

COMBATTING COVID – 19 SRI LANKAN APPROACH

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EXECUTIVE SUMMARY

1. Coronavirus (COVID-19) pandemic is spreading across the world and Sri Lanka is no exception. As of 8 May 2020, more than 3,918,600 positive cases have been reported in 200 countries and territories and nearly 270,700 have died due to the pandemic.
2. Vision of His Excellency the President of Sri Lanka is “***proactive intervention to prevent any outbreak of COVID-19 within Sri Lanka***”. All preparations / actions by the Government of Sri Lanka (GoSL) are within this intent.
3. The GoSL took many proactive actions as epicenter of the COVID-19 shifted from China to the West. These include imposing travel restrictions to strengthening of health services. State Intelligence Service, Health Sector, Defence Forces and Police were kept ready to act in any outbreak. The GoSL established the National Operation Centre for Prevention of COVID-19 Outbreak (NOCPCO) to spearhead combined operations of combatting COVID-19.
4. The GoSL strategy in combatting COVID-19 is a whole-of-government approach. It cascades down from the vision and the direction of His Excellency the President and broadly focuses on following four Lines of Operations (LOO):
 - a. **Military / Police / Intelligence**. This line is focusing on prevention of virus getting into Sri Lanka, contain if already present and prevent further spreading through various processes. Major components in this process are Detection, Isolation and Tracing.
 - b. **Medical and Health Care**. This line is focusing on early detection, isolation and provide treatment while contact tracing through primary healthcare staff. Testing, health surveillance and continuous monitoring are essence in this process.
 - c. **Psychological**. This line is focusing on cognitive domain of the community and giving right information about COVID-19 situation, public confidence building and consolidate solidarity. Narrative of psychological LOO in fighting COVID-19 is “Life First”.
 - d. **Economy and well-being of community**. This line is focusing on maintaining the economy focusing on future in the country whilst looking after the immediate well-being of population by providing them with uninterrupted food supplies and medicines.

5. Synchronization of different LOOs and coordination and cooperation between line Ministries, Tri-forces and Police, Departments, Corporations, Authorities, Local Government Systems, all State and Private Sector partners are the masterpiece in Sri Lankan approach in combatting COVID-19.

6. Process adopted by the GoSL in controlling the spread of COVID-19 is akin to “**Hammer and Dance**” theory by “**Tomas Pueyo**”. It is focusing on using various aggressive proactive measures (**Hammer**) and thereby bring the spread of virus under controllable level (**Dance**).

7. Spreading of COVID-19 pandemic in the world is continuing and different countries have employed different ways and means to combat the spreading. Sri Lankan model is an aggressive, strenuous and continuous process but comparison of data related to COVID-19 in the world suggests that Sri Lankan approach is a unique and a dynamic model.

COMBATTING COVID 19 – SRI LANKAN APPROACH

INTRODUCTION

1. Coronavirus (COVID-19) pandemic is spreading across the world and Sri Lanka is no exception. Outbreak of COVID-19 was first reported in Wuhan Province in China in December 2019 and as of now it has spread to number of countries in the world. First COVID-19 patient in Sri Lanka was reported on 27 January 2020 and virus seemed active in Sri Lanka with the detection of second patient on 11 March 2020. On 30 January 2020, World Health Organization (WHO) declared the outbreak as a Public Health Emergency of international concern and on 11 March 2020, WHO recognized it as a pandemic. As of 8 May 2020, more than 3,918,600 positive cases have been reported in 200 countries and territories and nearly 270,700 have died due to the pandemic.

SRI LANKA'S PREPARATION FOR COVID-19

2. Vision of His Excellency the President is ***“proactive intervention to prevent any outbreak of COVID-19 within Sri Lanka”***. All preparations / actions by the Government of Sri Lanka (GoSL) are within this intent. The GoSL acted well before the pandemic hit the region. It established the National Action Committee for COVID-19 on 26 January 2020, a day before the detection of first diagnosed patient in Sri Lanka; a Chinese national who came to Sri Lanka as a tourist. This patient was treated at the National Institute of Infectious Diseases (NIID) and was discharged with a complete recovery on 19 February 2020. This incident prompted GoSL to act proactively and strategize the actions on possible breakout of COVID-19 in Sri Lanka.

3. State Intelligence Service was tasked to undertake researches on developments in the world and to assess possible impacts on the region, in particularly on Sri Lanka. Health sector was prepared for any medical emergency while other sectors were also prepared for any eventualities. Defence Forces were kept ready and were given the mandate to establish and handle quarantine centers. Police was given the directives to be prepared for enforcement of law during any situation. The GoSL's preparedness was clearly manifested in bringing in, quarantining and releasing of 33 students from China in February 2020.

