Ministry of Urban Development and Housing State Ministry of Rural Housing and Construction & Building Materials Industries Promotion



HEALTH AND IMMUNITY ENHANCEMENT GUIDELINES FOR COVID -19 and DENGUE

CIDA Health Guidelines for Construction Industry

Version 4(Revised)



Construction Industry Development Authority Sri Lanka

January 2021

Ministry of Urban Development and Housing

State Ministry of Rural Housing and Construction & Builiding Materials Industries Promotion

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HEALTH AND IMMUNITY ENHANCEMENT GUIDELINES FOR COVID-19 & DENGUE

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Acronyms

<i>,</i> -			
CIDA	Construction Industry Development Authority		
CDC	Center for Disease Control & Prevention of US		
COVID-19	Corona virus disease of 2019		
CSOH	Construction Safety and Occupational Health		
EOT	Extension of Time		
EU	European Union		
GDP	Gross Domestic Product		
LD	Liquidated Damages		
NDCU	National Dengue Controlling Unit		
NIOSH	UN National Institute for Occupational Safety and Health		
OSHA	Occupational Safety and Health Administration		
PPE	Personal Protective Equipment		
SARS-CoV-2	Severe Acute Respiratory Syndrome Corona virus 2		
US	United States		
USA	United States of America		
v/v	Volume per Volume		
WHO	World Health Organization		

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Chairman's Foreword

As the Chairman of the Construction Industry Development Authority It is my privilege to contribute to the "Health & Immunity Enhancement Guidelines for COVID-19 & Dengue" for the industry stakeholders to practice by taking sufficient precautions to avoid the threat due to these two epidemics.

Today, Construction Industry plays a very important role in National Economy contributing approximately 7% to the Gross Domestic Product. It has provided more than 500,000 employments directly and indirectly while serving the public to improve their living standards. Therefore, any decline in the industry due to these epidemics would be detrimental to the national economy.

COVID-19 is spreading all over the world reporting millions of deaths. In a situation where the world is struggling to find a vaccine, the construction industry has to perform. In the recent past, the construction sites due to their nature of activities and site situations had been blamed for the creation of easy breeding grounds for dengue mosquitoes. Threat of COVID-19 and Dengue both are causing a negative impact in the public participation in the construction industry activities. This affects the activities in the construction industry and in future this will adversely impact the national economy.

Therefore, considering the responsibility vested to assure best health in the constructions workforce, CIDA decided to publish this guideline to educate the industry stakeholders to ensure safety from both COVID-19 and Dengue. The main aim of the Guideline is to protect human lives associated with the construction sites, from the dangers due to COVID-19 & Dengue, thereby leading to the sustenance of construction industry.

This report which a combination of the "Health and Safety Guidelines for Sri Lankan Construction Sites to be adopted during COVID-19 Outbreak- Version 4 (Revised)" and "Guidelines on Dengue prevention by CIDA and guidelines of the Ministry of Health and Indigenous Medical services, Sri Lanka". This Guideline is well supported by Guidelines of Ministry of Health of Sri Lanka on COVID-19 & DENGUE.

As the Chairman of the Construction Industry Development Authority, I am taking this opportunity to extend my gratitude to all those in CIDA who contributed to this national endeavor by contributing as preparers and reviewers. Among the contributors and reviewers, I am I especially thankful to Ms Muditha Priyanwada for taking a special interest in this Version 4. I trust the construction industry will make full use of this guideline and make construction sites safe from the two epidemics.

A healthy construction site will be able to deliver the best infrastructure to the public thereby serving the nation better. This guideline has been developed as a service to the registered contractors and others involved in the construction industry.

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EXECUTIVE SUMMARY

Health and Immunity Enhancement Guidelines for COVID-19& Dengue in construction industry is an utmost important consideration and should pay high attention to practice throughout the process. It is required to ensure that all aspects of health should have been properly arranged before stepping into the sites as construction environment is prone to health hazardous situations very often nowadays

The third revision of this guideline was published in August 2020 and the best practices on transport of men & materials in construction sites is introduced in this 4th version.

This technical publication discusses the sources of COVID-19 & DENGUE, its symptoms and discusses health precautions in detail that need to be taken during this outbreak of COVID-19 and Dengue which cause critical health issues. It also elaborates the obligations of each party of the industry including Contractors, Employers and Workers. Further it gives a detailed account of improved welfare facilities to ensure the best health in construction sites. Employers' commitment on allocation of funds for site cleaning as a mandatory requirement for preventing Dengue, has also been highlighted.

In the Part 2 of this document, important links that include health information is mentioned for easy reference of the stakeholders. The Forms to be submitted by each Contractor to Ministry of Health and simple informative posters which can be used to educate the staff are also in this document for reference. In preparation of this Guideline, CIDA has referred Industrial Safety Division of Department of Labor, Sri Lanka, the WHO guidance of 19 th March 2020 for infection prevention and control during health care when COVID-19 is suspected, and the guidelines of the Ministry of Health and Indigenous Medical services, Sri Lanka and OSHA of USA.

This Guideline is to be available to personnel concerned with construction projects, specially to the technical staff of contractors and the staff for the purpose of improving site control, periodical checkups and mitigating risk of this deadliest viruses. CIDA wishes all entities engaged in construction projects to utilize this guideline for enhancing the health culture in the industry and promoting the industry among the public as a healthy industry to survive.

PART 1

Health and Immunity Enhancement Guidelines

For

COVID -19 and DENGUE

1. INTRODUCTION

1.1. CIDA Guidelines on COVID-19, DENGUE and Health and Safety Guidelines

This document on Health and Safety Guidelines on COVID - 19 and Dengue is prepared by the Construction Industry Development Authority (CIDA) established under the Construction Industry Development Act No.33 of 2014 and is meant to be followed by construction sites operating in Sri Lanka as the controlling mechanism The guidelines aim to prevent spreading of COVID-19 and Dengue and to promote good health among construction workers and staff.

This 'Health and Safety Guidelines on COVID-19 and Dengue' is a culmination of Health and Safety Guidelines for Sri Lankan Construction Sites to be adopted during COVID-19 Outbreak- Version 3 by CIDA published on 26th May 2020 and Guidelines for prevention of Dengue of CIDA. The new set of guidelines consists of two parts. Part 1 contains good practice guidance including the mandatory requirements of the health authorities and directions from selected guidelines of the Ministry of Health and Indigenous Medical Services for construction sector addressing COVID-19 and Dengue related issues.

CIDA has also carefully considered the guidelines that had been developed by the Industrial Safety Division of Department of Labour, Sri Lanka, the WHO guidance of 19th March 2020 for infection prevention and control during health care when COVID-19 is suspected, and the guidelines of the Ministry of Health and Indigenous Medical services, Sri Lanka and OSHA of USA.

The Part 2 contains supplementary practices to ensure the sustenance of the sector by enhancing the immunity as recommended by Traditional Native and Ayurveda medical practice. The fervent hope of CIDA is to achieve

a steady input from the construction workforce thereby ensuring the much-needed contributions to the national economy.

Sri Lanka and elsewhere in the world, construction sites are places with workers performing a wide variety of tasks manually. Cutting down fund allocations for site overheads leads to serious concerns which affect the sustainability of the projects in the long run. Garbage stagnation, water stagnation and less use of Personal Protective Equipment creating an environment prone to COVID-19 spreading and dengue breeding are some of the issues erupting as end results of these cost restrictions.

Also, workers are working fairly close proximity by sharing tools, working in groups for efficiency, using machines operated on a shift basis, experiencing frequent labour group transport both horizontally and vertically supporting quick spread of any kind of virus. These significant differences at construction sites when compared with other factories, business, or work places require a special attention to face the threat of COVID-19.

Therefore, CIDA as the apex regulatory institution, has taken a special effort to develop a comprehensive, detailed, yet easy to practice guideline for the safety and protection of the Sri Lankan construction work forces from these two deadliest deceases.

This Guideline contains instructions which are both mandatory and advisory. The health authority directives are mandatory while the immunity enhancement practices recommended are advisory. CIDA expects the construction workers to comply with the instructions and the construction site managers to enhance the awareness among the work force. It is expected that each construction site will take extra precautions to be free from recognized hazards likely to cause death, in case of COVID-19 or Dengue.

