanwhile, annual average inflation rose to 23.1% in July 2022 from 18.4% in June 2022.

During the COVID-19 pandemic the Government of Sri Lanka (GoSL) implemented all measures recommended by WHO through the Strategic Preparedness Response Plans of 2020 and 2021 using a 'whole of government whole of society' approach. The measures showed dividends with Sri Lanka being able to control the pandemic successfully. The COVID-19 response plan which included strong surveillance, quarantine from time of arrival in the country or once exposed to infected patients, isolation and treatment of patients and primary vaccination of almost all with additional/booster doses were all provided free of charge by the GoSL. The total cases and deaths reported as of 30th May 2022 were 663,816 and 16,516 deaths with a CFR of 2.49%. The country has vaccinated 77.8% of its population with one dose of COVID-19 vaccine and 66.1% of the population with both doses. The Booster/additional dose coverage is 36.4% of the total population. During COVID-19 the Ministry of Health continued to provide routine uninterrupted essential medical services which was reflected positively in the recently published third round of the global pulse survey on continuity of essential health services during the COVID-19 pandemic. *(Third round of the global pulse survey on continuity of essential health services during the COVID-19 pandemic)*

The government took proactive measures mentioned above to mitigate the impact of the pandemic. Despite limited fiscal space, resources were allocated (approximately 0.7 percent of GDP) for health measures, cash transfers and postponed tax payments. While public expenditures increased, revenues declined, resulting in a widening of the fiscal deficit in 2020 (*Economic and Poverty Impact of COVID-19)*

Therefore, it is a challenge for the government to ensure adequate financing for the activities related to ending the pandemic in the country and, the assistance from the donor agencies is necessary at this stage.

1.5 Health in times of economic crisis

Sri Lanka's health system has a long track record of strong performance. For at least 50 years it has achieved much better outcomes in maternal and child health and infectious disease control than would have been predicted by its income level. The cornerstone of Sri Lanka's Universal Health Coverage (UHC) agenda has been supply-side efforts to ensure strong service delivery. It has provided universal, free access to government provided healthcare services to its population since the 1930s.

The country has made significant gains in essential health indicators, witnessed a steady increase in life expectancy among its people, and eliminated malaria, filariasis, polio and neonatal tetanus. At the same time, Sri Lanka's health system faces challenges arising from a rapidly aging population, and the need to address the burden of non-communicable diseases which currently contributes to nearly 75% of deaths in the country (*Sri Lanka health system review*).

Before the COVID-19 outbreak, the economy started recovering from the Easter Sunday Attacks that caused GDP growth to decelerate to 2.3 % in 2019, the lowest in two decades. COVID-19 manifested a new economic shock with unparalleled economic consequences. Sri Lanka defaulted on its 51 billion USD foreign debt on 12th April 2022 amidst the mounting economic crisis, with an inability to import essential goods including medicines, after the coronavirus pandemic hampered vital revenue from tourism and foreign remittances.

Sri Lanka is currently facing the worst economic and political disaster since independence, which has brought the country into a state of near-bankruptcy. The healthcare services have now plunged into a crisis that appears to be of almost insurmountable proportions. Apart from locally produced medicines the country depends on imported medicines and other material for its healthcare services. The acute shortage of foreign exchange the country is facing has resulted in an inability to obtain all these essential items to maintain services. Prices of essentials in short supply like food, medicine, fuel and transport have skyrocketed. People are suffering due to acute shortage of essentials due to the rising economic crisis. As a result emergence of an epidemic of malnutrition especially among children and the elderly would be inevitable. With the economic crisis, the government is facing difficulties in allocating funds to provide essential services. The shortage and rise of the prices of essential drugs and medical

supplies for both preventive and curative services, are serious concerns. Increasing prices of drugs and medical devices and laboratory services will further challenge the already rising out-of-pocket expenses (OOPs), which have already gone beyond 50% of the total recurrent health expenditure. OOPs rising above 65% will be a huge challenge to the concepts of Free Health and Health for All.

Within the month of April 2022, the price of several essential medications was raised by 27% with no reciprocal increase in purchasing power for the populations. Sri Lanka's nationwide inflation in April 2022 determined under the National Consumer Price Index (NCPI) jumped to 33.8 % from 21.5 % recorded in March 2022 on a year-on-year basis based on the reports of the Department of Census and Statistics. The headline inflation reported for the month of May 2022 was 45.3%. Contributions to the inflation rate of June 2022 from the food group and non-food group are 36.0% and 22.9% respectively.

Sri Lanka, in fact, has been an example of good progress on social development even with relatively slow economic growth. At the core of this success is a strong primary health care (PHC) system that pre-dates Alma Ata and is based on public investment in public health. This constitutes the largest social protection effort in Sri Lanka, providing effective access to quality, affordable and equitable health services for all. Moving forward in a sustainable way, the principles of Sri Lanka's primary health care approach must be safeguarded while adjusting the health system to the country's evolving needs and towards resilience. Given the country situation, two critical adjustments shall be imperative: *more health for the money and more money for health*.

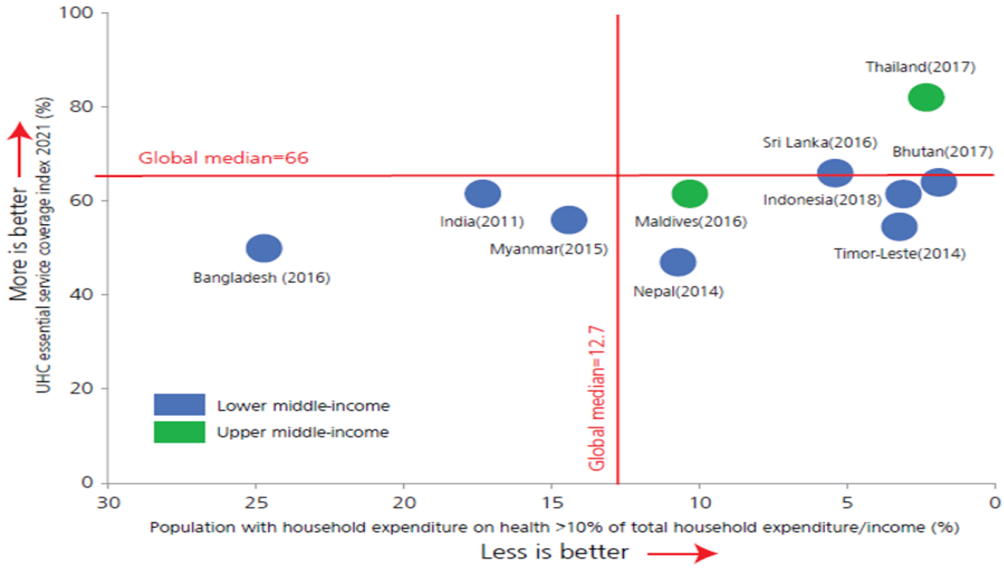

Figure 1.5: UHC Essential Service Coverage Index, 2021

COVID-19 has significantly reduced financial protection globally. Between 2015 and 2017, the incidence of catastrophic spending continued to worsen primarily due to OOP spending on health among the non-poor. According to the World Bank and the International Monetary Fund, the global economic contraction caused by the ongoing coronavirus pandemic is the largest in the last eight decades, raising the world poverty rate, exacerbating inequalities and damaging long-term economic growth prospects.

COVID-19 control and social distancing policies triggered steep declines in economic activity globally. The world experienced one of the largest declines in GDP in more than a century, unprecedented in magnitude and scale, with most countries seeing negative economic growth and almost all seeing a slowdown in economic growth in 2020. The COVID-19 pandemic soon transformed from a health crisis to a social and economic crisis causing a number of adverse economic and social effects in Sri Lanka.

As of 8th April 2020, the domestic Sri Lankan rupee depreciated against the US dollar to 200.47 making history that its first time reaching the Rs.200 level or above mark, despite Sri Lankan government's effects to control it. Sri Lanka's GDP has dropped to USD 81 billion by 2021 (from USD 90 billion in 2018) severely affecting the already limited fiscal space. Sri Lanka's public debt has risen from 94% of GDP in 2019 to 119% of GDP in 2021. The country's official reserves were USD 2.36 billion in January 2022, having dropped by 79% over the last 3 years. Moreover, Sri Lanka has to pay around USD 4.4 billion annually until 2025 as debt repayment.

1.6 Summary of COVID-19 response in Sri Lanka 2020-2021

During the first wave of COVID-19 Sri Lanka was placed at the 10th position according to the Global Response to Infectious Diseases (GRID) index, which is used to rank countries based on the effectiveness and efficiency of leadership and preparedness in relation to the management of COVID-19 pandemic (Amaratunga *et al.*, 2020).

On March 2020 the COVID-19 outbreak in Sri Lanka tested and overstretched the country´s emergency response capacity. Sri Lanka succeeded to provide a unified response due to its political will, a resilient and high-performing health system through past health investments, the government´s commitment to provide free health care, and emergency preparedness strategies in-place such the National Action Plan for Health Security (NAPHS), Emergency Medical Technicians (EMT) and the Strategic Preparedness and Response Plan COVID-19. Sri Lanka's response to the pandemic has

been swift and coordinated through government and the whole population, and thanks to health partners' engagement and support.