4. Further, GoSL took many proactive actions as epicenter of the COVID-19 shifted from China to the West. The GoSL promptly imposed travel restrictions for arrivals mostly from affected countries starting from 10 March 2020 and imposed total travel restrictions into Sri Lanka by 20 March 2020. All arrivals were directed to central-quarantine. It was made compulsory for persons who came before 10 March 2020 to self-quarantine themselves. Many actions in the field of medical and health care were also taken. These include strengthening of health service, obtaining enough testing materials for COVID-19, infrastructure developments in already available hospitals, dedicating certain hospitals for

COVID-19 testing / patients and even constructing separate hospitals for COVID-19 patients. GoSL also established the National Operation Centre for Prevention of COVID-19 Outbreak (NOCPCO) to spearhead combined operations of combatting COVID-19. NOCPCO is playing a pivotal role in actualizing the vision of His Excellency the President.

SRI LANKA'S APPROACH FOR COVID-19

5. The GoSL strategy in combatting COVID-19 is a whole-of-government approach. It cascades down from the vision and the direction of His Excellency the President. Sri Lankan approach broadly focuses on four Lines of Operations (LOO) and those LOOs could be conceptualized as follows:

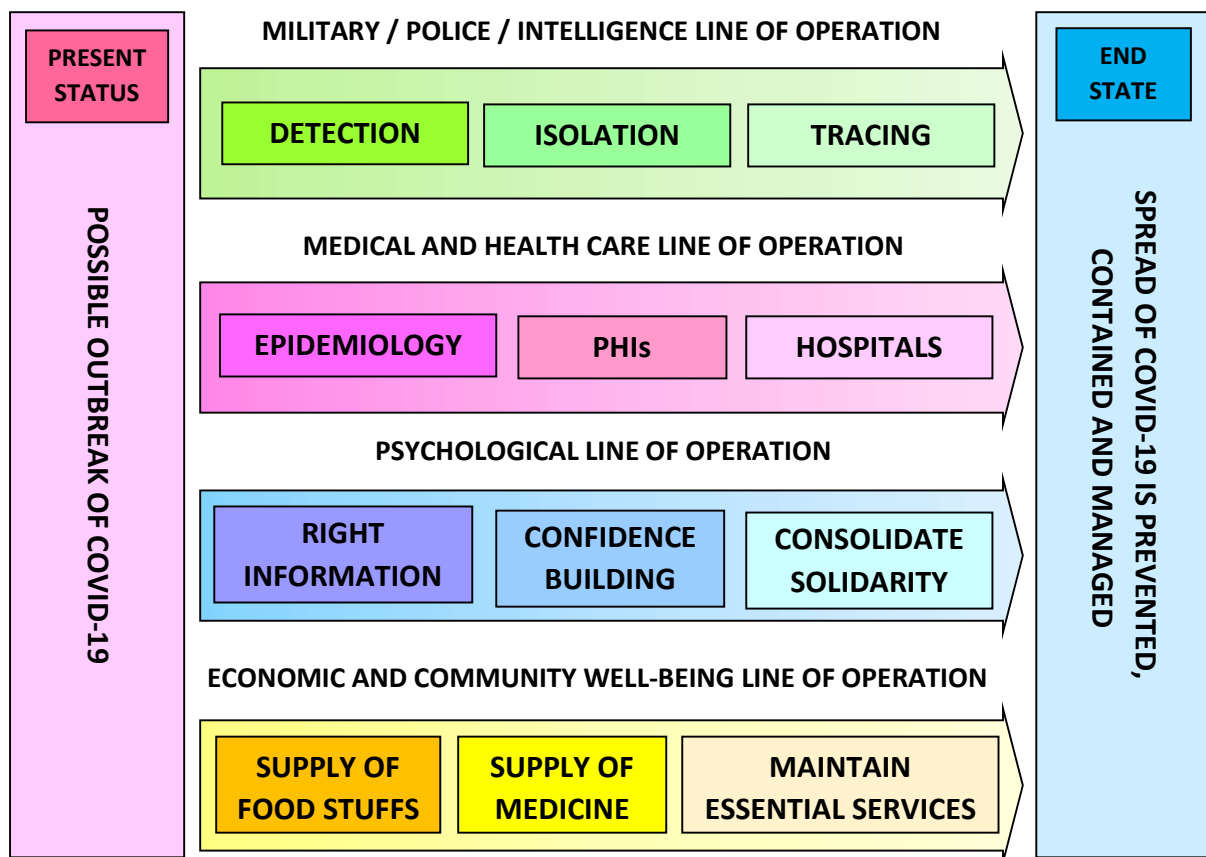


Figure 1: Conceptualization of Whole-of-Government Approach

6. Each LOO in the model is unique but complimentary and their focuses are as follows:

- e. **Military / Police / Intelligence**. This LOO is focusing on prevention of virus getting into Sri Lanka, contain if already present within the country and prevent further spreading through various processes. Military / Police / Intelligence LOO enables Medical and Health Care LOO and size the pandemic into a manageable scale for medical and health care to handle. Whilst State Intelligence Service is focusing on contact tracing, Sri Lanka Army is focusing on containment and Police is focusing on

controlling mobility to avoid spreading. Ministry of Defence is taking the lead in coordinating between all agencies in this LOO.

