



Water consumption increment due to COVID-19: At a glance

International Secretariat for Water – Solidarity Water Europe

Discussion Paper

November, 2020

Water consumption has increased in most of the developing world, as well as in the industrialized world, due to COVID-19 pandemic. The reasons for this increment are many, people are washing more times their hands, cloths, cleaning the house more often as well as their cars. Other arguments also explain that water consumption has increased due to the fact that people are staying more time at home to comply with the confinement measures. In some European cities, water consumption has decreased, due to the emigration of residents or the absence of tourists, that accounted and important amount of drinking water consumption.

In **Bundelkhand, India**, water consumption has raised 60% during the first weeks of the pandemic, going from an average of 75 liters per persons before the outbreak to 125 liters (at March 15, 2020) to repeated handwashing, home cleaning, washing of clothes (PTI, 2020).

In **India**, there has been a 20 to 20 per cent increment in the whole country in water demand and generation of wastewater from human settlements (Down to Earth, 2020).

In **Huancayo**, a city located in the central Andes of **Peru**, drinking water consumption has raised 100% since population is consuming in six hours the water that was treated for 12 hours of water consumption, due to the excessive use in unnecessary activities such as cleaning of vehicles, patios and even bathrooms and clothes (Radio Cumbre, 2020).

In **Cuzco, Peru**, drinking water consumption raised at least 15% during the COVID-19 quarantine (RPP, 2020).

In the **Central Zone of Chile** (Puerto Montt and surroundings) residential consumption raised in 6% (EHA, 2020)

In **San Carlos, Costa Rica**, drinking water consumption raised in 20%, 302 cubic meters more than in the same period in 2019 (San Carlos Digital, 2020).

In **Monterrey, México**, drinking water consumption grew 30% in 10 days, from March 25th to April 4th, while people consume more water due to the mortal virus and the rise of temperature, while the reservoirs that supply water to this city have decreased from 2019 to 2020 in 21%, 23% and 15% in La Boca, Cerro Prieto and El Cuchillo reservoirs (El Norte, 2020).

In **Mexico**, “average drinking water consumption raised 40% during the pandemic” (El Economista, 2020)

In the city of **Querétaro**, also in **México**, water consumption has raised 25% in the first thirteen days of April (FCEA, 2020).

In **Cali, Colombia**, and according to Valleucana de Agua, the local water supply company, water consumption has raised from 100% to 250% depending of the municipality, which could cause low pressure and rationalization (90 Minutos, 2020).

In **Bogota**, also in **Colombia**, consumption has raised 1 m³/s, which represents around 25% of water consumption, equivalent to the population of Soacha, a Colombian city with a bit more of half a million inhabitants (Reinoso, 2020).

In **Quito, Ecuador**, within the capital area, consumption raised from 180 liter per person per day to 240 lpd, which represents a 35% increase. In the Quito metropolitan extreme south area, like Chillogallo y Guamaní, and in the extreme northe as como Carapungo y Calderón, had a consumption that raised between 100% to 200% from normal values (La Hora, 2020).

In **Cuenca, Ecuador**. Water consumption raised 20% in residential areas due to COVID-19 (El Universo, 2020).

In **Tunisia**, Latifa Dhaouadi et Raoudha Gafrej remark that “water consumption has raised in 15% during the pandemic” (UFM, 2020).

In **Turkey**, Water consumption raised around 28% in residential dwellings due to COVID 19 (Map Ecology, 2020).

In the **Middle East and North African Region**, the demand for drinking water raised in 33%, from 9 to 12 liters per person, which represents a 5% increment in residential water demand (Revue Politique, 2020).

A different situation seems to take place in European capitals hit by the COVID-19. In **Madrid, Spain**, for instance, reduced its drinking water consumption during the outbreak official alert month in -9,12% (iAgua, 2020). This situation could be explained due to the fact that around 20% of the city’s population are foreigners (Ayuntamiento

de Madrid, 2019) and foreigners have mostly fled to their countries of origin, or families have gone to their houses in the countryside where they could be safer. However, in **Huelva, Spain**, an increment of up to 20% in drinking water consumption was registered since the appearance of the pandemic (Aguas Residuales, 2020)

In **Lyon, France**, metropolitan area, water consumption reduced 8%. In **Tours, France**, drinking water consumption lowered -15% due to the closure of schools, gyms, pools, and the stop of private companies and industries (Demagny, 2020), (France Inter, 2020), which caused a significant chlorine taste in tap water, phenomenon that invites to think that the same amount of chlorine was placed in the water supply system while there was less water running in the pipes.

