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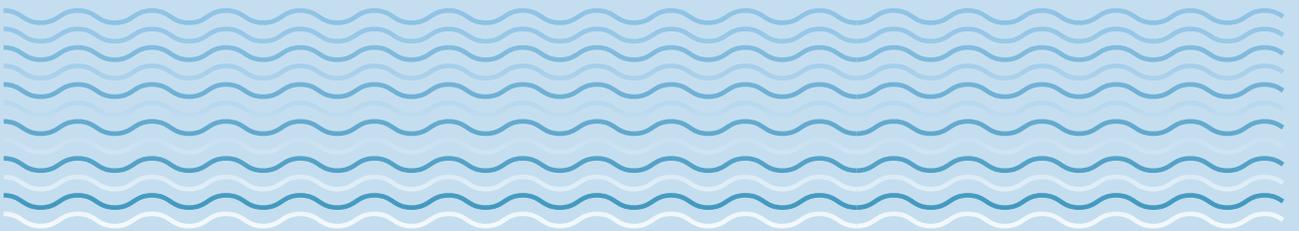
MPEDA

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COVID-19 GUIDELINES FOR THE SEAFOOD SECTOR

**THE MARINE
PRODUCTS EXPORT
DEVELOPMENT AUTHORITY**







FOREWORD

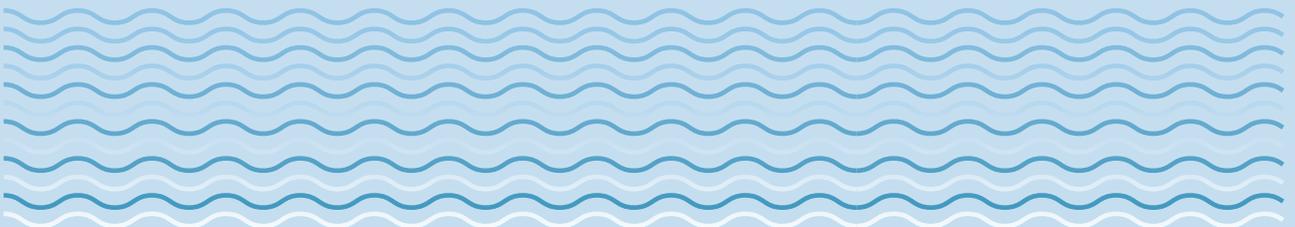
The COVID-19 global pandemic has affected the seafood economy in an adverse manner. As the disease spread across nations, it strained world economy and seafood trade also got affected with disruptions in production and supply chain. The turbulence in the seafood markets has created ripples in the production and process supply chain in India also. MPEDA, through timely interventions stood by the sector and supported the farming and exporting community to tide over this difficult phase, as the pandemic grew out of proportion claiming human lives and creating major concerns over human health and safety. As the markets get back to normalcy slowly, concerns have been raised by buyers, super market chains and import authorities about the transmission of viral nucleic material through seafood consignments and its packaging.

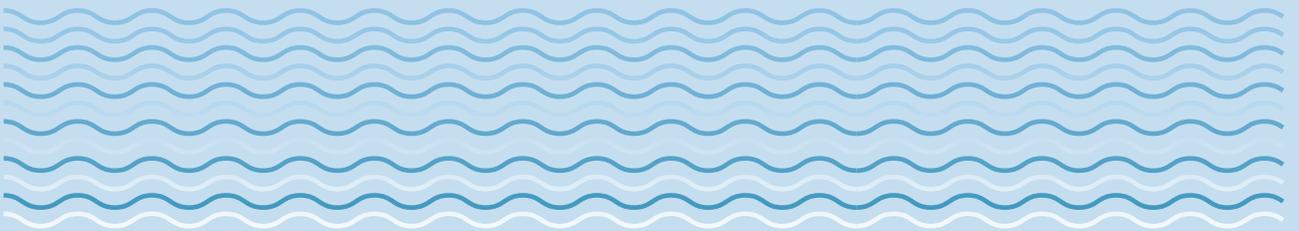
In view of the above situation, MPEDA has brought out this booklet which covers the sanitation and hygiene protocols to be followed by the seafood sector in keeping away the risk of viral contamination of COVID-19 through fish and fishery products. The booklet also has guidelines on sanitation, social distancing and material handling protocols to be followed in fishing boats, landing centres, auction centres and aquaculture farms while procuring the seafood for human consumption.

I congratulate the Quality Control Section of MPEDA for the efforts taken in preparing this booklet, which is tailor-made after researching and reviewing the published documents such as those from FAO, European Commission, USFDA, FSSAI etc.

I hope all the seafood processing units and other stakeholders will find this useful and follow the prescribed protocols religiously so as to keep COVID-19 pandemic transmission risk through seafood at bay.