f. **Medical and Health Care.** Medical and Health Care LOO is focusing on early detection, isolation and provide treatment while contact tracing through primary healthcare staff. It also involved in quarantine of exposed persons while promoting public health preventive measures to prevent disease from spreading. The necessary testing facilities are also performed by a network of laboratories. Epidemiology Unit of Ministry of Health with the support of Public Health Inspectors and Medical Officers of Health at grassroots level and smooth functioning of the hospitals identified for quarantine and isolation in the country are of paramount importance in this regard.

g. **Psychological.** This LOO is focusing on cognitive domain of the community by providing right information about COVID-19 situation in the country and in the world, measures by government in place to prevent and control and spread of COVID-19, encourage people to abide by medical and health care instructions, adhere to the law and order and also to consolidate the national narrative / solidarity. Psychological LOO is to touch full spectrum of social fabric; each ethnicity and religion.

h. **Economy and well-being of community.** This LOO is focusing on maintaining the economy focusing on future in the country whilst looking after the immediate well-being of population by providing them with uninterrupted food supplies and medicines. It is also focusing on running the essential services and administrative functions in the country. Further, it looks at the mid and long term economic strategies against possible future global economic recession due to pandemic situation.

MILITARY / POLICE / INTELLIGENCE LINE OF OPERATION

7. This is an exclusively intelligence driven model. This LOO contributes largely to identify the origin of the virus, identify the vulnerable communities, possible contaminations and prevent the spreading through human mobility. Essence of the strategy is based on Detection (D), Isolation (I) and Tracing (T); DIT model. Each component in the model overlaps and complements each other. General approach of each component is as follows:

a. **Detection.** Detection is twofold; detecting positive cases and detecting vulnerable communities. Medical and Health Care LOO is responsible for the former. Detection in this context is employed to identify vulnerable communities, that is to say those who have come into the country from contaminated countries / areas, those who might have got exposed to the virus., etc. Detection process is combined with big-data analysis, verification of records with various agencies like Immigration and Emigration, Registration of People, Voter Registration., etc.

b. **Isolation.** Based on the results of detection, isolation is used to segregate different communities through number of measures to include community to oblige to self-quarantine, central-quarantine in quarantine centers, enforcing curfews to restrict the mobility of communities and thereby prevent the spreading, isolation of vulnerable areas and complete lock-downs if necessary. Security Forces, Sri Lanka Army in particular hold a massive responsibility of establishing and running quarantine centers, shifting people into quarantine centers as and when necessary and managing people in quarantine centers to include their food and medical care. Police holds similar responsibility of isolating villages / areas, enforcing curfews to restrict the mobility of communities and also to maintain law and order.

c. **Tracing.** Tracing is an important process and is employed to identify the root cause / origin of the case. Tracing is heavily based on ground intelligence and big-data analysis. Information from Telcos are of high value. Tracing would identify the family associates (FA), close associates (CA), distance associates (DA) of a patient, his / her movement details, contacts, places visited., etc. Further, tracing would be employed to identify whether those persons are already contaminated and / or vulnerable to contamination. Results of tracing would propose persons / communities for self-quarantine / central-quarantine., etc. State Intelligence Service, Directorate of Military Intelligence and Police Special Branch are heavily involved in this process.

