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Session: S2. Air Quality

The air quality during the confinement and coronavirus 2020-2021 period: The case of Tunisia

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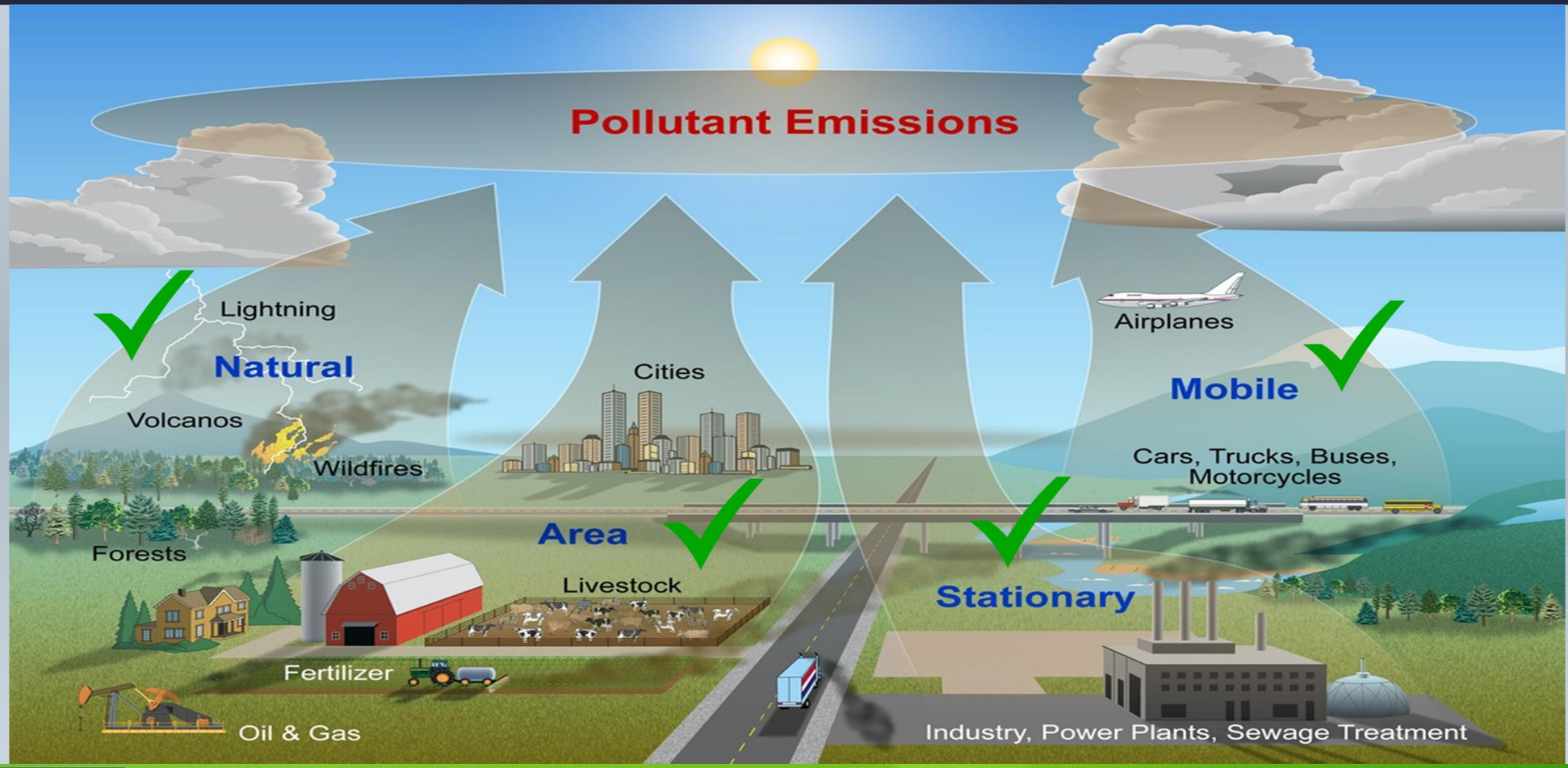
Summary: COVID-19 and the air quality: The case of Tunisia

- ✓ **1- Introduction**
- ✓ **2- Application**
- ✓ **3- Results**
- ✓ **4- Conclusion**

