



Climate compatible development under human livelihood

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We explore the link between improvements in human development and greenhouse gas emission by analyzing the human development index (HDI) on the national scale. We argue that a disaggregated view on human development is required to understand the potential for decoupling of development from greenhouse gas emissions. To do so, we relate the 16 elements from the recently introduced livelihood index on an individual basis to emissions as well as the potential for emission reductions. Improvements in livelihood are decoupled from emissions for 10 elements, while only 6 are related to significant emissions. For the later, we suggest that livelihood conditions can be distinguished in a domain of fairness and a domain of responsibility. For the domain of fairness, improvements of conditions for a livelihood element should be allowed irrespective of emissions. However, when entering the domain of responsibility, considerable potential for emission reductions are apparent. We operate the proposed framework for food consumption and related emissions and find a reduction potential of about 13% compared to the total emissions from this sector. Our approach contributes to the ongoing political discussion on the worldwide allocation of greenhouse gas emissions based on fairness principles.