8. Concept of the same is depicted below:

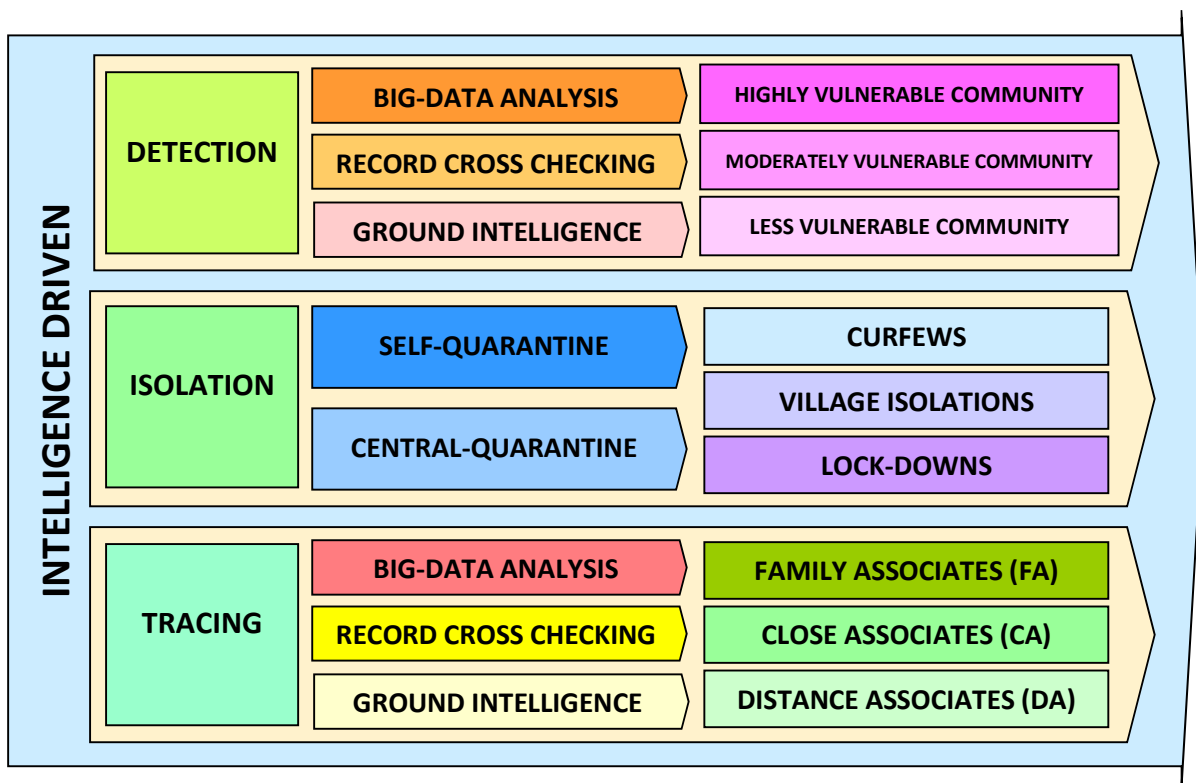


Figure 2: Model of Detection, Isolation and Tracing

9. DIT model is a **proactive** and **aggressive** process which works both **backward** and **forward**. As and when a new case is detected or reported, the model works backward to identify the origin of the virus and span of the spread. It employs different sources to include ground surveillance / verifications, use of record checks, analyze boarder control data, details from Telcos, hotel reservations and many other sources for this purpose. With those details, model works forward to isolate, self-quarantine and / or central-quarantine of vulnerable communities (FA, CA, DA and any other contacts). In case, anyone of vulnerable communities (FA, CA, DA) becomes positive, DIT model applies equally to each case. This is a strenuous and continuous process but is an effective procedure.

10. Operationalization of DIT model in context is as follows:

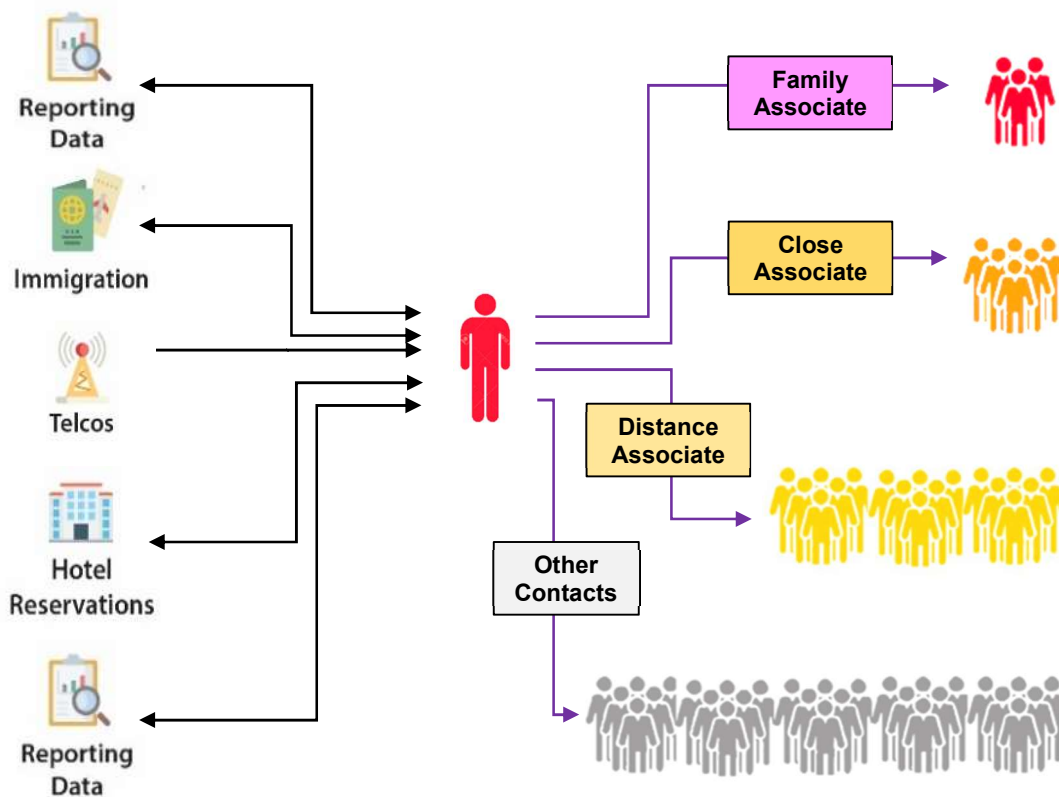


Figure 3: Operationalization of DIT Model

MEDICAL AND HEALTH CARE LINE OF OPERATION

11. **Health surveillance.** In Sri Lanka, with cluster transmission, health surveillance is focused on detection of cases through exposed contacts to quarantine measures, comprehensive and rapid contact tracing of the infected persons and case identification through severe / acute respiratory illness or even through post mortem testing of all suspected sudden deaths. The health sector together with military, police and intelligence are trying to curb the spread of virus to the community. In certain instances where community transmissions were reported, the surveillance was expanded to include monitoring of

geographical spread of the virus, transmission intensity, disease trends, characterization of virologic features and the assessment of impacts on Health Care Services.

