

Summary of Guidance on Waste Management During Covid-19 Outbreak

Issued in Public Interest

As part of the Development and Management of Nationally Appropriate Mitigation Actions (NAMAs) in India project commissioned by Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU) with Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India as lead executing agency waste NAMA pilots are being implemented in city of Varanasi and Goa. The project is being implemented by Deutsche Gesellschaft für International Zusammenarbeit (GIZ) India with The Energy and Resources Institute (TERI) as partner. This summary of guidance from Ministry of Health and Family Welfare (MoHFW), World Health Organization (WHO) and Central Pollution Control Board (CPCB) has been prepared as a part of technical advisory support under Waste NAMA project. Other sources referred are mentioned in the reference section as well. The stakeholders are requested to refer to detailed guidelines by respective agencies for details:

Procedure for handling waste under COVID-19 Situation:

If you are having symptoms of COVID 19 what should you do?

Table 1: Do's and Don'ts for general public having symptoms of COVID 19:

Do's	Don'ts
<ul style="list-style-type: none"> Segregate your waste into organic and biodegradable (Green bin), inorganic and recyclable (Blue bin) and household hazardous waste (Red Bin) ¹ Hold your organic waste² and recyclable waste and inerts for a duration of 2-3 days separately in closed lid bins to let the virus die. Post 2-3 days this can be given with general waste to waste collector. Keep your biomedical waste separately in yellow colored bags (for biomedical waste collection) provided by Urban Local Bodies (ULBs). Make sure it does not leak and is kept in separate bins out of reach of other members of the family and pets. Call your ULB solid waste management cell and identify nearest Common Bio-medical Waste Treatment Facility (CBWTF) operator 	<ul style="list-style-type: none"> Don't dispose Mixed Solid Waste. Don't dispose your waste the very same day you generated it. It can spread the infection to waste collectors. Don't throw your household hazardous waste in any garbage bag. Only use yellow colored bags. Don't dispose your waste in nearby locality/in water body/open plots. Don't panic, contact your ULB for assistance.

¹ Comprising of used syringes, date expired or discarded medicines, used masks/gloves and in case of patients with other chronic diseases may also include drain bags, urine bags, body fluid or blood-soaked tissues/cotton, empty ampules etc.

² Preferably if you can compost your organic waste it is beneficial for you and the city as well. Don't feed to animals at this stage.



<p>to collect biomedical waste as and when it gets generated.</p> <ul style="list-style-type: none"> • Hand over the yellow bags containing biomedical waste to authorized waste collectors at doorsteps engaged by local bodies if the system to handle domestic hazardous waste exists. • Ask your waste collector to Deposit biomedical waste in yellow bags at designated deposition Centers established by ULB for household hazardous waste. OR Contact CBMWTF operator and handover your waste at your doorstep against a deposit fee. • In case you have any difficulty in getting services, contact your ULB officials. 	
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Procedure for handling waste by sanitary workers under COVID-19

Situation:

If you are a waste management contractor or an urban local body and are concerned with increasing risks under COVID-19 situation, here are few tips for your workforce based on guidance from Ministry of Health and Family Welfare (MoHFW), World Health Organization (WHO) and Central Pollution Control Board (CPCB) guidelines. Other sources referred are mentioned in the reference section as well. The stakeholders are requested to refer to detailed guidelines by respective agencies for details:

Table 2: Do's and Don'ts for sanitation workforce workers collecting general waste

Do's	Don'ts
<p><i>For sanitary staff:</i></p> <ul style="list-style-type: none"> • Wear Personal Protective Equipment (PPE) including mask, jacket, gloves, boots and glasses. • Ensure to sanitize yourself regularly. • Maintain proper (6 feet) distance from others. Please follow guidance given in Aarogya Setu app from Government of India. • Ask waste generators to let dry waste idle for 72 hours. • If, waste cannot be left idle, ask your generators to appropriately give segregated waste. • Remember, while taking off PPEs keep your hands away from eyes, nose and mouth and wash thoroughly. • Wash each reusable PPE appropriately and dry it in sunlight. • If you feel sick and show any symptom of COVID19 like cough, fever, etc. stay away from 	<p><i>For sanitary staff:</i></p> <ul style="list-style-type: none"> • Don't collect yellow bags (household hazardous waste having gloves, masks, bandages, medicines, etc), as there is a separate team handling COVID-19 yellow bags. • Don't touch fleet/waste buckets with bare hand, it can have contamination. • Don't mix dry and wet waste while collecting. • Don't touch waste materials, even plastics cardboard and steel can have infection. • Don't accept the sanitary/biomedical waste in mixed form, it can be hazardous. • Don't allow colleagues/waste generators to come close, maintain social distance of 6 feet. • Don't carry your shoes inside your house, they carry many aerosols.



