



Shelter Cluster Iraq
ShelterCluster.org
Coordinating Humanitarian Shelter



CONSTRUCTION SITE SAFETY PROTOCOL FOR COVID-19 CONTEXTS

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Abstract

How to mitigate the risk of COVID-19 infection during engineering works and particularly in construction sites
Guidance for humanitarian partners and their beneficiaries, contractors, third parties, suppliers and relevant authorities

Shelter and NFI Cluster Team | IRAQ

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INTRODUCTION

The COVID-19 pandemic has required to raise health and safety standards across all spectra of domestic and professional life. While safety protocols for construction sites have been established in many countries, adjusting those to the new pandemic represents a new obligation, to address risks for all persons present on those sites. The objective of this protocol is to provide operational instructions to mitigate the risks associated with the spread of COVID-19 during any rehabilitation works, both in residential properties, and during infrastructural engineering works. COVID-19 represents, in fact, a biological risk for which equal measures must be taken for the whole population.

How to use this protocol: based on the “Do No Harm” principle, the measures presented in this protocol **MUST** be implemented at all times on all construction/rehabilitation sites for works carried out by every Shelter Cluster partner in Iraq. Partners may opt for making this protocol part of their contractual agreement with (sub)contractors, suppliers, third parties, beneficiaries, etc. and could request the **signature at the bottom of this document**. A **check-list, training materials and visual aid** have also been developed based on these guidelines, to facilitate the daily job of ensuring preventative measures against COVID-19. The links to those tools, that constitute the “CSSP toolbox”, can be found in [Annex 1](#).

Adhering to these guidelines shall NOT generate panic, anxiety, stigma or any other mental health, psychosocial and broader protection consequences. The reasons for such measures and their implementation shall be explained carefully.

The speed of works shall not compromise the respect of the safety measures. A slower execution of works in order to fully comply with the safety measures shall be taken into consideration.

Eventually, it is recognized that the type of works required in the construction sector often imply working in small spaces, at height, or carrying out physical effort. The very harsh weather conditions of Iraq also expose construction workers to a challenging working environment. Recommendations in this protocol are a compromise between ensuring comfort during works while still adopting precautionary measures against COVID-19 contagion.

0. USERS CONCERNED BY THE PROTOCOL

All recommendations of this protocol should be used by partners to inform, monitor and eventually make them part of their contractual obligation with contractors, third parties, daily workers, Governmental officials as well as beneficiaries of shelter programs.

In case of any infringement, the Shelter Partner may opt to stop work of the contractor and delays that incur penalties will be the responsibility of the contractor.

BASIC NOTIONS AROUND COVID 19 AND HEALTH PRACTICES

1. COVID-19 VIRUS

COVID-19 virus is a new respiratory infection, causing mild disease (i.e. non-pneumonia or mild pneumonia) in about 80% of cases and most cases recover. More severe symptoms are experienced if a person is elderly or has a pre-existing medical condition (e.g. cardiovascular diseases, diabetes, lung disorders, cancers, etc.). Although it is not certain to what extent, asymptomatic cases may spread the virus without exhibiting any symptoms. Children seem to be less affected by the virus, yet they may spread the virus.

The following are the most common symptoms for COVID-19:

- **Fever or chills**
- **Dry cough**
- **Shortness of breath or difficulty breathing**
- **Sore throat**

These symptoms are very **similar to the ones of a normal flu**. Only a medical test performed in specialized labs can confirm if a person is positive to COVID-19. Iraqi MoH has made a great effort to ensure testing capacity is available to all citizens. Nonetheless, **any person** showing such symptoms shall be considered carefully and **seek immediate health advise** while avoiding getting in contact with any other person till a diagnosis is given.

Everyone can catch COVID-19 virus – irrespective of age, gender, sexual orientation, religious, tribal or other affiliations – as a matter of fact, it is a disease that has been affecting all countries around the globe. It is a personal and social responsibility to ensure this message is spread widely, with no discrimination or fear. This is why health workers, epidemiologists and other scientists are everywhere to support anyone fearing COVID-19 contamination, to provide immediate health care and counselling.

