

How Tax Dollars Can
Undercut the Environment
and the Economy

NORMAN MYERS AND JENNIFER KENT

PERVERSE SUBSIDIES

How Tax Dollars Can Undercut the Environment and the Economy

Norman Myers and Jennifer Kent

This book is published in cooperation with the International Institute for Sustainable Development.

ISLAND PRESS

Washington • Covelo • London

Copyright © 2001 Norman Myers and Jennifer Kent

Perverse Subsidies was originally published in 1997 by the International Institute for Sustainable Development, Winnipeg, Manitoba, Canada.

All rights reserved under International and Pan-American Copyright Conventions. No part of this book may be reproduced in any form or by any means without permission in writing from the publisher: Island Press, 1718 Connecticut Avenue, N.W., Suite 300, Washington, DC 20009.

ISLAND PRESS is a trademark of The Center for Resource Economics.

Library of Congress Cataloging-in-Publication Data

Myers, Norman.

Perverse subsidies: how tax dollars can undercut the environment and the economy / Norman Myers and Jennifer Kent.

Includes bibliographical references and index.

ISBN 1-55963-834-6 (cloth: alk. paper) — ISBN 1-55963-835-4 (pbk.: alk. paper)

1. Subsidies—United States. 2. Environmental degradation—United States. I. Kent, Jennifer. II. Title.

HC110.S9 M94 2001

338.973'02—dc21

00-012384

British Library Cataloguing in Publication Data available.

Printed on recycled, acid-free paper



Manufactured in the United States of America 10 9 8 7 6 5 4 3 2 1

Preface

Our initial report on perverse subsidies was published in mid-1998 by the International Institute for Sustainable Development in Winnipeg, Manitoba, Canada. The timing was favorable. In May of that year, the annual G8 meeting, a gathering of presidents and prime ministers from the eight biggest economies in the world, was to meet in Birmingham, England. What a splendid opportunity, we thought: our text would show those heavyweights how they could do more to boost their economies through phasing out perverse subsidies than through any other single measure. They could cancel their budget deficits at a stroke, they could offer huge tax cuts, they could reorient their fiscal priorities by supplying large increases to front-rank sectors such as education and health, and they could do lots of other things, with enough left over to throw nationwide parties. At the same time, they could go far to reduce the grand-scale degradation of their environments and repairing past damage. We duly ensured that copies of the report were put into the hands of leading advisers of each president and prime minister.

Alas for our hopes. Not a single word from on high was breathed with regard to perverse subsidies. Nor has there been any mention of perverse subsidies in other topflight gatherings of political leaders, except at the World Bank. There is a long way to go before these subsidies take their rightful place in the center of the radar screens of those who shape our future.

Because of the issue's importance and the lack of attention given to it, I decided to revise the original report and present a more detailed assessment of the problem. Hence this book, the preparation of which was kindly supported by Island Press and its senior editor, Todd Baldwin, together with the International Institute for Sustainable Development and Stephan Barg. As a result of fine-grain analysis, our calculation of the subsidies total was bumped up from \$1.9 trillion to \$2.5 trillion per year. I am convinced that were the issue to be given an even more in-depth treatment, the total would turn out to be larger still. An assessment of the United States by Paul Hawken¹ found that one-third of the country's economy serves no worthwhile human purpose, and much of the waste is fostered by those (expletive deleted) subsidies. Worldwide, Hawken believes, the waste could amount to \$10 trillion.

Fortunately, there has been a scattering of initial efforts to cut perverse subsidies in countries west, east, north, and south. These efforts are a start: nothing more, and also nothing less. "Nothing more": it is a curious circumstance that greater attention, or much attention at all, is not directed at such a prominent phenomenon of our daily lives. Of course, there should always be room for constructive subsidies: they help our world to go around better. But many other subsidies are "perverse" in that they are damaging to our environments and economies alike. The perverse ones total around \$2 trillion, within a global economy of \$35 trillion; hence, they are highly distortional and damaging. Were they to be phased out, huge sums would be released to pursue the Holy Grail of sustainable development. The 1992 Rio Earth Summit offered a budget for sustainable development, with a total of \$600 billion per year-which was dismissed by governments as quite unavailable. Yet perverse subsidies, which by definition are superb supports of unsustainable development, could supply funds three times larger than the Rio proposal. This surely presents an insurmountable opportunity.

