

“International Cooperation for Metal Recycling From Waste Electrical and Electronic Equipment”

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Summary

This article addresses a market-based management concept for waste electrical and electronic equipment (WEEE) known as the “best-of-two-worlds” approach. The concept is based on the idea that recyclers in developing countries and emerging economies can cooperate with technologically advanced refineries in industrialized countries to facilitate efficient recovery of valuable metals, such as gold and palladium, from e-waste. The article provides an overview of technical and environmental concerns underlying the concept and sheds light on the political framework, the waste-related trade issues, and the resource economics that need to be considered for further decision making. Building on this synthesis, I conduct a qualitative assessment of sustainability impacts of the proposed concept by analyzing two scenarios and their associated risks.

The analysis suggests that, under certain preconditions, the best-of-two-worlds concept could yield significant improvements in terms of management of hazardous substances, resource efficiency, greenhouse gas emissions, income generation, and investments into social and environmental standards. Generally, two potential implementation scenarios were identified: Whereas under Scenario 1 only WEEE generated within developing countries and emerging economies is managed through the best-of-two-worlds approach, Scenario 2 additionally incorporates WEEE imported from industrialized countries. Although both scenarios can yield a variety of benefits, Scenario 2 might cause a net flow of hazardous substances from industrialized countries into developing countries and emerging economies, thus leading to less beneficial sustainability impacts.

The article can be found here: <http://onlinelibrary.wiley.com/doi/10.1111/j.1530-9290.2010.00307.x/full>