CIDA will affect responsible action to update this guideline as new information about the virus, its transmission, and impacts, becomes available. However, it is the responsibility of the managers and others in the workforce to take sufficient steps to refer reliable sources for updates related to the developments associated with COVID-19 to ensure the control of this pandemic.

2. HEALTH ISSUES IN CONSTRUCTION SITES

2.1 COVID-19

2.1.1. Beware of COVID- 19

2.1.1.1.About COVID-19

The Coronavirus 2019 (COVID-19) sickness is a highly contagious respiratory disease which is caused by the SARS-CoV-2 virus. Although there are no confirmed sources as to where the virus has originated, it has spread to most of the countries in the world including Sri Lanka. As at present, COVID-19 outbreak has become a pandemic that has infected millions and has become responsible for the death of hundreds of thousands worldwide. The lockdown situations imposed to curb the outbreak has affected the life styles of all around the world and also in Sri Lanka. Since late February 2020, the COVID-19 has prevented free travel, trade, tourism, food supplies, and even functioning of financial markets. In Sri Lanka in the second week of March 2020, the COVID-19 closed down all construction sites of both public and private sectors. Since the COVID-19 virus has adversely affected many human lives causing thousands of deaths, and millions of infected people in the world it is extremely important to be cautious and take necessary preventive steps to protect our construction industry from this virus.

2.1.1.3 Symptoms of COVID-19

Infection triggered by the virus that causes COVID-19, (SARS-CoV-2), can create illness ranging from mild to severe and, in some cases, can be fatal. These symptoms include fever, cough, and shortness of breath. Some infected people have reported experiencing other non-respiratory symptoms. The people, referred to as asymptomatic cases, do not experience symptoms at all. According to the Center for Disease Control & Prevention

of US (CDC), symptoms of COVID-19 may appear in a minimum of 2 days up to around 14 days after exposure to the virus.

2.1.1.3 Survival of the Virus

The COVID-19 virus is spread out with droplets when coughing or sneezing. The survival duration of virus on surfaces depend on the type of surface. The COVID-19 virus remains in air for approximately 03 hours. The types of surfaces and corresponding survival durations are given in Table 1.

Table 1: Survival of COVID-19 on Surfaces

Туре	Duration	1
Cardboard	03 hours	F
Copper	24 hours	١
Un-tarnished iron	02 days	(
Plastic	05 days	,

Туре	Duration		
Paper	04 to 05 days		
Wood	04 days		
Glass	04 days		
Aluminum	02 to 08 days		

2.2. DENGUE

2.2.1 Beware of DENGUE

2.2.1.1.About DENGUE

Dengue is fast emerging pandemic-prone viral disease in many parts of the world. The Aedes aegypti mosquito is the main vector that transmit the deadly virus. Dengue. Dengue fever flourishes in urban poor areas, suburbs and the countryside but also affects more affluent neighborhoods in tropical and subtropical countries.

In recent times, construction industry is booming in Sri Lanka particularly in urban cities. This situation has created several environmental health concerns including an abundance of mosquito breeding places in construction sites. As a result, vector borne diseases such as Dengue fever has seen an exponential increase. Recent mosquito surveys have concluded that 70% of inspected construction sites have water collection suitable for mosquito breeding. Further, more than 10% of construction sites inspected in 2018, had positive dengue mosquito breeding places.

2.2.2.2 Symptoms of DENGUE

Symptoms of Dengue usually begin four to six days after infection and last for up to 10 days. It may include sudden high fever, severe headaches and pain behind the eyes, muscle pain, fatigue, nausea, vomiting and skin rash.

Sometimes, symptoms are mild and can be mistaken for those of the flu or another viral infection. If neglected this may include high fever damaging to lymph and blood vessels, bleeding from the nose and gums, enlargement of the liver, and failure of the circulatory system. The symptoms may progress to massive bleeding, shock, and death.

2.2.2.3 Survival of the Virus

The best way to prevent the disease is to prevent bites by infected mosquitoes, particularly if you stationed in or traveling in urban area. This involves self-protection and making efforts to keep the mosquito population down. Though there are certain attempts to invent a vaccine, there is no vaccine to prevent the general population from contracting it.

3. BEWARE OF RISKS OF COVID-19 AND DENGUE IN CONSTRUCTION INDUSTRY

3.1. COVID-19 and DENGUE

Infected persons due to Covid-19 and Dengue is reported high fever. If any person is infected Covid-19 it is considered most contagious when they are most "symptomatic" (i.e., experiencing fever, cough, and/or shortness of breath). Spreading might even be possible before people show the symptoms and there have been many reported cases of this type of "asymptomatic" transmission with this new corona virus.

Though the following has been briefed previously, it is important to stress the risks of spreading COVID-19 and Dengue in the construction industry. Due to the very nature of work at Sri Lankan construction sites, construction workers often have to work in close proximity, share tools, attend to tough and hard work such as placing shuttering, reinforcements, scaffoldings, receiving and returning of tools, attend to awareness pocket meetings, and adhere to common meal or tea-breaks. These would make it very difficult for the construction workers to keep social physical distancing as required by the authorities. Social physical distancing and preventive measures will become most difficult at the beginning because of the already built up inertia due to the habits which would be impossible to change overnight. Tendency of using the same face mask without replacing or cleaning could be very high. Furthermore, there might be cases, where those with respiratory issues may be unknowingly, assigned to work at dangerous or risky In the construction industry workers are commonly transported from site to site in trucks and trailers, packed close to each other. In high rise building construction, the practice is for many workers to use a

small cubical for vertical transport. Most of the construction workers are with some common/bad habits such as chewing beetle, smoking and even alcohol consumption, dumping garbage everywhere, ignorance of water accumulation etc. Frequently many workers share the use of mobile phones and chargers.

Due to all these and many more manners that prevailed in the construction sites prior to the COVID-19 attack, the workers at construction sites would become very vulnerable and get exposed to a high risk of getting infected or spreading the disease, unless appropriate remedial measures are taken.

Nevertheless, Dengue prevention has been the real challenge before the devastation COVID-19 brought. Hence, construction workers must be carefully guided to protect from the risks of getting infected from both COVID-19 and Dengue and thereby ensuring high contribution to the sustenance of the industry.

As the principle of preventing measures is the best solution for controlling the deadliest two viruses, stakeholders of the industry have to adhere to best practices, especially given in Section 5, 6 and 7 of this document.

4. DUTIES AND RESPONSIBILITIES

4.1. Role of CIDA in preventing COVID-19 and

Dengue

CIDA as the apex body for construction industry has taken actions as mentioned below to prevent spreading COVID-19 and Denaue.

- CIDA has established a Surveillance team for monitoring health practices at construction sites to prevent dengue in line with the Special Presidential Task Force for Dengue Prevention. This surveillance team consists of members of National Dengue Control Unit (NDCU) of Ministry of Health, Environmental Police, Area MOH and members of CIDA.
- 2. Surveillance team advises and monitored on the precautions to be taken to maintain the site as a dengue free zone to each construction site staff.
- A check lists (Attached as Form 1 in Part 2) has been issued by CIDA with the support of NDCU to check the site conditions. Each month, the summary of checklists (Attached as Form 2 in Part 2) has to be returned by the Contractor to CIDA. CIDA has taken necessary steps to update NDCU based on the Summary received.
- 4. CIDA has prescribed Employers to provide cost incurred in site cleaning. This has been included in the standard preliminary list of Preliminary Bill No 1 of CIDA(ICATAD/04)
- 5. Any Contractor who is not capable of maintaining the sites as Dengue free zone will be considered as guilty of an offence as per disciplinary procedure laid down in the evaluation "Criterion for Registration, Grading and Monitoring of Main Construction Contractors of CIDA".

6. In addition to this Guideline, CIDA has issued Health and Safety Guidelines for Sri Lankan Construction sites to be adopted during COVID-19 Outbreak" and also a Guidelines for Safety and Health in Construction (CIDA/STD/04) as a guide to overall safety and health management in construction sites.