Key question: why has the issue not attracted more attention from professional analysts, policy makers, political leaders, and the general public? Still more to the point, why has it remained a black hole for research? Primarily, I think, because it is such a murky subject. Data are hard to track down or are simply not available, which is understandable when most governments do not keep even minimal track of subsidies overall. Then there is the age-old problem of what constitutes a subsidy, let alone a perverse subsidy.

As a result, this was the most complex and challenging of all the fifteen "big-picture" research projects I have undertaken during the

past quarter century. The issues are manifold, the sectors are wide ranging, and the information base is extraordinarily deficient. So I was far more dependent than usual on support from a host of friends and colleagues around the world. Many sent or directed me to papers and reports; over 2,000 have been collated in all—a total so large that we cannot thank all these helpful individuals by name here. Certain others supplied analytic insights, and anyone who has tackled an intractable research issue such as this one will understand that "idea people" contribute much more than they are often aware. In the front rank of these are Stephan Barg, Jane Corbett, André de Moor, Peter Gleick, Arthur J. Hanson, Rick Heede, Douglas Koplow, Todd Litman, Jim MacNeill, Mara Myers, David Pimentel, Sandra Postel, David Roodman, and Ronald Steenblik.

In particular, I want to express hefty thanks to those people who took great amounts of time to read chapters and send back detailed critiques: Dennis Anderson, Bill Barclay, Stephan Barg, Chris Barr, John Browder, Tom Burke, Peter Dauvergne, Tom Downing, Malin Falkenmark, Chris Flavin, Fred Gale, Robert Gale, Peter Gleick, the late David Hall, Arthur J. Hanson, Rick Heede, William Hyde, David Kaimowitz, Douglas Koplow, Ann Platt McGinn, Randal O'Toole, David Pimentel, Sandra Postel, Andrew Rajkumar, David Roodman, Carl Safina, Douglas Southgate, Ronald Steenblik, Michael Strauss, Michael Sutton, Michael Weber, and Peter Weber.

Of course, the original research project would not have got to the starting line if it were not for the generous financial support of The John D. and Catherine T. MacArthur Foundation in Chicago. Special thanks go to Dan Martin, director of the Program on Global Security and Sustainability. I much appreciated Dan's believing in my seemingly way-out idea in the first place.

Thanks also to Arthur J. Hanson, former president, and Stephan Barg, senior program advisor, of the International Institute for Sustainable Development in Winnipeg, who agreed to publish my original report in 1998. They have continued to highlight perverse subsidies by setting up a World Wide Web site with regular listings of subsidies news from around the world. The 1998 report subsequently caught the eye of Todd Baldwin, senior editor of Island Press in Washington, D.C. He suggested that I engage in a full-bore revision of the earlier report with a view to commercial publication, and the result is what you, the reader, now hold in your hands. I warmly welcomed Todd's enthusiasm for the beefing-up exercise and his steady support while I and my research associate sweated away with mountains of statistics and analyses. The result is a much more com-

prehensive assessment. The book now includes forests as a sixth sector, and it features many more fine-grain evaluations of what's what. It is not a "Son of *Perverse Subsidies*"; it is more like a "Father and Mother Account of *Perverse Subsidies*." As the reader will note at numerous points in the book, this latest estimate of perverse subsidies—\$2 trillion per year—is surely more of an underestimate of the real-world situation than was the first-time assessment.

I also want to recognize the support of my literary agent, Virginia Barber of New York. As with most of my sixteen books, she handled the contract negotiations with her customary acumen, and she remained enthusiastic about the venture at those times when I felt underwhelming interest in giving it another whirl. Hefty thanks to you, Ginger: you contribute more than you know.

