

Abstract

To reach an international agreement on the cost of abatement of climate change, one needs to specify a fair burden sharing rule. This paper evaluates different burden sharing rules in terms of their redistributive impact and by the extent to which they realize the aim of optimal abatement. It is shown that for all regions and almost all countries, the Lindahl solution, where the burden sharing rule of carbon abatement is determined by each country's willingness to pay, is to be preferred above the noncooperative Nash outcome. Poor countries and regions however would prefer the social planner outcome with a global permit market, because then the burden sharing rule is given a secondary role of income redistribution from rich to poor, on top of its primary role of assigning abatement burdens.