1- Introduction: COVID-19 and the air quality: The case of Tunisia



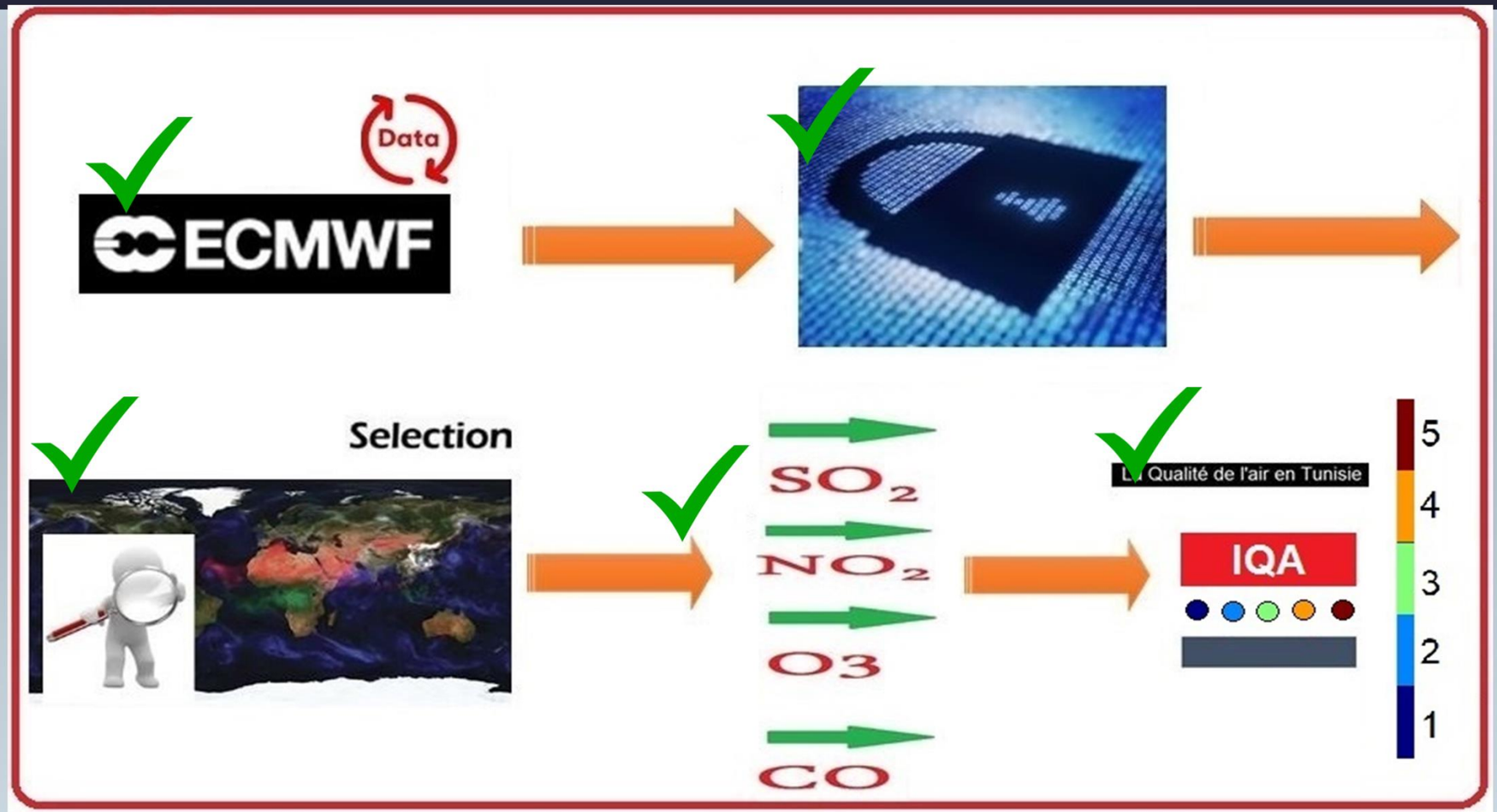
1- Introduction: COVID-19 and the air quality: The case of Tunisia

- During the first wave of the COVID-19 epidemic, **air quality improved** significantly, in early March **2020**. WHO declared that this outbreak in Wuhan has turned into a global pandemic