Recognizing the fact that health emergencies do require inter sectorial and inter-ministry coordination, decision-making and action, in late January the President brought together a range of stakeholders in addition to the health sector on the COVID-19 response. The Ministry of Health in collaboration with other government ministries and development partners also worked to increase public awareness around preventive public health measures including physical distancing, frequent hand hygiene and respiratory etiquette and through whole-of-society engagement approaches, including with local organisations. Under following active domains, activities have been implemented as a response to COVID – 19 pandemic in Sri Lanka.

I. Surveillance, Laboratories, and Public Health Intelligence

The National COVID-19 Surveillance System has been established by the Ministry of Health for COVID – 19 in designated hospitals. COVID-19 surveillance was integrated to existing platforms, situation reports were prepared daily in addition to weekly Epidemiology Reports and methods identified to monitor transmission intensity. Equipment and physical resources were provided, and staff was trained to conduct systematic risk assessments including mathematical modelling.

Scaling up Surveillance, Epidemiological Investigation and Contact Tracing were done actively. Mapping of all the COVID-19 cases using digital platforms (GIS) was initiated in the western province. Further expansion will be in the process. Real-time information sharing with accessibility to enter and utilize the data at a regional level is possible with the intervention. Every district with the platform can have a situation update in their locality, based on indicators

The quarantine strategy and the discharge criteria were revised from time to time based on global evidence. Mechanisms for contact tracing established. Surveillance for early identification of possible positive (for COVID-19) employees at vulnerable places like workplaces and monitoring the preparedness and response was ensured. National disease surveillance system was strengthened at pre-arrival stage, arrival stage and post-arrival stages at the points of entry.

In late January, the Epidemiology Unit developed a working case definition of COVID-19 in line with the WHO case definition for detecting the disease. The definition subsequently underwent two revisions to broaden the criteria used in the case definition. According to the latest case definition, all patients fitting into one of six suspected case definitions are transferred by ambulance to the closest designated hospital for confirmatory testing and management. If positive, the patient once stable is transferred to a designated COVID-19 treatment centre through the COVID-19 coordinating centre. For patients with severe acute respiratory distress must not have their treatment delayed and be taken to designated isolation or ICU units.

Furthermore, all close contacts of COVID-19 patients were tested as well. As part of the strategy, Public Health Inspectors (PHI) interview each confirmed case thoroughly. For those who do not have symptoms, they must quarantine for 14 days. Initially, the Ministry of Health permitted close contacts to quarantine at home, but due to frequent breaches of the quarantine rules, it was mandated that all close contacts to be sent to institutional quarantine for 14 days to limit the risk of the spread of disease. Quarantine centres were set up across the country, primarily in the northern part of the country to not just house close contacts, but also returning Sri Lankans. The repatriation of 33 Sri Lankan students from Wuhan, China in February, 2020 provided Sri Lanka an optimal opportunity to test the quarantine process.

Initially 58 quarantine centres were identified with a capacity of 3000 people. This was later expanded to 72 quarantine facilities which also include “pay and stay” hotels. The centres combined can accommodate more than 10 000 people. The Tri Forces were placed in control of managing the quarantine centres. Special quarantine centres were also set up for health care workers.

Later all asymptomatic patients who do not warrant hospitalization, from intermediate care centers and secondary care centers were directed to receive home based integrated care in order to increase the availability of hospital facilities to the most needed patients. This integrated care mechanism ensured the early pick up and hospitalization of the most required patients through a SMS portal 1904 and 247 call center. At the peak of the third wave, a total of 165,483

patients were home supported with close medical supervision which contributed substantially to reduce the patients burden in health institutions and provided some psycho-social benefits to the patients and their family members for being managed at home, under a qualified medical officer. Categorizing patients for admission to tertiary, secondary and intermediate care level was executed through the National Coordinating Centre in coordination with regional ends.

Meanwhile, those who are positive with COVID-19 symptoms were admitted to one of the quarantine hospitals set up in every district across the country. Initially during 1st wave we only had 14 treatment centres which later increased up to 84 centres during 2nd wave and 278 centres during 3rd wave (Table 1.1).

	First wave	Second wave	Third wave
Number of Treatment Centres	14	84	278
Number of ICU Beds	10	32	201
Number of Hotels	0	14	70

Table 1.1: Number of COVID-19 treatment centers as at 31.12.2021

Epidemiology Unit publishes the surveillance situation report every afternoon at 3pm from January 2020 to date and vaccination data incorporated from January 2021 for scientific decision making based on the surveillance and contact tracing pattern.

The Department of Virology at MRI initiated molecular test for SARS-CoV-2 virus (PCR testing) within three weeks of the pandemic outbreak in Sri Lanka. The method was validated through the WHO-supported external quality assessment program (EQAP) from University of Hong Kong. The existing 18 state laboratories were enrolled for EQAP and have undergone EQAP. MoH produced guidelines on performing PCR tests at private sector laboratories in March 2020 and ensure that COVID-19 testing was available in 32 laboratories nationwide by June 2020. The MoH developed the laboratory strategy for COVID-19 in May 2020 which were updated on June 2021. Genomic sequencing of SARS COV 2 virus strains was established at Medical Research Institute, National Hospital Kandy and Teaching Hospital Karapitiya in the latter part of 2021. Laboratory surveillance was expanded covering other areas of the country.

(Annexure I) PCR testing of the high-risk categories identified according to timely updated guidelines.

A total of 994,866 PCR tests were done in state sector in 2020 (Table 1.2). In 2021 2,859,523 PCR tests were done with a daily average of 7,993 and a positivity rate of 13.4%. 2,287,581 Rapid Antigen Tests (RAT) were done in 2021 with a daily average of 6,267 tests.

	20-Mar	20-Apr	20-May	20-Jun	20-Jul	20-Aug	20-Sep	20-Oct	20-Nov	20-Dec	TOTAL
Total	2552	20330	43185	42694	53427	68563	61320	154787	249454	298554	994866

Table 1.2: Number of PCR tests done during 2020

Mandatory pre-departure testing and Day-1 PCR testing were done among travellers. Laboratory data digital platform to capture COVID-19 laboratory data at subnational levels is available at the Ministry of Health level to facilitate capacity building, systems strengthening and information sharing and for effective decision making.

II. Vaccination, Public Health and Social Measures, and Engaged Communities

Sri Lanka is one of the Advance Market Commitment (AMC) countries that received the vaccine for 20% of its population (4.2 million) free of charge under the COVAX facility.

A National Coordinating Committee (NCC) for COVID-19 Vaccine chaired by the Secretary of Health was convened.

Three technical subcommittees were appointed.

1) Technical subcommittee for prioritization, targeting and surveillance for COVID-19 Vaccine,
2) Technical subcommittee for maintenance of cold chain and logistics on COVID-19 Vaccine and
3) Technical subcommittee for costing for implementation of COVID-19 Vaccine.

The National Advisory Committee on Communicable Diseases (ACCD) appointed a technical working group called the National Immunization Technical Advisory Group (NITAG) to provide guidance on vaccine selection,

prioritization of population groups and development of national deployment and vaccination plan (NDVP).

Health Ministry accepted the offers made by GAVI, WHO, UNICEF and other partner agencies for logistic support, extended for smooth vaccine deployment in the country.

Application for the vaccine request was submitted during the first week of December 2020. In addition, the Government of Sri Lanka has explored the possibility of getting additional vaccines.

Country readiness:

The National Immunization Technical Advisory Group (NITAG) developed a term of reference to outline the mandate of the technical working group.

As of October 2020, according to the Vaccine Introduction Readiness Assessment tool (VIRAT), Sri Lanka has completed two major activities, the formation of the National Coordinating Committee (NCC) and NITAG while many of the other activities were in progress. VIRAT is a national level tool to be used by the Ministry of Health with the support of the partner organizations. It is a planning road map that ensures adequate readiness for COVID-19 vaccine. The National Coordinating Committee (NCC) for COVID-19 continued working in close collaboration with COVAX mechanism and other avenues for assurance of vaccine deployment.

The technical expert working group of ACCD convened the 2nd meeting on 27th November 2020 at the Epidemiology Unit of the Ministry of Health.

The main objectives were the identification of target groups for vaccination and completion of vaccine request before the scheduled deadline, December 2020. In alignment with SAGE recommendations on prioritization, the committee decided to consider three priority groups: the frontline health workers and other key front-line workers actively involved in COVID-19 outbreak management, older age groups and persons with co-morbidities.

The request for Technical Assistance (TA) for the implementation of the major activities identified in the COVAX Readiness and Preparation Plan and VIRAT/VRAF was submitted on 27th November 2020.

The National Deployment and Vaccination Plan (NDVP) was developed and presented to the ACCD and to the NCC and finalized. The final version of the NDVP was uploaded in the partner's platform for the review by the regional reviewers.