In **Paris, France**, due to Corona Virus, many Parisians, which are now called the “selfish Parisians” fled to their secondary houses in the country side, risking rural inhabitants to get the mortal virus (Europe1, 2020), and at the same time reducing the pressure on the city’s water consumption. In **Paris**, the city informed of a 20% reduction in drinking water consumption, “due to the fact that there are less tourists”. A different case in France is seen in the agglomeration community of **Concarneau-Cornouaille**, that has raised the drink water consumption in 60%, due to the massive arrival of secondary residents (France TV, 2020)

In **Portsmouth, England**, residential demand increased by 15 percent during the lockdown, while in **San Francisco, California**, residential demand increased by 10 percent (Pacific Institute, 2020).

In **Quebec, Canada**, according to the specialists of the Environment Network, drinking water consumption raised at least 10% during the COVID-19 crises (Vivafrik, 2020). However, in the city of **Shawinigan**, also in Québec, registered an increment from 30% to 50% in drinking water consumption during the pandemic (L’hebdo du Saint Maurice, 2020), while in the district of **Notre-Dame-du-Mont-Carmel**, also in Québec, registered that drinking water consumption raised 100% (Le nouvelliste, 2020)

In **Kinshasa, Congo Democratic Republic**, demand for water has increased as a result of the pandemic, and water sales points are far busier than before. There is no choice but to queue up and wait your turn, sometimes for several hours at a time. But the journey back in the hardest part of all (Reliefweb, 2020)

Draft Conclusions

- The increase of water consumption in developing countries means that there is also an increase in wastewater production.
- Increased drinking water consumption may be accelerating the depletion of water sources.

- More data is needed on how drinking water consumption is increasing in developing countries in order to have better estimates to prevent the collapse of water supply and sanitation services providers, that in many cases already had a weak situation.
- There are already many developing countries that currently have no access to water supply. The situation is critical in Lacking-Water-Regions like in South Africa, where 21 millions of 60 millions of South Africans have no basic drinking water, and where villages like Phuthaditjhaba have not have drinking water at all during the last six months (St-Jacques, 2020).
- Cities like Harare, in Zimbabwe, already announce a disaster, fearing the worst. “We will starve” is published in local newspapers in a city that has a water crises and where in the last weeks there have been days where water has not run at all in the household pipes, and while the country, according to United Nations, has already 60% of the population facing hunger (Chingono, 2020).
- Health authorities in developing countries have requested their citizens to wash their hands frequently, even if they do not have access to safe water, which makes pandemic prevention very difficult.
- Fast-track and large-scale solutions are needed to provide safe water to vulnerable communities in developing countries to help them prevent the threats of COVID-19 and other water-related diseases.
- International solidarity for water is urgently needed to avoid that a global pandemic results in a global disaster in the developing world.

References

Aguas Residuales. 2020. El confinamiento y la prevención del COVID-19 aumentan el consumo de agua en los hogares de la provincia de Huelva
<https://www.aguasresiduales.info/revista/noticias/el-confinamiento-y-la-prevencion-del-covid-19-aume-rUSd4>

Ayuntamiento de Madrid. 2019. El municipio en cifras. Available at
<http://portalestadistico.com/municipioencifras/?pn=madrid&pc=ZTV21> Reviewed on April 14, 2020

Britneff, Beatrice. 2020. No return to ‘normality’ until coronavirus vaccine is available, Trudeau says. Available at <https://globalnews.ca/news/6799110/coronavirus-covid-19-vaccine-return-to-normality-trudeau/> Reviewed on April 14, 2020

Chingono, Nyasha. 2020. 'We will starve': Zimbabwe's poor full of misgiving over Covid-19 lockdown. Available at: <https://www.theguardian.com/global-development/2020/apr/03/we-will-starve-zimbabwes-poor-full-of-misgiving-over-covid-19-lockdown> Reviewed on April 14, 2020

Debré and Gonzales. 2013. Vie et mort des épidémies. Odile Jacob Ed., Paris.

Dedet, Jean-Pierre. 2010. Les épidémies. De la peste noire à la grippe AH1N1. DUNOD ED., Paris.