2. PREVENTIVE HEALTH AND HYGIENE PRACTICES – AT ALL TIMES

PHYSICAL DISTANCING

1. Keep a **minimum distance of 1 meter (i.e. a large step) with others at all times** to eliminate the potential of cross contamination
2. **If keeping minimum 1 meter is not possible, people shall wear face mask/face shields**
3. **No hugging – words can be more powerful to prove closeness to those we care about but shall not touch!**

RESPIRATORY HYGIENE

4. **Cover coughing or sneezing with a tissue**, then throw the tissue in the trash and wash your hands
5. If no tissue is available, then **cough into your elbow**

HAND HYGIENE

6. **No handshaking – words can be more powerful to prove closeness to those we care about but shall not touch!**
7. **Avoid touching eyes, nose, and mouth with your hands**
8. **Wash hands often with soap for at least 20 seconds or use an alcohol-based hand sanitizer with at least 60% ethanol or 70% isopropanol**

CLEANING AND DISINFECTION¹

9. **All frequently used areas, surfaces and objects** shall be first cleaned and then disinfected regularly - including but not limited to: tools, door/window handles, push plates, handrails, washrooms including taps, sinks, toilet flush (and seats if applicable), tables, chairs, phones, floors, etc.
10. **Clean with detergent and water first**, followed by rinsing and drying – this is the most useful method for removing germs from surfaces. **Surfaces must be cleaned prior to disinfection**

¹ This recommendation is based on WHO “Environmental cleaning and disinfection in non-health-care settings in the context of COVID-19” that can be found at:

<https://apps.who.int/iris/bitstream/handle/10665/332096/WHO-2019-nCoV-Disinfection-2020.1-eng.pdf?sequence=1&isAllowed=y> (English version)

<https://apps.who.int/iris/bitstream/handle/10665/332096/WHO-2019-nCoV-Disinfection-2020.1-ara.pdf?sequence=12&isAllowed=y> (Arabic version)

11. **Disinfection** can then be carried out using **0.1% chlorinated water (i.e. bleach diluted into water)², or 70% alcohol/ethanol-containing solution**
12. Keep chlorinated water, disinfectants and other chemical products away from children and persons with disabilities
13. In case these products get into your eyes, mouth or nose, rinse immediately with plenty of fresh water and seek health advise

3. PERSONAL PROTECTIVE EQUIPMENT (PPE)

14. **Keep in mind that the use of PPE does not eliminate the risk of contamination, but reduces it, therefore it is mandatory to wash hands frequently and keep a one-meter distance between all people at all times**
15. Face masks and latex gloves must be properly tossed in the trash bin immediately after single use. **It is prohibited to leave any used PPE (face mask/gloves) at the working site**
16. **Re-usable PPE** should be thoroughly cleaned with 0.05% chlorine solution after use and **not shared between workers**
17. **Single use PPE** should be disposed of so that it **cannot be reused**

FACE MASKS:

18. Face masks help minimizing contagion through nose and mouth as they filter the inhaled and exhaled air
19. **Face masks should be used when the minimum distance of one meter cannot be respected**
20. **If the physical distancing of at least one meter cannot be achieved, wearing a mask is mandatory** (in order of preference, based on the filtration capacity):
 - i. **FFP2** masks are recommended as they have a filtration capacity of 95%, also against aerosol of toxic gases
 - ii. If FFP2 masks are not available, wear **two surgical masks**
 - iii. If proper face masks are not available, use a **3-layered face cover or a double-folded thick scarf** – those must cover both mouth and nose
 - iv. **Face shields** can be also used, although they only offer a physical barrier and do not have any filtration capacity
21. Cleaning hands thoroughly **before** wearing a face mask and **after** removing the mask/scarf
22. **The mask should fit tight to the face; avoid leaving gaps around your chin, cheeks, and nose**
23. **Avoid touching the mask. If so, re-washing hands is necessary**
24. Single-use masks cannot be re-used

