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The water footprint of different diets within European sub-national geographical entities

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The water footprint concept has been recognized as being highly valuable for raising awareness of the large quantity of water resources required to produce the food we consume. We present, for three major European countries (the United Kingdom, France and Germany), a geographically detailed nationwide food-consumption-related water footprint, taking into account socio-economic factors of food consumption, for both existing and recommended diets (healthy diet with meat, healthy pescetarian diet and healthy vegetarian diet). Using socio-economic data, national food surveys and international food consumption and water footprint databases, we were able to refine national water footprint data to the smallest possible administrative boundaries within a country (reference period 2007–2011). We found geographical differences in water footprint values for existing diets as well as for the reduction in water footprints associated with a change to the recommended healthy diets. For all 43,786 analysed geographical entities, the water footprint decreases for a healthy diet containing meat (range 11–35%). Larger reductions are observed for the healthy pescetarian (range 33–55%) and healthy vegetarian (range 35–55%) diets. In other words, shifting to a healthy diet is not only good for human health, but also substantially reduces consumption of water resources, consistently for all geographical entities throughout the three countries. Our full results are available as a supplementary dataset. These data can be used at different governance levels in order to inform policies targeted to specific geographical entities.

This presentation is based on a recent paper published in Nature Sustainability