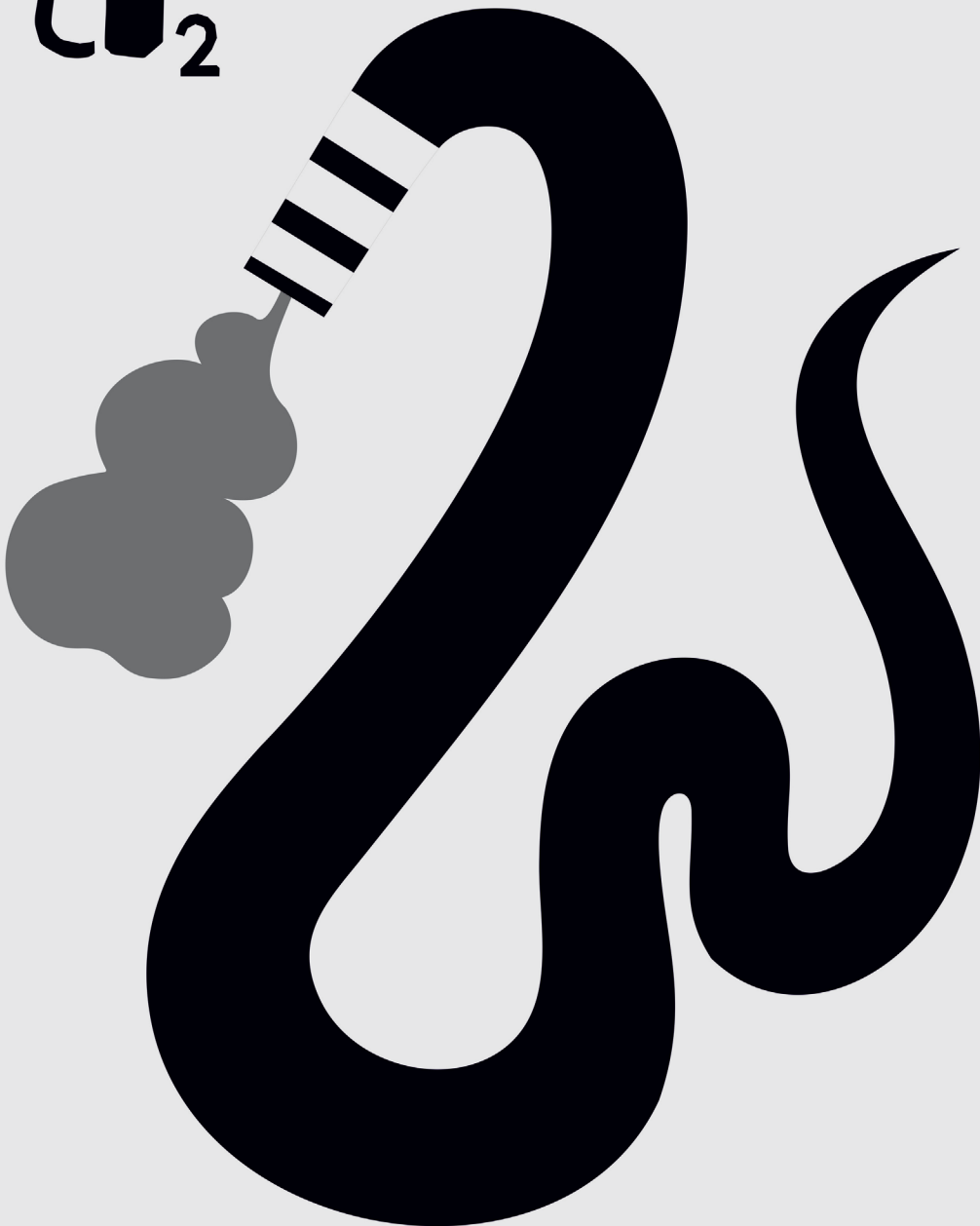


**STOP  
CO<sub>2</sub>**



Author: Patrycja Longawa

# NEWSLETTER

APRIL/4/2024

Sustainable  
Development  
Office

**ZILONY  
WSiZ**



ISSUE TOPIC:  
**DIGITAL CARBON  
FOOTPRINT**

**Task 13.3: Increase the level of education and human and institutional potential, raise the level of awareness on climate change mitigation, adaptation and effects of climate change and early warning systems against threats**

Greenhouse gas emissions caused by human activities continue to grow and drive climate change. Greenhouse gas emissions have never been so high. If we do not take action, the average global temperature in this century is expected to increase to over 3°C, with even higher temperatures in some regions of the world\*.