Demagny, Xavier. 2020. Paris, Lyon, Strasbourg : depuis le Covid-19, l'eau est-elle plus chlorée dans les grandes villes ? Available at : <https://www.franceinter.fr/societe/paris-lyon-strasbourg-l-eau-est-elle-plus-chloree-dans-les-grandes-villes-de-france> Reviewed on April 14, 2020

Down to Earth. 2020. How the Coronavirus Pandemic is Affecting Water Demand <https://www.downtoearth.org.in/blog/water/covid-19-outbreak-more-hand-washing-can-increase-india-s-water-woes-69900>

Staples, David. 2020. From apathy to panic: timeline of Canada's home front battle against COVID-19. Edmonton Journal. Available at: <https://edmontonjournal.com/news/politics/from-apaty-to-panic-timeline-of-canadas-home-front-battle-against-covid-19/> Reviewed on April 14, 2020

EHA. 2020. Pandemia de COVID-19 modifica hábitos de consumo de agua en regiones de los ríos y los lagos. Available at : <https://www.eha.cl/noticia/regional/pandemia-de-covid-19-modifica-habitos-de-consumo-de-agua-en-regiones-de-los-rios-y-los-lagos-7829> Reviewed on November 2, 2020

El Economista. 2020. Available at: <https://www.eleconomista.com.mx/arteseideas/El-consumo-de-agua-en-hogares-ha-aumentado-40-durante-la-pandemia-pero-no-todos-reciben-el-liquido-20200424-0063.html> Reviewed on November 2, 2020

El Universo. 2020. Consumo de agua potable aumenta en Ecuador debido al aislamiento obligatorio. Available at: <https://www.eluniverso.com/noticias/2020/04/05/nota/7804908/consumo-agua-potable-aumenta-debido-aislamiento-obligatorio> Reviewed on November 2, 2020

Europe1. 2020. Coronavirus : la fuite des Parisiens "égoïstes" inquiète les habitants des campagnes. Available at <https://www.europe1.fr/societe/coronavirus-la-fuite-des-parisiens-a-la-campagne-agace-et-inquiete-les-habitants-des-regions-concernees-3956085> Reviewed on April 14, 2020

FCEA. 2020. Querétaro: Incrementa consumo de agua 25%: CEA (Diario de Querétaro). Available at : <https://agua.org.mx/queretaro-incrementa-consumo-de-agua-25-cea-diario-de-queretaro/> Reviewed on April 14, 2020

France Info. 2020. Des traces de coronavirus détectées dans le réseau d'eau non potable de la ville de Paris. Available at: <https://france3-regions.francetvinfo.fr/paris-ile-de->

[france/paris/traces-coronavirus-detectees-reseau-eau-non-potable-ville-paris-1818442.html](https://www.franceinter.fr/societe/paris-lyon-strasbourg-l-eau-est-elle-plus-chloree-dans-les-grandes-villes-de-france) Reviewed on November 2, 2020

France Inter. 2020. Paris, Lyon, Strasbourg : depuis le Covid-19, l'eau est-elle plus chlorée dans les grandes villes ? Available at : <https://www.franceinter.fr/societe/paris-lyon-strasbourg-l-eau-est-elle-plus-chloree-dans-les-grandes-villes-de-france> Reviewed on November 2, 2020

France TV. 2020. Coronavirus : des restrictions d'eau mises en place dans trois communes du Finistère après l'arrivée massive de résidents secondaires. Available at : https://www.francetvinfo.fr/sante/maladie/coronavirus/coronavirus-des-restrictions-d-eau-mises-en-place-dans-trois-communes-du-finistere-apres-l-arrivee-massive-de-residents-secondaires_3884057.html Reviewed on November 2, 2020

iAgua. 2020. El consumo de agua en la Comunidad de Madrid cae un 9'1% desde la declaración del estado de alarma. Available at : <https://www.iagua.es/noticias/canal-isabel-ii/consumo-agua-comunidad-madrid-cae-91-declaracion-estado-alarma?amp> Reviewed on April 14, 2020

La Hora. 2020. Consumo de agua en Quito fuera de sus límites por emergencia sanitaria. Available at: <https://www.lahora.com.ec/quito/noticia/1102314718/consumo-de-agua-en-quito-fuera-de-sus-limites-por-emergencia-sanitaria> Reviewed on November 2, 2020