² Chlorine concentrations in commercially available products (domestic bleach) vary between 4% and 6%. To know the parts of chlorine-based product to mix into water to reach the desired concentration, the calculation is the following: [% chlorine in liquid sodium hypochlorite / % chlorine desired] – 1 = Total parts of water for each part sodium hypochlorite. For 0,1% chlorine-diluted solution, 49 parts of water need to be mixed for each part of sodium hypochlorite (or almost 100 each 2 parts of 5% concentrated bleach)

GLOVES:

25. **Frequent hand washing is the best practice.** Gloves may give a false sense of safety. Hence, when the material allows, wash them frequently as if they were your bare hands
26. Single-use broken gloves shall be discarded

MANAGEMENT AND ORGANIZATIONAL MEASURES

4. A NEW JOB PROFILE: THE COVID 19 SAFETY MANAGER

27. The main contractor of the shelter program shall appoint a **designated staff**³, to ensure adherence to all safety & COVID-19 related protocols – the so-called **COVID-19 Safety Manager**
28. **Job description of the COVID-19 Safety Manager:**
 - Get acquainted with all symptoms, contamination risks and precaution measures related to COVID-19
 - Run regular trainings for workers, before commencement of works as well as on a daily basis as refresher. Frequency can be weekly if and when all workers show to know how to respect the protocol without reminders. Any new staff shall receive a bilateral training before starting work
 - Provide a detailed briefing to the beneficiary before commencing the construction/rehabilitation works
 - Provide any support to the **workers**, would they have any question at any time
 - Provide any support to the **beneficiaries**, would they have any question at any time
 - Collect daily **verbal self-certification** from workers as soon as they arrive at the work site, that they are in good physical condition and do not have any COVID-19 symptoms, especially:
 - free of fever and in any case below 37.5 °C
 - absence of flu-like symptoms
 - absence of contacts in the last 14 days with subjects tested positive for COVID-19 or coming from risk areas according to WHO and GoI indications (e.g. Iran, Turkey).
 - Remind workers to respect the safety protocols whenever these are not being respected
 - Develop and fill in a **check-list for each construction site** to facilitate the verification of the protocol
 - Produce **regular reports on the respect of the protocol**, incidents, challenges, etc. Such reports shall be shared weekly with the Contractor Manager and the humanitarian partner. They in turn could adjust on-site measures if required, as well as decide to stop the works and inform the Health Authority in the case of any major or recurrent violation of the protocol

³ This new role may not necessarily be a newly recruited person, but a worker already contracted for the works or assigned to multiple workers on rotation basis. His/her experience in construction would help foresee potential risky practices where more care shall be applied. Based on the size of the rehabilitation works and the presence of several actors providing assistance, the C-19 Safety Manager could also be assigned to multiple construction sites, although the workload shall not impact the quality of the surveillance around the respect of this protocol

- Apply **disciplinary measures** established by the contractor and the humanitarian partner, would any one present at the construction site violate the basic principles of this protocol
- Verify the good hygiene conditions of the construction site and of all the related services (bathrooms, detergent dispensers, service rooms etc.), on a regular basis (daily or hourly, depending on the size of the construction site and the number of workers present)

- Ensure personnel, including third party, wash their hands before entering and leaving the site, and after handling delivered materials
- **Coordinate and regulate access to the site from other actors** (e.g. suppliers, daily workers, technicians, authorities, third parties, etc.)
- Direct any worker to seek health advise if showing COVID-19 symptoms (coughing, difficulty in breathing, high fever)

Notify DoH if a worker shows any symptom. Inform the contractor’s manager and the relevant humanitarian agency as well. [Identity must be kept confidential to avoid generating stigma and/or panic](#)

