



Integrating Global Value Chains and Emissions Accounting: Methods and Applications

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Summary of the Training Session:

Global value chains (GVCs) are at the forefront of modern international trade, with goods and services crossing multiple borders before reaching final consumers. While GVCs have enabled significant economic growth and integration, they have also raised important questions about environmental sustainability, particularly regarding the carbon footprint of global trade. Input-output analysis, a powerful tool in understanding interdependencies within economies, has emerged as a critical framework for analyzing the environmental impacts of GVCs, including greenhouse gas emissions.

Outline:

First Session **Global Value Chains Accounting framework**

Second Session **Environmental Input-output Analysis**

Third Session **Tracing CO2 in Global Value Chains**

Fourth Session **Application in R.**

Prerequisites:

It could be necessary that participants have a basic level in R or Python. Participants will bring with them their laptops.

Suggested References:

Koopman, R., Wang, Z., & Wei, S. J. (2014). Tracing value-added and double counting in gross exports. *American economic review*, 104(2), 459-494.

Feng, K., Davis, S. J., Sun, L., Li, X., Guan, D., Liu, W., ... & Hubacek, K. (2013). Outsourcing CO2 within china. *Proceedings of the National Academy of Sciences*, 110(28), 11654-11659.

Meng, B., Peters, G. P., Wang, Z., & Li, M. (2018). Tracing CO2 emissions in global value chains. *Energy Economics*, 73, 24-42.