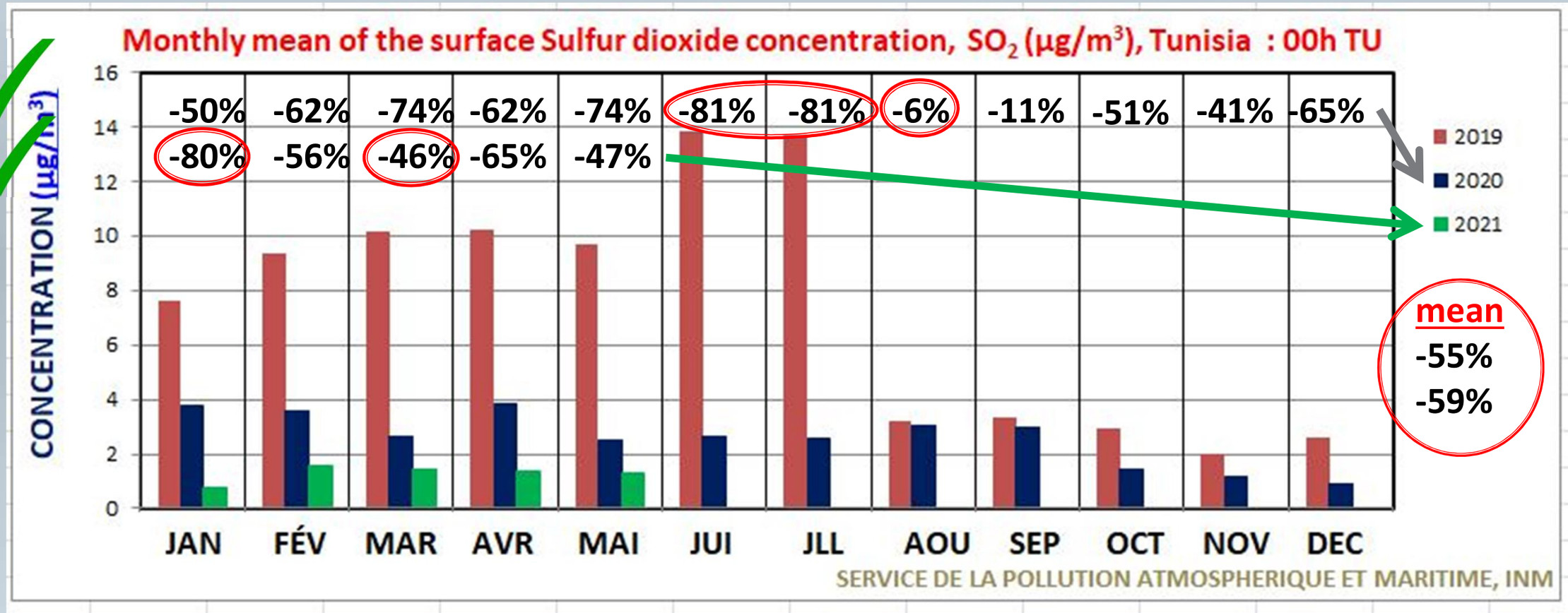
- In central China, **NO_2** emissions have been **reduced** by almost **25%**

- **SO_2** emissions have **fallen** by nearly 33% in New York and Los Angeles, 50% in Madrid, 50% in Seoul, 42% in Wuhan and by over **60%** in **northern Tunisia**….

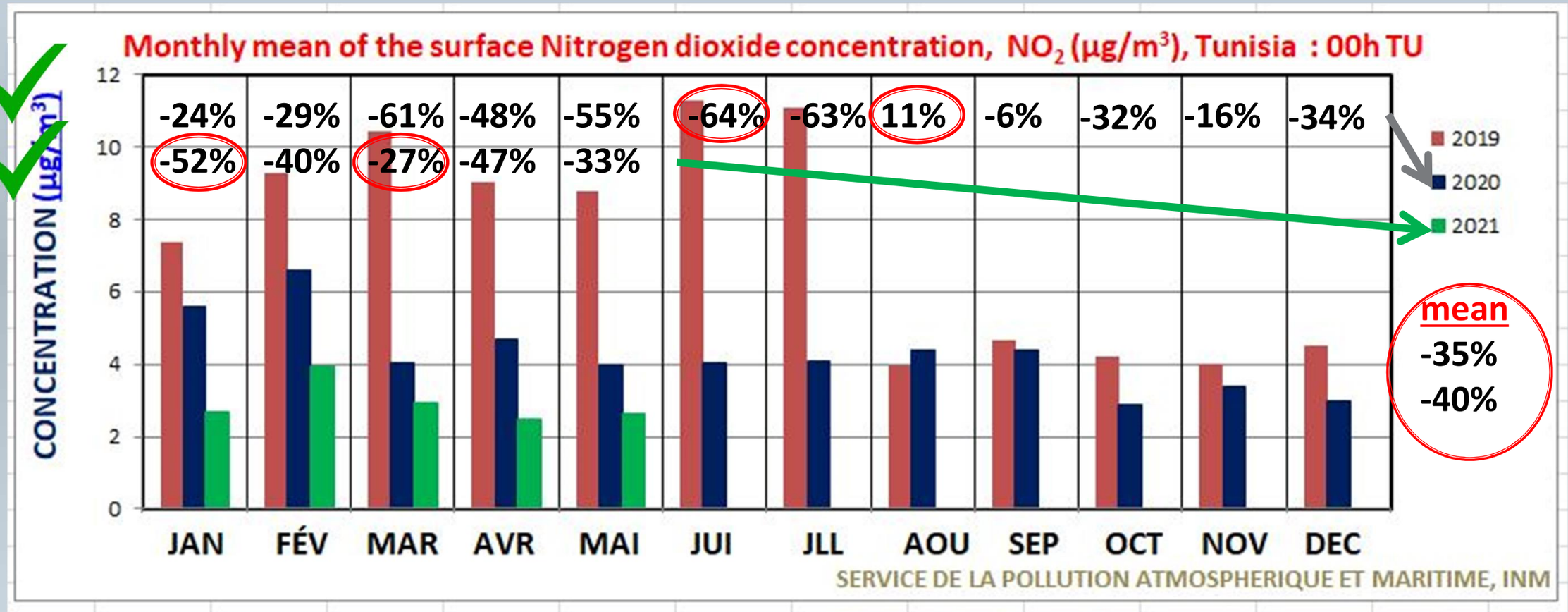
2- Application: COVID-19 and the air quality: The case of Tunisia