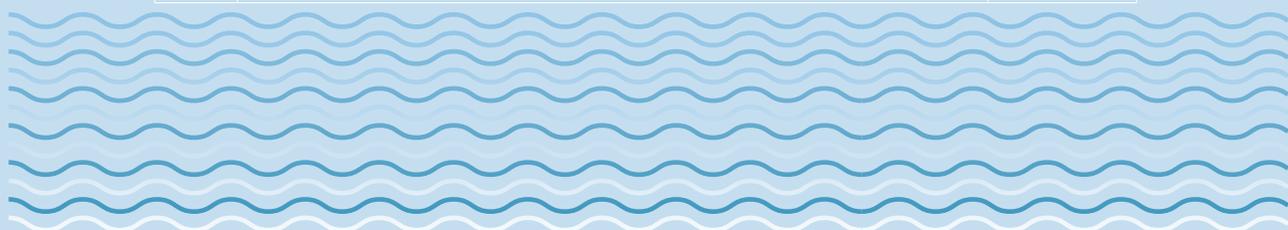
K.S. Srinivas IAS
Chairman

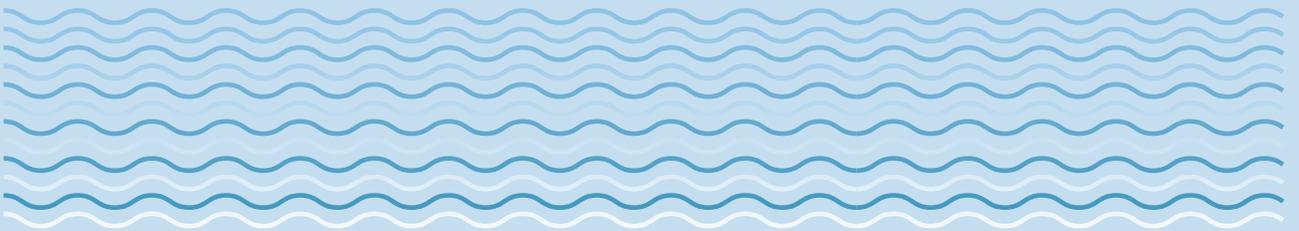




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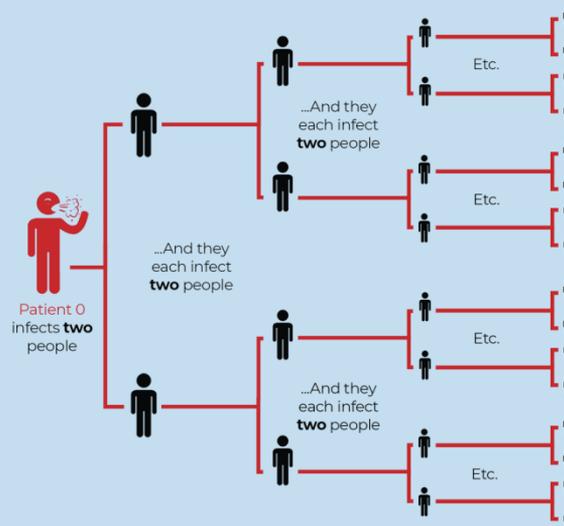




1. Introduction

COVID-19 is a communicable disease caused by novel corona virus known as SARS CoV-2. Corona viruses are a large family of viruses which cause illness in animals and humans. Corona viruses are zoonotic in nature, which means they are transmitted between animals and people. COVID-19 causes acute respiratory tract illness and common signs of infection include respiratory symptoms, cough, shortness of breath and fever. In severe conditions, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death. COVID-19 virus spreads mainly through respiratory droplets, saliva generated when an infected person cough/ sneezes or talks loudly. The infection can also occur indirectly through contact with contaminated surfaces containing respiratory droplets.

How a virus with a reproduction number (R0) of 2 spreads in a non-immune population



Though COVID-19 is not known to be food borne, it is important for seafood processors to be extra cautious and to take adequate precautions to prevent the spread of COVID-19 in workplace. Seafood processors/managers have to ensure that their employees are trained appropriately in good hygiene, social distancing practices, regular environmental cleaning, disinfection and limiting unnecessary travel. They shall ensure provision of adequate facilities for hand washing and sanitizing for all employees including delivery drivers, vendors, suppliers etc. and also for visitors.

1.1 Common symptoms of COVID-19 include:

- a. Fever (high temperature - 37.5°C or above)
- b. Cough - this can be any kind of cough, not just dry
- c. Shortness of breath
- d. Breathing difficulties
- e. Fatigue
- f. Head ache
- g. Diarrhea
- h. Loss of smell or taste
- i. Rashes on skin or discolouration of finger or toes



Fever



Cough



Trouble Breathing

2. Management Responsibility

- a. **Employees should be encouraged to report illness** without any fear of losing wages or their job if subjected to quarantine. Suitable assurance on the matter may be given from the management side.
- b. Employees need to be aware that they **should not come to the processing unit with symptoms of COVID-19**, but should notify such illness over telephone.
- c. Arrangements should be made for **screening of all employees and visitors at the gate/entry point** with the help of non-contact thermal scanners for checking their **body temperature**. In case any employee has temperature

above 37.5⁰C (99.5⁰F) or **flu like symptoms** or the employee reports that they have come in contact with such a person, he/she shall be immediately isolated (should not be sent back home) and the incident should be reported to the local health authority & action may be taken as advised by them.

- d. Use of **bio-metric attendance** system may be **discontinued** during the pandemic period in order to avoid cross contamination. It may be replaced with facial recognition or manual system ensuring minimal physical contact.
- e. Employees may be advised **not to use other's** phones, **belongings**, pens, work tools and equipment.
- f. The Seafood processors should take adequate steps by providing training in safety measures and guidance to employees.
- g. Appropriate arrangements for **proper disposal of used face masks, head gears, gloves, single use towels** and disinfection of aprons, footwear, uniforms etc shall be made.
- h. Ensure that the processing area, toilets and washrooms are adequately ventilated with operational exhaust fans when the unit is not air conditioned.
- i. In case of **air conditioned facilities**, ensure that **appropriate filters are provided to maintain clean air** (ideally maintain temperature of 24-30⁰C and 40-70% humidity).
- j. Seafood processors shall ensure that sharing of lockers by employees is avoided and a **gap of at least two meter** is maintained by the employees while using the lockers.
- k. Food handlers shall be advised & trained not to crowd around in common public spaces such as recreation centers, canteens, hostels etc.
- l. The management shall ensure that the **loss of working man days due to infection or quarantine are adequately compensated** to give emotional and financial support to the worker, and to encourage them to report the illness / contacts.
- m. Seafood processors **may prevent discriminatory practices** like discrimination against a worker who has recovered from COVID-19, or not providing protective gear like gloves and masks to contract workers.
- n. **Intimate suppliers of raw material and other inputs to take necessary precautions** to ensure that the materials supplied by them are handled by following proper hygiene and sanitation protocols to prevent COVID-19 transmission.