<p>work and report immediately to your supervisor.</p> <ul style="list-style-type: none"> • Vehicle and tools should be sanitized with sodium hypochlorite or any appropriate chemical disinfectant after every trip to avoid any chance of contamination. 	
<p><i>For MRF or treatment plant operator:</i></p> <ul style="list-style-type: none"> • Maintain separate record for collection, treatment and disposal of different fractions of waste. • Maintain social distancing of 6 feet. • Provide adequate PPEs to the workers including three-layer masks, splash proof aprons/gowns, nitrile gloves, gum boots and safety goggles. • Make sure that all staff always wear appropriate PPEs. • Train staff every day and reiterate the importance of hygiene and appropriate handling of PPEs. • Make sure that staff is well trained to dispose once to be used PPEs and washing of reusable PPEs. • Make sure that staff knows how to get PPEs off without contaminating themselves. • Provide appropriate sanitizers and washing facility. • Vehicle and tools should be sanitized with sodium hypochlorite or any appropriate chemical disinfectant after every trip to avoid any chance of contamination. • Check staff's body temperature daily at the time of reporting, in case of showing any symptoms of illness report to responsible authority. 	<p><i>For MRF or treatment plant operator:</i></p> <ul style="list-style-type: none"> • Don't allow any unauthorized person to come in your facility without appropriate PPEs. • Don't allow to process the sanitary/biomedical waste with improper PPEs. • Don't allow any worker showing symptoms of illness to work at the facility. Provide adequate leave to such workers with salary. • Don't allow staff to use mobiles/wireless phones with bare hands without sanitization. They might have touched their devices with contaminated PPEs. • Don't allow workers to take their shoes inside homes, they may carry virus in form of aerosols. • Don't accept any COVID-19 waste with mixed waste, this can be harmful to all. Appropriately link such waste with Common Bio-medical Waste Treatment Facility (CBWTF).

Table 3 Do's and Don'ts for sanitation workforce collecting hospital / Quarantine facilities COVID-19 waste

Do's	Don'ts
<p><i>For sanitary staff:</i></p> <ul style="list-style-type: none"> • Ask for a training from Common Bio-medical Waste Treatment Facility (CBWTF) operators for handling COVID-19 waste. • Wear proper PPEs including three-layer masks, splash proof aprons/gowns, nitrile gloves, gum boots and safety goggles. • Use dedicated closed vehicles to collect COVID-19 waste. 	<p><i>For sanitary staff:</i></p> <ul style="list-style-type: none"> • Don't collect waste in same vehicle as used for general waste. • Don't collected COVID 19 waste if you are not authorized. You need proper training before handling such waste at any point. • Don't untie the bag during transportation or at secondary storage, it will be untied only at processing plant.



<ul style="list-style-type: none"> • Engaged worker must be trained and dedicated and should collect yellow COVID-19 laden waste bags in a precautionary manner. • Ask waste generators to use double layer yellow bag for adequate strength and leakage proofing. • Waste bags/bins and sharp containers should be filled to no more than three-quarters full and never be stapled but may be tied in a knot or sealed with a yellow plastic bag. • Sanitize the bin used at waste generators as well as themselves regularly. • Should maintain a proper 6 feet distance on duty from other people. • After every trip disinfect the collection vehicle or cart and bins (outer and inner surface) with 1% sodium hypo chlorite solution. • Follow the scheduled time and set route (internal transportation) for minimum exposure with staff and public. • Follow a proper mechanism available for sanitizing the collecting vehicle and water system available for collector with minimum physical contact. • Remember, while taking off PPEs after work, don't contaminate yourself. Keep your hands away from eyes, nose and mouth. • Wash each reusable PPE appropriately and dry in sunlight. • If you feel sick and show any symptom of COVID19 stay away from work and report immediately to your supervisor. 	<ul style="list-style-type: none"> • Don't let the waste containers/collection vehicle/site for COVID 19 waste overflow. • On site don't eat or drink without sanitizing yourself. • Don't carry your shoes inside your house, they carry many aerosols. • Don't allow colleagues/waste generators to come close, maintain social distance of around 6 feet.
<p><i>For plant operator:</i></p> <ul style="list-style-type: none"> • Adequately monitor and record quantity of waste collected, treated and disposed. • Maintain social distancing of around 6 feet and avoid having too many workers at a time in the plant. • Provide adequate PPEs to the workers including three-layer masks, splash proof aprons/gowns, nitrile gloves, gum boots and safety goggles. • Operator of CBWTF shall ensure regular sanitization of workers involved in handling and collection of biomedical waste. • Dedicated closed vehicles should be used to collect COVID-19 waste. 	<p><i>For plant operator:</i></p> <ul style="list-style-type: none"> • Don't allow to process the sanitary/biomedical waste without proper PPEs. • Don't allow any worker showing symptoms of illness to work at the facility. Provide adequate leave to such workers with salary. • Don't store untreated bio-medical waste beyond a period of 48 hours. You may operate additional hours as directed by your respective State Pollution Control Board (SPCB). • Reduce number of workers on site at any one time.



<ul style="list-style-type: none"> • Timely collect and transfer the waste at CBWTF from temporary waste storage area. • Vehicle should be sanitized with 1% sodium hypochlorite solution or any appropriate chemical disinfectant after every trip • In case of COVID-19 waste, waste should be disposed-off immediately upon receipt at facility. • Always provide appropriate sanitizers and washing facility for staff. • Vehicle and tools should be sanitized with sodium hypochlorite or any appropriate chemical disinfectant after every trip to avoid any chance of contamination. • Check staff's body temperature daily at the time of reporting, in case of showing any symptoms of illness report to responsible authority. • Provide disinfectant in the waste collection vehicle. • Follow updated guidelines issued by Central Pollution Control Board (CPCB). 	
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Reference:

1. CPCB guidelines for handling, treatment, and disposal of waste generated during treatment/ diagnosis of COVID-19 patients
2. Ministry of Health and Family Welfare (MoHFW) Guidelines for Quarantine facilities COVID-19
3. WHO guidance, Safe management of wastes from health-care activities.
4. https://www.iswa.org/fileadmin/galleries/0001_COVID/Singapore_Waste_Management_during_Covid19.pdf
5. <https://www.circularonline.co.uk/wp-content/uploads/downloads/1.-WISHNI-Covid-19-Advice.pdf>