4.2 Employers Duties

- Employer has to play a key role in prevention of spreading COVID-19 and Dengue. Employers are responsible to follow below mentioned actions during their constructions.
- Employers, workers, and their organizations should collaborate with health authorities to prevent and control COVID-19 and Dengue.
- 3. Employers, in consultation with workers and their representatives, should plan and implement measures to prevent and mitigate COVID-19 and Dengue at the workplace through engineering and administrative controls, and provide personal protective equipment and clothing according to the risk assessment. Such measures should not involve any expenditure on the part of the workers.
- 4. If COVID-19 is contracted through occupational exposure, it could be considered as an occupational disease and, if so determined, should be reported and compensated according to the Area MOH or Close by Government hospital for employment injury benefits as stated in the Section 5 and 7.

4.2.1 Allocation of funds

 Employer has to allocate necessary funds for Dengue prevention as an Overhead as stated in Guidelines for the preparation of Bill No 1 – Preliminaries of Building Works. It is to be paid as an Item as mentioned in the below;

Table 2: Guidelines for the preparation of Bill No 1 – Preliminaries of Building Works

Item No	Description	Qty	Unit	Amount Rs
28	Allow lump sum for maintaining the site in a clean and orderly manner during the entire contract period. The contractor shall take due care to prevent water stagnation, eliminate mosquito breeding places at the site and this is to be ensured through internal monitoring mechanism.	Е	Item	

2. In addition to that Employer may provide financial allocations for safety precautions and PPEs required safeguarding Contractor's Workers against COVID-19 and Dengue. Available contractual provisions may be used in this connection with the approval of the Engineer to the project.

4.3 Contractual Obligations of the Contractor

Contractor is the most responsible person for controlling COVID-19 and Dengue in Construction sites. Contractor should implement Section 5: Preventive Hygiene best practices at Construction Sites for COVID-19 described in this document to avoid spreading COVID-19.

In addition to that following special Dengue preventive actions should be carried out by the Contractor.

- A dedicated programme for regular inspection and elimination of mosquito breeding places should be in place throughout entire construction period.
- Assign an Officer (Safety & Occupational Health supervisor) and a subordinate team (Health and Safety Committee) responsible for keeping the site free of mosquito breeding and free of garbage. All mosquito breeding places detected should remove on a daily basis.
- Train members of the site inspection team regularly on control methods of mosquito breeding according to the guidelines prepared by National Dengue Control Unit (NDCU).
- Regular Capacity Building and training workshops to be conducted by MOH/NDCU in respective areas.
- 5. Daily site inspection should be carried out covering entire construction area, storage yard, living quarters, cooking/washing area and toilets as explained in Form 01. Assigned officer must complete Form No 01 indicating positive and potential breeding places. Filled Form No 01 should be kept filed in site office for inspection by any authorized officer.

- Weekly update/findings of Form No 01 should be communicated to the Main Contractor of the Construction site.
- 7. Consolidated monthly summary report, Form No 02 should be prepared based on Form No 01 findings.
- All construction sites must send this monthly summary report, Form No 02 to the respective local authority (Municipality/Urban Council) with copies to the area MOH and CIDA.
- In case of COVID-19, special measures are needed to protect workers at higher risk of developing severe disease, such as that age 60 and over, or with underlying medical conditions, upon recommendation of the occupational health services.
- 10. Workers in the informal categories such as material suppliers, security officers, stores keepers, tea boys etc. should not be left behind in the protection of their health and safety at work.
- 11. Chemical management (Fogging) and environmental management as preventive measure should be done with the support of Area MOH after confirmation of an outbreak (Circular No: ROP/PSC/2017/01). Suitable List of pesticides management agencies registered under the Registrar of Pesticides (ROP) received by National Dengue Control Unit (NDCU) is listed for contractors to obtain services and is available in CIDA Web site.
- 12. Use recommended larvicides (Bti H-14: Bacto Bti, Bactivec, Mosquito Dunk, Pyriproxyfen (Similarv 0.5 G), Novaluron, Polydimethylsiloxane (Aquatain AMF) in a scientific manner with the technical advice and

- supervision of area MOH. Refer to circular no ROP/PCS/2017/1 and ROP/PCS/2018/2 issued by Registrar of Pesticide.
- 13. Services from a professional Pest Management Agency (PMA) shall be required for continuous application of larvicide for potential breeding places. Selection of professional pest management agency shall be done as per the attached list in CIDA website.
- 14. Maintain records on type of larvicides and frequency of application by the Contractor is required.
- 15. Application of Larvicides shall be used as per the Instructions of medical experts and PHIs, and also as the last option as it destroys most environmentally friendly species such as butterflies.

4.4 How Workers should support in preventing COVID-19 and Dengue

- Workers has to have a volunteer contribution in COVID-19 and Dengue preventing actions as they are the most vulnerable team to the two epidemics.
- 2. Workers are responsible to follow the measures for occupational safety and health and infection prevention and control implemented in the workplace, and to participate in training provided by the employer. Workers should wear PPEs as instructed by the Supervisor without any hesitate.
- 3. Workers should report to their in-charge/supervisor any situation which may present if they have any symptoms of COVID-19 or Denaue are appeared.

4. Workers have to leave themselves from any work situation that they have reasonable justification to believe of having COVID-19 or Dengue with the aim of avoiding spreading COVID-19.

PREVENTIVE HYGIENE BEST PRACTICES AT CONSTRUCTION SITES FOR COVID-19 AND DENGUE

- 5.1. Health tips
- 5.1.1. Health checks-Body Temperature

Continuous health checks are very important to prevent spreading COVID-19. Following main health checks are recommended to carry out at each site.

- Body temperature of the workers shall be checked at the entrance of each construction site, by hand held equipment that can be used by maintaining social physical distancing. Such Thermal scanners should be of Medical grade.
- 2 All precautions shall be taken to prevent entry of persons recording a temperature above 98.4 °F or 37.0°C. Such persons should be re-checked after 10-15 minutes of rest and if positive for second time then the concerned person must be referred to appropriate medical attention.

5.1.2 Health tips- Washing hands and sanitization

Following health tips facilitating the workers washing hands and sanitization is recommended.

- 1 Construction projects are to be provided with soap, running water and hand sanitizers at the entrance of the construction site, for the workers to wash their hands. Facilitation of hand washing and frequent hand washing is mandatory.
- 2 All efforts must be taken to install foot operated taps in order to ensure water on demand: This is considered as the best for all wash basins.

- 3 As an additional measure, step can be taken to provide a foot bath with 0.1% sodium hypochlorite solution at the entrance and vulnerable places.
- 4 Directions mush be given to change shoes at the entrance of a work site and provisions must be made for each individual to use a separate set of shoes while inside the premises.

5.1.3 Health Tips -Personal hygiene

Care on personal hygiene is very important to control COVID-19. Each worker has to pay attention on following tips to maintain good care on personal hygiene.

- Construction workers shall be educated to refrain from touching their face, eyes, nose or mouth. They shall not touch the mask frequently. If the face masks are of disposable type, then must not be used after a single use. Multi use face masks must be of good hygiene for repeated use.
- 2. If a finger scan machine is used to mark attendance at a work site, then workers shall be instructed to clean their hands. It is necessary to note that, after using the finger scan machine the workers must wash hands or clean with a hand sanitizer. Preferably a hand sanitizer (70%v/v alcohol based) must be placed near the finger scanning machine for easy use.
- Workers must refrain from sharing mobile phones, pens and other common utilities such as, telephones, fax machines, desks, work tools and equipment unless they are carefully sanitized.
- Each construction worker shall keep his clothes, suits, towels, shoes, overalls, etc. separately and must refrain or borrowing from each other unless they have been carefully sanitized.

- Each construction worker shall keep a plate, water bottle glass/cup, tooth paste, tooth brush, razor of their own use.
 They must keep them separately and shall not make them available for common use.
- At all times during the outbreak and during the periods under observation, construction workers shall avoid mixing with crowds, keep away from crowded places and evade visiting public places,
- In order to maintain the body immune system healthy, construction workers shall consume a nutritious and balanced diet and take a good rest after work and ensure a good continuous sleep.
- 8. Contaminated waste, handkerchiefs, paper tissues, disposable razors, tooth brushes, etc., shall be disposed in a pedal operated closable garbage bin.
- 9. Disposal of waste shall be carried out hygienically and following the guidelines of a health inspector or an appropriate health authority. The waste of a suspected person shall be managed in accordance with the guidelines on waste management given by a health inspector. The suspected person must also be carefully taken care of.
- 10. Construction workers shall not be indulged in smoking or consuming any drugs, which lower their immunity levels.
- 11. After finishing the day's work, construction workers shall not get together for discussions, group games, and recreation or to consume food, water or alcohol.
- 12. Construction workers should refrain from physical contacts such as handshakes, embracing, etc., until the COVID-19 threat has been declared as over.
- 13. Once reported to work, construction workers must refrain from leaving the construction site without obtaining due permission from the person in charge and without taking

appropriate health precautions, If a re-entry is required then all steps described earlier as appropriate, must be practiced.

