

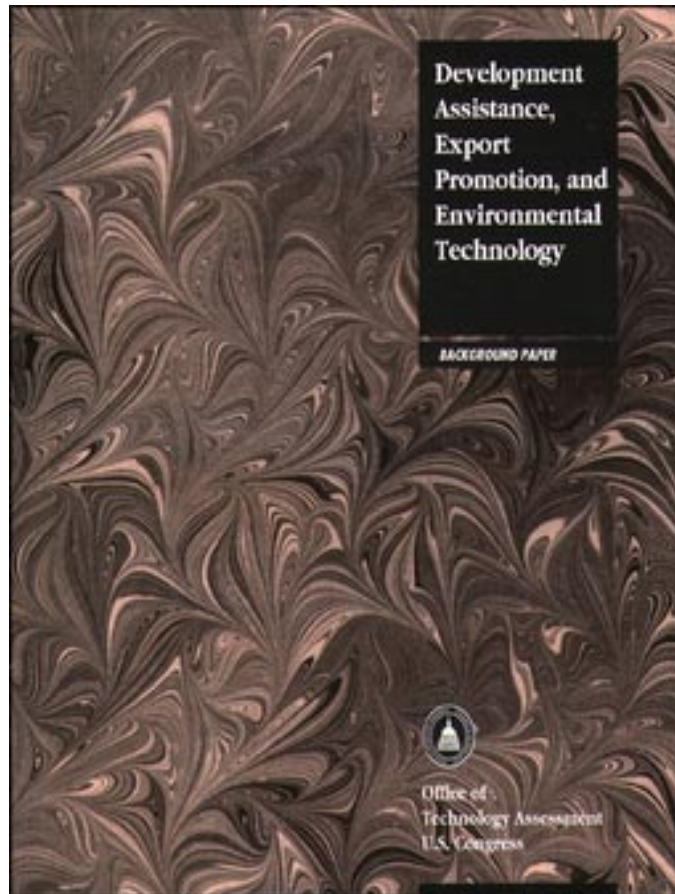
*Development Assistance, Export Promotion,
and Environmental Technology*

August 1993

OTA-BP-ITE-107

NTIS order #PB93-218907

GPO stock #052-003-01332-1



Recommended Citation:

U.S. Congress, Office of Technology Assessment, *Development Assistance, Export Promotion, and Environmental Technology--Background Paper, OTA-BP-ITE-107* (Washington, DC: U.S. Government Printing Office, August 1993).

For sale by the U.S. Government Printing Office
Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328
ISBN 0-16 -041852-6

Foreword

P olicymakers--both in the United States and in other countries that provide foreign assistance--are examining possible links between environmental export promotion and foreign assistance. As developing countries address their environmental problems, sizable markets for environmental technologies and services could emerge. With their long experience in environmental management, developed country firms could be a vital source of environmentally preferable technologies and know-how.

While most resources for environmental improvement will need to come from developing country sources, U.S. foreign aid and that of other donors could serve a potentially catalytic role in fostering technology transfer, with commercial benefits to donors in the form of exports and the potential for continuing trade after such aid ends. Yet, the commercial features of foreign aid programs, if undertaken with insufficient attention to developing country needs, could promote exports of inappropriate technologies at the expense of sustainable development. The role of foreign aid in encouraging technology transfer is receiving added attention as countries consider follow up measures to the 1992 United Nations Conference on Environment and Development, a major world event attended by the heads of state from more than 100 countries.

This Background Paper provides an overview of developing country environmental problems and markets for environmental technologies and services. It discusses preliminary estimates on the amount and purposes of environmental aid provided by donor countries in 1991. The Paper discusses the commercial implications of other countries' aid for U.S. environmental firms, and the Helsinki package adopted by the OECD in late 1991 to limit commercial advantage from use of tied aid credits. Japan's aid program, which seems likely to become the largest bilateral source of development assistance and environmental aid, receives the most attention. The Paper's appendixes discuss environmental markets in developing and newly industrialized countries, and U.S. export promotion programs pertinent to environmental technologies and services.

The Background Paper is the second of three publications in OTA's *American Industry and the Environment* assessment, which was requested by the House Foreign Affairs Committee, the House Energy and Commerce Committee and the Senate Finance Committee. The Paper was prepared to meet the specific request of the House Foreign Affairs Committee for interim information on environmental industry issues. The initial product of the assessment, *Trade and Environment: Conflicts and Opportunities*, was published in May 1992. The final report of the assessment will address U.S. environmental industry competitiveness in detail. It will also discuss interactions between environmental regulations and technology, and their implications for U.S. manufacturing industry competitiveness.



Roger C. Herdman, Director

Advisory Panel

Roland W. Schmitt, *Chairman*
Rensselaer Polytechnic Institute

Edgar Berkey
National Environmental
Technology Applications
Corporation

Judith Dean
School of Advanced International
Studies
Johns Hopkins University

Robert E. Driscoll
U. S.-ASEAN Council for Business
and Technology, Inc.

Peter Emerson
Environmental Defense Fund

Harry L. Foster
General Motors Co.

Stewart J. Hudson
National Wildlife Federation

Mary Kelly
Texas Center for Policy Studies

Jeffrey Leonard
Global Environment Fund

David S. Marsh
Marsh Plating Corporation

Jessica Matthews¹
World Resources Institute

Robert S. McNamara
U.S.-Japan Foundation

J.A. Meyer
Chevron Corporation

T.C. Parsons
Center for Industrial Services
University of Tennessee

Martyn Riddle
International Finance Corporation

Paul Relis
California Integrated Waste
Management Board

Lawrence Ross
Center for Waste Reduction
Technologies
American Institute of Chemical
Engineers

Maxine Savitz
Garrett Processing Division
Allied-Signal Aerospace

Samuel A. Schulhof
General Electric Company

James Selover
Selover Associates

Peg Seminario
AFL-CIO

John J. Sheehan
United Steelworkers of America

Sally Shelton
Georgetown University

¹ Resigned from the advisory panel in April 1993.

NOTE: OTA appreciates and is grateful for the valuable assistance and thoughtful critiques provided by the advisory panel members. The panel does not, however, necessarily approve, disapprove, or endorse this report. OTA assumes full responsibility for the report and the accuracy of its contents.

Project Staff

Peter D. Blair, Assistant Director, OTA
Energy, Materials, and International Security Division

Audrey B. Buyrn, Program Manager
Industry, Technology, and Employment Program

Wendell Fletcher, Project Director

Robert Weissler, Senior Analyst

Madeleine Costanza, Consultant

Sebastian Remoy

Takashi Mashiko

Rodney Sobin

Robert D. Atkinson

Susan H. Lusi

ADMINISTRATIVE STAFF

Carol A. Guntow, Office Administrator

Diane D. White, Administrative Secretary