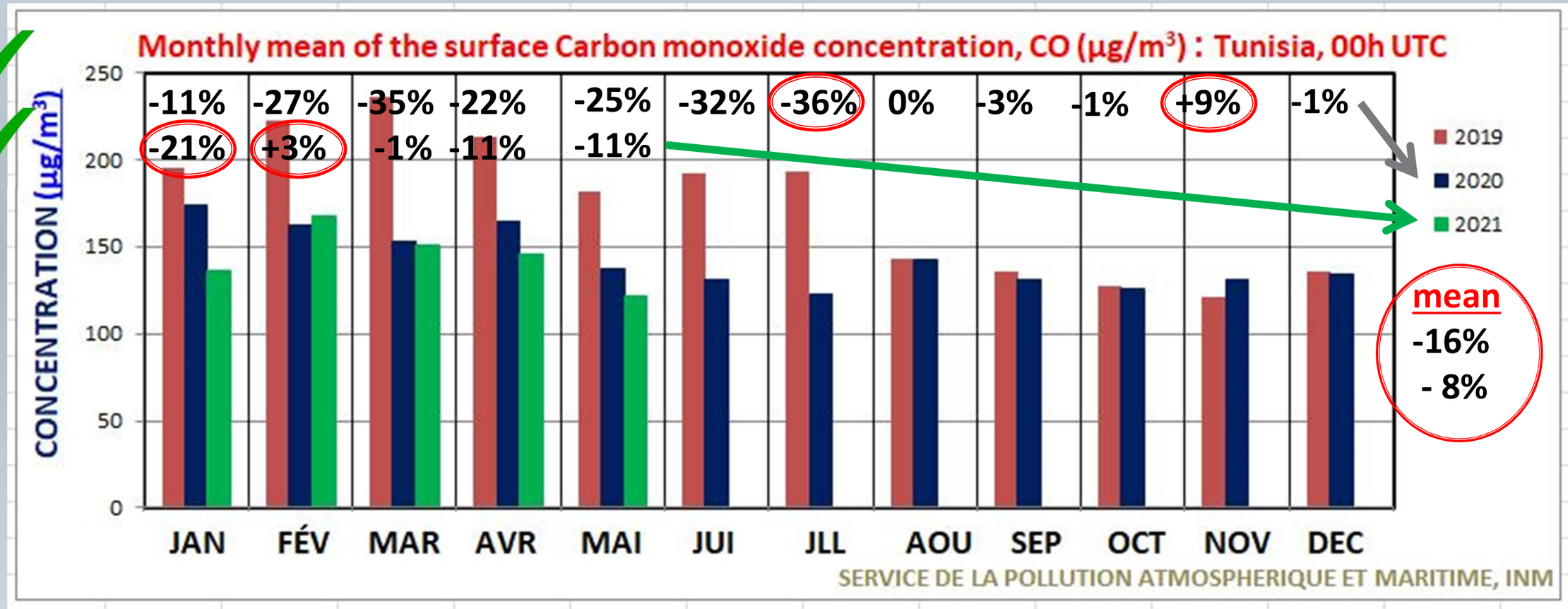
3- **Results:** COVID-19 and the air quality (**SO_2** (µg/m^3))