12. **Detecting positive cases.** Positive cases are detected through (a) laboratory confirmation of suspected persons admitted to hospitals, (b) sampling of associates of already positive cases (either they are in self-quarantine or central-quarantine) (c) random sampling of high risk / vulnerable communities and high risk / vulnerable areas and (d) sampling at border control points. Algorithm of PCR testing has already been defined by the Epidemiology Unit and simple process is depicted below:

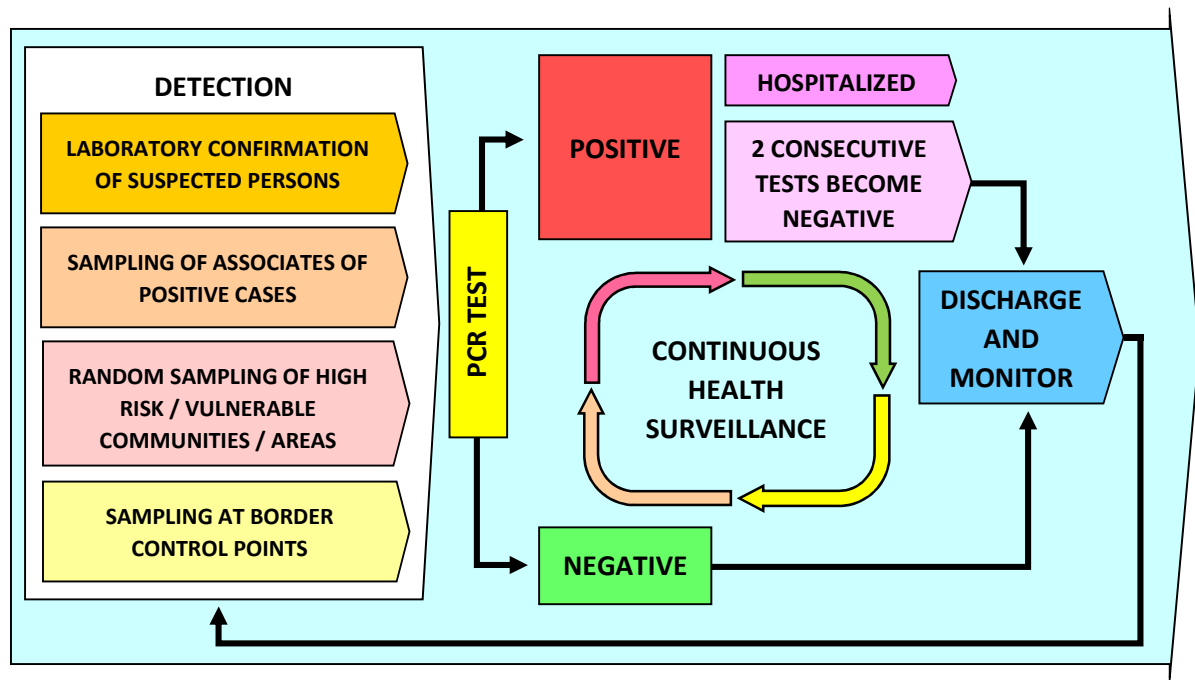


Figure 4: Detecting Positive Cases

13. Overall health surveillance is coordinated by the Epidemiology Unit. When a suspected case is admitted or laboratory confirmation is found, the hospital or the laboratory notifies the area Medical Officer of Health, Regional Epidemiologist and the National Epidemiology Unit immediately. The surveillance activities are done through the network of 345 Medical Officers of Health in areas around the country and also coordinated with military, police and intelligence where it is necessary. The primary healthcare team comprising of Public Health Inspector and Medical Officer of Health investigate all exposed persons to the infected person based on contact history of 14 days prior to being detected and either gets the persons in self-quarantine or in central-quarantine.

14. **Health monitoring.** The exposed persons are monitored for 14 days and if symptoms appear are admitted to special quarantine hospitals for investigation while those who do not get symptoms are tested before being released from quarantine. The information is shared through a special investigation form through the District Regional Epidemiologist and

Regional Director simultaneously to the provincial level and national level Epidemiology Unit. The Epidemiology Unit not only compiles the data but also randomly visits the areas to ensure that the investigation and quarantine are done as per national guidelines which are based on guidelines of the World Health Organization (WHO).