2.1 Formation of Emergency Response Team (ERT)

- a. An emergency response team should be established to deal with suspected COVID-19 infections and **one person should be thoroughly trained & designated as the COVID-19 coordinator.**
- b. The **Coordinator's contact details should be shared with all employees** and shall be displayed prominently in the unit premises for information of workers & other staff members.
- c. The emergency response team should develop protocols on the precautions to be taken when handling suspected COVID-19 patients and as a means of general preparedness, the following at least, should be ensured:
 1. Ensure that a list of local health workers & other **emergency contacts are maintained / updated & displayed.**
 2. The **list of local authorized centers/hospitals** for COVID-19 testing and treatment is maintained and frequently updated.
 3. The contact details of **disinfection authorities / companies** are kept handy.
 4. Sufficient **disinfectant & dispensers** for use during emergency is available. A team of workers may be trained & kept ready for immediate disinfection.
 5. Masks, gloves, safety shields, **Personal Protective Equipment (PPE)** for emergency use are available as per advisories issued by the government, from time to time.
 6. **Isolation rooms** for suspected cases & primary contacts with attached toilets & colour coded closed trash bins with colour coded garbage bags that may need to be disposed separately as per the guidance of the health workers if the worker tests positive.
 7. **Records related to all the information about suspected & confirmed cases should be maintained,** these records should mention at least employee name, description of the incident, communications had with local authorities, action taken, recovery status of the worker.

8. The workers & employees may be encouraged to maintain a **personal diary** to note down the details of the people & places they have come in contact, visited (shops, places), mode of shared transportation (bike, car, bus etc.) on a daily basis.
9. Only the bare **minimum workers** required may be asked to report for duty based on the activities planned for the day & the requirement may be intimated in advance.

3. Workers' awareness

Seafood workers include those who directly touch open seafood as part of their work. It also includes staff that may touch food contact surfaces or other surfaces in areas where open food is handled. The term can therefore apply to managers, cleaners, maintenance contractors, delivery workers, and food inspectors. Seafood processors must ensure that their employees are informed and are aware of COVID-19 infection, its sources and should be aware of ways to prevent it like not reporting for work while feeling sick even if there are no symptoms.



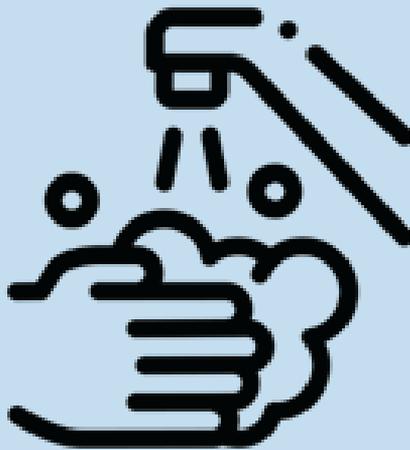
PROTECTION FROM CORONAVIRUS



3.1 General instructions

- a. **Proper hand washing with soap and water** is one of the most effective tools in preventing the spread of COVID-19.
- b. Additional hand washing and sanitizing points (stations) shall be set up in the plant including non-food handling areas.
- c. Posters shall be displayed prominently at hand washing stations in the language understood by employees.
- d. Posters/sign boards encouraging risk-minimizing behavior may be displayed at entry points.
- e. Hands shall be washed elbow down for 20 seconds or more using water and liquid soap after every two hours. Hands shall be dried using clean towel (disposable towels are preferred) or by using hand dryers.
- f. **Good Respiratory Hygiene (GRH)** helps to prevent COVID-19 spread in the factory. Covering mouth and nose when coughing or sneezing with tissue or into their inner elbow/ sleeve & not to use the palm of the hands to cover their nose and mouth shall be practiced.
- g. Food handlers/employees shall move away from the food handling area while coughing or sneezing.
- h. Avoiding close contact with anyone showing symptoms of respiratory illness such as coughing and sneezing.
- i. The tissue shall be disposed off in a closed foot operated bin and hands shall be thoroughly washed and sanitized, before handling food.
- j. In case any food handler coughs or sneezes without following respiratory hygiene or develops any flu like symptoms, an area of more than 6 feet around the person shall be immediately vacated, thoroughly cleaned and disinfected using freshly prepared 1% hypochlorite solution or any other disinfectant found to be effective against the novel corona virus.
- k. Employees shall use **clean face mask to cover nose and mouth**. It is suggested to use face shields in high risk areas of COVID-19 transmission.
- l. The mask shall fit perfectly on face without leaving any gaps on mouth, nose and chin.

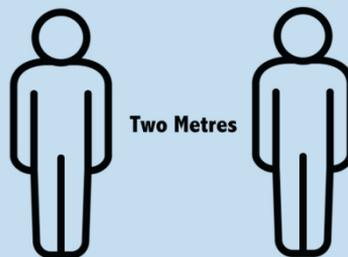
- m. The face covers shall be changed every six hours or as soon as they get wet. If reusable face covers / masks are used, it should be cleaned, sanitized and dried thoroughly.
- n. In case disposable face covers are used or reusable face cover is damaged, it shall be disposed of in a closed bin.
- o. While removing the face cover, care shall be taken not to touch the outer surface of the face cover.
- p. Employees shall **avoid touching their face, eyes, nose**, etc. after removal of face cover/ mask before washing the hands thoroughly.
- q. In addition to the standard hygiene practices in the unit, workers shall ensure that their hands are washed:
 - ✓ before starting work
 - ✓ after touching surfaces such as door handles, walls, windows, doors, keyboards, etc.
 - ✓ after removal of gloves, mask, etc



3.2 Workers and staff canteens

Workplace canteens in essential front line service that need to remain open where there are no practical alternatives for staff to obtain food. High standards of hygiene and public health measures for hand washing and respiratory hygiene protocol need to be maintained in canteens. Operational standards for staff canteens should include:

- a. Maintaining a **physical distance of at least 2 meter** between an individual and other workers, including in seating arrangements.
- b. **Staggering staff work and break times** to reduce staff numbers in a canteen at any onetime.
- c. **Restricting non-essential physical contact** as much as possible.
- d. Visible notices for staff promoting hand hygiene and physical distancing.
- e. **Cleaning and disinfection procedures** for equipment, premises, contact surfaces/ **high touch points**, e.g. counter tops/tongs/service utensils/open self-service displays/door handles.



