

trends towards environmental sustainability in these countries.

The research spanning 29 years (1990-2019) across EU-27 countries examined the complex interplay between economic growth and [environmental impact](#) using the Environmental Kuznets Curve (EKC) framework. This framework suggests that environmental degradation initially increases with economic growth but decreases at higher income levels.

The study thoroughly analyzed CO₂ emissions in relation to [energy consumption](#), GDP, and population dynamics, revealing a significant decrease in CO₂ emissions despite economic and population growth.

Advanced econometric methods showed a positive trend: as EU economies expanded, they became cleaner and more resource-efficient. This change is attributed to effective EU [environmental policies](#), technological progress, and increased sustainability awareness.

Highlights:

- The total GHG emissions of the EU-27 were reduced significantly (p
- The energy consumption increased significantly by +1.18 Mtoe per year (p
- The Environmental Kuznets Curve relation has been confirmed within EU-27.
- Economic development within the EU-27 has started to improve the environment.

Lead researcher Safwan Mohammed emphasizes the significance of the study in understanding how economic development, policy interventions, and [environmental sustainability](#) intersect in the EU context.

The study's findings affirm the effectiveness of EU environmental policies, emphasizing the vital role of [economic growth](#) in enhancing environmental quality. These insights are crucial for policymakers and stakeholders in shaping sustainable development strategies and environmental protection measures.

More information: Safwan Mohammed et al, Assessment of the environmental kuznets curve within EU-27: Steps toward environmental sustainability (1990–2019), *Environmental Science and Ecotechnology* (2023). [DOI: 10.1016/j.ese.2023.100312](https://doi.org/10.1016/j.ese.2023.100312)

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