EPI programme manager, consultants and regional level technical persons participated in a series of regional and global level training programmes under the areas of regulatory preparedness, NDVP development, AEFI and AEFI surveillance, cold chain management etc.

National Immunization Technical Advisory Group (NITAG)/ Advisory Committee on Communicable Disease (ACCD) meetings were conducted for required recommendations for the Ministry of Health policy decisions as required for vaccination campaigns. Regulatory pathways for approval and regulatory oversight of COVID-19 vaccines, including risk-based pharmaco-vigilance and post-marketing surveillance of products were efficiently expedited. Therefore, all five types of COVID-19 vaccines including Covishield/ AstraZeneca, Pfizer-BNT, BBIBP-Inactivated Vero Cell (Sinopharm), Sputnik and Spikevax-Moderna were properly registered at the National Medicines Regulatory Authority (NMRA). Initial risk category-based vaccination scaled up to population-based vaccination and achieved high coverage (Table 1.3) for completed primary doses with adequate stocks of vaccines for the booster vaccination.

The vaccination program in Sri Lanka commenced on 29th January 2021 with the vaccination of frontline healthcare workers, and essential workers involved in pandemic control activities and provision of essential services. Subsequently, the vaccination was expanded to the general population using a risk-based approach giving priority to individuals with co-morbidities and the elderly. The 2nd dose administration was initiated on 28th April 2021. The booster dose vaccination is currently underway with the first booster dose being offered in November 2021 and the second booster dose in May 2022 for adults aged 20 years and above. At present, children aged 12 – 19 years are offered a primary series of two doses of COVID-19 vaccine, and those 20 years and above are offered additional two booster doses.

	Number of 1st doses administered	Number of 2nd doses administered	Number of 3rd doses (booster) administered	Number of 2nd booster doses administered
AstraZeneca	1,479,631	1,418,593		
Sinopharm	12,049,614	11,184,215		
Sputnik V	159,110	155,812		
Pfizer	2,612,660	1,010,747	8,054,082	43,536
Moderna	804,801	787,361		
Total	**17,105,816**	**14,556,728**	**8,054,082**	**43,536**
Eligible population	Above 12 years (17,655,390)	Above 12 years (17,655,390)	Above 20 years (14,819,810)	Above 20 years (14,819,810)
Vaccinated as a percentage of the eligible population	96.88%	82.45%	54.35%	0.3%
Vaccinated as a percentage of the total population (Total population – 21,919,416)	78.04%	66.41%	36.74%	0.2%

Table 1.3: COVID-19 Vaccination Summary Sri Lanka as at 04.08.2022

The vaccination programme has achieved great success in the year 2021. As of 04th August 2022, 17,105,816 had received the 1st dose and second dose recipients were 14,556,728. 8,054,082 received first booster dose and 43,536 received the second booster dose.

The future COVID-19 drive, considering the cohorts to be covered, will depend on the future burden of the disease globally and locally, the variants in circulation, emerging variants and the effectiveness of vaccination against these variants, WHO recommendations on continuation of vaccination of eligible groups, and the demand for vaccination in the population. Given these considerations, it is difficult to arrive at an estimate of the future funding requirement for a vaccination program against COVID-19.

Regular task force meetings were conducted regarding the COVID-19 situation in Sri Lanka with active and regular participation of main stakeholders.
Quick communication channels for internal communication were established (e.g., WhatsApp groups, Viber groups).

Communication with other stakeholders for risk communication, such as UN agencies, the education sector, local government authorities, the corporate sector, telecommunication networks, the Department of Government Information, and media agencies have also been established, including regular meetings.
Internal communication with different Directorates of the Ministry of Health, provincial, regional, institutional level and other related departments were established including healthcare workers at all levels.

The DReAM campaign (Figure 1.6) has been implemented in collaboration with the MoH, WHO, and the Itukama (Presidential Fund) to guide the public "towards a new normal".

D – Distancing (physical distancing)
Re – Respiratory etiquette (cough/sneeze using the inner side of your elbow and not directly to the front)
A – Aseptic techniques (handwashing, using hand sanitizer, avoiding touching your face)
M – Mask (proper wearing of a face mask and its proper disposal)

Figure 1.6: DReAM Campaign

Hotlines and important numbers shared widely and one-to-one communication was established by answering the public queries.

The government of Sri Lanka has implemented a sequence of control measures including nationwide curfew, inter-district travel restriction, and lockdown of high-risk villages to reduce the growth rate of the COVID-19 pandemic. The work from home has been arranged for state, semi government and private sector entities except which are categorized as essential services.
A decision was taken to deliver medicines to homes of regular patients who have registered at hospitals with the support of Divisional Secretaries, Public health officers and the security forces.

Measures were taken to pay Rs. 5,000 each to all senior citizens allowance recipients, disabled persons, farmers who are registered under the Farmers' Insurance Scheme, Samurdhi recipients and kidney disease patients. Thriposha and other nutritional supplements were delivered directly to the residences of expectant mothers and families with malnourished children.

Limiting participation in social gatherings such as weddings, parties and funerals. (75% of the usual capacity of the hall) Limiting passengers in public transport and making a safer public transport system with adherence to COVID-19 precautionary measures. Considering the controlled nature and the possibility of further escalation of the COVID-19 epidemic, public activities were permitted strictly adhering to COVID-19 preventive measures.

Given the highly contagious nature of COVID-19 and its rapid spread across borders, it was imperative that the country's Strategic Preparedness and Response Plan implement strict guidance and recommendations on Points of Entry (PoE). Immediately Sri Lanka operationalized its Public Health Emergency of International Concern (PHECP) which involved operationalizing its National Public Health Contingency Plan for Designated Airports in Sri Lanka and its Public Health Emergency Preparedness and Response Plan for Sea Ports in Sri Lanka. Under the Quarantine Act, from 26th January 2020, all incoming passengers were requested to fill in a Health Declaration Form at health office of the PoE before passing through a thermal scanner for a temperature check. If passengers fell into the "suspected case" category, they were taken into an isolated area before being transferred to a designated hospital. At the beginning of February 2020, Sri Lanka was one of the first countries to evacuate students from the epicentre of the virus in Wuhan who were repatriated back home following stringent quarantine measures.

As COVID-19 continued to spread rapidly around the world, the Sri Lankan government introduced mandatory 14 day quarantine and travel restrictions for passengers coming from Italy, Iran and South Korea from 10th March 2020, to limit the spread of disease in the country. They were quarantined at a centre in Batticaloa. The Government decided to suspend all types of visas from high-risk countries and temporarily ban visitors from these countries on 14th March 2020.

By mid-March, as the COVID-19 situation in specific countries worsened, the Government issued a travel ban for an additional 13 countries. Later all borders were closed except for cargo.

Upon arriving back in Sri Lanka, citizens must quarantine at a designated quarantine centre or "pay and stay" hotel for 14 days, followed by 14 days of home quarantine. PCR testing for COVID-19 was done at the Point of Entry, which was then repeated between the 10th and 12th day of entering into Sri Lanka, unless symptoms appear prior to this. Moving forward, as Sri Lanka positions itself to reopen its borders in September, Points of Entry will be opened to travellers in a phased-out manner. Later 10 days quarantine and subsequently people who have got vaccinated with both doses are allowed to move free if prior to departure PCR tested negative.

III. Research, Development, and Equitable Access to Countermeasures and Essential Supplies

A special unit was established to streamline the storing and distribution of medical supplies to COVID–19 treatment centres and other related institutions island wide.

Mainly 15 items were issued on the requests made by the hospitals and according to a regular distribution plan. These items were issued to Prison Hospital, Army Hospital, Air Force, Town Councils, Election Commission Department and Airport as per requests, in addition to designated Covid centres, line ministry and provincial institutions.

Donations received from World Bank, Asian Development Bank, WHO, China and individuals were stored and issued from the special unit. This unit was functioning round the clock, and directly monitored by the Director /MSD and supervised by Deputy Director General (Medical Supplies). Further this unit has a daily reporting system on receiving and issuing items. MSD carried out emergency procurement and supply of all diagnostics (PCR, antigen Kits, etc) required for the campaign against 1st and 2nd waves of the of the COVID-19 pandemic.

The Medical Supplies Division procured and supplied personal protective equipment, sanitizer chemicals and disinfectants for the COVID-19 management in the country. Continuous supply of all diagnostics (PCR, antigen Kits, etc.), PPE, sanitizer chemicals and disinfectants for the COVID-19 management in the country were ensured by the MSD.

Ministry of Health decided to issue the drugs for three months requirement for the cancer patients who were being treated from oncology clinics considering COVID- 19 pandemic in the country. Procured COVID-19 vaccines and syringes required for the mass vaccination programme of the COVID-19 pandemic.

Weekly Supply Position Review Meetings were conducted under the chairmanship of the Director General of Health Services with the participation of the representatives of all stakeholders and institutions including National Medicines Regulatory Authority (NMRA), State Pharmaceutical Corporation (SPC) and Ministry of Health to minimize the shortages of essential drugs and devices.