5.2. Welfare facilities

Arranging welfare facilities of the construction workers for avoiding spreading COVID-19 is very important aspect to be paid attention. Transport Facilities, Accommodation, sanitary facilities, lunch room and canteen arrangements, changing rooms and water stagnation should be well planned and organized to manage social distancing and minimum contacts. Following minimum actions are to be implemented at sites and responsible officers are requested to implement best practice as per the nature of the site.

5.2.1 Exit procedure after work

There are several measures that needs to be taken when returning home from work place, upon returning home and then prior to entering the house or the dwelling unit. All workers must care to adhere to the following to avoid contamination and chances of spreading the decease.

- Wash both hands thoroughly by using soap and water.
- ii. Remove the clothing and shoes/slippers and leave them outside, and wash them before taking inside or wearing them again.
- iii. Leave all your belongings outside. If any item is taken inside the house, either wash it with soap and water or disinfect with alcohol sanitizer. (This applies to your mobile phone, spectacles, wrist-watch etc.). Enter the house only after a bath.

5.2.2 Transport facilities

- Chances of construction worker contamination while using public transport such as buses and trains could be minimized by providing transport facilities to workers from the residence to the construction site and back.
- 2. Using own bicycle, motor cycle, or a car can be considered as an option to avoid the use of public transport. In case of such an option, the vehicle must be provided with a health-safe location for parking. In case such transport utility has to be brought into a site, then proper disinfection must be carried out.
- The workers who are compelled to travel by public transport such as buses and trains shall always wear a face mask and gloves.
- Each worker using public transport must be advised to maintain a fair distance between him/her and others. In isolated cases of a breach in condition, the worker must resort to a sufficient method of disinfection.
- If site organized and site-specific transport facilities are available then workers shall keep the health authority required physical distance and shall always maintain wearing face masks.
- 6. The vehicles of a construction site used to provide such transport facilities shall be regularly cleaned and disinfected under the supervision of the health inspector.
- Resorting to on-site or nearby accommodation is a favorable option to minimize risks of contacting COVID-19 while travelling. Walking to site must be encouraged for the employees residing at close proximity.

5.2.3 Accommodation

Spreading of virus through bed linen garments in accommodation facilities:

- Clothing, bed sheets, pillow cases, and other garments of workers shall be washed regularly using a detergent and with water heated to a temperature between 60°C -90°C. The construction workers must refrain from sharing the garments and linen in places of accommodation.
- Clothes and bed linen, washed, shall be dried by exposing to adequate heat or under direct sunlight.
- 3. Hostels, barracks, dormitories, lodges and sleeping areas, used by the construction workers shall be frequently disinfected and kept clean and ventilated.

5.2.4 Sanitary facilities

- Adequate sanitary facilities, lavatories, bathing rooms, changing rooms, etc., shall be provided in the worksite/s, and in such facilities/places, the handles, and taps shall be disinfected to minimize the spread of the COVID-19 virus.
- 2. The number of occasions of disinfection shall be decided by the health inspector by considering the frequency of use and the number of workers in the worksite.

5.2.5 Lunch rooms and canteens

 At each construction site the lunch breaks should be staggered to ensure meaningful and successful implementation of the guidance given to avoid the spreading of COVID-19 due to possible lack of social physical distancing at canteens/lunch rooms.

- The number of persons using the lunch room at any given time shall be minimized to ensure congestion and social physical distancing requirements. The locations must be suitably ventilated.
- 3. Lunch rooms or the eating places of each construction site must always be kept clean and disinfected.
- 4. Water taps of the lunch room be automated or disinfected regularly. Automated taps could be made with the use of a pedal.
- 5. The chairs/seating arrangements in the eating places and lunch rooms must be kept at distances fulfilling social physical distancing requirements.
- 6. As much as possible steps must be taken to arrange the chairs in the lunch room ensuring that they are not facing each other but facing the same direction.
- 7. Construction workers must be encouraged to use disposable wrapping and containers to take or carry meals. Any waste disposal must be carried out according to the guidance of the health inspector and for this purpose foot operated bins are recommended.
- 8. Catering services deployed at the construction sites must adhere to Hygienic and healthy ways and this should be guided by and ensured by the health inspectors.

5.2.6 Changing rooms

- Changing room/s shall always be kept clean and disinfected. Proper ventilation shall be ensured. Hand washing must be facilitated at or near the changing rooms.
- 2. In order to minimize the spread of the virus, clothes and garments of each worker shall be kept separately.

- The chairs of the changing room must be kept at a distance of one meter, cleaned and disinfected regularly.
- 4. The number of people using changing rooms at any given time shall be minimized to prevent undesirable social physical distancing.

5.3 Waste Disposal at construction sites

In the context of dengue control, non-biodegradable items, community and industrial waste collected should be properly disposed and managed at sites avoiding water stagnation.

- 1. Proper storage, collection and disposal of waste are essential for protecting site staff including Dengue.
- 2. Waste should be collected in plastic sacks and water stagnation should not be allowed. Waste collected should be disposed regularly and should not stagnated.

5.4 Personal Protective Equipment

Employers have duties concerning the provision and use of personal protective equipment (PPE) at work. PPE will protect the workers against health or safety risks at work, specially from the deadliest deceases such as COVID-19 and Dengue.

- Each Construction site must ensure that all construction workers are provide with face masks and hand gloves. Masks and gloves shall not be shared or re-used
- It is necessary to make workers aware of the proper use of Personal Protective Equipment (PPE) to avoid cross contamination. These include, removing and placing the face mask once again, taking off and wearing the gloves again.

5.5 Water stagnation in construction sites

Management of irremovable stagnant water collections in the site should be paid attention to avoid potential breeding places. Following actions are recommended to implement by the Safety & Occupational Health Supervisor and to be monitored by the Health and Safety Committee

Water-storage containers can be designed to prevent mosquitoes from laying eggs on the surface of the water. Containers can be fitted with tight lids or, if rain-filled, tightly-fitted mesh screens can allow for rainwater to be harvested from roofs while keeping mosquitoes out. Removable covers should be replaced every time and any water shall be removed. Such places should be well maintained to prevent damage that permits mosquitoes to get in and out.

Applying larvicides and immersing BTI dungs in water collected areas where removal of water is difficult shall also be an option. However periodical replacing of dungs and applying larvicides shall be done as guided by the Registrar of Pesticides / NDCU, for effective preventive actions.

6. ADMINISTERING A CONSTRUCTION SITE AGAINST COVID-19 and DENGUE

Stakeholders of the construction Industry should strictly ensure the practice of preventive measures introduced in this guideline to ascertain the prevention of the spread of COVID-19 and Dengue in construction sites. Any construction site contradicting these guidelines or any government guideline on COVID-19 or Dengue is liable to legal action and /or temporary closure of site.

6.1 General

- Contractor shall suitably appoint Construction Safety & Occupational Health Supervisors at site/s to closely monitor whether the instructions are strictly adhered by the occupants of the sites.
- Every construction site shall facilitate Public Health Inspectors (PHI) to visit the sites to inspect and provide guidance with respect to the adequacy of precautionary measures taken to ensure the safety of the workers and steps taken to curb any possible spread of the COVID-19 virus and Denque.
- Contractor may introduce a suitable system imposing a fine for violators of this health guideline to maintain work place discipline.
- 4. Every construction site must strive to operate only with resident workers. However, if workers are permitted to move in and out of the premises, then it must be done under unavoidable circumstances and by responsibly adhering to health guidelines such as disinfection and social physical distancing.