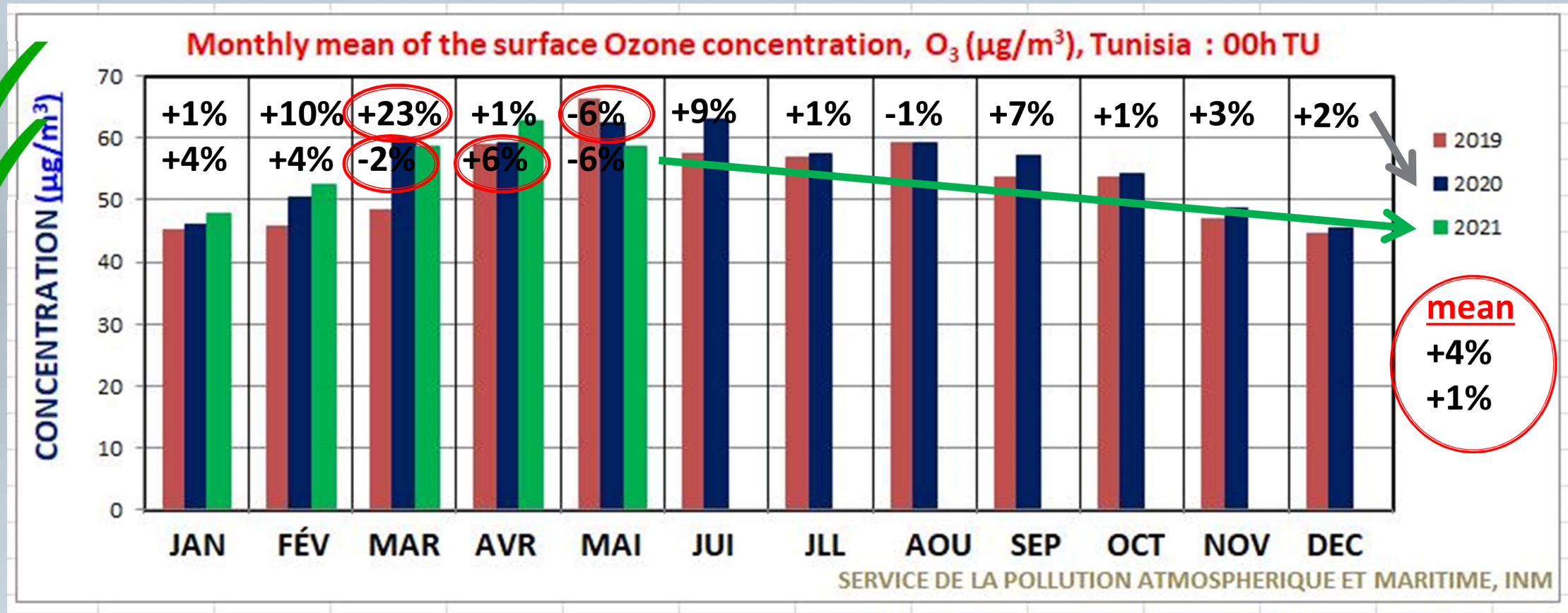
3- **Results:** COVID-19 and the air quality (**NO_2** ($\mu g/m^3$))



3- **Results:** COVID-19 and the air quality (**CO** (µg/m^3))

