

Understanding the Greenhouse Gas (GHG) Inventory

Key Trends and Actionable Insights

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The U.S. Environmental Protection Agency (EPA) recently published the latest GHG Inventory, which analyzes U.S. emission sources, sinks, and trends of greenhouse gases.¹ Containing 841 pages and 9 annexes filled with valuable information, the GHG Inventory is crucial to nationally tracking the effects of policy and socioeconomic trends on emissions and climate goals. This tracking helps to ensure that the U.S. meets its commitments under the United Nations Framework Convention on Climate Change.² To help you better understand the GHG Inventory and its key takeaways, we have summarized some of the large-scale trends from the report and provided some actions that you can take to help reduce GHG emissions and mitigate climate change.



2022 GHG Inventory Highlights

The GHG Inventory describes several large-scale trends:

- **Largest GHG Emitting Sectors:** The transportation, energy, and industrial sectors stood as the largest emitters in the U.S. economy over the period of 1990–2020.
- **Annual Emissions Decreasing Trend:** There was a 9% decrease in 2020 emissions relative to 2019, reflecting the impact of COVID-19 on travel, as well as the credit of sustained energy efficiency measures and market trends.

- **Increase in Wind and Solar Energy Production:** 2020 heralded wind and solar energy production levels 100 times greater than 1990 production levels.
- **Energy-Efficient Technologies Implementation:** The widespread implementation of energy-efficient technologies represents industry efforts to improve environmental performance and mirrors consumer trends, such as declining energy use and emissions per capita.³

These trends are not surprising given the societal focus on climate change, but they also provide areas of focus and opportunity for those in the private sector.

However, not all ecological restoration is equal. Well-designed ecological restoration projects can produce multiple benefits simultaneously, including reducing GHG emissions, improving carbon sequestration, providing ecological habitat, increasing resilience of local communities and infrastructure, and providing community recreational opportunities, among others. Coastal wetlands are one such ecosystem that can provide value for carbon sequestration while also providing protection from sea level rise, flooding, and surge-related natural disasters. By considering GHG impacts as part of the ecological restoration design, firms can fully realize all of the potential benefits restoration may provide.



Wetlands may provide high-carbon storage potential to reduce GHGs.

Putting It All Together

The GHG Inventory is a bridge between the science community's research on climate emissions and the wider economy's statistics on the emissions sources underpinning the climate crisis. Actionable steps, like enhanced ESG reporting and targeted restoration projects, can help companies take concrete actions to incorporate GHG reduction and climate change mitigation into their operations, providing additional value to the stakeholders and the global community.

References

- ¹ <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2020>
- ² <https://unfccc.int/>
- ³ <https://www.utilitydive.com/news/putting-the-e-back-in-esg-lessons-from-the-field/598207/>
- ⁴ <https://www.accountingtoday.com/news/sasb-and-iirc-complete-merger-to-form-value-reporting-foundation>
- ⁵ <https://www.wsj.com/articles/sec-plans-to-propose-climate-change-disclosure-rules-on-march-21-11646922765?tpl=cb>
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