- 5. Every construction site must appoint a Health and Safety Committee to ensure that the guideline conditions are met and adhered to. These committees are recommended to meet at least once a week to evaluate the management of the threat due to COVID-19 and Dengue and then to effect any remedial action if required.
- Construction sites should arrange a shift work system to limit the number of workers to the required minimum, and also establish specific movement arrangements to minimize interaction.
- 7. At each construction site there must be sufficient space to ensure safe social physical distancing between people waiting to enter and exit the site. Each site is recommended to use signage such as floor markings, to ensure the maintenance of safe social physical distance between people when queuing. A similar method can be used at applicable work area to avoid contact between worker teams.
- Each construction site must ensure non mixing of members in work teams as a precaution of arresting a possible outbreak of COVID-19.
- While sanitizing hands after use of a finger print machine, disinfecting the machine after each shift may not be necessary.
- 10. In large projects where the number of workers are high there would be a difficulty to carryout manual body temperature checking procedures. In such situations, it is advisable to acquire equipment using technologies such as Infra-Red Rays. Prior to deciding on the number of equipment, it may be appropriate to evaluate the number of workers entering at a time.

- 11. Each construction site must take steps to postpone the non-essential training and non-essential site visits from external parties.
- 12. Each work site is advised to develop a COVID-19 Preparedness plan; considering the occupational exposure level of employees, the individual risk factors and other recommended good practices mentioned in this guideline. Each member of the work force must be aware that this plan will not only enable the prevention/control of the spread of infection but also prevent panic situations in the event of detecting a suspected case.
- 13. Safety of each activity to be undertaken must be carefully re-evaluated under the COVID-19 situation. In case any activity cannot be safely undertaken, then such activity should be postponed or cancelled as appropriate.
- 14. Where loading and offloading arrangements on site is allowed, drivers shall remain in their vehicles. Where drivers are required to get down from their vehicle, they should wash or sanitize their hands before handling any materials.

6.2 Preparation for resumption

As a pre-requisite to the opening at a site after the closure of construction sites Due to COVID-19 lockdown, each site must be prepared and inspected to ascertain the following.

1. It is necessary to verify whether there are any breeding spots likely to have harbored dengue-mosquitoes and implement effective action to curb the situation.

- 2. Ensure an effective site clearing operation to remove weeds and similar vegetation, dispose undesirable extraneous matter and then perform a disinfection exercise.
- 3. Verify whether toilet and other sanitary facilities are adequate to fulfill the COVID-19 safety considerations. If necessary, take steps to upgrade the existing or erect new facilities ensuring the adequacy to support the new conditions stipulated for safety from COVID-19 pandemic.
- 4. Ensure effective communication by clear and specific notices to all potential workers indicating that It is extremely important for them to remain in their locations if they are experiencing either a mild cough or low-grade fever (37.3° C or more).
- 5. Employees returning from other Districts must be carefully scrutinized by checking with the Health Ministry quarantine requirements such as MOH certificates, and then in case of a clear necessity, further quarantine should be pursued.
- 6. Proper investigations must be carried out to ensure that any person with symptoms, or having been in contact with a positive case in the last 14 days, or quarantined by health authorities is not allowed to commence work.
- 7. Each construction site must ensure a clear site plan indicating the key designated locations such as exits, hand washing facilities, cafeteria/lunch rooms, changing rooms, office of the health inspector locations for washing/temperature check etc. The plan must ensure clear labels, using applicable language(s) for easy understanding of construction workers.

- 8. At each construction site the order of actions that has to be adhered to after entering the premises must be very clearly stated by using notices and verbal instructions. The following indicates the desired sequence to be ensured.
 - Handing over personal belongings
 - Washing hands
 - Temperature check
 - Second temperature check (if required)
 - Finger scan (if available)
 - Use of Hand-Sanitizer
- Posters and placards promoting respiratory hygiene, with instructions for wearing masks, washing hands shall be adequately displayed.
- 10.During the critical period each construction site must take precautions and prior to commencement each site must make arrangements to display notices to prevent the entry of unauthorized visitors
- 11.In case of granting permission to allow temporary/short period visitors, then precautionary measures must be arranged prior to the commencement. These arrangements must ensure requirements such as temperature measurements, washing hands, social physical distancing etc., clearly mentioned in this guideline. After the departure of such a visitor, the places occupied must be disinfected to the satisfaction the health inspector.

6.3 Site Cleaning and Maintenance

Cleansing the sites, material and machines also form a very important part when attempting to achieve the desired hygienic conditions in construction sites. There are

- several tasks that need to be carried out under site cleansing and maintenance. They are as listed below.
- The construction site, its machines, equipment, tools, stocks of material have to be regularly sanitized using a disinfectant.
- Metal and plastic surfaces could contain the COVID-19 virus over a number of days. Hence such surfaces shall be properly disinfected. All metal surfaces shall be disinfected with minimum of 70% v/v alcohol solution. All non-metal surfaces shall be disinfected with 0.1% sodium hypochlorite solution.
- 3. Construction sites must be kept clean and disinfected. The surrounding atmosphere must be kept with clean air to minimize the spreading of the virus.
- 4. All the doors in buildings and structures of the construction site must be opened as long as possible providing ventilation and fresh air, thereby minimizing the spreading of virus.

6.4 Construction Site Meeting

1. Physical meetings must be called only for essential reasons such as wider discussions, opinion sharing with back and forth idea exchange etc. However physical presence for meetings shall be kept at a minimum. In such essential and unavoidable physical meetings, the participation must be kept low, staggered and preferably held in batches. Safety precautions must be taken by cleansing, disinfection, wearing face masks and gloves, maintaining social physical distancing etc., mentioned earlier as mandatory health requirements. Greetings by means of shaking hands, embracing each other etc., must be avoided. The traditional "Sri Lankan - Äyubowan" by keeping hands together; must be used for greetings.

- Conducting meetings with a face to face arrangement shall be avoided to the maximum possible extent.
 Whenever the participants possess the capability, all meetings must be conducted using communication tools such as teleconferencing / video conferencing.
- 3. Conducting construction site meetings must include a careful selection of meeting location. Each construction site manager must ensure that site meetings are held in wide open spaces where workers can maintain minimum social physical distance. Each meeting must ensure the social physical distancing and safe hygienic measures that have been imposed by health authorities and also clearly described in this guideline.
- 4. As a prerequisite, each meeting manager or meeting host must pre-order sufficient supplies including face masks tissues, and hand sanitizer dispensers adequate for all participants.
- 5. As a prerequisite, each meeting manager or meeting host must confirm the availability of the health officer and also ensure the availability of emergency requirements such as surgical masks for use by anyone who develops respiratory problems or any other COVID-19 symptoms.

6.5 Using Lift or Elevator

- 1. Minimize the spreading of COVID-19 by minimizing the use of the Electric Stairways and Lift/Elevators.
- 2. The operating buttons and handles of Lifts/Elevators must be regularly disinfected.

3. When using the lift/elevator, the persons so using must face the walls of the same and thereby minimizing the spread of the virus. The number of persons traveling in the elevator shall be minimized. A ground plan must be made for this purpose.

6.6 Men & Material Transportation

- 1. Persons intended to travel should keep a letter issued by an authorized person / owner of the construction work/ registered contractor clearly mentioning the names, NIC numbers, the date of travel, and indicating that those person or persons are in good health and do not show any signs of COVID-19 symptoms.
- 2. Persons travelling from their own permanent residences should ensure that their residences are not subject to Quarantine process.
- 3. The said dated letter from the authorized person / owner of construction work/ registered contractor should be addressed to the Director General of Health Services and bear the name of construction activity, place of activity, name of CIDA registered contractor, a valid CIDA registration number, if any.
- 4. Any transportation activity requiring intermittent stoppage must limit such stoppage for resting purposes and must ensure that all movements, use of facilities and consumption of food and water must be limited adhering to regulations imposed by the Director General of Health Services.
- Travelling long distances should be avoided as much as possible and preferably it may be within a distance of 20 km radius from the intended construction work.

