

FAQS

- Waste Management during COVID19

This is a continually updated document which formalizes the most frequently asked questions from cities regarding responses to COVID-19 and the most prevalent waste-related concerns. Individuals will not be directly attributed to ideas/comments unless statements are already public; this document is only accessible to C40 employees and member city officials. In case you would like to get more information on any of the anonymous statements below, please contact kzeller@c40.org or fdipenta@c40.org

Major themes of recent conversations:

1. Communication (external/ internal)
2. Safety
3. Collection
4. Management of waste pickers and vulnerable groups

As follows, you will find frequently asked questions collected in the Whatsapp group, the private group on the Knowledge Hub and individual conversations with cities, according to the above themes. Answers and resources are included as they come in. We decided to include all questions independent from having a consolidated solution available yet, so cities that are not intensely affected can get an idea of what kind of challenges might come up. To add any question or share information, please contact us or use the comment function.

Guidelines:

- ACR + has created an [overview \(in progress\) of guidelines](#) (safety and health measures for employees, waste treatment requirements, general procedures) from different countries in Europe
- OSHA/ USA, see drop-down menu '[solid waste and wastewater management workers and employers](#)' (you can also find a press analysis of the guidelines [here](#))
- NHI Working Group on Environment and Waste Management/ Italy, [Interim Guidelines for urban waste management in relation to the transmission of the viral infection caused by virus sars-cov-2](#), translation available in the references¹⁾
- Delhi [BWI guidelines](#)

1. Communication (external/ internal)

Q1. What kind of update are being sent out to residents?

- **Bulky waste:** Small vehicle self haul traffic may spike (spring) as people make use of some extra time and an opportunity to go outside. Communications can ask residents to store bulky recycling waste at home until further notice.
- **Recycling centers:** New/ restricted opening hours or closure
- **Collection:** Any changes on collection days/ times, collected bins, eventual new rules for disposal of hygiene products, eventual double-bagging. Some cities also communicate actively about what is not changing to help citizens understand current indications and rules.
 - [Toronto](#), see drop down menu 'Recycling, Garbage and Organics'
 - [Vancouver](#), see drop down menu 'Garbage and green bin collection' and 'Recycling and disposal facilities'
 - Milan [press release](#) and [infographics](#), refer to translation²⁾³⁾ or use google translator on the page
- Tel Aviv suggesting to reuse trash as home with children to play
https://www.pinterest.com/kipodksaba/?invite_code=eaf20812e509456bb5ee9d2135f44848&sender=85920442799362903
https://www.pinterest.com/kipodksaba/?invite_code=eaf20812e509456bb5ee9d2135f44848&sender=85920442799362903
- Potentially there is also an option to **call for solidarity** with waste workers and keep waste generation down as much as possible, which might generate a lasting impact

2. Safety

Q1. What are the recommendations for safety in collection?

1. [Guidelines developed by the Istituto Superiore della Sanità](#) (Italian public sector research body handling the scientific aspects of the outbreak) on 14th March:
Recommendations for citizens
 - For people that are either exhibiting symptoms or confirmed cases of infection
 - Suspend waste segregation and place all waste in one bag to be placed in the non-recyclables bin
 - Waste bags should be double-bagged, without compressing the waste
 - Waste bags and their double bagging should be done using single-use gloves
 - Prevent animals from having access to waste bags

The Institute then recommends the handling of non-recyclable waste by “adequately trained staff”, but they have not released specific training

- For people that are not exhibiting symptoms
 - Continue normal waste segregation using 3 or 4-way segregation system
 - As a precautionary measure, throw all napkins, tissues and paper towels in the non-recyclables bin

Recommendations for workers

- Continue wearing all normal protective gear (please see picture below), including gloves and shoes
- Distribute FFP 2 or FFP 3 certified masks to all workers at all times
- Do not “shake” uniforms and other equipment to get of dust, instead wash at 60 degrees, ideally adding disinfectant such as hydrogen peroxide or bleach
- Changing gloves every time an operator handles a broken bag of waste
- Wash cabins of all vehicles after every shift. This should not be done using pressurised air / water systems that may push infected particles into the air. The use of disinfectant in spray form may be appropriate, and a vacuum cleaner should only be used after disinfection
- Waste workers must immediately refrain from going to work if they exhibit symptoms

Recommendations for treatment

- Non-recyclable waste should be handled according to the normal waste laws in different areas, with a preference towards incineration where such structures are in place¹

Additional recommendations received from cities, you might:

- Set up schemes to allow for physical distance between workers, as for example organizing changes of shifts by leaving truck keys in the truck instead of locker rooms
- Change collection to times of the day with less traffic (if any) to help workers finish collection faster`

3. Collection

Q1. Residents are taking out increasing amounts of bulky waste or garden waste while making use of the extra time to clean up. How do we deal with this?