5. INFORMATION DISSEMINATION

29. **All parties involved in the construction works shall play a very proactive role in disseminating hygiene and health information and prevention measures against COVID-19**
30. **All users concerned by this protocol should receive trainings prior to the inception of the works on the risks associated with COVID-19 and the related safety and precautionary procedures and measures to be implemented.** Refresher sessions shall be repeated during works. The [COVID-19 Safety Manager](#) is the main person responsible for these activities
31. All trainings and information sessions shall be conducted in a ventilated (preferably open and shaded) space, respecting ALL recommendations of this protocol, in particular physical distancing. Only essential staff are admitted to participate. The [COVID-19 Safety Manager](#) will be responsible for disseminating the information and regularly monitoring the respect of the measures
32. **Each worksite should have Education, Information and Communication (IEC) Materials** (either from MOH or WHO) on COVID-19 safety guidelines and handwashing instructions that are posted and shared. These posters must be present at all strategic areas including trailers, gates, equipment, vehicles, etc. and shall be posted at all entry points to the sites, and throughout the project site. To be removed and moved to next sites upon works completion.

6. ACCESS CONTROL MEASURES

33. **Any sign of sickness shall be considered carefully by All** – humanitarian partner staff, contractors, beneficiaries, suppliers, third parties, etc.
34. **Any employee / worker / subcontractor / supplier shall not come to the working site if feeling sick**
35. Anybody with access to the construction site must provide to the [COVID-19 Safety Manager](#) a **daily verbal self-certification** that they are in the physical conditions to carry on the work. This self-certification should also be provided orally to the [COVID-19 Safety Manager](#) whenever requested, and a record should be compiled by the [COVID-19 Safety Manager](#)

36. Temperature check when entering the site could be implemented (although not made mandatory in many countries). If so, anyone refusing such check shall not be admitted to the site. Good working condition of the thermometer is the responsibility of the contractor
37. Anyone found sick or exhibiting any of the symptoms above should be reported to the [COVID-19 Safety Manager](#) (via phone, text or verbally) right away for immediate referral to the health provider. As provided by law, the identity of the worker must be kept confidential. **Upon learning of an infection**, the designated [COVID-19 Safety Manager](#) must immediately notify the DOH, the contractor's manager and the relevant humanitarian agency. **Works must stop immediately**
38. Any person exhibiting symptoms or unable to self-certify should be directed to leave the work site and seek medical attention and applicable testing by their health care provider. **They are not to return to the work site until cleared by a medical professional**
39. **For no reasons any individual under quarantine or isolation health protocols shall be admitted to the site**
40. Keeping an **attendance register/visitor book** at the work site signed by **anyone** accessing the site is highly recommended – especially if a contact tracing process needs to be initiated by the Health partner/authority
41. The contractor shall **manage the working shifts** in order to:
 - Avoid large gatherings while accessing/exiting the worksite
 - Avoid high staff turnover – best is to maintain the same crew of workers on the same site, with minimal to no use of additional daily labor
 - Limit the presence of (sub)contractors, suppliers, third parties, etc. at the same time
 - As much as possible, coordinate the rehabilitation activities in a way that different specialists access the construction site with alternate modalities (e.g. civil works executed in the morning, plumbing/electricity in the afternoon, or in different days)

7. SAFETY MEASURES AT WORK

TRAVELING TO THE WORK SITE

42. **Prefer individual transport to the work site.** If that is not feasible, prefer to **share the vehicle with the same staff** on the way to the construction site and on the way back home.
43. **If travelling in a shared vehicle, wear masks if the passenger capacity of the vehicle is occupied for more than 50%⁴.** In any case, the **maximum number of people should not exceed the number of seats**

AT THE WORK SITE

44. Employees must be asked **daily** by the [COVID-19 Safety Manager](#) if they are experiencing any symptoms, and referred to the nearest health facility if they are (See access control measure above)

⁴ Based on Iraq Government (PMO 30.5.2020). This recommendation shall be adjusted to any further Governmental instruction