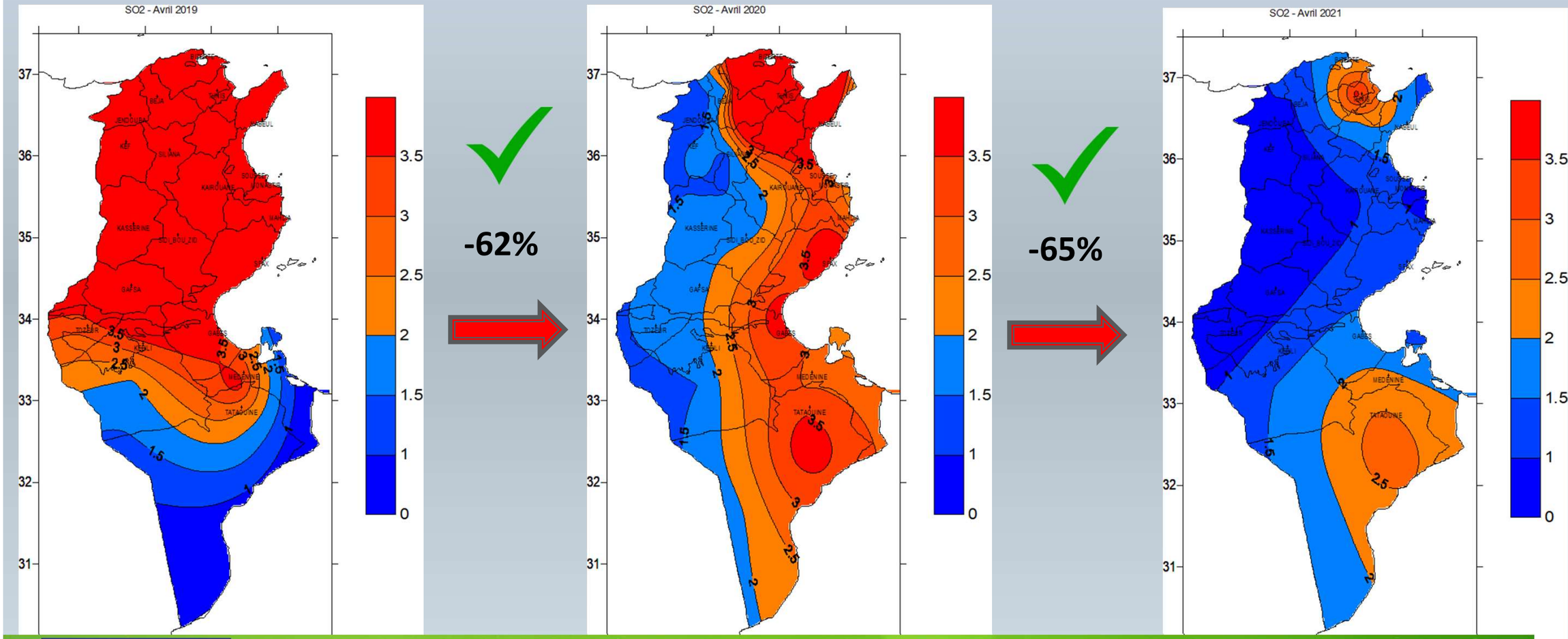


3- **Results:** COVID-19 and the air quality (O_3 (µg/m^3))



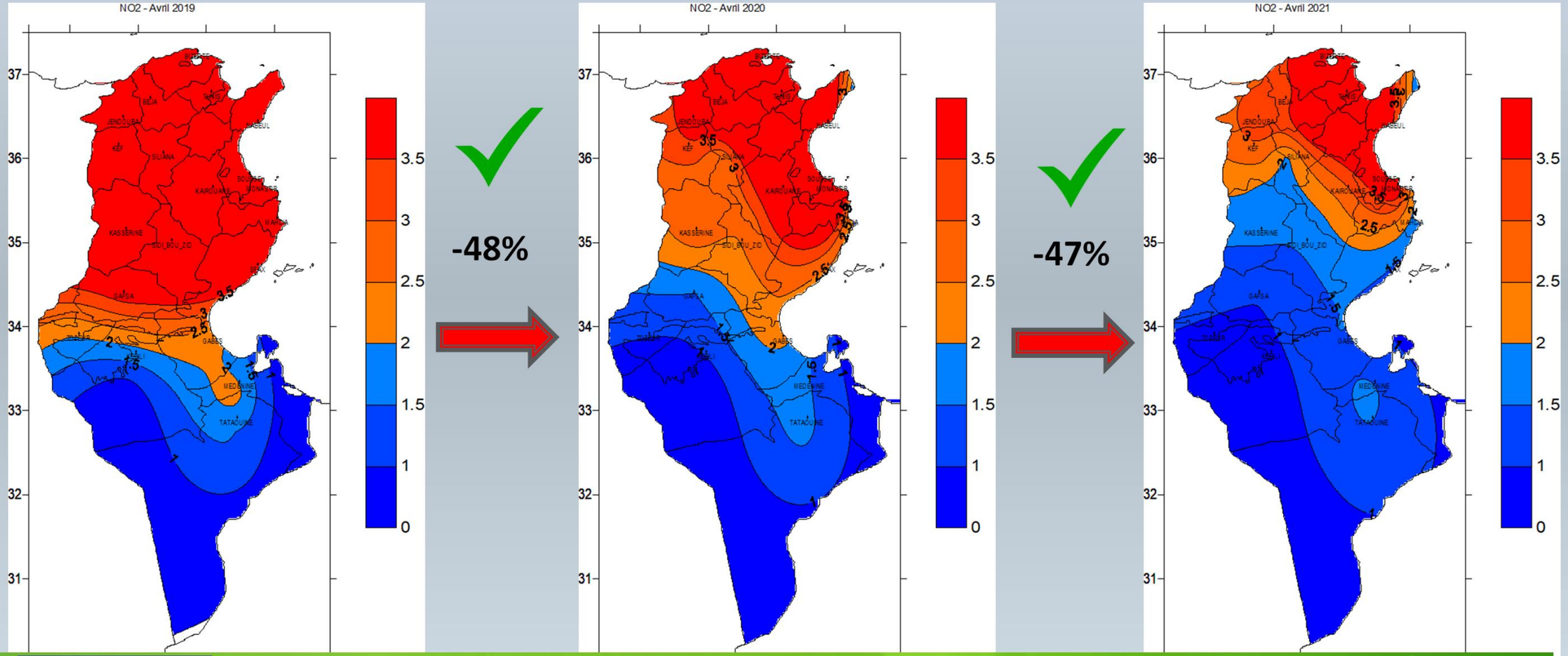
3- **Results:** COVID-19 and the air quality (SO_2 (µg/m^3))