PSYCHOLOGICAL LINE OF OPERATION

15. Narrative of psychological LOO in fighting COVID-19 is “**Life First**”. Giving the right information of the COVID-19 situation in the country to local public and to the international community is of vital importance in order to keep them well-informed. This would prevent any misinformation or disinformation by unverified sources. President's Media Division (PMD) acts as the official source of information of GoSL initiatives / actions and continues to provide right information to the public through its website, twitter and Facebook. Conceptualization of psychological LOO is as follows:

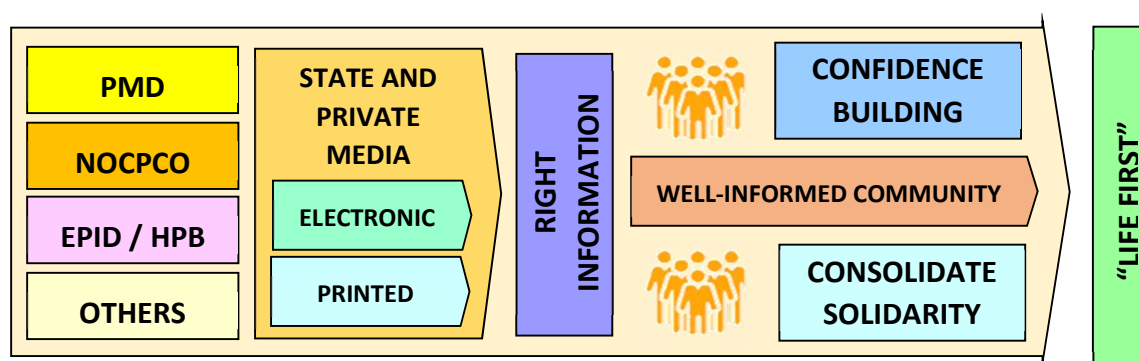


Figure 5: Conceptualization of psychological LOO

16. National Operation Centre for Prevention of COVID-19 Outbreak (NOCPCO) also continue to work with public information campaigns through regular media briefings on COVID-19 situation, statistics and operations related to combat COVID-19. Epidemiology Unit (EPID) and Health Promotion Bureau (HPB) of Ministry of Health also update official figures in their websites. Several actions have also been implemented to build confidence of the public over GoSL approach in fighting COVID-19 and the ability to control the situation. Experts from different fields have extensively used State and Private media (both TV and radio channels), social media forums / platforms to share the right information with the general public through a number of discussions / programmes. Likewise, printed media has also been used.

ECONOMY AND WELL-BEING OF COMMUNITY LINE OF OPERATION

17. In line with GoSL policy and long term economic objectives, a Task Force has been established to revive the economy and eradicate poverty while paying special attention to the challenges posed and opportunities emerged in Sri Lanka in the wake of COVID-19 outbreak. This Task Force has been entrusted with the responsibility of steering the relevant institutes

to create a productive economy through the formulation of a unique economic structure based on novel initiatives. Implementation of joint operations to establish a people-centric economy which will promote domestic industrialists and entrepreneurs is another objective of the Task Force.

18. In mid and short term, the Task Force is to cover the administration of essential services to continue civilian life in areas which have been identified as high risk zones in the face of COVID- 19 spread. It has also been tasked with the responsibility of taking measures to distribute products in liaising with all the institutes while paying attention to the activities undertaken by other agencies to maintain normalcy in the civilian life. The Task Force comprises of Governors, Secretaries to Ministries, Tri Forces Commanders, Acting Inspector General of Police, Chairmen of several Departments, Corporations and Authorities and District and Divisional Secretaries.

19. Detailed scope of the Task Force include distribution of rice, vegetables and other products to the communities in all districts, strengthening farmers and the local economy, encouraging and assisting farming activities and home gardening, providing monetary assistance to farmers promoting the use of organic fertilizers, organizing of co-operatives and other retailers / business networks. The Task Force is also empowered to distribute medicine to the public and to operate the banking facilities.

SYNERGY OF THE SRI LANKAN APPROACH

20. None of these LOOs could produce desired results by working in isolation. Intelligence is required for precise situational awareness for other LOOs to act. Medical and Health Care need to coordinate with Military / Police / Intelligence LOO to detect, isolate and trace. Similarly, psychological and economic LOOs require inputs from intelligence for their responses. Thus, coordination and cooperation between different LOOs and synchronization of ground and technical intelligence is pivotal in this effort. Further, coordination and cooperation between line Ministries, Tri-forces and Police, Departments, Corporations, Authorities, Local Government Systems, all State and Private Sectors partners are of paramount importance in this. Such synchronization is the masterpiece in Sri Lankan approach in combatting COVID-19.

CONTROLLING MECHANISM OF SPREAD OF COVID-19

21. Process adopted by GoSL since its first local case on 11 March 2020 to date in controlling the spread of COVID-19 is akin to “**Hammer and Dance**” theory by “**Tomas Pueyo**”. The GoSL approach was focusing on using various aggressive proactive measures (**Hammer**) in anticipating spikes of cases and bring the spread of virus under controllable level (**Dance**) so that the health sector can handle the case load without exhaust. This process is continuous

and reviewed after each case or cluster then adopted to the next case or cluster with the experiences gained by handling previous cases or clusters.