3.3 Physical distancing in the work environment

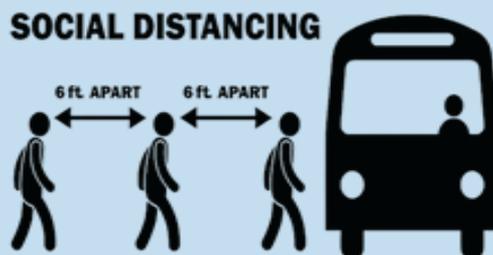
Physical distancing is very important to slow down the spread of COVID-19. This is achieved by minimizing contact between potentially infected individuals and healthy individuals.

- a. A minimum distance of 6 feet shall be maintained between two persons at all points in the seafood processing establishment.
- b. Spacing measures such as **marking on floor, separation of tables, use of barriers**, etc. shall be adopted for food handlers.
- c. Limiting the number of people in contact on a production floor by creating physical barriers, so people in smaller spaces can work without fear.

- d. **Increased time between shifts or scattering of break** timings will help to minimize employee's interaction.
- e. A time gap between two consecutive shifts will allow greater time for cleaning and sanitizing to minimize the likelihood of spread between employees or visitors.
- f. Face-to-face meetings should be avoided / minimized as far as possible.
- g. Avoid employees gathering in car parks, bus stops, canteens or other common areas after their shift.
- h. Employees coming by vehicles arranged by the company ensure physical distancing during transportation and while waiting for the vehicle.
- i. Employees coming by public transport may also be instructed to maintain physical distancing during their travel.
- j. While returning back also workers are instructed to follow physical distancing.
- k. All **vehicles carrying employees should be disinfected** appropriately.

Examples of practical measures to adhere to physical distancing guidance in the seafood- processing environment are to:

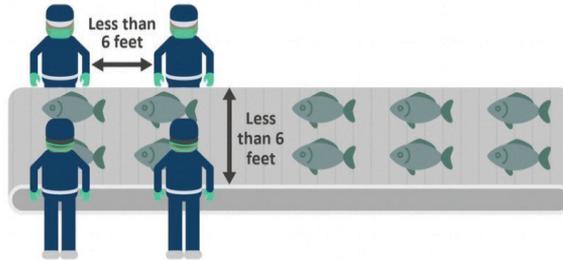
- **Stagger workstations** on either side of processing lines so that workers are not facing one another.
- Provide **face masks, hair nets, disposable gloves**, clean overalls, and slip reduction work shoes for staff.
- Space out workstations, which may require reduction in the speed of production lines.
- **Limit the number of staff** in a food preparation area at any onetime.
- Organize staff into working groups or teams to facilitate **reduced interaction** between groups.
- **Meetings** shall be conducted through **video conference** mode.



How to Align Seafood Processing Workstations, if Feasible

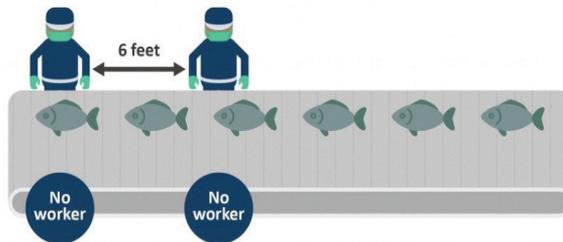
Bad:

Workers are within six feet of one another, including at side-by-side or facing workstations.



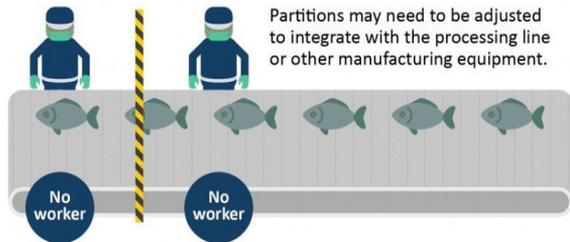
Good:

Workers are spaced at least six feet apart, not facing one another. Other configurations may be used to achieve similar distancing between workers.



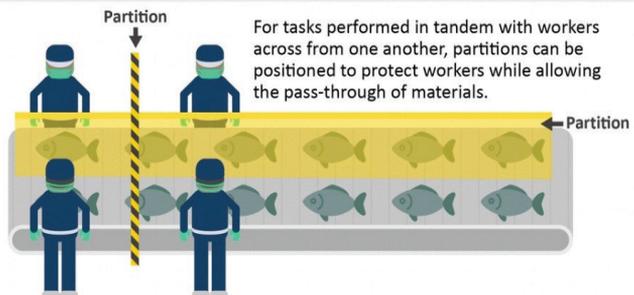
Good:

Physical barriers, such as partitions, separate workers from each other.



Good:

Physical barriers, such as partitions, separate workers from each other, including where workers need to perform tasks in tandem across from one another.



(Image courtesy: CDC (2020) Protecting Seafood Processing Workers from COVID-19)

4. Transportation and delivery of food ingredients and food products

The virus will enter business premises only when an infected person enters or contaminated products or items are brought into the premises. All drivers, loading and unloading workers, other food handlers shall be made aware of COVID-19 infections, its symptoms and possibility of prevention by following good hygiene practices, physical distancing, cleaning and sanitation. Certain general instructions with regard to handling the vehicles and drivers moving in and out of unit premises are given below:

- a. A tyre washing at the entrance of the unit is suggested for the vehicles.
- b. Once the vehicle reaches the gate it should be parked in designated area.
- c. Subsequently, all the **crew to be checked for symptoms of COVID-19** & their body temperature is checked using non-contact temperature scanners.
- d. **Hand washing** facility with soap and water or sanitizer should be placed in the driver's cabin where delivery personnel will have access.
- e. Cleaning schedules shall be maintained, implemented, verified and records shall be maintained.
- f. **Travel history of each driver** shall be recorded to check if the vehicle has traveled through government declared COVID-19 containment zones.
- g. **Vehicle** shall be **thoroughly cleaned and disinfected** if the vehicle has **passed through** Government declared **containment zone**.
- h. In any case, the vehicle shall be thoroughly cleaned before handling the next consignment.
- i. Cabin and parts of the vehicles such as doors, handles, steering wheel, seats, should be cleaned & sanitized with 1% chlorine spray or 70% alcohol or equivalent before starting the journey and once in 6 hours. **Cleaning schedule & records are to be maintained.**
- j. Empty crates, pallets if collected from outside should be sprayed with 1% chlorine solution or equivalent.
- k. Drivers should be instructed to **refrain from stopping for tea / coffee breaks at crowded places** and using public toilets. If unavoidable, thorough washing and sanitizing of hands is required.
- l. If driver/ support staff is suspected with COVID-19 symptoms, then they have to be isolated and the local health authority should be intimated.
- m. If necessary, **clearance may be obtained from the concerned authority for the travel and transport of workers and material.**

5. Disinfection of the facilities

Among the good hygiene practices required at all stages of seafood production, of particular relevance are cleaning and, where appropriate, disinfection of seafood processing facilities and equipment for preventing cross contamination. Steps to be taken for sanitation of processing plant premises may differ from state to state. Any **protocol specifically prescribed by central/state government from time to time may be followed for sanitation of processing plant premises in addition to those prescribed in these guidelines.**

- a. Processing facility premise shall always be well maintained and cleaned thoroughly and sanitized daily.
- b. Office spaces, canteens, food handling area, packaging area, stores etc. should be cleaned with soap and water followed by disinfection using freshly prepared 1% hypochlorite solution or other disinfectants that are found to be effective against Corona virus.
- c. Other areas like parking lots, stores, machine rooms, internal roads, vehicle loading /unloading bays etc. shall also be cleaned and disinfected targeting the surfaces that are frequently touched.
- d. High touch points like handrails / handles, counters, telephones, printers/ scanners, keyboards, mouse, mouse pad, tables, chairs, pens, files, tea/ coffee dispensing machines, etc. shall be cleaned twice daily with cloth soaked in freshly prepared 1% sodium hypochlorite. 70% alcohol can be used to wipe metallic surfaces, where use of bleach is not advisable.
- e. Stores, warehouses and raw material receiving area shall ideally be cleaned at a defined frequency and sanitized, where required before receiving material.
- f. For destruction of Corona virus, it is recommended to use hot water above 60°C for cleaning utensils or commercial sanitizers /disinfectants like 1 percent hypochlorite, hydrogen peroxide, 70% alcohol as specified by the manufacturers.
- g. All cleaning equipment, mops, boots, gloves, aprons etc. shall be thoroughly cleaned and disinfected after use and prior to next use.

5.1 Common disinfectants and cleaning procedure

Active Ingredient	Conc./ Dilution	Contact Time	Suitable For	Frequency
Quaternary Ammonium Compounds (QACs) such as Benzalkonium chloride (BKC), Quaternary Methyl Butyric Acid (QMBA) etc	-	5-10 Min	Food Contact Surfaces	After use
			Common touch points	Every two hours
			Food premise	Every four hours
Peracetic or Peroxy-acetic acid	500–2000 mg/L	10 minutes or as per labelling	Food Contact Surfaces,	After use or as and when required
			Common touch points	Every two hours
			Food premise	Every four hours
Sodium Hypochlorite	5000 ppm (i.e. 0.5%) free chlorine	10 Min	Food Contact Surfaces	After use or as and when required
			Common touch points	Every two hours
			Food premise	Every four hours
Isopropanol	70%	2 Min	Food Contact Surfaces	After use or as and when required
		2 min	Common touch surfaces	Every two hours
		30 sec	Hand Sanitation	As an when required
Ethanol	70%	2 Min	Food Contact Surfaces	After use or as and when required
		2 min	Common touch surfaces	Every two hours
		30 sec	Hand Sanitation	As an when required
*Cleaning process should be followed by disinfection. Use chemicals as per the direction provided by the manufacturers.				

(Courtesy: Food Safety Standards Authority of India (2020))

6. Safe handling of packing material

Employees involved in food packaging shall also be trained in maintaining personal hygiene, physical distancing and hygiene practices. Recent research evaluated the survival of the COVID-19 virus on different surfaces and reported that the virus can remain **viable for up to 72 hours on plastic and stainless steel**, up to **four hours on copper**, and up to **24 hours on cardboard**. It is imperative for the seafood industry to reinforce personal hygiene measures and provide refresher training on food hygiene principles to eliminate or **reduce the risk of food surfaces and food packaging materials becoming contaminated with the virus** from seafood workers. **The suppliers may also be intimated of the extra precautions to be adopted in view of the COVID-19 situation.**

- Packaging materials should be placed in clean and sanitized places.
- Packaging materials are stored in designated area with adequate precautions and utilized in a need based manner.

7. Action plan for positive case reported in the facility

7.1 Steps to be taken in case an employee tests COVID-19 positive

- a. **If an employee confirms to have COVID-19**, it will be necessary to **notify all close contacts** of the infected employee so they too can take measures to minimize further risk of spread.
- b. The seafood **processing plant premise**, working tables, equipment, packing materials, toilet, locker, and rooms **that came in contact with the infected person should be thoroughly cleaned and disinfected.**
- c. The **primary contacts** in the seafood industry could include any employee who was in face-to-face or physical (i.e. touching) contact; any employee who was within 1 meter with the confirmed case; anyone who has cleaned up any body fluids without adequate PPE (e.g. gloves, overalls, protective clothing); employees in the same working team or work group as the confirmed case, and any employee living in the same household as a confirmed case. The contacts **should be quarantined for 14 days** from the last point of exposure to the confirmed case. If they become unwell at any time within their 14-day isolation period and test positive for COVID-19,

they will become a confirmed case, and should be managed as such. The health of such employees should be tracked until recovery. Such employees shall be allowed to return to work only after they have completely recovered and have been issued a fitness certificate by a qualified medical practitioner.