Formulary Revision for medical drugs list, medical devices list and laboratory items list of the MSD was initiated and 90% has been completed. Institutional and Regional Drug and Therapeutic Committee Meetings (DTC) were conducted successfully via teleconferencing facility amidst of the increasing Covid 19 situation in the country. Pricing and checking units were established with the objective of providing a quality customer care for clients.

The project “Improving Stores Facilities of Line Ministry Institutions, RMSDs and Base Hospitals in all provinces” was carried out. 70 health institutions out of 90 have completed the drug stores upgrading work successfully during the year 2021. Infrastructure facilities and MSMIS system connection had been provided to 145 provincial hospitals by the “Medical Supplies Management Information System (MSMIS) Expansion” project.

All available resources and supply systems including MSD and RMSD were mapped. Inventory review was conducted on supplies based on WHO Disease commodity package, COVID-19 kit and a central stock reserve was established. Supply chain control and management system was reviewed in relation to

medical and other essential supplies. The capacity of suppliers was assessed to meet the increased demand. Personnel involved in supply chain management was trained. Provision of PPE for health staff to meet the preparedness for Covid cluster outbreak was continued. Uninterrupted supply of equipment and consumables for curative care services was ensured.

IV. Safe and Scalable Clinical Care, and Resilient Health Systems

Furthermore, in specific localities which were locked down for long periods, mobile medical clinics were conducted with the support of main government hospitals. Drugs were issued to the patients receiving treatment for chronic diseases and facilities to measure blood pressure, blood sugar and medical consultation were made available. Remote healthcare was initiated to prevent overcrowding and to minimize exposure of high-risk immune-compromised NCD patients such as those undergoing kidney transplant or on dialysis to COVID-19. The NCD Bureau in collaboration with the private sector launched a telemedicine system in 16 government Nephrology clinics.

A mechanism was established to deliver medicines to the homes of the patients who usually purchase drugs from the private sector. Pharmacies delivered medicines for a reasonable fee.

More hotlines and m-based and e-based models were introduced for inquiries, requesting appointments and health message delivery in non-COVID-19 health subjects, e.g., National Mental Health helpline.

The NCD Bureau used digital platforms to disseminate health information. Messages were disseminated via mass/social media on recognizing danger signs of NCD emergencies and how to reach for medical services in an emergency.
Social media were utilized to disseminate lifestyle advice during the lockdown. Relevant experts frequently conducted awareness programmes on mass media on NCD care.

Routine Expanded Program on Immunization (EPI) services were maintained.
RMNCAH (Reproductive, Maternal, New-born, Child and Adolescent Health)-routine services were functioned except in lockdown areas/ curfew areas. During the second wave in October-November 2020, approximately 110 pregnant

mothers have been identified as COVID-19 positive. Designated maternal hospitals for COVID infected pregnant mothers. Maternal deaths were reviewed as a desk review which revealed COVID related excess deaths were due to transport restrictions, delays in accessing health care and fear and stigma.

TB, HIV, Leprosy, Dengue control and surveillance, Malaria prevention of reestablishments activities were continued with necessary changes. However, active screening of prison inmates for TB, HIV was withheld.

Emergency surgeries and surgeries on cancer patients were not disrupted.
The Directorate of Mental Health and National Institute of Mental Health with the support of WHO strengthened the National Mental Health Helpline (1926) and expanded the National Mental Health Helpline to all the districts to enable increased referral and district-based support during the pandemic.

The directorate with the support of other stakeholders supported continuation of medication for patients under long term care for psychopharmacological medication, drug stocks for two consecutive months were delivered through the Sri Lanka Postal service and the community mental health staff- to their doorsteps.

The Directorate of Mental Health, National Institute of Mental Health, Sri Lanka College of Psychiatrist and Sri Lanka Psychologist Association continued with mass media programmes on psychological wellbeing and emotional balance and available mental health services in the country.

Directorate of Mental Health, Sri Lanka College of Psychiatrists, WHO and MHPSS (Mental Health and Psychosocial Support) communities provided continued access to essential mental health services and medications. Medical Officers of Mental Health (MOMH) teams and the community of Psychiatry Nursing Officers conducted home visits to the most vulnerable patients for the administration of injectable medicines. The mobile clinics were conducted in the lockdown areas with public health measures. National Technical Committee on Mental Health developed to promote the mental wellbeing of frontline health personnel and curtail future mental health conditions.

World Health Organization aided Ministry of Health to conduct a Mental Health Wellbeing Programme dedicated to frontline health workers and their families. National Call Centre named "Suwasawana" was established with a computer network system under the supervision of Additional Secretary Medical Services to manage all correspondence received through the hotline "1907". The main aim of the system is to establish a centralized system to address the grievances of the public.

"Suwasariya" 1990 ambulance service continued with the transport of patients with COVID-19 and other emergencies. They were given special training on transportation of COVID-19 cases with mental illness.

Most of the capacity building programmes were continued using virtual means. Infrastructure facilities and technical support to adopt online training procedures for digital dialogues were provided by GoSL, and other developmental partners. Scenario Based Reference Guide with all circular instructions was designed and disseminated on Maintaining RMNCAYH services during the COVID pandemic in early 2021.

Ministry of Health established National Steering Committee on disorders on Management of Substance Use to prevent and control and manage persons with substance use disorder. The management protocol for heroin withdrawal was developed and disseminated. Nearly 10 out-patient facilities identified to manage substance use disorders and circular sent to all relevant stakeholders.

Ministry of Health together with National Authority on Tobacco and Alcohol, National Dangerous Drug Control Board, SLCP and civil society organizations implemented many support services for targeted individuals and community wide health promotion and advocacy programmes.

V. COVID-19 Preparedness and Response Coordination

A presidential task force for the prevention of the COVID-19 outbreak has been established to provide strategic guidance, leadership and coordination. This signifies the priority that has been given at the presidential level to outbreak control.

Regular meetings are held with the leadership of the president with the participation of the highest-level officers representing each sector. In addition, frequent coordination and planning conferences were held to consult experts from health, tri-forces, police and state intelligence services, foreign affairs, customs, immigration, civil aviation, disaster management, and municipal councils.

A Health Cluster chaired by WHO Representative and Co-Chaired by MoH and "Sarvodaya" was established to coordinate the support of non-state stakeholders. Ministry of Health coordination body held daily operational meetings which were chaired by the Secretary of Health, Additional Secretaries and DGHS with relevant DDG's, Directors, and Chief Epidemiologist and other high-level staff from all relevant sectors involved in the COVID-19 response to assess the situation and make essential decisions.

Operationalizing the decisions taken at the COVID-19 Management meeting was done daily at the "COVID-19 Preparedness and Response Meeting" headed by Addl. Secretary MS with relevant DDG's, Directors, and Chief Epidemiologist, and other high-level staff of MoH.

National Health Emergency Operation Centre for COVID-19 Prevention and Control was established at the DPRD to assist the health sector for COVID-19 response through multi-stakeholder coordination.

Regular review of prevention and containment of the epidemic transmission in the districts with all PDHSs and RDHSs is conducted under the guidance of Additional Secretary (PHS). A COVID-19 Technical Committee Co-Chaired by the Addl. Secretary MS and DGHS continue to provide technical guidance based on the best possible evidence.

2. Strategic Preparedness for 2022

In this document for 2022, based on the WHO guidance, Sri Lanka aims to sets out a number of key strategic adjustments that if, implemented rapidly and consistently at national and subnational levels, will enable the end the acute phase of the pandemic.

Drivers of disease impact and transmission

Drivers of high transmission

- Viral evolution resulting in more transmissible variants
- Lack of immunity due to lack of access to vaccination, hesitancy, or incomplete vaccination, and/or waning protection against COVID-19 following infection or vaccination
- Inconsistent and/or inadequate use of proven Public Health and Social Measures
- Insufficient capacity to use and or adjust interventions on the basis of available public health intelligence and accrued knowledge
- Misinformation, disinformation and politicization undermining the effectiveness of proven public health and social measures, therapeutics, and vaccines

Drivers of high impact

- Low vaccination coverage, with complete schedule, in priority use populations globally
- Waning protection against severe disease or death following vaccination and/or infection
- Lack of access to life-saving tools such as oxygen and other therapeutics
- Lack of access to diagnosis, late diagnosis and delayed entry into clinical care pathway
- Viral evolution reducing the efficacy of life saving tools
- Poorly defined and/or resourced care pathways for post-COVID-19 Condition (Long COVID)

• Insufficient capacity to adjust recommended layered interventions on the basis of available public health data and analysis

SPRP 2022 Objectives

In order to achieve this target, World Health Organization has identified two main strategic objectives.

1. Reducing and controlling the incidence
2. Preventing, diagnosing and treating the coronavirus disease

Those two strategic objectives are designed to optimize national and international strategies and to improve operational readiness (Figure 2.1).

Figure 2.1: Strategic Objectives to End the Covid 19 Health Emergency

Currently Sri Lanka is in the stage of ending the acute phase of the Covid 19 pandemic, and an integrated plan has been developed to end the pandemic. In this regard, the following core components have been identified (World Health Organization, 2022a) as shown in Figure 2.2.

