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**ON THE CORE OF AN ECONOMY WITH MULTILATERAL
AND MULTIDIMENSIONAL ENVIRONMENTAL
EXTERNALITIES**

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Abstract

For simple economic models of transfrontier pollution, Chander and Tulkens (1995) and (1997) have offered a formula for transfers to sustain international cooperation on a voluntary basis and which deter coalitionnal free-riding under some reasonable behaviours of countries not in the coalition. Their scheme rests on the assumption that pollution is a scalar. Relaxing this assumption, interesting interactions among pollutants arise that call for a new formula. In this paper we extend Chander and Tulkens formula for this more realistic multidimensional context, and thereby enhance the practical and theoretical relevance of their seminal analysis.

Keywords: international pollutions, Nash equilibrium, partial agreement Nash equilibrium, international transfers, γ -core.

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