- d. It is reminded that **use of mask, physical distancing, hand washing and maintenance of personal hygiene** is important in **preventing inadvertent spread of COVID-19 from asymptomatic carriers.**

7.2 Steps to be taken for sanitation of seafood processing plant premises in case an employee tests COVID-19 positive

- a. **Cordon off the area** where the worker was present when he/she showed symptoms immediately & disinfect the area. If the test result is positive, the premises should be shut down till a **thorough disinfection and decontamination is carried out.**
- b. The area where the COVID-19 positive worker had worked or may come in contact with may be cordoned off and disinfected. **The unit may be kept closed as per the prevailing central/state/district administration guidelines.**
- c. Keep the sick worker's locker and working space closed. Clean and sanitize both the areas.
- d. All items that have been in contact with the patient should put in a safe place and stored separately until the result comes. If the employee tests negative, this can be disposed off with the normal waste. If the result is positive, instructions of public health authorities may be sought for disposal of the same.
- e. Continue to maintain safety, hygiene and health protocols for all employees upon resumption of the plant.
- f. Keep a **close watch on workers** who were **present on the day of the incident** for symptoms.
- g. **A certification** indicating **thorough disinfection** of the unit to resume operations shall be obtained **from local health authorities or designated agencies.**
- h. **Operational/manufacturing clearance**, regulatory requirements **may be obtained after a period of shut down.**
- i. Continuous working and **upkeep** of frozen storages and **support machinery** may be carried out **even when the seafood processing activities are suspended.**

8. Documentation & Records

The unit shall maintain documented information covering standard operating procedures and records on COVID-19 guidelines in addition to the records specified in the HACCP manual maintained by the unit. Sample checklist is placed as Annexure.

9. References:

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Note:

This Guideline document covers the additional food safety, hygiene and social distancing practices that need to be followed by seafood processing units to avoid food and human health hazards due to COVID-19 pandemic. This document is prepared by the Quality Control Division of MPEDA after referring the relevant information on the matter currently available, as listed in the references. As this is a new & evolving topic, processors are advised to update the same as and when relevant new scientific information is available.

10. Annexure

COVID-19 Sample Checklist for seafood processing units

(This is only for illustration purpose. Each unit may prepare specific check list as per the need of their operations)

Sl. No.	Area / Activity	Observations
A	General	
1	Whether workers including loading workers, Supervisors, drivers, managers & other employees are aware of COVID-19?	
2	Are bare minimum employees deployed in each area & the requirement is intimated in advance based on the activities planned?	
3	Is area specific training given to the employees?	
4	Whether the company has a policy for treating employees who get infected or have relatives / associates who are infected? Are these policies intimated to the employees?	

5	Has a COVID-19 coordinator been nominated?	
6	Is an emergency response team formed?	
7	Is a list of emergency contacts & procedures clearly spelt out and made available to all & is it displayed prominently?	
8	Are designated isolation rooms set up in the facility as part of emergency preparedness and are they properly maintained?	
9	Whether physical distancing is ensured while traveling in office provided vehicles and these vehicles are cleaned & sanitized after every trip?	
10	Are employees trained on Hygienic use of masks and gloves?	
11	Are meeting rooms used only if a distance of 2 m can be maintained between participants?	
12	Are lunch breaks staggered and managed to allow employee seating at cafeteria tables at 2 m distance?	
B	Gate / Entry point	
13	Whether Non contact thermal scanning check is carried out at entry point? (Those with Temp > 99.5 ⁰ F/ 37.5 ⁰ C are not allowed into the facility for 7 days from the day of the high reading)	
14	Whether self-declaration from the workers are collected to know whether they or any of their family members or associates with whom they may be staying show any symptoms of COVID-19?	
15	Whether fingerprint based bio-metric attendance of employees is discontinued? (Attendance is marked by security/designated representative to ensure that employees do not handle the register and pen)	
16	Is Travel history of all employees, drivers, staff-permanent and contractual collected by security guard?	
17	Are posters on awareness and precautions to be taken for COVID 19, prominently displayed?	

18	Whether all entrants wear masks and sanitize their hands before entering the premises?	
19	Is a register maintained for collecting the details of visitors including mobile number, and address? (Self-declaration regarding any flu like symptoms and travel history is also collected).	
20	Whether hand/foot wash stations are provided near the gate/ entry point?	
21	Whether additional wash stations near the gate & entry points to the other detached buildings of the facility are available?	
22	Whether physical distancing of minimum 2 meter is maintained at gates while entry/exit and while waiting for transportation?	
C	Change rooms	
23	Whether required number of cleaned uniforms , masks , gloves etc. are stored properly?	
24	Are closed dustbins provided to dispose used masks, gloves etc?	
25	Whether the employees are provided with clean uniform daily? (Ensure that employee uniforms are washed daily with detergent and water)	
26	Whether supervisors are designated to monitor medical issues (cold, cough, fever etc.)?	
27	Whether physical distancing of minimum 2 meter is maintained at change rooms and locker area?	
D	In the pre-processing / processing area	
28	Are gloves changed after each break?	
29	Whether frequency of hand washing is increased to allow mandatory hand wash with soap and water every 2 hours?	
30	Are soap and non - hand operated taps with running water provided at multiple points for easy access?	

