

Topic 1: Is digital pollution as polluting as it is said to be? Write down an introduction with a thesis issue and a conclusion. If you quote some data or information from a website please use quotation mark and name the source. (from 1 to 3 pages at the most)

Nowadays, actual new technologies concern high-tech sector, modern information and communications technology. All this technology is materialized by our electronic devices. Currently, Earth is in danger because of pollution. In fact, this pollution creates Global Warming. There are several types of pollution and we will study here what is digital pollution.

Digital pollution is defined as pollution produced by our electronic equipments.

Is digital pollution as polluting as it is said to be?

We will define what digital pollution is. Then, we will explain why saying digital pollution can be exaggerated. Finally, we will understand why this pollution can be dangerous for our planet.

Firstly, pollution is the utilization of substances or objects created (or not) by humans which damages environment in the long term. Some studies demonstrated we began to pollute during the first industrial revolutionⁱ. In fact, the invention of the steam engine and mining of coal marks the beginning of a new economic era, bad for our environment.

Nowadays, our actual consumer society has a big ecological impact because people always want to buy the new high trends like cellphones, laptops, game consoles, because of passing fads. They are addicted to these new technologies and this addiction has an impact on the Earth.

Consumer electronics manufacturing requires lots of resources, which means resource depletion. The use of their appliances, like mails or streaming, requires running data centers especially. All these behaviours cause lots of pollution which can be named by Digital Pollutionⁱⁱ.

But, maybe the media overstates this “digital pollution”.

On one hand, with the media coverage of environmentalist movements, studies “demonstrated” Internet is the biggest polluter on the planet. Unfortunately, it is not really true: digital pollution rises shortly by comparison with population increase, unlike car pollution which is more dangerousⁱⁱⁱ.

Moreover, digital pollution is not the first source of pollution. The first source of global warming gases is transports with cars and planes: cars are very used a lot and air travels are so polluting for just one plane. The second source of pollution is industries. So, in our case, digital pollution is marginal compared to other pollutions^{iv} : 4% CO2 emission reflect this form of pollution.

Also, digital pollution was appeared with the emergence of Internet. So, lots of companies emerged and offered their services online. We can mention social networks for example. But, some companies

are trying to reduce their gas emission because of use of servers.

For instance, Facebook^v wanted to only use renewable energies for 2020 with the aim of reducing digital pollution. In fact, use of these renewable energies is democratized.

Even if digital pollution is small compared to others forms of pollution, we will understand the real impact of digital pollution on Earth?

On the other hand, despite the fact that the percentage of digital polluting is small, the figures are alarming. In fact, we are estimated one Google search generates 7 grams of CO₂^{vi}. This can be explained by the fact the user requests Google: This request is sent to Google and goes through few Google servers. So, to respond to the user, servers emit these 7 grams of CO₂. Another shocking figure is the number of 430 million kilos of CO₂ emission per hour during mails transmission. Unfortunately, this digital pollution doesn't emit only greenhouse gases: its uses water and electricity. In fact, data centers gather servers: there servers raise the temperature after heavy use. Therefore, cold water circulates to cool down these servers. For example, annually, 0.2% of water consumed is used because of digital pollution, which represents 3.6 billion of showers^{vii}...

Obviously, electricity consumption is prominent in this problem of pollution. In particular, this energy is used by customers (who want to charge phones for example) and corporations which want to respond to market needs (social networks for instance).

In this case, this digital pollution represents 5.5% of yearly electricity consumption, which is 2.6 times the yearly electricity usage in France.

Currently, we should use more renewable resources like solar panels or wind turbines to product energy. Too few companies use this energy to run their servers...

Finally, with the emergence of 5G in the world, there are increasingly connected objects. In fact, nowadays, all our objects can be remote-controlled (fridge, IT personal assistant...). It is Internet of Things (IoT) which increases fast. We can estimate 48 billion of connected objects^{viii} in 2025. This number can be dangerous because digital pollution will increase too!

From a personal perspective, with regard to the ecological aspect, I think it is too late. In fact, we are in a consumer society where each country wants to grow up. Unfortunately, the economic side is the opposite of the ecological side.

If we stop our activities, pollution will disappear but our society will get through a financial crisis. However, if we continue industries, the Earth will continue to be polluted.

So, we have to find a progressive solution to continue activities and protect our planet, which is in danger.

In conclusion, we have just seen that digital pollution is marginal compared to others pollutions (transports for example). But, if we study the impact on the consumption of water and energy, it is too much for our planet.

We have two choices to protect our environment: being careful about use of our electronic equipments or finding solutions to consume our resources in another way.

A lasting solution consists of using renewable resources to use our data centers, using second-hand or rebuilt IT equipments.

So, we can ask ourselves how our society can do to reduce our environmental impact.

ⁱ <https://www.history.com/topics/natural-disasters-and-environment/water-and-air-pollution>

ⁱⁱ <https://cleanfox.io/blog/pollution-numerique-definition-et-solutions/>

ⁱⁱⁱ <https://youmatter.world/fr/pollution-numerique-internet-ecologie-idees-recues/>

^{iv} <https://www.eea.europa.eu/themes/air/air-pollution-sources-1>

^v <https://sustainability.fb.com/>

^{vi} <https://cleanfox.io/blog/foxyactus-fr/chiffres-effrayants-pollution-digitale/>

^{vii} <https://cleanfox.io/blog/pollution-numerique-definition-et-solutions/>

^{viii} https://www.tourmag.com/Environnement-quel-est-l-impact-reel-du-digital-sur-la-planete_a100845.html