\* <https://sdgs.un.org/goals/goal13>

# THROUGH THE EYES OF A SPECIALIST



Dr. Mirosław Hajder

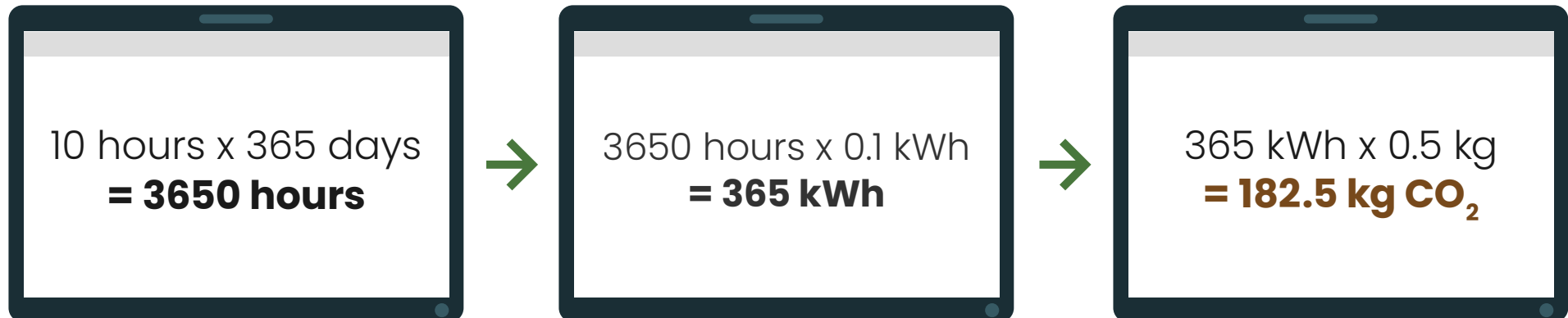
## Computers and the carbon footprint

When discussing carbon footprint, we often associate it with combustion automobiles or home heating. However, we tend to overlook that it is also introduced by everyday use of a computer. Let's consider a simple example assuming that:

The computer is turned on for 10 hours a day;

Draws 100 watts per hour;

The carbon footprint is 0.5 kg for each kWh.



Although the estimated values may appear small, if we consider that there are approximately **7 billion computers** in the world, the total mass of carbon dioxide produced would be around **1.2775 billion tons**. Assuming that the total anthropogenic CO<sub>2</sub> emission is approximately 40 billion tons, the share of computers in this is almost **3%**. The values used in the calculations are very conservative. Many people use computers for more than 10 hours a day, and our devices often consume more than 100 watts.

**Estimates suggest that the Internet will be responsible for emitting 20% of global greenhouse gases within the next decade.**

# THROUGH THE EYES OF A SPECIALIST



Dr. Mirosław Hajder

It is estimated that **watching a one-hour long YouTube video can generate approximately 10 kg of CO<sub>2</sub>**. While it is true that not all of the energy used by computers comes from emission sources, we cannot ignore the fact that computer-related activities can still pose a threat to the environment. Although there is an increasing share of non-emission renewable sources in electricity production, we must still be mindful of our technological usage and its impact on our planet.

## What can we do as users to minimize our carbon footprint?

The recommendations below seem obvious, although we often do not follow them.

We must declare war on digital waste



For each unwanted letter, the carbon footprint is approximately

**0,3 grams of CO<sub>2</sub>**

For emails with attachments it will be at least

**50 grams**



It is also good practice:

- deleting (e.g. by **archiving**) unnecessary e-mails
- **limiting** the number of messages sent

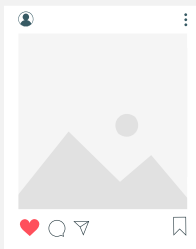
# 13 CLIMATE ACTION



Digital technology is responsible for the emission of approximately

# 4%

of greenhouse gases<sup>1</sup>.