1. Surveillance, laboratories and public health intelligence
2. Vaccination, public health and social measures and engaged communities
3. Research, development and equitable access to counter measures
4. Safe and scalable clinical care and resilient health systems
5. COVID-19 preparedness and response coordination

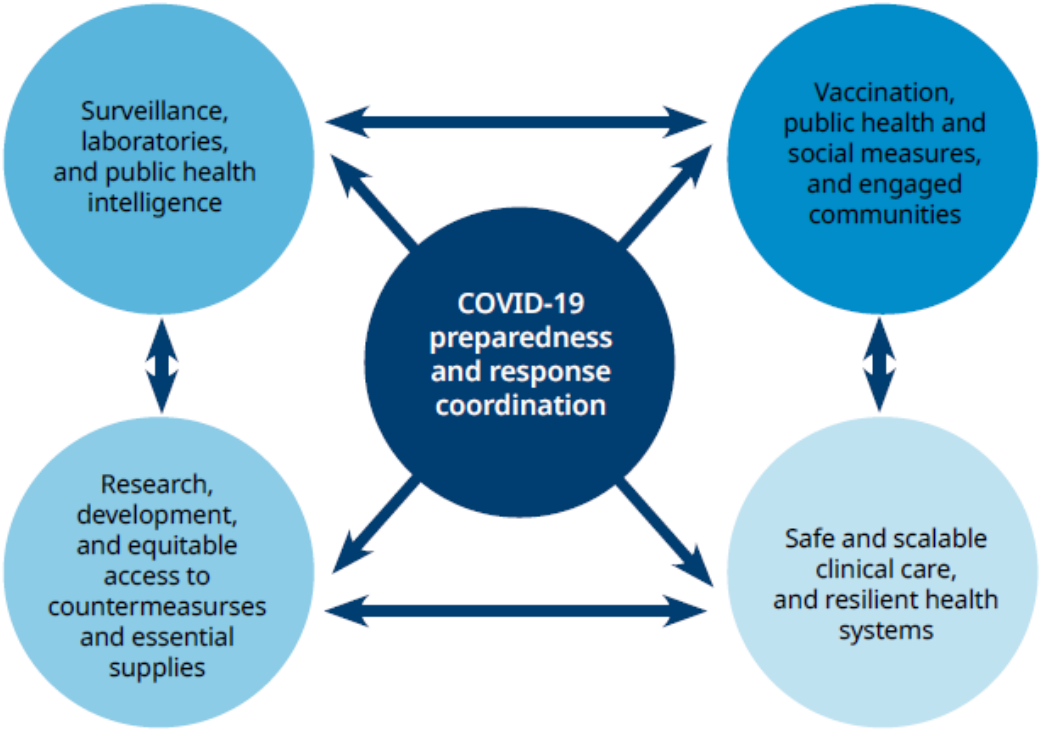

Figure 2.2: Five Core Components of Covid 19 Preparedness, Readiness and Response

However, as witnessed from countries and territories around the world at present there is a risk of resurgence of COVID-19. An increase in the number of COVID-19 cases can be observed in the global context after a declining trend that persisted up to March, 2022 (World Health Organization, 2022b). Hence, certain measures have to be taken at this stage to prevent any surge in cases and thereby to end the pandemic.

Despite the successful management of COVID-19 in Sri Lanka, the negative impact caused by the pandemic is notable especially in relation to the economy, education and health. According to their study, Centre for Policy Alternatives (2021) states that household financial conditions in Sri Lanka worsened in 67.8% of the participants due to the pandemic.

3. Estimated Budget for Strategic Preparedness, Readiness and Response for 2022

Sri Lanka has performed consistently well on basic health indicators with achievements above its income level. It has, in fact, been an example of good progress on social development even with relatively slow economic growth. To preserve the hard-earned progress towards SDG3 and all other Sustainable Development Goals special interventions are needed to ensure essential services are provided uninterruptedly through the financial crisis situation.

The health sector at the central and provincial levels is financed by both domestic and foreign sources. At the central level, domestic financing averaged 94.7% of health sector resources while foreign resources averaged 5.3% between 2015 and 2021. In the 2021 central-level approved budget, the domestic to foreign resources ratio in the health sector stands at 95% to 5%. Donors make a relatively small contribution to the country's health budget, with most external resources coming in the form of loans.

Most of Sri Lanka's public health expenditure is recurrent. In the 2021 central-level health sector budget, the recurrent-to-capital spending ratio stands at 85% to 15%. Capital expenditure at the central level is predominantly allocated for the development of hospitals, whilst almost the entirety of recurrent expenditure is spent on the operation of hospitals and the provision of medical supplies.

Low and middle-income countries such as Sri Lanka have pre-existing vulnerabilities that could be exacerbated by the crisis as well as potentially give rise to new vulnerabilities. Prioritizing funding for healthcare service delivery is key under normal circumstances, but is even more crucial in times of crisis as it can provide for services that the poor find difficult to access. Strategic Preparedness and Response Plan for the year 2022 was developed based on the strategic guidelines given by the World Health Organization for the year 2022 (World Health Organization, 2022a). Accordingly, stakeholder concerns were obtained, and a plan was developed aiming at ending the pandemic situation.

The activities planned by the Ministry of Health for each core component as described by the World Health Organization is described below.

Table 3.1: Activities planned with the estimated budget

Activity	Estimated Budget (USD)	Unit Implementing the Activity
3.1 Surveillance, Laboratories and Public Health Intelligence		
Construction of Four Public Health Laboratories	4,444,500.00	Additional Secretary (PHS)
Programme with professional colleges with respect to laboratory consultants who engage in technical evaluation	500.00	Laboratory Services
Program to the staff of the laboratory services, NBTS, MRI representing procuring entities	500.00	
Conduct Consultative Meetings to discuss on state party Annual Report on International Health Regulations (IHR) capacities 2022	2,000.00	Quarantine Unit
Proposal for Evaluation of the activities in National Action Plan for Health Security in Sri Lanka in 2022	2,100.00	
Establishment of sentinel surveillance system for soil transmitted helminth infection amongst children in Sri Lanka	1,400.00	MRI
3.2 Safe and Scalable Clinical Care and Resilient Health Systems		
Proposed hospital list for establishment of ICUs / HDUs (Annexure II)		Additional Secretary Medical Services
Establishment of six bedded ICU units in 11 hospitals	7,762,590.00	
Establishment of eight bedded HDU units in 8 hospitals	3,598,400.00	
Monitoring of facilities and performance in medical services	13,900.00	MS I
Digitalization of medical services (regarding provision of infrastructure and training	13,900.00	
Development of database for medical services (for development and training	600.00	
Printing of information booklet for consultants and medical administrators	27,800.00	
Donor registry and database development (for development and training)	1,400.00	
Transplant coordinators and intensive care unit staff sensitizing project	1,400.00	
Intensive care unit surveillance and database implementation training	900.00	
Gap analysis of medico legal services in Sri Lanka	900.00	
Database development for medico legal activities	900.00	
Digitalization of monthly reports from quality units of hospitals	5,600.00	
Quality improvement of nursing care services	1,666,700.00	

Development of A&E at District General Hospital Vavuniya with Equipments	13,900.00	
Purchase of cytotoxic isolators for cancer treatment centers - one	55,600.00	National Cancer Control Programme
Purchasing of brachytherapy machine (Internal beam radiation) for cancer treatment center	555,600.00	
Purchase of flowcytometry machines	111,200.00	
Purchase of Immunohistochemistry machines	111,200.00	
Purchase of multipara monitors, infusion pumps and syringe pumps for day care treatment centers (40)	55,600.00	
Purchase of chemotherapy chairs and adjustable beds for day treatment centers	69,500.00	
Purchase mammogram machines	416,700.00	
Strengthening NRDPRU for CKD/CKDu screening in CKDu affected areas	44,600.00	National renal disease prevention and research unit (NRDPRU)
Strengthening of RDHS for CKD /CKDu screening in CKDu affected areas	72,400.00	
Strengthening of PD units for point of care service for CKD/ CKDu patients	72,400.00	
Strengthening of HD units for point of care services for CKD/CKDu patients	72,400.00	
Strengthening of renal information system – Introduction of workstations for dialysis unit	2,500.00	
Expansion and construction of dialysis units	200,000.00	
Strengthening of dialysis unit facilities	2,243,100.00	
Incomplete activities in 2021	2,350,200.00	
Introduction of new compact flow cytometry-based HLA typing & screening system with comprehensive technical support package	556,300.00	National Blood Transfusion Service
Activities incomplete in 2021	2,212,600.00	
Purchase of Technical Malathion 5850 l	138,900.00	Dengue control
Purchase of Cyphenothrin 6500 l	181,600.00	
Purchase of Temephose 1900 kg	31,900.00	
Purchase of 25 Portable USS	174,600.00	
Purchase of 100 Microhaematocrits	35,000.00	
Purchase of 100 Infusion Pumps	55,900.00	
Advertising through electronic and print media	55,900.00	
Purchase of 100 Multipara Monitors	139,700.00	
Purchase of 10 7-part analyzers	139,700.00	
Purchase of 100 Syringe Pumps	55,900.00	
Upgrading the web-based disease surveillance System	8,100.00	
Upgrading the web-based entomological surveillance system	6,900.00	
Purchase of Personal Protective Equipment	41,900.00	