- Allow a restricted number of people at the same time to enter drop-off facilities (might lead to longer waiting lines)
- Restrict access to specific groups (e.g. commercial or household only)
- Communicate any change through your cities’ channels

Q2. How is the situation affecting the collection schemes?

Different responses are indicating that generation rises in households after implementation of lockdowns, and decreases in commercial areas due to the closure of restaurants and

¹ Please note that at this moment there is no scientific recommendation available and other types of treatment, as for example anaerobic digestion for organics, might also be sufficiently adequate. Any further information will be used to update.

other establishments. However, impacts seem to vary widely and there were also reports on decreasing generation (*once reliable data is available, updates will follow*)

- [Scenario planning in Rotterdam](#), considering different types of risks for collection
- “We are going to concentrate mostly on the health waste collection (since the municipality is responsible for the public health waste collection) and the organic and non-recyclable. We are decreasing the recyclable collection, sending all of it to the MRFs, and ending, since yesterday, the distribution of recyclables to recycling cooperatives.”
- “We’ve seen an increase in collected bulky waste of 7% over the first week now, the residual waste increased with 3% in week 1 of the measures”
- “During this week of quarantine, we have increased by 15-30% the amount of waste that the city is generating”
- “They have increased a lot!”
- “In the City there has been a decrease in the amount of household waste generated since the lockdown (last Friday, 20.3.). However we are analyzing the information everyday.”

4. Management of waste pickers and vulnerable groups

Q1. Are waste pickers still working in your city and what is the recommendation?

- Curitiba informs that the City Hall will pay the associations the subsidy, even, at this moment, they decide to stop working. The mayor also advises that those who choose to stay working, protect themselves with gloves, masks and safety glasses.
- We are encouraging the people to keep recyclables in the households in order to prevent waste pickers going out
- “Most waste pickers do not want to stop, because most of their income comes from selling the material.”
- “Informal recycling activities in all waste disposal sites has been shut down”
- “The waste pickers, that are part of our social-environmental program, promptly accept the lockdown. They are really terrified and aware of the situation...The fact that the municipality is going to financially support them was a extremely important element on their decision and acceptance!”

Q2. How are waste pickers being supported in terms of the economic impact?

- “We are counting the total number of workers, as well as the salary received in the last 4 months, and making an average salary so that we can compensate them in this quarantine period”
- “I am in contact with some leaders and civil society actors and requesting their aid in the matter. One idea of positive social impact that I had and forwarded to them was

the creation of a fund, with a wide participation of the private sector, as a redirection of the projected funds, for this semester (and even year), in the matter of the social-environmental projects, to this specific fund, for the informal sector of the waste pickers.”

References

1)

<https://www.epicentro.iss.it/coronavirus/pdf/rapporto-covid-19-3-2020.pdf>

NHI Report on COVID-19 nr. 3/2020

INTERIM GUIDELINES FOR URBAN WASTE MANAGEMENT IN RELATION TO THE TRANSMISSION OF THE VIRAL INFECTION CAUSED BY VIRUS SARS-COV-2

NHI Working Group on Environment and Waste Management

last updated 14 March 2020

Acronyms

FFP2 Filtering Facepiece Particles medium (> 94 %)

FFP3 Filtering Facepiece Particles high (> 99 %)

MERS Middle East Respiratory Syndrome

PD Presidential Decree

PMD Prime Ministerial Decree

PPE Personal Protective Equipment

SARS Severe Acute Respiratory Syndrome

Introduction

These guidelines are based on the facts available to date on the transmission of the viral infection caused by virus SARS-CoV-2, addressing the need to establish modes of operation for the management of urban waste based on the precautionary principle on the entire national territory, as per PMD 9 March 2020.

At the moment, the survival time in household/urban waste of any coronaviruses, and specifically of virus SARS-CoV-2, is not known, but a high risk perception exists within the Italian population and also among urban waste collection workers. However, viruses with viral envelopes – like SARS-CoV2 – have limited survival compared to nonenveloped viruses (such as enterovirus, norovirus, adenovirus, and so forth) and are therefore more sensitive to environmental factors (temperature, humidity, sunlight, autochthonous microbiome, pH, etc.), disinfections and biocides.

Therefore, considering the information currently available, it can be supposed that virus SARS-CoV-2 deactivates, similarly to other enveloped viruses, in a timeframe going from few minutes to max. 9

days, depending on the matrix/material, concentration and microclimatic conditions. Usually, other coronaviruses (e.g. SARS e MERS) do not survive on paper in the absence of humidity, but they can endure longer on disposable clothes (in high concentrations, for 24 hours) compared to cotton, for instance.