- 6. Transportation of workers to sites should preferably be in small batches confining to the safe distance. The vehicle used in transportation shall have adequate space for comfortable travelling. If an Air Conditioner is operated, use of face masks and avoiding close contacts shall be strictly adhered during the entire journey.
- 7. Construction Material Suppliers can contact the PHI of the area and shall keep the outlets open for material supplies. The material suppliers must ensure satisfactory health conditions of their employees and keep the details of employees as specified by the PHI of the respective areas and following the Directives of the Director General of Health Services.
- 8. Transport of Construction Material for respective sites shall be responsibly undertaken by the respective contractor or owner of the construction work.
- 9. The approval given for the transport of materials and labor to the required site with the intention of continuing the development work should not be misused.
- 10. Material Consignments directly released form ports, shall be used considering the survival times of the CORONA virus on surfaces.
- 11.Extra care shall be taken when handling consignments imported from CORONA affected countries. Unloading and loading zones has to be identified and declared. Limited access should be provided.

7. ADMINISTERING AN EMERGENCY COVID- 19 SITUATION

7.1 Preliminaries

COVID-19 emergency situations vary from the general construction site emergencies. Hence is very important for each construction site to plan ahead to ascertain safety of the affected person or persons, the co-workers and also the construction site.

The identification of a COVID-19 suspect case alone is considered as a state of emergency within a construction site. Hence appropriate action as the care for the suspected patient and as measures to arrest spreading of COVID-19 must be affected immediately. The degree of urgency at a construction site after a suspect case had been identified, should also be attributed to the place, elevation and type of work a worker is carrying out at the time of detection.

Following preliminaries are considered as essential for successful handling of a COVID-19 emergency situation,

It is fundamentally mandatory for each construction site
to nominate a Safety & Occupational Health
officer/supervisor health inspector, maintain an on-site,
designated first aid room and an isolation room. These
areas must be properly labelled and placed with
important notices. Among other notices, there must be
clear notices displayed to understand the procedure that
must be followed during a COVID-19 emergency
situation".

- 2. At each construction site a register of deployed workforce must be made available. This register must contain name, national identity card (NIC) reference number and other details as in the NIC, current address, name and address of a person to be contacted in case of an emergency, and important telephone numbers etc., corresponding to each person working in the particular construction site. This "Site Workforce" register must be complete, updated and verified on a daily basis.
- 3. The above register must provide space to note information related to persons who are most vulnerable. This can include a classification according to the age, prior records of other critical illnesses, habits critical in terms of COVID-19, a record of whether a person is from a place known to have COVID-19 cases, whether a person is or had been either directly or indirectly connected to a COVID-19 patient, consideration of the risk level of residential district, a classification of the vulnerability of the transport arrangement from home up to the worksite etc. Each construction site must use these details to identify employees of concern, ensure continuous vigilance and deploy safety precautions.
- 4. At each construction site the information in the register must also be used to identify vulnerable workers from a point of view of prior health and age. Persons under vulnerable category must be instructed and monitored for strict adherence of guideline requirements. The following may be used with other considerations to assess vulnerability status of workers.
 - Persons with respiratory ailments (asthma, etc.)
 - Persons with single or multiple non-communicative deceases such as diabetes, high cholesterol levels, high blood pressure, etc.
 - Heavy smokers

- Persons with compromised immunity systems
- Persons above 60 years of age.
- 5. The information required for the register must be captured by using a questionnaire filled and signed by each worker and such records must be kept for inspection and use in incase of a COVID-19 emergency. Such personal information must be handled ensuring confidentiality. All workers should be educated to inform any change of status to ensure their own safety in case of an emergency.
- 6. Monitoring and Tracking of the construction workforce within the premises must be carried out. Each construction site must deploy a method to track and monitor the geographical position of each worker at any given time. Such tracking details must be used to identify the location of a suspected COVID-19 case, to provide instruction to re-locate in case of an emergency, or to seek help from others to overcome a possible emergency situation. The functioning of a tracking system may be either by using physical/manual methods or by using communication technologies.
- 7. In extreme situations in which a construction site is compelled to handle a suspected worker, the stipulated procedures must be strictly adhered by using the recommended PPEs. Each site must strictly adhere to the timely provision and use of PPEs for COVID-19, such as respirators, N95 certified or equivalent face masks, eye protection goggles or a face shields, non-sterile long-sleeved gown and gloves, waterproof aprons. It is necessary to ascertain that all construction sites are equipped with such items as recommended by health authorities, well before the recommencement of construction activities.

7.2 Detecting a suspected COVID-19 Case

The following must be adhered to in case of detecting a suspected COVID-19 or Dengue case at a work site. The Safety & Occupational Health officer/supervisor of each site must ensure that all members of the work force in that are with enhanced awareness.

- 1. The COVID-19 suspected worker must be advised to continue wearing the mask and kept in isolation. Until the suspected person(s) are transferred to a hospital, all relevant precautions as mentioned in previous sections must be taken to arrest the spread of the disease. The emergency room and available PPEs must be used to handle the situation. Immediate action must be taken to inform the MOH of the area.
- Transferring of a suspected case to a designated hospital must be by using an ambulance or as instructed by Health Authorities.

'Suwasariya' ambulance service can be contacted **by dialing 1990.** In case an alternative is required, then the Health officer of the construction site may use any other ambulance or seek assistance from the contact numbers mentioned below to obtain assistance and instructions.

	The Ministry of Health hotline, available 24 hours – 011 3071073
]	The Government media unit hotline – 117
]	'Suwa Sariya' Health line – 071 0107107
	Medical Officer of Health of the area or other responsible persons in the area, whose contact numbers are displayed in the emergency room

 Construction site must take all possible actions to assist the PHI of the relevant area / other authorities / special units appointed by the Health Ministry / Presidential Task Force to trace the contact-persons associated with the suspected case. The details of such contact-persons available with the site must be urgently made available to the relevant authorities. Each construction site must take all possible steps to assist health authorities the contact tracing exercise and facilitate to enforce self-quarantine, If COVID-19 case is reported.

7.3 Cleansing after a suspected Case

- Construction sites must incorporate a recommended site cleansing procedure after the identification of a suspected COVID-19 case.
- 2. The entire work force must be made aware of the facts to avoid any further danger from new cases of COVID-19.
- The entire work force must be instructed to re-ensure the application of precautionary measures against COVID-19 such as, disinfection, face masks, social physical distancing etc.
- 4. All general and other waste from a suspected or confirmed case shall be incinerated or disposed by following the guidelines for waste management issued by the Ministry of Health.

7.4 Training including emergency situations

Regular Capacity Building and training workshops to be conducted in respective areas by the relevant Institutions. Each worker should release for participation of such programme without any barriers.

8. INFORMATION

8.1 More information and Training

CIDA has taken all efforts to include the important information for construction sites of Sri Lanka. However, in case of gaps the construction industry is advised to use the following and other reliable sources to ensure the safety of the industry, the economy of Sri Lanka and our nation.

8.2 Information about COVID-19 infection and Dengue

More information about the COVID-19 infection can be obtained by vising the following websites

- http://www.epid.gov.lk
- □ https://hpb.health.gov.lk/en/covid-19
- □ https://www.who.int/srilanka/covid-19

8.3 Other Awareness Enhancements and training

- Definitions of parties to the Contract (Employer/ Engineer / Contractor) shall be as defined in CIDA Standard Bidding Documents
 - http://www.cida.gov.lk/sub_pgs/publications.html.
- CIDA from time to time will take steps to publish further developments related to the COVID-19 Guidelines in the official website at http://www.cida.gov.lk/index_en.html
- Composition of Sanitizing liquids, body temperature values and all other medical instructions and general work place safety practices shall be as per the Operational Guidelines on Preparedness and Response for COVID-19 outbreak for work settings - Interim Guidance 17thApril 2020 published by the Directorate of Environmental Health, Occupational Health and Food Safety of Ministry of Health and Indigenous Medical Services

http://www.health.gov.lk/moh_final/english/public/elfinder/files/feturesArtical/2020/2020-04-22circular.pdf)

PART 2 Supplementary Provisions

1. IMPORTANCE OF IMMUNITY

1.1 Traditional Practice

Government directives on "Guidance for Work Place Preparedness for COVID-19" and "Strengthening Environment Management in Construction industry to prevent Dengue" provide very clear and vital course of action with respect to the prevention of "COVID-19 and Dengue" threat and the Part 1 of this guideline (Revisedversion 4) elaborates the application of these cautionary activities for the construction industry of Sri Lanka. People with weakened immune systems as well as those with a second or subsequent dengue infection are believed to be at greater risk for developing dengue hemorrhagic fever damaging to lymph and blood vessels, bleeding from the nose and gums, enlargement of the liver, and failure of the circulatory system. The symptoms may progress to massive bleeding, shock, and death.