April 2019 | April 2020 | April 2021



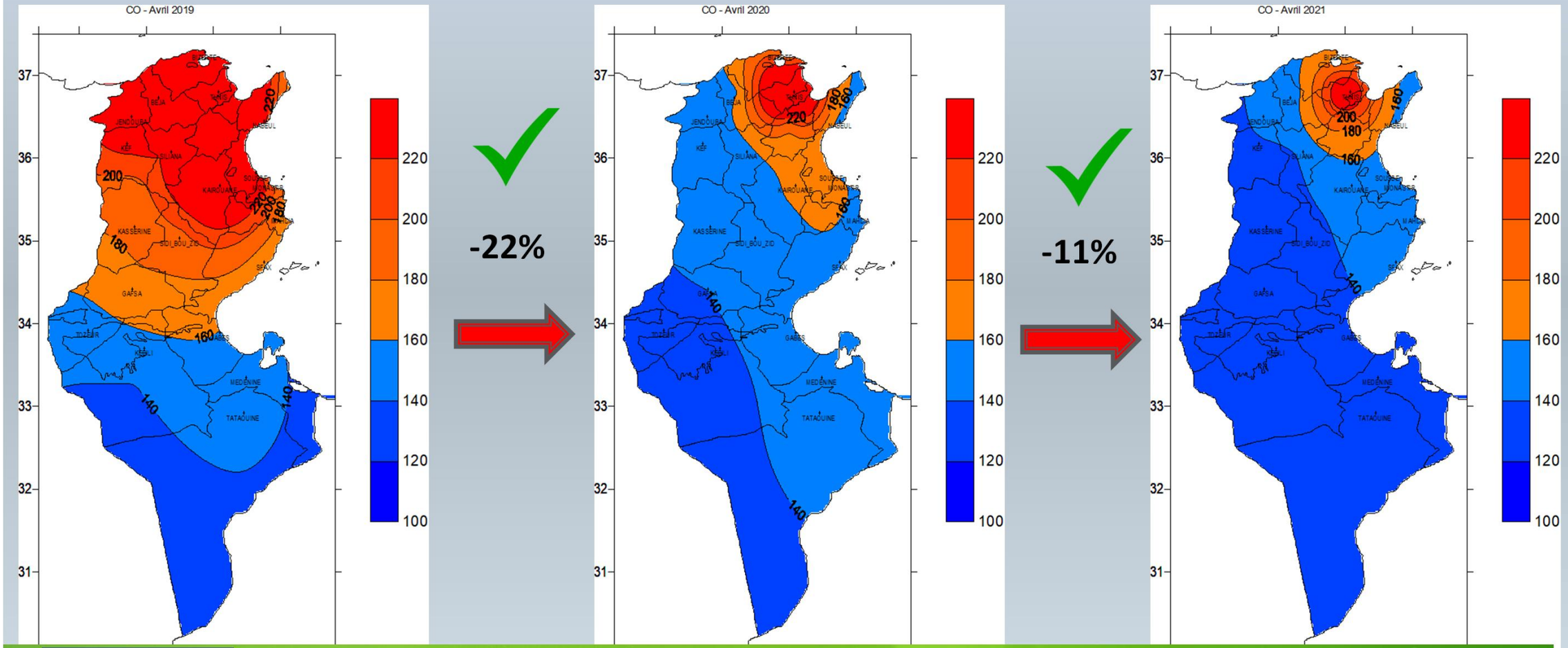
3- **Results:** COVID-19 and the air quality (NO_2 (µg/m^3))