45. **Keep a minimum distance of 1 meter with others at all times** to eliminate the potential risk of cross contamination
 - In work conditions where distancing is impossible to achieve, every worker shall be supplied with all appropriated PPE including standard face mask and/or face shield, working gloves, and when applicable latex gloves and eye protection
 - Multi person activities to be limited where feasible and appropriate (e.g. lifting activities)
 - Safety critical work should still be carried out with adequate personnel and under adequate levels of supervision to avoid incidents that may lead to loss of life
 - Non-essential physical work that requires close contact between workers should not be carried out
 - Plan all other work to minimize contact between workers
46. Before use, clean first and then disinfect tools, cabinets, equipment, door/window handles, etc.
47. Daily clean and disinfect hard surfaces like tools, door/window handles, equipment, bathrooms, floors, etc.
48. Limit access to scaffolding to essential staff only. Clean them on regular basis (no need for disinfection)
49. **Workers should not touch anything on site that is not strictly needed for their works.** If an area does not need works, workers shall not enter the room when beneficiaries are living in the house under rehabilitation
50. All onsite workers must help keep all areas (including washrooms) clean
51. **Increase ventilation in enclosed spaces.** Where more than one person is working, this could be achieved with **a simple fan and an exhaust piping system**

MANAGEMENT OF COMMON EQUIPMENT

52. Contractors will have to limit the exchange of tools and equipment between their workers. **Prefer the use of individual tools as much as possible**
53. Disinfection after each use to be done in case of multi usage equipment
54. Stairs should be used in preference to lifts or hoists
55. Where lifts or hoists must be used, reduce their capacity to avoid congestion and clean touchpoints, doors, buttons etc.
56. Regularly clean the inside of vehicle cabs and between use by different operators

ON THE USE OF PPES WHILE WORKING

57. **If the physical distancing of at least one meter between workers cannot be achieved, use of face masks are mandatory (in order of preference):**
 - **FFP2 masks**
 - If FFP2 masks are not available, wear **two surgical masks**
 - If proper face masks are not available, use a **3-layered face cover or a double-folded thick scarf**
 - **Face shields** can be also used, although they do not offer any filtration capacity against viruses

58. Workers to wear working gloves suitable to the nature of the work. Whenever not working, if available latex gloves should be worn in order to keep worker's hands protected at all times
59. **Hands**, even with latex gloves, shall be **washed frequently**: for this purpose, **the contractor must ensure daily supply of chlorinated water (0.1%) at the construction site, to cover the needs of handwashing of all workers and visitors**
60. **Hand washing station shall be organized by the contractor** at the site entrance, with soap for all workers and people entering the site, and additional stations at locations in the site that make it possible for workers to frequently wash their hands with soap for at least 20 seconds each time. Alcohol-based hand sanitizers should be provided where hand washing facilities are unavailable
61. Face masks and latex gloves must be properly tossed in the trash bin immediately after single use. It is **prohibited to leave any used PPE (face mask/gloves) at the working site**

ON BREAKS

62. Work crew meetings and breaks to be held outside and follow physical distancing
63. Move, unpack and pack up personal belongings oneself
64. Bringing food and water from home is recommended
65. **No sharing of water/beverage bottle/cup**
66. Clean up after yourself on breaks. Cigarettes, wrappers etc. must be placed directly in trash. Clean with water and detergent surfaces like chairs and tables after use. Disinfect if needed

WASHROOM AND ENVIRONMENTAL HYGIENE

67. There should be at least one toilet dedicated to the workers inside the building
68. In case there is NO toilet available for the exclusive use of the workers, after each use, each worker/user must guarantee the cleaning of all the surfaces touched with detergents and/or disinfectants
69. Ensure the presence of cleaning detergent in the bathroom. A small sprayer with chlorinated water could also be useful
70. Ensure ventilation of the premises
71. **Install hand washing stations with (possibly 0.1% chlorinated) water and soap to be used for frequent handwashing for all onsite employees**
72. If a worker notices soap is running low or out, immediately notify the [COVID-19 Safety Manager](#)
73. Beneficiaries to be informed about the risks related to the shared use of spaces and in particular of toilets
74. Garbage barrels will be placed next to the hand wash station for disposal of tissues/towels