Review of HIV testing in Hospital setting and scaling up of HIV testing	13,300.00	National STD/AIDS Control Programme
Training of primary health care staff on guideline – assessment ,diagnosis ,management of mental disorders at primary health care	13,900.00	Mental Health
Printing of revised consumer care guideline and mental health service providers directory	1,100.00	
Capacity building training for Community psychiatric nurses	1,700.00	
Capacity building training for psychiatric social workers	1,700.00	
Mental Health Promotion Training for Consultant Community Physicians and Mo/MH Focal Point	1,700.00	
Multi Sector Alcohol Prevention program (MAP)	3,000.00	
Child Mental Health Training program	2,000.00	
MO/MH in-service training	2,000.00	
Capacity building of mental health team on management of Epilepsy and other neurological disorders	3,000.00	
1926 help line refresher training	5,600.00	
Training of health workers at Community Support Centre	900.00	
Training media persons on responsible reporting of suicides	700.00	
Programme on “Strengthen multi-stakeholder community based mental health care services”	8,900.00	
Purchasing of multiple medical equipments (Annexure III)	5,860,000.00	Biomedical Engineering Services
Printing PMR, Participant Register, Monthly Return, Follow up Register		Non Communicable Disease
Printing PMR Male (H 1309) for 2022	58,400.00	
Printing PMR Male (H 1309) for 2023	255,600.00	
PMR Female (H 1310) for 2022	152,800.00	
PMR Female (H 1310) for 2023	277,800.00	
Purchase cholesterol strips for HLC		
Purchase TC cholesterol strips-for 2022	219,500.00	
Purchase TC cholesterol strips-for 2023	583,400.00	
Purchase of glucose strips for HLC		
Purchase of glucose strips for HLC 2022	72,900.00	
Purchase of glucose strips for HLC for 2023	125,000.00	
Purchase computers		
Purchase of three desktops and three laptops to NCD Directorate (Surveillance/virtual capacity building of district staff)	4,500.00	
Purchase of three desktops and three laptops to office of DDG NCD	4,500.00	
Conducting meetings and purchase of Analysis materials (Annexure IV)	73,100.00	EOHFS

3.3 Research, Development and Equitable Access to Countermeasures and Essential Supplies		
Development and Implementation of Planning Management Information System	100,000.00	DDG (Planning)
Develop an updated and a valid grading system for Private Medical Institutions	13,900.00	Private Health Sector Development
Updating the knowledge of health staff at hospitals on infection control programmes (25 programmes for 1500 staff)	1,700.00	Research and Development
150 mackintoshes, 25 blood spill management kits, 80 meters for cloth for cotton hand towels for training activities	1,600.00	
3.4 Vaccination, Public Health and Social measures and engaged communities		
Child Health and Development Record	166,700.00	Family Health Bureau
Vitamin and Mineral Powder (Multiple Micro Nutrient Powder - MMN)	1,030,000.00	
RUTF (BP100)	931,000.00	
Vitamin A Mega Dose Capsules (100000 IU)	142,000.00	
Mebendazole 500 mg tablets	11,000.00	
Procurement of growth monitoring equipment	41,700.00	
Printing of essential registers and returns for monitoring and evaluation	138,900.00	
Maternal care formats	64,200.00	
Obstetric Bed Head Tickets	27,500.00	
Glucose 75mg sachets	79,700.00	
Publishing of maternal care clinical guides	5,600.00	
Urine 2 para strips	107,800.00	
Iron folate	2,026,100.00	
Calcium Lactate	334,500.00	
Vitamin C	299,500.00	
Folic Acid	40,100.00	
HDU equipment	136,500.00	
Trainings on basic maternal care guide	2,800.00	
Poster on maternal danger signals	1,400.00	
Validation of psychosocial screening tool	900.00	
Procurement of reagents for screening for congenital hypothyroidism	444,500.00	
Procurement of dried blood spot collection cards for congenital hypothyroidism	49,300.00	
Procurement of envelopes to dispatch samples (dried blood spot collection cards) of congenital hypothyroidism screening	5,600.00	
Labour room beds	27,800.00	
Procurement of digital Baby weighing scales	27,800.00	

Procurement of Pulse Oximeter with Neonatal Probes	27,800.00	
Procurement of Ultrasound Scan machine	208,400.00	
Procurement of Multi para monitor	55,600.00	
Procurement of Cardiotocography Machines	55,600.00	
Printing of MOEWS chart	13,900.00	
Printing of SCBU/NICU History record sheet (H1164)	1,400.00	
Printing of Neonatal Examination Format (H1162)	13,900.00	
Printing of Neonatal admission sheet (H1167)	5,600.00	
Condoms	350,000.00	
Oral Contraceptive Pills	260,000.00	
DMPA (Depot-Medroxyprogesterone Acetate)	560,000.00	
Intra Uterine Device	42,000.00	
Single Rod Implants	370,000.00	
Two Rod Implant	555,000.00	
AD syringes	70,000.00	
HPV DNA Test kits for cobas 4800	388,900.00	
Development of online training materials and capacity building programmes	55,600.00	
Essential capacity building activities on lactation management, life skills, child mental health, SRH for adolescents,	27,800.00	
MCH reviews	13,900.00	
Maternal death reviews	13,900.00	
Maternal and perinatal death reviews central level meetings	8,400.00	
Biannual reviews for MOMCHs, Regional Supervising Public Health Nursing Officers, and SSO	13,900.00	
High level governance meeting including technical advisory committees	8,400.00	
3.5 COVID-19 Preparedness and response coordination		
Maintenance of hardware and networks in hospitals and public health institutes and central level (health information unit)	277,800.00	Health Information Unit
Expansion of Covid-19 related hospital information system, software upgrade	138,900.00	
Development of ICU at Infectious Disease Hospital Kilinochchi with equipment	277,800.00	MS I
TOTAL	**45,649,390.00**	

(Exchange Rate = 360LKR per 1 USD)

As this technical documentation has illustrated, Sri Lanka finds itself at a stage of vigilant sanguinity as a result of its superior response to the unprecedented COVID-19 pandemic. During this catastrophic economic crisis, with more investment into future preparedness, there is no doubt the country can work hard to build a much stronger, robust and resilient health system which can be even better prepared for the next health crisis.

Annexure I: Number of PCR tests done in 2021 in state sector

	Laboratory Name	Total Samples Tested	Positive Samples - First Time	Positive Samples - Repeat	Inconclusive Samples	Daily Avg. Tests	Positivity rate %
1	Bandaranayake International Airport - Katunayake	339,484	38,789	49	6,026	930	11.4
2	MRI	309,472	44,952	100	4,325	848	14.5
3	BH - Colombo East (Mulleriyawa)	233,755	41,626	47	13,939	640	17.8
4	TH – Karapitiya	218,707	27,275	93	586	599	12.5
5	National Hospital – Kandy	169,193	18,657	279	1,419	464	11.0
6	PGH – Badulla	156,031	24,747	1	4,127	427	15.9
7	TH – Anuradhapura	143,758	11,802	2,538	1,305	394	8.2
8	TH – Jaffna	143,455	12,258	14	4,642	393	8.5
9	Faculty of Medicine - Sri Jawawardanapura	136,236	7,893	579	157	373	5.8
10	National Institute of Infectious Diseases	117,807	21,730	1,912	4,641	323	18.4
11	TH – Batticaloa	110,669	9,466	127	299	303	8.6
12	Sri Lanka Army Hospital	85,157	5,778	214	1,164	233	6.8
13	TH – Kurunegala	71,055	13,908	66	101	195	19.6
14	Apeksha Hospital - Maharagama	62,163	9,604	730	2,047	170	15.4
15	TH - Sri Jayawardhanapura Teaching Hospital	62,089	6,692	31	270	170	10.8
16	TH – Rathnapura	60,960	13,537	19	522	167	22.2
17	DGH - Nuwara Eliya	56,493	11,281	4	1,034	155	20.0
18	TH - Kothalawala Defence University (KDU)	55,424	7,602	257	3,134	152	13.7
19	DGH – Kegalle	53,291	12,993	23	747	218	24.4