31	Are doors handles, packaging tables, and working tables and other high touch points sanitized with appropriate sanitizing /cleaning agents every 4 hours?	
32	Are area-wise manufacturing and manning demarcation schedules prepared to minimize human interactions wherever possible?	
33	Whether physical distancing is practiced with minimum 2 meter distance in pre- processing hall, processing hall and packaging halls?	
E	Non Production Areas	
34	Whether office spaces, employees' canteen, service area, etc. are cleaned daily with soap and water, and disinfected using freshly prepared 1% hypochlorite solution or any other approved disinfectant such as 70% Alcohol (w/w) based on the surface?	
35	Are high use areas cleaned daily and sanitized with freshly prepared 1 % Hypochlorite?	
36	Do employees involved in unloading wear masks and thoroughly wash and sanitize hands before and after the unloading? Only bare minimum number of workers may be deployed	
F	Receipt of Raw Material	
37	Are vehicles sanitized before loading?	
38	Are crates thoroughly cleaned & sanitized before loading of raw material?	
39	Are all the workers at the farm & landing centers wearing masks properly?	
G	Receipt of other inputs	
40	Are storage areas cleaned regularly and sanitized as necessary?	
41	Are packaging material kept quarantined for a period of 72 hours prior to use?	
H	Vehicle dispatch	
42	Whether employees and drivers are encouraged to ensure minimum handling of documents?	

43	Is travel through Govt declared hot spots allowed only with formal approval, and with additional hygiene and disinfection measures?	
44	Are reefer containers sanitized & disinfected before loading the cargo?	
45	Are the vehicles and crates used for transportation of raw material disinfected?	
46	Are drivers checked for symptoms of illness & undergo thermal scanning?	
47	Whether drivers are wearing masks & instructed not to stop the vehicle or get out of the vehicle unnecessarily?	
48	Whether drivers are trained not to allow unknown persons into the vehicle?	
49	Whether a check is in place to ensure that the drivers of vehicles that have passed through containment zone/hot spot are not allowed to alight from the vehicle within the factory?	
50	Whether a check is in place to ensure that the vehicles that traveled through a containment zone parked in a designated area are disinfected thoroughly?	
51	Are necessary protocols followed when ice is loaded from the processing plant when the vehicle leaves for collecting raw material?	
52	Are the trailer trucks & containers disinfected before loading the finished products?	
53	Are the containers sealed before it leaves the facility to avoid any contamination <i>en route</i> ?	
I	Dealing with COVID-19 positive cases	
54	If any employee falls sick with COVID symptoms during operations, employee is isolated, reported to local health authority. Whether progress of such employee is tracked?	
55	Whether the co-workers who worked in close proximity to infected person has undergone quarantine?	

11. Additional procedures to be followed by the seafood industry.

All the prescribed Good Manufacturing Practices (**GMP**), Good Hygiene Practices (**GHP**) and Sanitation Standard Operating Procedure (**SSOP**) & **HACCP systems should be in place. In addition** to those, the **following points** are suggested **with specific reference to COVID-19.**

ADDITIONAL COVID -19 SOP

A. Fishing vessels

1. All the **crew** of the fishing vessels **to be checked for any visible COVID-19 symptoms** & ensured that all the crew are healthy.
2. **Details of the crew** shall be **provided to the authorities before voyage**, and ensure **returning** of vessel to **same fishing harbour** from where the voyage started.
3. **Fishing boats to be disinfected** before venturing for fishing.
4. Inform the vessel owner and **return back** to harbour **immediately** upon noticing **COVID-19 related symptoms in any of the crew.**
5. Photo id of all crew members to be kept in the fishing vessel.
6. **Reduce the crew numbers to the minimum.**
7. The **crew** shall be **monitored on a daily basis** throughout the voyage.
8. The **crew** shall **wear masks and gloves** while working & handling fish.
9. The crew shall maintain personal hygiene.
10. Adequate **soap and sanitizers for usage by crew** shall be provided.
11. The crew shall ensure social distancing during work, leisure, while collecting fuel and other supplies.
12. Unnecessary entry of people to the vessel shall be avoided.
13. Avoid unnecessary movement of crew in the harbour premises.
14. Fishing vessel and gear should be **disinfected after unloading.**
15. The **crates and boxes should be disinfected** before packing and loading into the truck.

B. Landing centers

1. Avoid unnecessary visitors to the harbours.
2. All the **persons entering** the landing centers shall be **checked for any visible symptoms of COVID-19 at the entry point &** their contact details & travel history are noted.
3. Maintain a **register** for entry of people with contact number at the entrance of the harbour/landing center.
4. Reduce the number of **workers** to the **minimum**.
5. All the workers shall follow general measures of hygiene.
6. All shall **wear masks and gloves inside the harbour and ensure social distance while at work**.
7. **Hand washing facilities** with soap & water shall be provided in adequate numbers.
8. All **vehicles, trolleys, crates, ice crushers, shovels etc are disinfected** appropriately.
9. Periodic **disinfection of harbour premises** shall be done.
10. Avoid unnecessary gathering in the harbour/landing centers.
11. Workers and fishers shall **leave the harbour as soon as the work is over**.

C. Aquaculture farms

1. Only **limited workers/personnel** shall be allowed to the farms. No congregation of crowd is permitted.
2. Maintain a **register for entry** of workers with contact number at the entrance of the farm.
3. All the **employees** at the farm shall be checked for symptoms of COVID-19 infection.
4. **COVID -19 awareness to be provided** to workers, technicians etc.
5. All the **workers** at the farm shall **wear masks and follow social distancing protocols**.
6. All the workers should follow general measures of hygiene.

7. Feed and other **inputs** should be stored in a **sanitized room/store** and should be **handled by workers wearing masks and gloves**.
8. Harvesting and post harvest handling at farm should be done by healthy persons by following COVID-19 protocols - hand washing, wearing mask, and washing the material with clean water containing 1% chlorine.
9. Harvested materials should be handled in **sanitized crates and sanitized vehicles**.
10. It is ascertained that the vehicle has been disinfected before loading of raw material.

D. Ice plant

1. Seafood processors may procure ice from **approved ice plants following all COVID-19 protocols**.
2. **COVID-19 awareness to be provided to workers** including drivers, technicians etc.
3. Maintain a **register for entry** of workers with contact number at the entrance of the ice plant.
4. **Workers** handling ice are **screened for COVID-19 symptoms** and shall wear gloves and mask. They shall also follow social distancing norms.
5. **Vehicles** transporting ice are **disinfected** thoroughly before using for transportation of ice.
6. **Ice crushers, conveyors, crates, shovels** etc used for handling ice should be **disinfected** before every use.
7. **Drivers and crew** are checked for symptoms of COVID-19 & their **body temperature is checked** using **non-contact temperature scanners** before vehicle leaves for loading ice.
8. The drivers are instructed to **avoid travelling through hot spots or containment zones as far as possible**.