In this document, the management of two different kinds of waste will be considered, namely:

1. Urban waste produced in the residences of subjects whose swabs are positive, in isolation or in forced quarantine.
2. Urban waste produced by the general population, in residences where no subject whose swabs is positive, in isolation or in forced quarantine, is present.

Legal aspects

For waste at point 1., you must refer to PD 254/2003 “Regulation on sanitary waste management according to article 24 of law n. 179 of 31 July 2002”, which at article 2.1 states “dangerous infectious sanitary waste [...] are waste coming from environments in isolation to prevent the transmission of infections and that have come into contact with any biological liquids secreted or excreted by patients in isolation”.

Therefore, urban waste coming from residences where subjects whose swabs are positive, in isolation or in forced quarantine stay, shall be considered equivalent to those that can be generated in healthcare settings, as defined by DP 254/2003.

In such a context, the prescriptions in the DP shall be applied; specifically, waste must be collected in adequate disposable packaging, according to:

- article 9 on “temporary storage, preliminary storage, supply stocking, collection and transportation of sterilized sanitary waste”, which at point 5 says that “Internal movements of waste within healthcare settings [...] must be realized with adequate disposable packaging, including flexible packaging, of a different color to that used for urban waste and other similar sanitary waste, reporting a visible indelible indication that they are “Sterilized sanitary waste” and the date of sterilization;
- article 15, stating “special waste produced outside healthcare settings, but of a similar level of risk as dangerous infectious waste, must be managed according to the same modalities as dangerous infectious sanitary waste”.

Hence, the supply of the abovementioned disposable packaging and the collection thereof shall be under the responsibility of the healthcare settings, which will have recourse to specialized companies in the collection, transportation and disposal of this kind of waste.

Recommendations

Subjects whose swabs are positive, in isolation or in forced quarantine

Being aware that the procedure described above could be difficult to implement, also for the lack of contracts in effect with companies specialized in the collection, transportation and disposal of

infectious waste, the following procedures, which are considered sufficiently protective for the health of the general population and of the workers in the environmental hygiene sector (collection and disposal of waste), are recommended.

It is therefore recommended that in the residences where subjects whose swabs are positive, in isolation or in forced quarantine stay, segregated waste collection be interrupted and that all household waste, regardless of its nature and including tissues, paper rolls, disposable sheets, masks and gloves, be considered unsorted waste and, as such, collected and disposed together. For waste collection, at least two bags (or more, depending on their resistance) must be used one within the other, possibly using a pedal bin.

It is recommended to:

- close bags tightly using disposable gloves;
- avoid crushing bags with hands;
- forbid pets to enter the rooms where waste bags are located;
- dispose waste outside one's residence regularly according to local regulations (place the bags outside one's door in their own containers or throw them in specific building or city dumpsters).

Local entities are recommended to establish a specialized collection service with adequately trained personnel.

Subjects whose swabs are NOT positive and NOT in forced quarantine

For residences where no subject whose swabs is positive, in isolation or in forced quarantine is present, it is recommended to apply the procedures in effect at the local level, without interrupting segregated waste collection.

As a precautionary measure, tissues or paper rolls, used masks and gloves must be disposed in the unsorted fraction.

Additionally, at least two bags (or more, depending on their resistance) must be used one within the other.

It is recommended to close the bags tightly, without crushing them, using closing laces or adhesive tape and to dispose them as per the procedures in effect (place the bags on the road in their own containers or throw them in specific building or city dumpsters).

Recommendations for workers in the sector of waste collection and disposal

With regard to workers in the sector of environmental hygiene (waste collection and disposal), it is recommended to use Personal Protective Equipment (PPE) as usual, especially face masks (Filtering Facepiece) FFP2 or FFP3 (in the latter case, compatibly with the evaluation of the risk of being in the workplace).

It is also recommended to carry out in a centralized manner:

- the cleaning of work overalls and work clothes, trying to reduce to a minimum the chance to scatter the virus in the air (do not shake clothes), washing work overalls and work clothes and following appropriate procedures (at least 60° wash with normal soaps, possibly adding disinfectants such as hydrogen peroxide or bleach);

- due to the difficulty to sanitize work gloves, the replacement of non-disposable work gloves, every time workers report to their supervisors that they have handled broken and/or open bags;
- the sanitization and disinfection of the cockpit of the vehicles used for urban waste collection after every work cycle, paying special attention to textile (e.g. seats), where the virus can survive longer than the steering wheel, gear stick, etc., which can be sanitized more easily. However, compressed air and/or pressurized water or any other method that could produce spurts or nebulize infectious material in the environment must not be utilized. Vacuum cleaners can be used only after proper disinfection. It is suggested to use spray sanitizers (e.g. alcohol based, at least 75% v/v)

Recommendations for volunteers

Since several volunteering initiatives are in place to support the needs of the elderly, lonely or sick people, it is recommended what follows:

- volunteers must not collect waste from residences where subjects positive to swab, in isolation or in forced quarantine are present;
- in residences where subjects NOT positive to swab, not in isolation nor in forced quarantine are present, volunteers can collect waste applying the following precautions and behavioral rules:
 - i. use disposable gloves, which must be disposed in the unsorted fraction after use;
 - ii. do not collect open or broken bags;
 - iii. throw bags as per the procedures in effect (e.g. in the unsorted dumpster or in the building container).