Le nouvelliste. 2020. Notre-Dame-du-Mont-Carmel veut freiner la surconsommation d'eau potable. Available at : <https://www.lenouvelliste.ca/actualites/notre-dame-du-mont-carmel-veut-freiner-la-surconsommation-deau-potable-7a15434dcd1c07ca8245bc94fa329607> Reviewed on November 2, 2020

L'hebdo du Saint Maurice. 2020. Surconsommation de l'eau potable: du jamais vu en 20 ans. Available at : <https://www.lhebdo.stmaurice.com/surconsommation-de-leau-potable-du-jamais-vu-en-20-ans/> Reviewed on November 2, 2020

Map Ecology. 2020. Covid-19 : La consommation excessive d'eau peut accentuer la réduction des réserves d'eau. Available at : <http://mapecology.ma/actualites/covid-19-consommation-excessive-deau-accentuer-reduction-reserves-deau-expert-turc/> Reviewed on November 2, 2020

Pacific Institute. 2020. How the Coronavirus Pandemic is Affecting Water Demand <https://pacinst.org/how-the-coronavirus-pandemic-is-affecting-water-demand/>

PTI. 2020. Water consumption in parched Bundelkhand up 60 percent due to COVID-19: Study. Economic Times. Available at: https://m.economictimes.com/news/politics-and-nation/water-consumption-in-parched-bundelkhand-up-60-percent-due-to-covid-19-study/amp_articleshow/75107081.cms Reviewed on April 14, 2022

Radio Cumbre. 2020. Población huancaína agota en 6 horas la producción de agua para 12 horas, según Sedam Huancayo. Available at : <https://radiocumbre.org.pe/?p=17328>
Reviewed on April 14, 2020

Ramos, Mirna. 2020. Dispara Covid 30% consume de agua. El Norte. Available at : https://www.elnorte.com/aplicacioneslibre/preacceso/articulo/default.aspx?urlredirect=https://www.elnorte.com/dispara-covid-30-consumo-de-agua/ar1911843?_rval=1
Reviewed on April 14, 2020

Reinoso, Guillermo. 2020. Consumo de agua se dispara un metro cúbico por Segundo. Available at : <https://www.eltiempo.com/bogota/consumo-de-agua-en-bogota-se-dispara-un-metro-cubico-por-segundo-475522> Reviewed on April 14, 2020

Relief Web. 2020. DR Congo: Caught between COVID-19 and water shortages in Kinshasa. Available at : <https://reliefweb.int/report/democratic-republic-congo/drcongo-caught-between-covid-19-and-water-shortages-kinshasa> Reviewed on November 2, 2020

Revue Politique. 2020. Impact de la COVID-19 sur la région MENA affectée par la pénurie hydrique. Available at : <https://www.revuepolitique.fr/impact-de-la-covid-19-sur-la-region-mena-affectee-par-la-penurie-hydrique/> Reviewed on November 2, 2020

RPP. 2020. Cusco: Consumo de agua potable se incrementó durante la cuarentena por la COVID-19. Available at : <https://rpp.pe/peru/cusco/coronavirus-en-peru-cusco-consumo-de-agua-potable-se-incremento-durante-la-cuarentena-por-la-covid-19-noticia-1278710> Reviewed on November 2, 2020

San Carlos Digital. 2020. Pandemia aumentó el consumo de agua en 20% en acueducto municipal. Available at : <https://sancarlosdigital.com/pandemia-aumento-el-consumo-de-agua-en-20-en-acueducto-municipal/> Reviewed on November 2, 2020

St-Jacques. 2020. Les visages de l'aridité en Afrique du Sud. Available at : <https://www.ledevoir.com/monde/afrique/573036/l-afrique-du-sud-assoiffee>
Reviewed on April 14, 2020

UFM. 2020. Analyser les impacts du COVID-19 sur l'approvisionnement en eau potable et l'assainissement. Available at <https://ufmsecretariat.org/fr/impacts-covid-19-sur-en-eau-potable-assainissement/> Reviewed on November 2, 2020

Vivafrik. 2020. La consommation d'eau potable en hausse de 10 % <https://www.vivafrik.com/2020/06/29/la-consommation-deau-potable-en-hausse-de-10%E2%80%89-a36406.html>

90 Minutos. 2020. Hacen llamado a uso racional del agua tras incremento en el consumo por COVID-19. Available at: <https://90minutos.co/llamado-uso-racional-agua-incremento-consumo-covid-19-26-03-2020/> Reviewed on April 14, 2020.