The native, traditional and Avurveda medicine practices of Sri Lanka also provide Supplementary advice to Sri Lankans and others. Most of these advices are known and had been practiced over a long period of time. These advices and practices have bonded with Sri Lankan culture and presently even western nations have embraced many of them. Good examples are the "Avubowan" method of greeting each other which automatically ensures avoiding physical contact and enables easy social physical distancing, practice of avoiding hugaing to show affection, drinking warm plain tea with a drop of fresh ainaer etc. Amona example practices commonly used by Sri Lankans are, drinking of coriander with ginger, "Veni-vel" in case of an influenza threat, chewing of "Vel-mee" in case of coughs, and drinking a dose or two of "Peyawa"- a commonly known decoction, in case of an advancing cough and a cold.

As the apex agency for the construction industry in Sri Lanka, the prime intention of CIDA is to protect the construction workforce from an attack of these two deadliest deceases. After a careful evaluation, CIDA recognized the important need to enhance the immunity of the workforce as a prime role that has to be taken care in parallel to preventive actions required by the Health Department Directives.

Though the native, traditional and Ayurveda medicine practices of Sri Lanka and associated ministries have thus far not made public announcements or issued directives with regards to the practices that can be opted by the public, there are many individuals who have taken the leadership to provide advice over the internet and other methods. In this connection CIDA referred available documentation while consulting registered medical practitioners to obtain advice. At the same time, CIDA also made attempts to capture the food practices that were administered in some of the quarantine centers. The sources that are used to compile the information of Part 2 are in Annex 2.

1.2 Personal immunity

Immunity' of a person is the ability of a person's body to resist diseases through activities of specialized blood cells or antibodies produced by the body. Further it is the ability of the body to recognize and dispose of substances which it interprets as foreign and harmful to its well-being. Generally, each and every person possess natural immunity. Natural immunity is a genetic characteristic of an individual and the immunity level varies from a person to person. In addition, personal immunity can be acquired; Immunity can be acquired by vaccination to get protection from certain diseases. However, as no vaccination has yet been developed for the COVID -19 virus and also for Dengue, the general public and especially the construction workers have to depend on

individual immunity or even follow methods to boost selfimmunization to be safe from getting infected.

Ayurveda, Traditional and Native practices which are time tested medical practices in the world has a strong reliance on "the power of the body can prevent or even resist developing diseases". Hence, if personal immunity enhancement practices of such commonly known practices can be incorporated to the day to day routines of the construction industry, and if they become effective, then it will be a huge bonus for the industrial sector of Sri Lanka.

In this backdrop CIDA has consulted many persons, professionals, documents, internet sources and extracted useful information to recommend the construction industry to practice as a measure of immunity enhancement of construction workers.

1.3 Conditions which improves/boosts

As indicated previously, strengthening the immune system of a construction worker is of utmost importance especially because of the economic status of those workers and also because of unique nature of construction activities in Sri Lanka.

Having recognized the importance of the construction sector, the non-western medical practices also recommend that workers should be encouraged to maintain good personal health, hygiene and practice. Accordingly, the construction site managers must facilitate the following to boost immunity of its work force. Then are by encouraging/advising/supporting.

- A healthy lifestyle supported by a good continuous sleeping habit
- · Healthy food choices and a balanced diet
- Regular physical exercises and a possible introduction of yoga exercises
- To drink adequate amounts of clean water and preferably warm water.
- To abstain from unhealthy habits such as smoking and alcohol consumption

Apart from the above, the references on Non-Western medical practices enabled the extraction of a daily setting that a construction site manager is able to practice during working hours.

These immunity enhancement recommendations which include steam inhaling, herbal beverages, and add-ons for meals are included in five breaks mentioned in the daily menu in order to ensure ease of application at a construction site. These can be recommended with suitable modifications and further medical advice if required.

1.4 Supplementing the Health Directives

- 1. The health directives of the government concentrate on preventing a threat of COVID-19. CIDA feels that the construction industry can affect no-risk action to act as an insurance against COVID-19. The situation that has arisen due to this pandemic or the impact from COVID-19 shows a close similarity to climate change impacts. In case of climate change, though the entire globe is affected, many countries are aware of their inability to mitigate impacts. Therefore, such countries contribute by taking adaptation measures for anticipated scenarios. Since most of such adaptation methods are expensive, the common first choices are the "No-risk" options. The advantage of "No risk" options are that even if the intended objective is not fulfilled, the option would still serve as a positive for the country.
- 2. Similarly, CIDA feels that in case of COVID-19, the Sri Lanka's construction industry can take a "No-risk" action path by incorporating an immunity enhancement option that would also may battle and win against the COVID-19. Though the traditional, native and Ayurveda doctors claim to have solutions for the COVID-19 pandemic, the western medical practice shuns such claims by citing the absence of clinical test results for diagnostic decision making.
- In this back drop CIDA after an evaluation of the ongoing practices and after consulting an Ayurveda medical practitioner recommends a daily practice advice for the favorable consideration of the construction industry.

2. DAY TODAY PRACTICE ADVICE

The CIDA recommendation for construction industry to practice as a daily menu for its work force, which has also been confirmed as suitable by an Ayurveda medical practitioner is as given below.

Recommended Daily Work Place Menu for Construction Sites

1 Prior to or at the commencement of Work

- Steam Inhaling: Boil water with or without additives such as coriander leaves, citrus leaves, vinegar and inhale steam for approximately 2-3 minutes
- Provide a Drink: a cup of Coriander boiled with Ginger

2 Morning Tea Time

• Provide a Drink: a cup of Coriander boiled with Ginger

3 Lunch Time

• **Provide to Eat:** a few raw red onions and/or 2-3 raw cloves of garlic with the main meal

4 Afternoon Tea Time

 Provide a Drink: In lieu of tea, prepare a warm beverage using 20 grams of ginger, 10 grams of cinnamon, 5 grams of Turmeric and 50 grams of Garlic for each 90 milliliters of water and boil to provide as a drink for the work force

5 After work (at the time of leaving site)

• **Provide a Drink**: the same beverage used for the afternoon tea time.

3. MEDICINE FOR COVID-19 AND DENGUE

There are many documentation and practitioners that have publicly indicated that there are cures for COVID-19. As this is beyond the purview of CIDA guideline, the advice that can be extended is to follow the guidance given by the registered medical authorities. This is because our consultations revealed that the medicine for COVID-19 and Dengue depends on the stage of the development of the virus within a body at the time of identification.

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- Operational Guidelines on Preparedness and Response for COVID-19 Outbreak for Work Settings Interim Guidance 17th April, 2020:
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- 4. https://epid.gov.lk/web/images/pdf/Publication/guidelines_for_the_management_of_df_and_dhf_in_adults.pdf
- Strengthening Environmental Management in Construction Industry to prevent Dengue, National Dengue Control Unit, Ministry of Health, Nutrition and Indigenous Medicine.
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- Notes on Work Place Safety by Department of Labour, Sri Lanka http://www.labourdept.gov.lk/images/PDF_upload/leaflets/1.pdf
 - http://www.labourdept.gov.lk/images/PDF_upload/leaflets/10.pdf

- 10. WHO Information on COVID-19 https://www.who.int/srilanka https://www.who.int/srilanka/news/detail/02-02-2020information-on-novel-coronavirus
- Construction sites and COVID-19 https://www.weightmans.com/insights/construction-sitesand-covid-19/
- 12. COVID-19 coronavirus: State of Emergency Declarations https://www.wa.gov.au/government/document-collections/covid-19-coronavirus-state-of-emergency-declarations
- Power Point Presentation on Precautions for COVID-19 (In Sinhala Language): Eng. E. Abeysiriwardena, District Factory Inspecting Engineer (Colombo), Dept. of Labour

ANNEXURES AND POSTERS

Annex 1: Important web sites for Sri Lankan Government Directives and Contacts that assisted in the Acquisition and Preparation of Information in Part 2