Management of unsorted waste

Unsorted waste must be managed as per the procedures in effect at the local level and, where incinerators exist, incineration must be preferred, with the aim to minimize the handling of waste.

Waste collection workers must comply with the precautionary hygiene rules recommended by the Ministry of Health, abstaining from work in case of respiratory disease and fever.

2)

<https://www.amsa.it/news-eventi/emergenza-coronavirus-come-raccogliere-i-rifiuti-domestici>

Coronavirus emergency: how to collect household waste

MARCH 17 2020

In relation to the measures for the containment of coronavirus (COVID-19), we invite citizens to follow the following rules, drawn up on the basis of the indications of the National Health Institute, to correctly collect and dispose of waste in this phase of health emergency:

If your swab is NOT positive and are NOT in quarantine:

- Continue to make the separate collection as you have done so far by correctly separating the waste (organic, paper, plastic, glass, cans etc.).
- If you used handkerchiefs, masks and gloves, throw them in the unsorted collection (dry residue).
- For unsorted waste use two or three possibly resistant bags (one inside the other) inside the container you usually use at home.
- Close the bag of unsorted waste well and throw it as you usually do in the container for the collection of unsorted waste (neutral transparent bag).

If your swab is POSITIVE or you are in forced QUARANTINE:

- Stop sorting your household waste.
- Use two or three possibly resistant bags (one inside the other) inside the container used for the unsorted collection in your house.
- All waste (plastic, glass, paper, wet, cans and dry) must be thrown into the same container used for the unsorted collection (dry residue).
- Disposable tissues or rolls, masks, gloves and disposable sheets should also be thrown into the same container for unsorted collection.
- Wear disposable gloves, close the bags tightly without crushing them with your hands using closing laces or adhesive tape.
- Once the bags are closed, the used gloves must be thrown into the new bags prepared for the undifferentiated collection (two or three possibly resistant bags, one inside the other). Immediately after, wash your hands.
- Pets must not enter the room where the waste bags are located.

We remind you that you can contact AMSA Customer Service on 800 332299 or through the online channel dedicated to requests for information and reports.

3)

<https://www.amsa.it/comunicati/emergenza-coronavirus-continuano-gli-interventi-di-sanificazione-indicazioni-la-raccolta>

Coronavirus emergency: sanitation interventions continue. Indications for separate collection

MARCH 17 2020

Amsa is putting all energy into play, thanks to the professionalism and dedication of its staff, to guarantee the city of Milan and the other Municipalities served in the Milan Metropolitan Area a regular waste collection, cleaning and sweeping of the roads, in a situation of national emergency which requires a considerable organizational effort every day.

All door-to-door separate collection services are regular and are carried out in the usual times and days of the collection calendar, as well as the free reservation and collection service for bulky waste on the road.

Citizens are asked to continue to follow the usual methods of separate collection, correctly separating waste (organic, paper and cardboard, glass, plastic and metals), with the precaution to use at least two bags for unsorted waste, one inside the other. Recall that disposable handkerchiefs, masks and gloves should be thrown into the bag of unsorted waste.

Citizens who are positive to coronavirus swab or in quarantine should not carry out separate collection. According to the provisions of the National Health Institute, positive or quarantined people can transfer all household waste - without separating the different fractions and including handkerchiefs, masks and gloves - into the transparent bag for unsorted waste. It is necessary to use at least two resistant bags (one inside the other) inside the container for unsorted collection in your house. Before being thrown, bags must be sealed, without crushing them with your hands, using closing laces or adhesive tape and wearing disposable gloves. At the end of the operations it is recommended to wash your hands carefully. Finally, pets must not be allowed to enter the room where the waste bags are present.

Amsa sanitization works continue, as requested by the Milan municipal administration. From Friday 13 to Monday 16 March, the Amsa teams covered around 400 km of roads, washing over 700 streets and squares in Milan. The vehicles dedicated to the service use a sanitizer, sodium hypochlorite in aqueous solution. The activities will continue at least until April 3, [the list of routes weekly affected is constantly updated.](#)

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