Finally and foremost, I conducted the project from start to finish with the super-est support of my research associate, Jennifer Kent. Self-trained, she has become far more of a statistical guru than I am. At the same time, she has researched, chased down references, dug out endless streams of nitty-gritty detail, re-rechecked a hundred this's and a thousand that's, and spent huge amounts of time clarifying the entire manuscript (often working at it until nearer dawn than dusk). This was a monumental task for her, and she did it monumentally well. I can best express my thanks to Jennie by saying that it long since became plain that her name belongs on the title page as coauthor—and in certain respects, her name should come first.

To reiterate the central point: perverse subsidies remain little known. Precisely because we are generally unaware of them, they are free to work away cancer-like in our body politic. This book not only sees them as problems but also views them as opportunities—surely insurmountable opportunities. Governments of the world: go for it!

NORMAN MYERS

Contents

xi

List of Tables, Figures, and Boxes

Preface xv

PART I. Background
CHAPTER 1. Introduction: What Are Subsidies? 3 Definition 5 Equity Concerns 9 Why Subsidies Are Often Unpopular 10 The Scale of Subsidies 12 Environmental Externalities 13 Research Methodology 16 Key Caveat 20
CHAPTER 2. When Do Subsidies Become Perverse? 2. Environmental and Economic Values 25 Environmental and Economic Costs 26 Environmental Externalities Revisited 28 The Question of Uncertainty 31 Global Warming 33 Summation and Conclusion 34

PART II. Sectoral Analyses

CHAPTER 3. Agriculture 39
The Subsidies Phenomenon 43
United States 45
All OECD Countries 51
Non-OECD Countries 51
The Environmental Resource Base 52
Subsidies Worldwide 55
Scope for Policy Interventions 59
CHAPTER 4. Fossil Fuels and Nuclear Energy 63
United States 69
All OECD Countries 71
The Former Soviet Union and Eastern Europe 71
Other Non-OECD Countries 75
Nuclear Energy 78
Environmental Externalities 80
Subsidies Worldwide 84
Policy Options 87
Cutting Carbon Dioxide Emissions 88
Energy Efficiency and Conservation 89
CHAPTER 5. Road Transportation 95
United States 98
Subsidies to the Oil and Car Industries 99
Road Building and Infrastructure 100
Free Parking 100
Road Congestion 100
Accidents, Injuries, and Deaths 101
Military Safeguards 102
Environmental Externalities 103
Total U.S. Subsidies 104
Other OECD Countries 106
Total Subsidies in OECD Countries 109
Subsidies in Non-OECD Countries 109
Subsidies Worldwide 112
Policy Responses 115

Establish the "True" Price of Gasoline 115 Adjust the Playing Field 116 Expand Traffic Management 117	
Increase Car Efficiency 117	
Water Demand and Supply 121 Water Waste and Subsidies 123 Adverse Consequences 126 Water as a Free Good 131 Inefficiency and Waste 133 Three Case Studies 134 India 134 Israel 135 United States 136 Subsidies Worldwide 138 Scope for Policy Reform 141	
CHAPTER 7. Fisheries 148 Marine Fisheries in Decline 149 Reasons for Decline 151 Subsidies Worldwide 151 Policy Responses 156	
CHAPTER 8. Forestry 159 Example of Overlogging: Indonesia 161 Example of Cattle Ranching: Brazil 165 Other Examples of Subsidized Deforestation in the Humid Tropics 167	
Total Subsidies in Tropical Forestry 168 Examples of Overlogging in Developed Countries United States 169 Canada 174 Russia 176 Subsidies Worldwide 177	169
Environmental Externalities 179 Material Goods 179 Environmental Services 181	

CHAPTER 9. Overview Assessment 187

Perverse Subsidies: The Leaders in Absurdity 190
The Crux: Covert Costs of Perverse Subsidies 191