April 2019 | April 2020 | April 2021



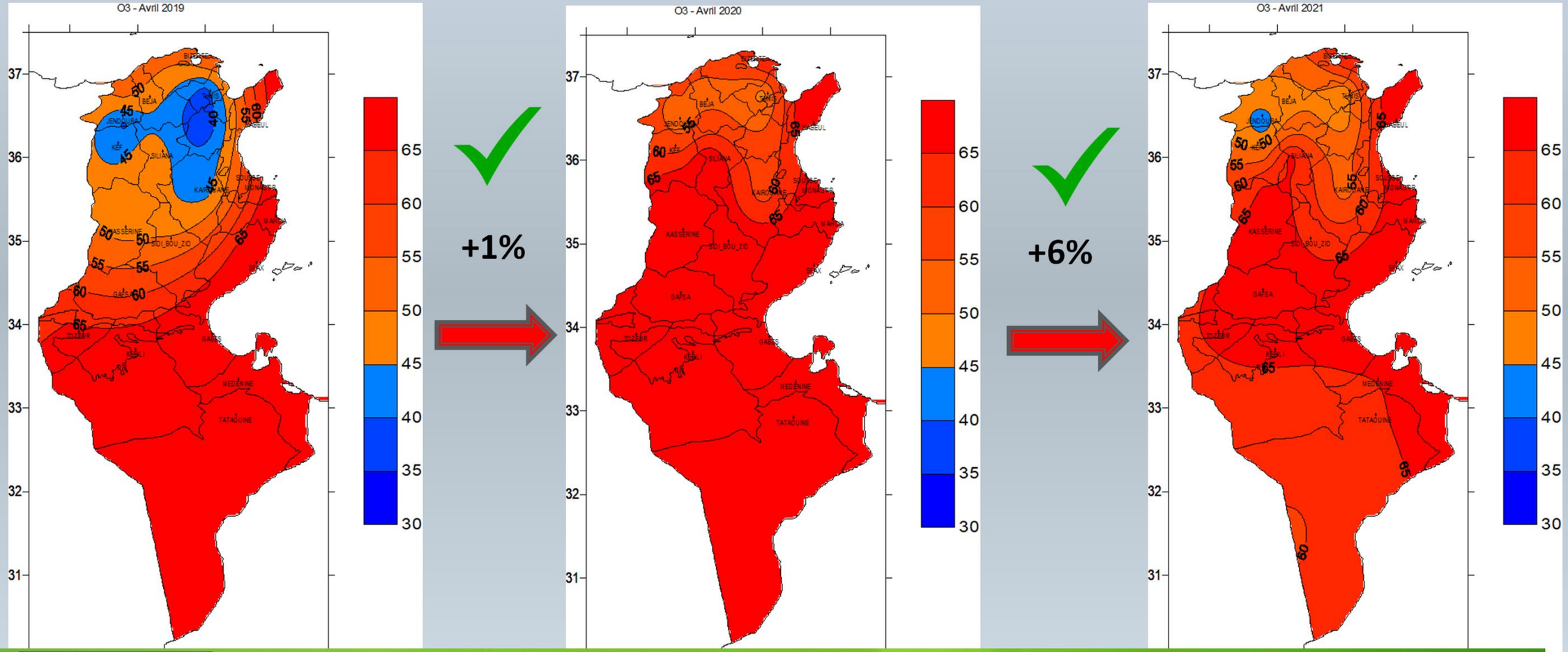
3- **Results:** COVID-19 and the air quality (**CO** (µg/m^3))

April 2019 — April 2020 — April 2021



3- Results: COVID-19 and the air quality (O_3 (µg/m^3))

April 2019 | April 2020 | April 2021



Resume

- In March 2020, the WHO declared that the epidemic in Wuhan has turned into a global pandemic,
- In **Tunisia**, **air quality improved significantly** during the **first confinement** in March and April **2020**,
- **NO_2, SO_2 and CO** showed a remarkable **decrease** with more than 40% during this period and nearly 50% reduction during the 3rd pandemic during the period of January-April 2021,
- Consequently, **the air quality has improved significantly** in Tunisia and around the world.

4- Conclusion

- Since the first COVID-19, reported in Wuhan, China, the Tunisian government has taken a series of protective measures to limit its spread at national scale, …
- We carried out to study the possible impacts of human behaviour following COVID-19 pandemic about the air,
- The mean monthly concentrations tendency analysis of air pollutants during the **first confinement**, showed **significant reductions** with about **40%** and nearly **50%** during the **3rd pandemic wave** during the period of January-April 2021.

4- Conclusion

- This decrease mainly depends on several environmental and meteorological factors such as temperature, humidity, pressure, wind speed, lightning, forest fires ….

- Also, the gradual limitation of industrial activity and automobile traffic caused by COVID-19 has been accompanied by an apparent decrease in air pollution

- Consequently, the effect of this horrible virus has brought us back to **cleaner air** in Tunisia and in the word

Thank you

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