E. Seafood processing units

1. **COVID-19 awareness** to be provided **to workers** including loading workers, Supervisors, drivers, managers & other employees.



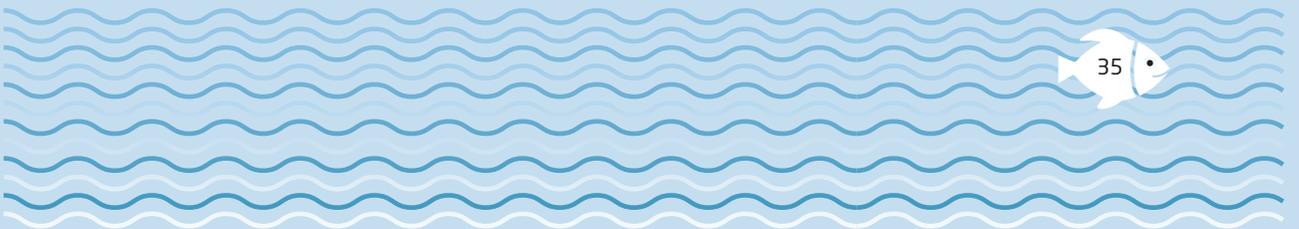
2. **Minimum employees** to be deployed in each area & the requirement may be intimated in advance based on the activities planned.
3. **Area specific training** to each employee shall be provided.
4. The **employees** to be instructed to **report** immediately when **either them or any of their family members or associates** with whom they may be **staying show any symptoms of COVID-19.**
5. The company may draw out their **policy** for treating employees who get infected or have relatives / associates who are infected relatives. These policies should be perceived as favourable to the employees to **encourage them to report illness.**
6. Designate a **COVID-19 coordinator** for the unit / section as the case maybe.
7. An emergency response team has to be formed.
8. The **list of emergency contacts & procedures** maybe clearly spelt out and made available to all & if necessary may be displayed prominently.
9. Set up at least 2 **isolation rooms** with attached toilets & waste collection facilities.
10. The employees may be asked to maintain **physical distancing** in the hostels & they shall be asked **not to share personal items** like mobile, pen, comb etc.
11. Facilities for **hand washing with soap and clean water** shall be provided **in the hostels.**
12. For employees coming by vehicles arranged by the company, **physical distancing during transportation** and while waiting for the vehicle to be ensured.
13. The employees coming by **public transport** may also be instructed to maintain **physical distancing** during their travel.
14. Marking of **attendance by security or designated personnel and non-contact body temperature scanning** at the gate to be arranged.
15. Provide **hand washing / sanitizing stations** soon after entry into the premises.
16. **Shift timings** could be **staggered** so that all the employees do not enter at the same time.

17. **Before entering into the processing area, the employees to be screened for visible symptoms of COVID-19 once again** and the same is recorded.
18. Those **employees showing visible symptoms** to be physically **isolated** in the isolation room, **health workers may be intimidated & further action may be taken as directed by the health worker.** Such workers shall not be permitted to go home.
19. Clean uniforms including masks shall be provided in the change rooms, gloves, **face shields may be provided to workers working in high risk areas** like the cooking area & the packing area.
20. The **workers shall wash their hands with soap and water every 2 hours, and take turns individually** & not to go in groups.
21. The **breaks** should also be **staggered** so that only limited workers use common facilities like the change rooms & canteen.
22. While returning back also the workers shall maintain physical distancing.
23. All **vehicles & crates to be disinfected** appropriately.
24. If the **ice is loaded** from the processing plant, **all necessary protocols to be followed.**
25. It is to be ensured that all company **vehicles** are properly **disinfected before proceeding for collection of raw material/workers.**
26. **Packaging materials to be stored** in designated area **with adequate precautions** and utilized in need based manner.
27. **Packaging materials** to be **placed in** clean and **sanitized places.**
28. The drivers & others who are **travelling** by the company vehicle are instructed **not to make unnecessary stops** in between & **maintain physical distancing while dealing with other people.**
29. The **drivers** & others who are travelling by the company vehicle to be instructed to **wear masks & avoid touching unwanted surfaces.** They are to be instructed **not to allow other unknown people into the vehicle.**
30. Once the vehicle reaches the gate all the **crew and the driver** shall be **checked for symptoms** of COVID-19 & their body temperature is checked using **non-contact temperature scanners.**

31. The drivers shall **avoid** travelling through **hot spots or containment zones** as far as possible. **No stoppage rule shall be followed in containment zones.**
32. If the **vehicle has passed through a hot spot or containment zone**, the vehicles shall be **disinfected immediately on arrival before taken for unloading.**
33. The **drivers of all the vehicles that bring in other supplies / containers** to be **checked for symptoms** of COVID-19 and **not to be allowed to leave the vehicle.**
34. **Discourage** all **unnecessary visitors** and other congregations.
35. **Meetings through digital platforms** may be encouraged.
36. Unavoidable **visitors like service engineers, officers of regulatory agencies to be screened for COVID-19 symptoms** & are asked to report their **travel history** and is entered by the security in the format available with them.
37. All the details of **visitors** including mobile number and address to be maintained in a **register.**
38. The **trailer trucks & containers** to be **disinfected before loading.**
39. The **containers** to be **sealed before it leaves the facility** to avoid any contamination *en route*.
40. If any **inspections** are required **at the port/customs**, then it is **ensured that all COVID-19 protocols are followed.**

In addition to the COVID-19 specific guidelines, all processing establishments shall follow HACCP based own check systems to ensure food safety based on the prescribed Good Manufacturing Practices (GMP), Good Laboratory Practices (GLP), Good Hygiene Practices (GHP) and Sanitation Standard Operating Procedure (SSOP).







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