75. Garbage collection and storage points should be increased and emptied regularly throughout and at the end of each day

OTHER ORGANIZATIONAL MEASURES

8. INTERACTION WITH THE BENEFICIARIES

76. **Beneficiaries can and should play an important role in the supervision of the implementation of the protocol inside their house, with the support of the COVID-19 Safety Manager**
77. **The Shelter Partner should inform the beneficiaries on relevant accountability and complaint mechanisms before the start of the works through printed materials and ensure contact numbers are distributed to everyone**
78. Before the commencement of the works, beneficiaries shall receive a training on COVID-19 precaution measures by either the Shelter Cluster Partner, or the Contractors
79. When residing inside the house to rehabilitate, beneficiaries shall be briefed on the existing risks around COVID-19, despite all the mitigation/preventive measures put in place, so they can take an informed decision on whether to accept the rehabilitation works
80. **Household members, including children, should not be in the same room where construction is ongoing and limit direct contact and engagement to an absolute minimum.**
81. **Special attention should be paid to families where one or more member is at heightened risk for COVID-19 (e.g. people above 60, pregnant women⁵, persons with disabilities, chronic health conditions and/or respiratory illness)**
82. If any household member is at higher COVID-19 risk, to the extent possible the vulnerable person shall relocate in another house while the construction workers are on the site
- If relocation is not possible, the vulnerable person shall remain in a room where construction workers will not enter. **Coordination with the health provider** can be sought, in order to make a decision on a case-by-case basis
83. **If a household member starts showing COVID-19 symptoms**, the head of the household shall notify the **COVID-19 Safety Manager** from the contractor and the humanitarian agency. **Construction work must pause until the health status can be determined**
84. Beneficiaries to be informed by the **COVID-19 Safety Manager** about:
- the risks related to the shared use of closed spaces and in particular of toilets
 - the need to clean with water and detergent, and then disinfect the area (especially door handles and shared toilets and sinks) after workers have left the site on a **daily** basis or whenever the working areas are being visited by beneficiaries
 - the need to keep windows/doors open as much as possible to help air circulation especially in small spaces

⁵ Although pregnant women are not at a higher risk of contracting COVID-19 than non-pregnant women, a new study published by the Public Health Agency of Sweden shows that compared to non-pregnant women, pregnant and postpartum women with COVID-19 have a higher risk of requiring intensive care

9. EXTERNAL COORDINATION AND COOPERATION MEASURES

85. Visitors access must be subject to prior authorization from the [COVID-19 Safety Manager](#)
86. **Visitors must adhere to this protocol**
87. Visitors must wear the necessary PPE
88. **Refrain from admitting non-essential visitors**
89. Drivers should preferably remain in their vehicles if the load will allow it. Alternatively, they can be allowed to stay near their vehicle to supervise/assist offloading. They must wash their hands before and after unloading goods and materials

***Credit:** this guideline has been based on the work carried out by **Première Urgence Internationale (PU-I)**, which established COVID-19 safety protocols for construction sites, taking into consideration best practices being developed across the most pandemic-hit European countries. The Shelter Cluster corroborated such work with its own knowledge, also taking into consideration the insightful **contribution of Danish refugee Council (DRC) and UN-HABITAT**. This remains a living document and more partners are welcome to contribute with their field knowledge.*

ANNEX 1: THE CSSP TOOLBOX

Here is the list of tools that constitute the “CSSP toolbox” of the Iraq Shelter Cluster:

- 1- Construction Site Safety Protocol for Covid-19 contexts ([Arabic](#) / [Kurdish](#))
- 2- Construction Site Safety Protocol TRAINING ([English](#) / [Arabic](#) / [Kurdish](#))
- 3- Construction Site Safety Protocol POSTERS ([English](#) / [Arabic](#) / [Kurdish](#))
- 4- Construction Site Safety Protocol CHECKLIST ([English](#) / [Arabic](#) / [Kurdish](#))