Each photo posted by Cristiano Ronaldo on Instagram generates energy consumption equal to

# 24 MWh

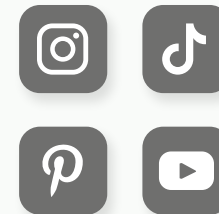
This is equivalent to the energy consumption of a laptop operating for over **50 years without interruption**<sup>4</sup>.



# 16 MARCH

## Digital Clean Up Day

To date, 170 countries and territories have joined the initiative, deleting nearly **12,7 million GB of data**, reducing annual **CO<sub>2</sub> production** by approximately **3.169 tons**<sup>2</sup>.



## DIGITAL SOBRIETY

An approach aimed at using digital technologies in a responsible, sustainable, and conscious way, thanks to which it is possible to limit the increase in digital energy consumption to **1,5%**<sup>3</sup>.

# GREENPEACE

According to Greenpeace, over

# 60%

of the energy used to power Facebook servers is generated from coal<sup>5</sup>.

<sup>1</sup>[www.systancia.com/en/digital-ecology/](http://www.systancia.com/en/digital-ecology/)

<sup>2</sup>[www.digitalcleanupday.org/](http://www.digitalcleanupday.org/)

<sup>3</sup>[pl.linkedin.com/pulse/cyfrowa-transformacja-vs-trze%C5%BAwo%C5%9B%C4%87-alten-polska](https://pl.linkedin.com/pulse/cyfrowa-transformacja-vs-trze%C5%BAwo%C5%9B%C4%87-alten-polska)

<sup>4</sup>[ochk.cloud/pl/dziennik-chmurowy/zielone-IT-chmura-ekologia](https://ochk.cloud/pl/dziennik-chmurowy/zielone-IT-chmura-ekologia)

<sup>5</sup>[www.backupacademy.pl/najwieksze-farmy-serwerow-na-swiecie/](http://www.backupacademy.pl/najwieksze-farmy-serwerow-na-swiecie/)

Approximately

**306**  billion

emails are sent globally each day

This results in a carbon footprint of over one million tons daily, which equates to

 **446.760.000** tons annually



The European Investment Bank states that only **20%** of emails are opened<sup>5</sup>,

and that before reaching the recipient, an email travels an average of **15 000 kilometers**.



Earth Day

**22**

April

|           |    |    |    |    |    |    |
|-----------|----|----|----|----|----|----|
| 1         | 2  | 3  | 4  | 5  | 6  | 7  |
| 8         | 9  | 10 | 11 | 12 | 13 | 14 |
| 15        | 16 | 17 | 18 | 19 | 20 | 21 |
| <b>22</b> | 23 | 24 | 25 | 26 | 27 | 28 |
| 29        | 30 |    |    |    |    |    |

**13** CLIMATE ACTION



## How can we reduce our digital carbon footprint

Based on recommendations from the European Investment Bank



Use the camera only when necessary<sup>6</sup>.



Turn off notifications for infrequently launched applications.



Turn off GPS, Wi-Fi and Bluetooth when not in use.



Limit sending short, unnecessary messages such as "Thanks" or emoticons.

<sup>5</sup> [www.eib.org/en/stories/digital-footprint](http://www.eib.org/en/stories/digital-footprint)

<sup>6</sup> [sektor3-0.pl/blog/6-sposobow-na-zmniejszenie-cyfrowego-sladu-weglowego/](http://sektor3-0.pl/blog/6-sposobow-na-zmniejszenie-cyfrowego-sladu-weglowego/)



### Task 13.3 under Goal 13 included in the 2030 Agenda for Sustainable Development

Increase the level of education and human and institutional potential, raise the level of awareness on climate change mitigation, adaptation and effects of climate change and early warning systems against threats.

## ARCHIVING THE NEWSLETTER

For **students and lecturers**, the newsletter is available on the Moodle platform in the "Sustainable development at UITM - Newsletter" course (navigation bar on the left, tab under the Technical Forum).

**Employees** can find the newsletter on the General Drive O; in the folder of the Office of Sustainable Development.



### Team of Sustainable Development

Sustainable Development Office – RA 143

+48 17 866 12 82 / +48 17 866 11 84



Author: Patrycja Longawa