22. Figure below indicates the cases reported in Sri Lanka since 11 March 2020 and each spike in the graph is correspondent to a cluster:

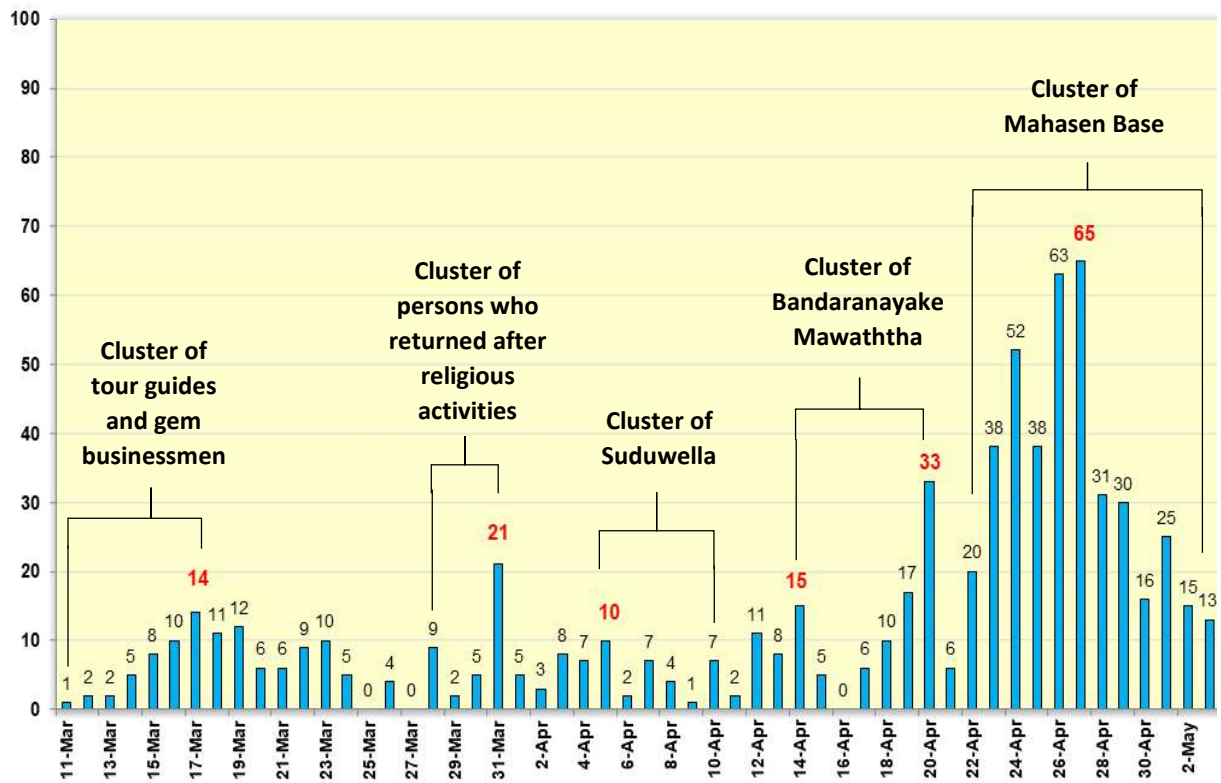


Figure 6: COVID-19 Cases Reported in Sri Lanka

23. **Clusters and application of Hammer and Dance.** As of now, case load in Sri Lanka are from around 31 identified clusters. Clusters of persons arrived from overseas, local tour guides, gem businessmen, persons arrived from overseas after religious activities, drug network cluster in Suduwella in Ja Ela area, “Bandaranayake Mawaththa” cluster in Colombo 12 and “Mahasen Navy Base” cluster in Welisara are a few. Mechanics of “**Hammer and Dance**” theory have equally applied to each of these clusters. Each time, the “hammer”; aggressive proactive measures have channeled the virus to “dance” under a controllable level. Application of this method has proven results in many cases. Two major clusters; “Bandaranayake Mawaththa” incident in Colombo 12 and “Mahasen Navy Base” incident in Welisara as cases in point.

24. **Bandaranayake Mawaththa Cluster.** First patient in “Bandaranayake Mawaththa” was reported on 15 April 2020 and area isolation began with the lock-down of vulnerable areas in Bandaranayake Mawaththa soon after 3 more patients were reported from the area on 16 April 2020. Soon after next day, on 17 April 2020 people in congested areas of

“Bandaranayake Mawaththa” were shifted to central-quarantine centers out of Colombo. This minimized any exponential spread within the area and out of “Bandaranayake Mawaththa”. Many cases reported thereafter were within the central-quarantine centers but minimal in the society:

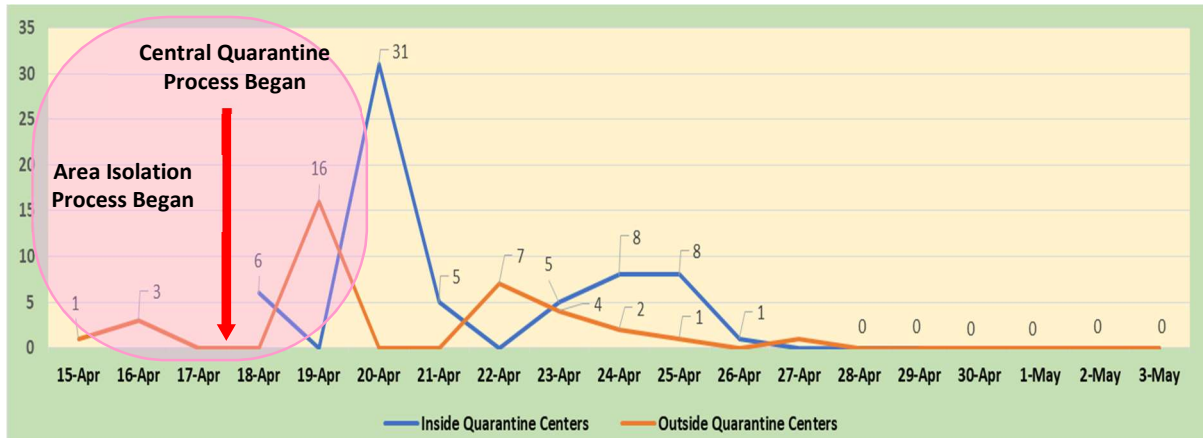


Figure 7: Controlling of Bandaranayake Mawaththa incident in Colombo 12

25. **Mahasen Navy Base Cluster.** Similarly, potential outbreak in “Mahasen Navy Base” incident in Welisara also was averted due to the application of the same theory. First Navy sailor was reported positive outside the base on 22 April 2020 and second sailor was reported outside the base on 23 April 2020. Stringent application of “hammer” by recalling all who were on leave back into base whilst their families and close associates were sent into self-quarantine, identifying vulnerable groups within those who were on leave, directing their families and close associates into quarantine centers prevented any exponential outbreak. Since then, numbers reported outside “Mahasen Navy Base” plummeted into zero:

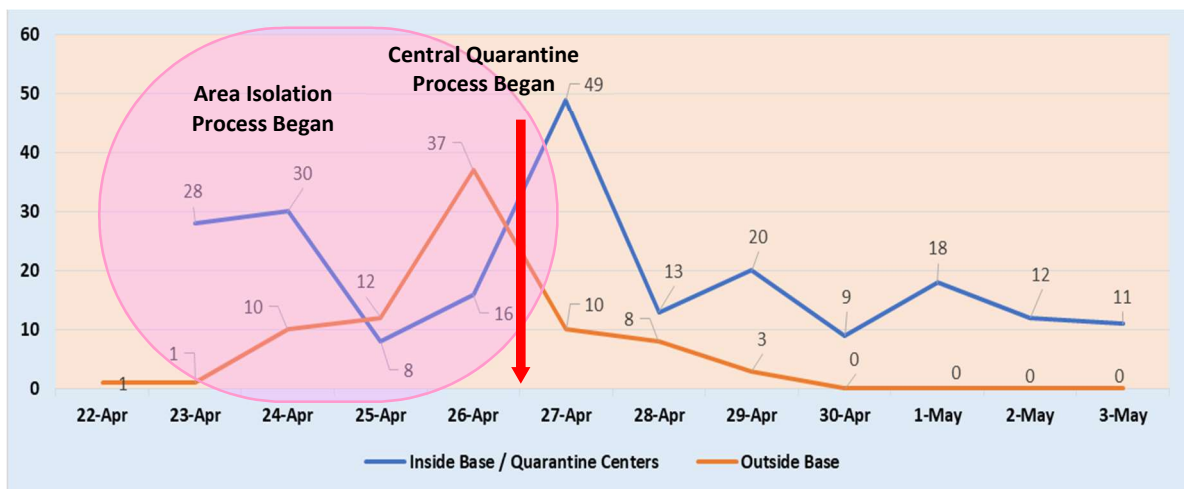


Figure 8: Controlling of Mahasen Navy Base incident in Welisara

CONCLUSION

26. Spreading of COVID-19 pandemic in the world is continuing and different countries have employed different ways and means to combat the spreading. Many researches and scientific studies have been done, yet, no credible vaccine has been developed to-date. In absence of such, prevention and containment are considered as the best available option. GoSL strategy in combatting COVID-19 is a whole-of-government approach focused on prevention, containment and management. It cascades from the vision of His Excellency the President; ***“proactive intervention to prevent any outbreak of COVID-19 within Sri Lanka”***. Sri Lankan model is an aggressive, strenuous and continuous process but comparison of data related to COVID-19 in the world suggests that Sri Lankan approach is a unique and a dynamic model.

Researched and conceptualized by
State Intelligence Service