



# 10<sup>th</sup> INTERNATIONAL WORKSHOP ADVANCES IN CLEANER PRODUCTION

“TEN YEARS WORKING TOGETHER FOR A SUSTAINABLE FUTURE”

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## **Global Income Inequality and Climate Change**

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“End poverty in all its forms everywhere” is the first of the United Nation’s Sustainable Development Goals (SDGs) adopted September 2015; setting targets of eradicating extreme poverty by 2030 for all people everywhere. In parallel another United Nations process took place that culminated in December 2015 where 195 countries adopted the new Paris Agreement under the United Nations Framework Convention on Climate Change aimed to keep warming to well below 2°C above pre-industrial levels in the long-term while recognizing developing countries right to eradicate extreme poverty and develop sustainably. These agreements provide a basis for putting the world economies on a sustainable pathway. However, both agreements do not prescribe how these ambitious goals may be achieved in a compatible manner, nor how the burden or responsibility of achieving them may be shared.

About 50% of the global population, that is more than 3.7 billion people, live on less than 3\$ Purchasing Power Parity (PPP) a day. The top 10% earn more 23\$ (PPP) per day. Clearly lifestyles, consumption patterns and associated per capita carbon footprints differ enormously between rich and poor and from country to country. But what are the differences in terms of carbon footprint? What is the contribution to total carbon emissions of the global middle class or the global elites? Do we see a convergence of consumption patterns and carbon footprints of rich folks across countries? What are the carbon implications of moving hundreds of millions of people out of poverty as proposed in the sustainable development goals? To answer these questions, we use consumer expenditure surveys for different income categories for most countries around the world. These are linked to a global multi-regional input-output model to calculate carbon footprints for different income categories for poor and rich countries, and specifically for the US. The paper shows how to link different datasets to estimate the effects of our consumption choices throughout global supply chains and presents some answers and implications.