

International Environmental Agreements under Other-regarding Preferences*

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Abstract: We study the formation of international environmental agreements in a standard two-stage coalition formation model when countries exhibit other-regarding preferences. We adopt Fehr & Schmidt (1999) inequality aversion, where countries suffer disutility from payoff differences, with potentially different weights on advantageous and disadvantageous inequality. Countries are homogeneous in material payoffs but heterogeneous in their social-preference parameters. We show that equilibrium abatement choices are symmetric within membership groups: coalition members choose a common abatement level and free-riding outsiders also choose a common (generally different) abatement level. Relative to the benchmark without other-regarding preferences, coalition members reduce abatement, while outsiders increase abatement. Turning to membership decisions, other-regarding preferences can increase stable coalition size, but this effect is typically modest. We further obtain systematic self-sorting into membership status depending on countries' degrees of advantageous and disadvantageous inequality aversion. A numerical illustration demonstrates that other-regarding preferences can substantially mitigate the public-good provision problem, mainly because they raise outsiders' abatement rather than because they generate much larger coalitions.

Keywords: international environmental agreements; coalition formation; inequality aversion; other-regarding preferences; public goods; climate cooperation.

JEL-Classification: D62; D63; H41; Q54; Q58.

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