- hpb.health.gov.lk) covid-19
- https://alt.army.lk/covid19/
- https://news.lk/news/covid-19
- www.epid.gov.lk) web
- https://www.who.int/srilanka/covid-19
- http://www.pmoffice.gov.lk/download/press/ D00000000011_EN.pdf

Contacts that assisted in the Acquisition and Preparation of Information in Part 2

Dr. Lokuge Jayasiri, Gampaha Siddaurveda Dispensary, Matara Road, Megalle, Galle

- Mr. Ruwan De Silva, No.06, S.H Dahanayake Mawatha, Kaluwella, Galle
- Mr. Susantha Ranjith Liyanarachchi, No 10 B, Thalgaspe, Elpitiya
- A set of selected staff members of CIDA
- Web sites local and regional on non-western medicine for covid-19
- http://www.businessnews.lk/blog/2020/04/06/ayurvedic-medicalpractitioners-requested-to-find-alternative-indigenous-medicineagainst-covid-19/
- https://pubmed.ncbi.nlm.nih.gov/7464187/
- https://newsin.asia/its-time-we-returned-to-wedakama-and-ayurveda-to-fight-covid-19/
- https://economynext.com/sri-lanka-invites-indigenous-medicalpractitioners-to-help-fight-covid-19-gmoa-chief-recommends-dumelleema-to-contain-spread-64381/
- https://timesofindia.indiatimes.com/life-style/health-fitness/healthnews/ayurveda-tested-immunity-practices-to-follow-during-thecoronavirus-pandemic/photostory/74912589.cms
- https://www.thehindu.com/news/national/government-recommends-homoeopathy-ayurveda-to-prevent-coronavirus-infection/article30686644.ece
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Annex 2: Checklist for Mosquito Breeding Sites in Construction Sites

ទី	Contractor:											Site / Project :										1			
ä	Client:											Date:										1			
<u>su</u>	Inspected by :											Inspected by:										1			
L				181	1st week					2 nd	2 nd week					3rd	3 rd week					4 th week	eek eek		
			Findings*	ings*		Actions Taken	aken	L	Finc	Findings*		Actions Taken	ken		Findings*	*sgn		Actions Taken	u		Findings*	Г	Ad	Actions Taken	
9	Description	Checked	Stagnant water	Stagnant Mosquito water breeding	Cleared stagnant water	Larvicid t applied	Larvicide Kept under applied shelter	Checke	Checked Stagnant Mosquito water breeding	Mosquito breeding	Cleared stagnant water	Larvicide applied	Larvicide Kept under applied shelter	Checked	Checked Stagnant Mosquito water breeding	Mosquito breeding	Cleared stagnant water	Larvicide applied	Kept under shelter	Checked Stagnant Mosquito water breeding	Stagnant water	Mosquito breeding	Cleared Larvicide Kept under stagnant applied shelter water	Larvicide Papplied	Kept under shelter
_	Construction Area																								
Ø	Concrete or cement floors - ground / all levels																								
q																									
ပ	Building materials																								
Р	Demolition debris																								
Φ	Equipment and machineries																								
ţ	Water storage tanks, drums, containers																								
б	Barriers																								
ᅩ	Trenches																								
	Bulk waste containers, skips & refuse bins																								
·	Sump pits/ silt traps																								
~	Drains/ temporary channels constructed for drainage																								
-	Vehicle wash bays																								
Ε	Lift wells																								
_	Planter boxes (concrete)																								
0	Discarded items & receptacles/tyres																								
2	Living Quarters																								
	Freight containers/ Sink Sheet Hut																								
æ	i) Roof																								
	ii) Ground below																								
q	Plastic containers/ cooking pots & pans/ domestic containers																								
O	C Discarded items & receptacles																								

	aken	Mosquito Stagnant applied Kept under breeding water																						
	Actions Taken	Larvicid appliec																						
4 th week		Cleared stagnant water																						
4 th	Findings*	Mosquito breeding																						
	Find	Stagnant water																						
		Checked																						
	ue	Cleared Larvicide Kept under Checked Stagnant Mosquib stagnant applied shelter water																						
	Actions Taken	Larvicide																						
3 rd week	Ą	Cleared stagnant water																						
3 rd w	*sb	Mosquito s breeding																						
	Findings*	Stagnant N																						
		Cleared Lavicide Kept under Checked Stagnant Mosquito stagnant applied shelter water breeding																						
	_	Kept under shelter																						
	Actions Taken	Larvicide Ke																						_
yek		Cleared La stagnant a water																						
2 nd week	*s	osquito si eeding																						_
	Findings*	agnant Mi																						
		Cleared Larvicide Kept under Stagnant Mosquito stagnant applied shelter water breeding																						_
		pt under C																						_
	Actions Taken	pplied s																						
sek	Act	Cleared La stagnant a water																						
1st week	,s	Mosquito St.																						
	Findings*	Stagnant Mo																						
		Checked Stagnant Mosquito water breeding																						
		Ö																			Area			
	vijon	uond		levels			containers		ineries	nks			ceptacles	moo.		ırs	: bowls	e tanks	1 sinks		Cooking & washing Area		eptacles	
	Description	Descri	Storage yard	Puddles- ground / all levels	ntainers	i) Container roof	ii) Ground below containers	aterials	Equipment and machineries	Concrete test cube tanks	so.	cans	h Discarded items & receptacles	Toilet & bathroom	floor	Pails/ plastic containers	Toilet cisterns & toilet bowls	Bathing point concrete tanks	Drain holes of unused sinks	r traps	king & w	Cooking pots & pans	Discarded items & receptacles	
					Freight containers		ii) Gro	Building materials	Equipmen		Tool boxes	Paint tins/ cans	Discarded		Concrete floor	Pails/ plas		Bathing po	Drain hole	f Gully/ floor traps			Discarded	
	to m	9	3	а		q		O	р	Ф	ţ	б	ح	4	В	q	၁	р	ө	-	2	а	q	

Annex 3: Monthly report on inspection of dengue breeding places in construction sites.

_		_
General	info	rmation

>	Contractor	➤ Site/Project:
>	Name of the contact person and contact number:	
>	Client:	> Month:
\square	MOH Division:	

Information about site inspection and dengue cases reported

> Availability of a dedicated team for regular inspection of mosquito breeding places.	Yes/No
> Number of potential breeding places detected during previous month.	
➤ Received services by pest control agency during previous month.	Yes/No
➤ If yes, Name of the agency	
MOH health team made inspection visits during the previous month	Yes/No
►Any warnings given / Red notice issued.	Yes/No
➤ Number of fever patients reported during previous month.	

Information about the actions taken on detection of breeding places/ to prevent breeding places

Potential water collected machinery and equipment in the premises and in the vicinity was	-
kept under a shelter	
Unused containers were stored under a shelter	
The floors, balconies, flower pots, temporary covers (polythene), concrete roofs and	
canopies were placed without clogging water	
Other fittings including iron / PVC pipes were covered with endcaps to prevent water	
collection	
Water storage containers / tanks were covered to prevent mosquito breeding and the water	
collecting containers were cleaned daily	
Scrub/brushed the inner surface of water collected tanks/containers at least once in three	
days.	
Drains and gullies were set up to flow	
Collected water in the lift wells were removed every 3 days	
Discarded material, debris and unused goods were discarded properly	
Solid waste was recycled	
The reusable or discarded tyres were stored/sand filled/pierced to prevent accumulation of	
water.	
Larvicides were applied to the mosquito breeding places/containers where water could not	
be removed	
Technical advice was obtained from the respective Medical Officers of Health	

Please send this report to local government (Municipality/ Pradeshiya Saba), MOH office of the area and CIDA before 10th of the subsequent month.

Your assistance as a construction contractor to this National programme on Dengue Prevention, is highly appreciated.

Posters for COVID-19

Poster 1: Instructions to Prevent COVID-19 at your work place



https://www.slagm.lk/wp-content/uploads/2020/05/COVID-Control-workplace-Poster-English.jpg

Posters for Dengue

Poster 1: Instructions to prevent Dengue breeding in Construction sites



Source:

http://www.cida.gov.lk/sub pgs/dengue prevention.html

Poster 2: Instructions to prevent Dengue breeding in Construction sites & Factories



Source: http://www.cida.gov.lk/sub_pgs/dengue_prevention.html