

SUSTAINABILITY

Working from home, the double-edged sword for sustainability

1 March 2023 6 min read

The advent of the global **COVID-19 pandemic** and the lockdowns implemented by various governments across the world to curb the spread of the highly contagious Coronavirus saw millions of people being forced to work from home. In the aftermath of all the lockdowns, reports noted a **decrease of about 17% in global carbon dioxide** emissions during the period we recognize as the level 5 lockdown period in 2020. [1]

Decreases in (i) land transportation (such as by cars, trains, and buses), (ii) air transportation and (iii) emissions generated by various industries accounted for nearly half of the decrease in carbon dioxide emissions.[2]

Since 2020, many industries and their employees have since returned to their respective formal offices, and as expected **carbon dioxide emissions** increased, which seems to suggest that working from home might actually accelerate the just transition to net zero by the year 2050 as set out in the United Nations Paris Agreement ("**Paris Agreement**").

In a study conducted by WSP Global ("**WSP**"), an environmental consulting company, WSP found that companies in the United Kingdom may contribute to the reduction in green house gases if they allowed employees more flexibility to work from home when the country's general energy consumption was higher, typically being during the colder months of Autumn and Winter ("**WSP Study**").

[Orion Growth](#), an independent consulting firm, has also found that digital nomads (i.e., persons who earn a living by working remotely from different locations of their choosing) who constantly travel may largely reduce their carbon footprint by working remotely instead of using air travel to travel to the various locations, as air travel produces higher quantities of carbon emissions per flight.[3]

Watershed Technology Incorporated ("**Watershed**"), an enterprise climate platform that measures and reports carbon reductions for businesses, have also noted in their study the carbon footprint of a company and its employees should be considered within the context of whether or not the employees working from home are living more sustainable lifestyles at home as opposed to the office.[4]

In this regard, Watershed found that employees working from home should be cognisant of their scope two[5] and scope three[6] carbon emissions, which indirectly contribute to the carbon footprint of employees working from home. In this regard, Watershed uses the following two examples to illustrate scope two and scope three carbon emissions, namely (i) whether the employee uses sustainable electricity sources to power their homes and (ii) the indirect carbon costs associated with the various employees' Uber Eats deliveries compared to the collective company cafeteria for all employees working in the office.

Interestingly, the WSP Study has also found that employees are more likely to print documents while working from the office, which may also be associated with scope two and scope three carbon emissions. The overarching consensus in the various studies is that what is "green" for one company is not necessarily "green" for the next company.

South Africa, as a signatory to the Paris Convention and under the National Development Plan and the Climate Change Bill (which is yet to come into effect), has undertaken a just transition to a low-carbon, resilient economy by 2050, which will ultimately culminate in achieving the net zero carbon emission target. South Africa should, therefore, be conscious of all the arguments in favour of and against working from home from a **sustainability perspective**.

In South Africa issues such as loadshedding and interrupted internet connectivity may hamper any general shift by companies towards adopting a more permanent and flexible workplace policy as not all employees have the financial means to power their homes and even fewer have the means to do so using sustainable energy sources such as solar energy. Employees may also opt to make use of small

generator units or inverters to power their homes during loadshedding, while working from home, however, it has been found that the larger industrial diesel generators (which are often installed at the office of the employer) generally produce fewer emissions due to their more efficient design.[7]

Therefore, companies in South Africa, should be urged to create a suitable and appropriate **tailor-made sustainability framework** for their specific sector and/ or industry to promote a reduction in greenhouse gases if and when requiring employees to work from home. The sustainability framework for working from home may include (i) the company making use of energy-efficient data centers and servers for connectivity purposes for the employees working from home (ii) organising carpooling services for employees who are required to visit the office (by means of establishing collection sites from where the employer transports employees to the office) or introducing slower travel for longer work-related trips (which would exclude air travel (if possible) because it is associated with higher carbon emissions), (iii) companies incentivising employees to recycle and compost materials while working, be it from the office or home and (iv) encouraging employees to make use of natural ventilation and daylight when working from home.

As a result, South Africa's needs to make working from home more sustainable may differ from what is relevant elsewhere in the world.

The COVID-19 pandemic has highlighted the impact that working from home has on the number of carbon emissions released into the atmosphere, however, working from home may not be more sustainable than working from the office if not carefully considered by all affected parties. Employers and employees should work together to facilitate a flexible and sustainable 'workplace' solution that balances the benefits of working from the office and working from home to employers and employees with the benefits arising from reduced carbon emissions and the just transition to net zero.

Footnotes

[1] 'Temporary reduction in daily global CO2 emissions during the Covid-19 forced confinement' by C Le Quere *et al.* [accessed on 25 January 2023]

[2] 'Covid-19 brings South Africa's daily carbon emissions down by 20%' by S King available on [accessed on 26 January 2023]

[3] 'Is remote working really more environmentally sustainable?' by C Callahan available on [accessed on 20 December 2022]

[4] 'Is remote working really more environmentally sustainable?' by C Callahan available on [accessed on 20 December 2022]

[5] “**scope two carbon emissions**” – indirect carbon emissions that are associated with purchasing electricity, steam, heat, or cooling

[6] “**scope three carbon emissions**” – carbon emissions derived from the activities from assets not owned or controlled by a person, but the person indirectly impacts on the value chain of such assets

[7] 'The Advantages of Diesel Industrial Generators' by O Gano available on [accessed on 29 January 2023]



Natalie Scott
Head of Sustainability
[View Profile](#)



Janice Geel
Associate
[View Profile](#)