20	TH - Colombo North Teaching Hospital (Ragama)	49,476	7,839	480	3,136	136	15.8
21	National Institute of Health Sciences (NIHS)	40,408	9,472	9	3,724	132	23.4
22	Faculty of Medicine - Jaffna	39,253	3,062	5	3	108	7.8
23	National Hospital - Sri Lanka	38,475	3,860	1	1,911	105	10.0
24	BH – Theldeniya	37,023	6,629	156	641	152	17.9
25	TH - Colombo South Teaching Hospital	29,217	5,342	17	255	80	18.3
26	Faculty of Medicine - Peradeniya	13,646	2,957	20	623	37	21.7
27	University of Peradeniya	11,020	1,433	4	35	30	13.0
28	Faculty of Medicine - Colombo	7,809	514	12	250	21	6.6
29	Faculty of Medicine - Kelaniya	4,528	1,210	8	397	19	26.7
30	DGH – Hambantota	2,144	236	2	10	14	11.0
31	Faculty of Medicine - Karapitiya	1,325	292	70	4	4	22.0
	Total	**2,859,523**	**383,436**	**7,867**	**61,474**	**7,993**	**13.4**

Annexure II: Proposed hospital list for establishment of ICUs / HDUs

Province	Proposed hospitals to establish ICUs	Proposed hospitals to establish HDUs
Western	B.H. Wathupitiwala	
Southern	B.H. Thissamaharamaya	B.H. Elpitiya
	B.H. Walasmulla	
Uva	B.H. Bibila	B.H. Welimada
Sabaragamuwa	B.H. Eheliyagoda	B.H. Kolonna
Central	B.H. Rikillagaskada	B.H. Rikillagaskada
North Western	B.H. Nikaveratiya	B.H. Puttalam
North Central	B.H. Thambutthegama	B.H. Medirigiriya
Eastern	B.H. Sammanthurai	B.H. Thirukkovil
	B.H. Dehiatthakandiya	
Northern	DGH Mannar	DGH Mullaithivu
Budgetary estimate for a six bedded ICU		
Construction work		
Preliminaries		7,000.00
Civil Work - Substructure		26,400.00
Civil Work - Superstructure		139,000.00
Water supply and Drainage work		9,200.00
Electrical work		16,600.00
Mechanical Work		61,100.00
IT work		7,000.00
External Work		5,560.00
Other (Consultancy fee, Price escalations, Taxes)		83,400.00
Medical Equipment		
Seven ICU Ventilator with Oxygen Sensors		38,900.00
Seven 7 channel multipara monitors with capnography		89,500.00
Two 5 channel multipara monitors		11,200.00
One Defibrillator with pacing facility		16,700.00
Seven Suction apparatuses		15,600.00
Twenty-four Syringe pumps		66,700.00
Ten Infusion pumps		22,300.00
One Portable ultrasound scanner machine with Doppler facility		13,900.00
One Mobile Ventilator		16,700.00
Two Pulse Oximeters		5,600.00
One Spot Lamp		600.00
One Mobile X -Ray unit		27,800.00
Two Patient Warmers		6,700.00
One Blood and Fluid Warmer		2,800.00
One ECG Machine		1,200.00
One Cardiotocography Machine		4,500.00
One C PAP Machine		3,300.00
Four Blood Pressure Apparatus - Android		500.00
Other Equipment		
Two Office Tables		1,100.00
Six Chairs		130.00
Six Over bed tables		500.00
Four Steel cupboards		300.00
Two Customised emergency trollies		900.00

Two Visitors' area – gang chairs units	500.00
Six Laundry buckets – Large size	30.00
Two Adjustable patient trolley with side bars	500.00
One LCD screen survey	200.00
Two Cool boxes	40.00
Four Emergency lamps	70.00
One Desktop computer with printer	400.00
Two Filters	60.00
Two 2 door fridges	1,200.00
Total cost estimate for a six bedded ICU	**705,690.00**
Total cost estimate for six bedded ICUs in 11 hospitals	**7,762,590.00**
Budgetary estimate for an eight bedded HDU	
Preliminaries	4,200.00
Civil Work - Substructure	18,100.00
Civil Work - Superstructure	111,100.00
Water supply and Drainage work	9,200.00
Electrical work	11,200.00
Mechanical Work	50,000.00
IT work	5,600.00
External Work	4,200.00
Other (Consultancy fee, Price escalations, Taxes)	69,500.00
Biomedical Equipment and other equipment	166,700.00
Total cost estimate for an eight bedded HDU	**449,800.00**
Total cost estimate for eight bedded HDUs in 8 hospitals	**3,598,400.00**

Annexure III: Activity Plan by Biomedical Engineering Services

Activity	Qty	Estimate cost (Rs.)	Awarded Cost (Rs.)	Estimated Budget in 2021 (USD)	Local Charges for LC	Progress to date Physical Progress	Required Amount of fund in 2022 (Rs.)	Required Amount of fund in 2022 (USD)
Mobile X-ray	1		5,140,000.00			Local charge to be completed (Rs60,000.00)	60,000.00	
Multipara Monitor (ICU)	56		104,182,400.00			10% to be paid / pending delay committee decision	10,418,240.00	
ESWL for CSTH	1		55,000,000.00			10% to be paid/ installation not completed	5,500,000.00	
X-Ray CR System	2		5,000,000.00			20% to be paid/ installation not completed	1,000,000.00	
Digital Flurosco py Mc (Apeksha, Karapitiya)	2		172,404,000.00			20% to be paid/ installation not completed	34,480,800.00	
High-pressure Autoclave (>500L)	2		20,920,000.00			20% to be paid/ installation not completed	4,184,000.00	
OT Table	3		11,250,000.00			20% to be paid/ installatio	2,250,000.00	

						n not completed		
OT Lamp	2		3,949,000.00			20% to be paid/ installation not completed	789,800.00	
Low Temperature Autoclave M/c	1		9,200,000.00			20% to be paid/ installation not completed	1,840,000.00	
X-Ray CR System	1		2,500,000.00			100% to be paid	2,500,000.00	
Infant Resuscitator	1		247,500.00			100% to be paid	247,500.00	
Handheld Blood Analyser	24		68,950,000.00			100% to be paid	68,950,000.00	
Cartridges	31,000						0.00	
BP Apparatus	169		3,126,500.00			Goods received/100% to be paid	3,126,500.00	
Laryngoscope	2		14120000.00			goods not received	14,120,000.00	
Ophthalmoscope	28		1,274,000.00			goods not received	1,274,000.00	
High-pressure Autoclave (>800L)	2		28,440,000.00			goods not received	28,440,000.00	
Digital Fluoroscopy Mc (Kalubowila, Badulla) (NU/G/S	2			1,100,000.00	16,151,102.18	local charges to be done for Kalubowila m/c	16,151,102.18	

IL/19/144)								
DSA - NHSL	1			613,400.00	10,200,000.00	20% payment to be done/ application sent to bank	10,200,000.00	122,680.00
CT Scanner for Badulla	1			570,500.00		20% payment to be done/ application sent to bank	0.00	114,100.00
CT Scanner for NHSL	1			1,106,050.00	17,108,340.00	20% payment to be done/ application to be sent to bank	17,108,340.00	221,210.00
X-ray (Mobile)	24			2,154,497.28		20% payment to be done/ application sent to bank	0.00	430,899.46
Echocardiography M/c	8			572,512.00		20% payment to be done/ application sent to bank	0.00	114,502.40
CT Scanner Apeksha Hos.	1			550,000.00	15,240,000.00	20% payment to be done	15,240,000.00	110,000.00
CT Simulators (Kandy, Batticaloa	3			1,456,104.00	75,373,516.00	local charges to be completed	75,373,516.00	291,220.80

&Karapitiya)								
CT Scanner for Batticaloa	1			513,500.00	12,520,000.00	Installation not completed.	12,520,000.00	102,700.00
CT Simulator	1			756,400.00	1,660,000.00	20% payment to be done/ application to be sent to bank	1,660,000.00	151,280.00
MRI Machine (1.5 T) for Apeksha Hospital	1			1,494,075.00	21,140,000.00	to be opened LC	21,140,000.00	1,494,075.00
Transport ventilators	68			434,010.00	8,059,500.00	to be opened LC/ application sent to bank	8,059,500.00	434,010.00
CT Simulators for Apeksha Hospital	1			485,368.00	25,124,505.33	to be opened LC/ application sent to bank	25,124,505.33	485,368.00
CT Scanner with Accessories Matara	01			421,000.00	11,538,000.00	to be opened LC/ application sent to bank	11,538,000.00	421,000.00
Spot Lamp	17		2,108,000.00			to be awarded to Technomedics	2,108,000.00	

						Int'(pvt) ltd/ order not accepted by supplier		
Phototherapy Unit (Single Surface)	10		1,850,000.00			to be awarded to Biomed International / order not accepted by supplier	1,850,000.00	
Slit lamp with tonometer	8		7,960,000.00			to be awarded to Mervynsons/ order not accepted by supplier	7,960,000.00	
Auroscope	28		1,932,000.00			to be awarded to Mervynsons/ order not accepted by supplier	1,932,000.00	
CRRT	10	35000000.00				objetions received / preparing TEC report	35,000,000.00	
Neuro monitor	1	13990000.00				pending PC decision on TEC report for objections	13,990,000.00	

