

# A differential game of international pollution control with evolving environmental costs

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We consider a two-player differential game of international emissions to represent the interactions between two groups of countries, namely, developed and developing countries. We adopt a broader-than-usual definition of environmental cost for developing countries to account for their evolving involvement in tackling environmental externalities. Cooperative and non-cooperative solutions are characterized and contrasted. We obtain that it may not be the best course of action to push developing countries to reduce their emissions in the short term, and that cooperation may not create enough dividend, also in the short term, to be implementable.

*This is a joint work with Nahid Masoudi.*

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