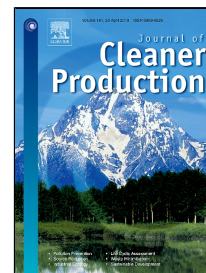


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Impacts of food wastage on water resources and environment in China

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Impacts of food wastage on water resources and environment in China

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Abstract: Food production consumes a large amount of water consumption and generates huge amounts of greenhouse gas emissions. Quantitative study of impact food wastage imposing on water and greenhouse gas emissions contributes to public awareness that food wastage will further worsen the resource shortage and climate warming, reducing food wastage accordingly. This paper evaluates the impacts of food wastage in the consumption stage on water resources and the environment in China. The result indicates that in the year 2010, the wastage of major food in China was around 62818 M kg in the consumption link, accounting for 14.5% of the total food production, of which the plant food wastage takes up the majority. The loss of water resources (blue water plus green water) caused by food wastage is 60502 Mm³, more than 10% of the country's total water use. Food wastage has a serious impact on agricultural non-point source pollution and greenhouse gas emissions, resulting in a grey water footprint of 16292 Mm³ and 60.85 M ton of carbon emissions. Taking regional differences of food consumption into consideration, the proportion of water footprints and carbon emissions in the eastern and southern developed areas is relatively higher, while the plant food takes a relatively larger share in water footprints and carbon emissions in the western and central provinces. Reducing food waste is important to remove unnecessary burdens on the environment and natural resources. The optimization of resource utilization in the process of food production is conducive to effectively reduce water footprints and carbon emissions of

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