C-Arm X-ray unit	2	20000000.00				preparing TEC report for received objections	20,000,000.00	
MRI Scanner Kalubowila	1	300000000.00				pending PC decision on TEC report for objections received	300,000,000.00	
CT Scanner for Awissawella	1	150000000.00				submitted for evaluation on 12.06.2020/ Tec changing	150,000,000.00	
Multimonitors	26	15000000.00				under evaluation / sent letter to FHB to get the confirmation of Allocation	15,000,000.00	
X-ray Machine - Digital	2	80000000.00				opened bids on 27.09.2019 & under evaluation	80,000,000.00	
Anaesthetic m/c with ventilator	10	51900000.00				under evaluation	51,900,000.00	
		0.00					0.00	
Diathermy	3	0.00				Advertised on 18.08.2020/ Bids opened on 18.09.202	0.00	
		0.00					0.00	

						0& under evaluation		
Infusion Pumps	97	12610000.00				Advertised on 18.08.2020/ Bids opened on 18.09.2020& under evaluation	12,610,000.00	
		0.00					0.00	
Phototherapy Unit (Double Surface)	3	930000.00				Requirement fulfilled by COVID Tender/ sent letters to hospitals asking about the current needness of the machines	930,000.00	
Ventilator (Thearputic) - Neonatal	16	80000000.00				under evaluation	80,000,000.00	
Urology Laser Machine (120W)	2	50000000.00				under evaluation	50,000,000.00	
CT scanner for TH Kaluthara	1	150000000.00				under evaluation	150,000,000.00	
DSA M/c	3	300000000.00				preparing document - to be continued	300,000,000.00	

						to 2022 P.Plan		
Ventilator (Thearputic)	84	252000000.00				to be appoin a TEC/ file with Audit - to be continued to 2022 P.Plan	252,000,000.00	
Arthoscopy	4	96000000.00				2020.09.23 dated MPC"D" decision to re visit the technical specification/ preparing TEC report	96,000,000.00	
		0.00					0.00	
Cardiac Out put	11	13750000.00				preparing document	13,750,000.00	
CRRT	6	0.00				DDG instructed to conjoin with BES/PD/2019/04E	0.00	
		0.00					0.00	
Laparoscopy	3	60000000.00				preparing document/ to be changed TEC	60,000,000.00	
		0.00					0.00	
Laparoscopy (Operative)	2	32000000.00				preparing document	32,000,000.00	
		0.00					0.00	
Argon Plasma Coagulation M/c	1	3500000.00				preparing document	3,500,000.00	

Dopplar - Hand Held	2	400000.00				preparing document	400,000.00	
Echo Machine	3	45000000.00				preparing TEC report for pre bid meeting	45,000,000.00	
Endoscopy System (Processor, Light Source, Monitor, Cart)	3	48000000.00				re preparing spec as per the PC decision	48,000,000.00	
Duodenoscopes	6	12000000.00					12,000,000.00	
Gastroscope	6	12000000.00					12,000,000.00	
Colonoscope	6	30000000.00					30,000,000.00	
Double Balloon Enteroscope sys	1	16000000.00				submitted to PC for document approval	16,000,000.00	
Holmium Yag Laser Machine with Endoscopic	1	0.00				preparing document	0.00	
Video Bronchoscope	2	8000000.00				preparing document	8,000,000.00	
Thoracoscope	2	10000000.00				preparing document	10,000,000.00	
Ultra Sound Scanner (Colour Dopplar)	1	8000000.00				under evaluation	8,000,000.00	

Endobronchial USS (Ebus	1	20000000.00				under evaluation	20,000,000.00	
C-Arm Fluoroscopy	1	15000000.00				under evaluation	15,000,000.00	
Ultra Sound Scanner	9	90000000.00				under evaluation	90,000,000.00	
X-Ray portable	4	80000000.00				under evaluation	80,000,000.00	
X-ray Illuminator - Double	46	690000.00				advertised on 14.08.2020 & opened on 07.09.2020/ under evalution	690,000.00	
Infusion Pumps	90	9000000.00				Bids opened on 15.09.2020 & under evaluation	9,000,000.00	
Syringe Pumps	90	14760000.00				Bids opened on 15.09.2020 & under evaluation	14,760,000.00	
Diathermy Machines	5	11000000.00				Pending PC decision for awarding	11,000,000.00	
		0.00					0.00	
X-Ray Digital	4	96000000.00				Pending PC decision for awarding	96,000,000.00	
MRI Scanner	1			1,366,000.00		to be placed the order/ planned to supplied under Japan donation		1,366,000.00
AMOUNT							**2,649,675,803.51**	**5,859,045.66**

Annexure IV: Events and items for the plan to ensure the Environment, Occupational Health and Food Safety of the country.

	Events / items	Event / Item required	Approximate cost per event/ item	Total Budget (LKR)
1	**Regulation meetings**	12	15000.00	180,000.00
2	Iodised salt test kit, for determining presence or absence of iodine in salt fortified with iodide. **Technical Specifications:** Kit contains: a. Test solutions, two 10 ml ampoules/vials with white caps. b. Recheck solution for identifying false negatives (for alkaline samples), one red 10 ml ampoule / vial. c. Salt holder (standardized plastic measuring sample). d. Instruction leaflet(s) in English, French, Spanish and Arabic. Instruction leaflet in other languages can be provided upon request. e. Colour reference chart. f. A device (safety pin) for opening the ampoules or vials. One kit can approximately test between 60 and 75 salt samples. **Shelf life:** Minimum of 18 months.	40000	170.00 (US$ 0.45)	6 800,000.00
3	**For Aflatoxin Analysis**			
	Affinity columns for G1,G2,B1,B2	250	5000.00	1,250,000.00
	Affinity columns for M1	250	6000.00	1,500,000.00
	Microfibre filters 11 cm	300	250.00	75,000.00
	Fluted filter papers 24 cm	300	150.00	45,000.00
	HPLC column C18, 5 µm, 4.6 x 250 mm	02	250,000.00	500,000.00
	HPLC grade Methanol	25 L (2.5 L x 10)	50,000.00	500,000.00
	HPLC grade Acetonilrile	5 L (2.5 L x 2)	50,000.00	100,000.00
	Tubing (PTFE Reaction Tubing 1/16'' 0.25 mm I.D. x 25 m) for Photochemical reactor With ferrule connector	2	2,50,000.00	500,000.00
	Ferrule, fittings & vailues for Waters HPLC, LCMS	10 from each		100,000.00
	Mercury lamp UV 254nm for Photo chemical detector	01	300,000.00	300,000.00
	FLR detecter lamp for waters 2475 detector (HPLC)	01	300,000.00	300,000.00
	2ml vials, clear glass, septa with plastic cap for HPLC, LCMS,GC	500	250.00	125,000.00
	2ml vials, Amber glass, septa with plastic cap for HPLC, LCMS,GC	1000	300.00	300,000.00

	ELIZA instrument and equipment with washer for Aflatoxin screening	01	5,000,000.00	5,000,000.00
4	**For Mercury Analysis**			
	Mercury standard 1000 µg/mL in 5% HNO_3	100 mL	100,000.00	100,000.00
5	**For Heavy Metal Analysis**			
	Setup solution (Be, In, U, Ce) for ICPMS - Perkin Elmar - Nexon	2000 mL (500 mL x 4)	100,000.00	400,000.00
	Heavy metal Standards - Con.1000ul/ml multy element standard solution	1 L	250,000.00	250,000.00
	Gold standard for ICPMS	50 mL	200,000.00	200,000.00
	Internal Standards for ICPMS (Sr, Rh, In, Tm - 40ul/ml)	250 mL x 4		400,000.00
	Conc. HNO_3 acid – ICP/MS grade	1L x 5	100,000.00	500,000.00
6	**For Trans Fat Analysis**			
	Liquid Nitrogen with container	10 L	100,000.00	1,000,000.00
	Nitrogen blower	01	1,500,000.00	1,500,000.00
	Internal standard (Triheneicosanoin) for fatty acid analysis	10 g	500,000.00	500,000.00
	Commercial blender	01	25,000.00	25,000.00
	Cylinder pressure regulators for Nitrogen, Helium, Hydrogen	01 from each (03)	100,000.00	300,000.00
7	**Essentials for laboratory testing**			
	Annual Accreditation fees	01	80,000.00	80,000.00
	Instrument Calibration fees	01	500,000.00	500,000.00
	Inter-laboratory Comparison for Edible oil	01	30,000.00	30,000.00
	Inter-laboratory Comparison for Iodized Salt	01	30,000.00	30,000.00
	Proficiency Testing for Edible Oil	01	400,000.00	400,000.00
	Wijs solution	25 L	10,000.00	250,000.00
	Crystalline dishes	50	5,000.00	250,000.00
	Weighing bottles	50	7,000.00	350,000.00
	Crucibles for Furnace	50	5,000.00	250,000.00
	Accreditation Scope expansion activities (PT/ILC)			200,000.00
	Setup solution (Be, In, U, Ce) for ICPMS - Perkin Elmar - Nexon	2000 mL (500mL x 4)	100,000.00	400,000.00
	Lap top computers	2	400,000.00	800,000.00
	Total			**26,290,000.00**

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