The Double Dividend 192

PART III. Policy

CHAPTER 10. What Shall We Do About It All? 197

Big-Picture Strategies 198

Supplementary Measures 202

Regulation 202

User Charges 202

Tradable Permits 203

Green Taxes 203

Subsidies to Support the Environment 204

Perverse Subsidies and the Taxpayer: Some Better News 205

Notes 207

Index 267

List of Tables, Figures, and Boxes

Tables

1.1	Types of Subsidy 8
3.1	Total Supports to OECD Agriculture, 1998 45
3.2	The Subsidies Burden for Consumers and Taxpayers, 1998 46
3.3	Agriculture Subsidies Worldwide, 1998 58
4.1	Energy Consumption and Carbon Emissions by Region, 1990-2020 65
4.2	Fossil-Fuel Producers, 1998: The Top Tens 68
4.3	Fossil-Fuel Consumers, 1998: The Top Tens 69
4.4	Energy Subsidies in Western Europe 71
4.5	Fossil-Fuel Subsidy Reforms in Non-OECD Countries, 1990–1996 74
4.6	The Benefits of Full-Cost Pricing of Energy 77
4.7	Fossil-Fuel and Nuclear Energy Subsidies Worldwide 85
5.1	U.S. Subsidies for Road Transportation 105

5.2	External Costs of Road Transportation in Western Europe 109					
5.3	Road Transportation Subsidies Worldwide 113					
6.1	Water Prices as Share of Marginal Cost of Supply 124					
6.2	Irrigation Subsidies in Developing Regions, 1983–1993 124					
6.3	Dependence on International Water Supply 131					
6.4	Water Subsidies Worldwide 141					
8.1	Forestry Subsidies Worldwide 178					
9.1	Subsidies Worldwide 188					
Figur	res					
3.1	Producer Supports to OECD Agriculture per Hectare of Arable Land, 1998 41					
3.2	Producer Supports to OECD Agriculture per Full-Time Farmer, 1998 44					
3.3	Pesticide-Resistant Species since 1908 54					
4.1	World Energy Consumption 66					
4.2	Growth in Global Energy Use, 1990-1998 91					
5.1	Gasoline Tax and Retail Prices in Industrialized Countries 1995 107					
7.1	World Fish Production, 1950-1996 150					
7.2	World Fleet Capacity and Catch Rate, 1970-1989 154					
Boxe	s					
1.1	Three Main Types of Subsidy 6					
1.2	Subsidies Broad and Narrow 7					
1.3	Pros and Cons of Subsidies 11					
1.4	Inconclusive Statistics 18					
2.1	Wherein Lies Perversity? 24					
2.2	The Planetary Ecosystem and the Global Economy 30					

143

3.1	U.S. Sugar Growers 4/	
3.2	The Case of New Zealand 56	
4.1	Energy Subsidies: All Sorts and Conditions Thereof	67
4.2	Coal Subsidies in Germany 72	
4.3	Electricity 79	
5.1	Aviation Fuel 96	
5.2	Road Transportation Costs in the United Kingdom	108

South Africa: A Success Story in the Making?

155

6.1

7.1

Fisheries Bycatch

Part I BACKGROUND

Chapter 1

INTRODUCTION: WHAT ARE SUBSIDIES?

Subsidies: the term sounds like the ultimate bore. But subsidies are a prime feature of our economic landscape. That much is well understood; we can live with the idea. But who has heard of—or who cares about—"perverse" subsidies? What have they ever done for us, or, rather, against us? Well, they affect us at every turn of our daily lives, and their harmful effect detracts from the pleasure and fulfillment we gain from every one of those daily lives. We can consider them to be subsidies that exert adverse effects on our economies and our environments alike. Hardly any other factor has such a downside influence on us.

Here we go, then, with a book that aims to document the problem of perverse subsidies in six main sectors: agriculture, fossil fuels and nuclear energy, road transportation, water, fisheries, and forestry. Total subsidies (perverse or not) in these sectors and a few others have long been thought to be around \$2 trillion worldwide per year, but they have remained almost entirely undocumented. This means that subsidies play a prime role in the functioning of the global economy. Suppose too that perverse subsidies amount to a sizeable pro-