1994 International Coastal Cleanup Results



1994 INTERNATIONAL COASTAL CLEANUP RESULTS

Written by

Seba B. Sheavly Coordinator, International Coastal Cleanup

Data Analysis and Compilation by

Robert A. Burgess
Marine Debris Database Manager,
David L. Hall
International Coastal Cleanup Project Associate,
and
Donna L. Lewis
International Coastal Cleanup Assistant

Edited by

Rose Bierce Kathryn J. O'Hara

Illustrations by Alison Merow

Published by

Center for Marine Conservation 1725 DeSales Street, NW, Suite 500 Washington, DC 20036 202-429-5609

©August 1995 Center for Marine Conservation

printed on 100% recycled paper with soy-based inks

The Center for Marine Conservation (CMC), established in 1972, is a marine conservation organization dedicated to protecting marine wildlife and conserving coastal and ocean resources. To further these conservation goals, CMC conducts policy-oriented research; promotes public awareness, education, and citizen involvement; supports domestic and international programs for marine wildlife and their habitats; and advocates sound policies concerning the marine environment.

The International Coastal Cleanup,

part of CMC's Clean Ocean Campaign, is supported by the Center's 120,000 members and special contributions from:

American Plastics Council ARCO Foundation

Ashland Chemical Company-Drew Marine Division

Bell Atlantic Corporation

Berkley

Body Shop of America

Busch Entertainment Corporation

Chevron Corporation

The Coca-Cola Company

earth preserv

U.S. Environmental Protection Agency (EPA)

Faber-Castell Corporation

Florida Power Corporation

Georgia-Pacific Corporation

Hewlett-Packard

Jantzen, Inc.

Jenkins Foundation

Mobil Chemical Corporation

NAPCOR

National Oceanic and Atmospheric Administration (NOAA)

U.S. Navy

Professional Association of Dive Instructors (PADI) A.W.A.R.E. Foundation

The Proctor & Gamble Fund

The Society of the Plastics Industry

Southern Bell

Trull Foundation

Underwater Discovery, Inc.

Wheelabrator Technologies, Inc.

The Center for Marine Conservation's International Coastal Cleanup is pleased to have the endorsement of the IUCN—The World Conservation Union and the support of the Intergovernmental Oceanographic Commission (IOC) of the United Nations' Educational, Scientific, and Cultural Organization (UNESCO).

CONTENTS

Acknowledgements
Dedication
Introduction
1994 International Coastal Cleanup Results
Overview
1994 Cleanup Highlights
Major Water Bodies of the 1994 International Coastal Cleanup
The Most Prevalent Type of Debris on the World's Beaches and Waterways
The 1994 International Dirty Dozen
Cigarette Butts
Bottles and Associated Goods
Impacts of Marine Debris on Wildlife
Sources of Marine Debris
Ocean-Based Sources of Debris
Recreational Fishing and Boating Wastes
Commercial Fishing Wastes
Operational Wastes
Galley-Type Wastes
Land-Based Sources of Debris
Sewage-Associated Wastes
Medical Wastes
Foreign Sources of Marine Debris
Conclusion
1994 International Marine Debris Raw Data Summary
Appendices
Appendix 1. Countries Participating in the International Coastal Cleanup, 1989-1994 63
Appendix 2. MARPOL Signatory Countries of the 1994 International Coastal Cleanup 66
Appendix 3. Country Coordinators of the 1994 International Coastal Cleanup 68
Appendix 4. Items Identified as "Most Peculiar" by 1994 International
Coastal Cleanup Volunteers
Appendix 5. Data Card Used by 1994 International Coastal Cleanup Volunteers
Appendix 6. Sponsors of the 1994 International Coastal Cleanup

ACKNOWLEDGEMENTS

There is not enough room on this page or any number of pages to begin to thank the tens of thousands of individuals who are responsible for making the International Coastal Cleanup such a huge success. This is the world's largest volunteer data-gathering effort on behalf of the environment. Its continued success and growth is due to the countless hours, resources, and efforts contributed by country coordinators, zone captains, sponsors, and the volunteers who collected the mountain of data for this cleanup. This nine-year effort is possible due to their continued support. A heartfelt THANK YOU to all who have been associated with the Cleanup.

We would specifically like to recognize the following individuals who worked so hard to make this report possible. They are:

Country Cleanup Coordinators

Anguilfa: John Benjamin

Argentina: Daniel Rolleri, Aldo Brandani,

Maria Rosa Gibson

Bahamas: Donna Lee Crawford, Laura Urian, Lynn Gape, Candace Key, Chere Pinder,

Lynn Gape, Candace Key, C Randy Brown

Bahrain: Deirdre Maher

Bangladesh: Brozo Gopal Biswas

Barbados: Sandra Prescod Belize: Hilberto Riverol Bermuda: Dwayne Williams

Brazil: Sheila Simao

British Virgin Islands: Julie Overing

Canada: Melissa Higgs, Margaret Butschler

Cayman Islands: Netha Banks,

Doreen de Sousa Lima, Donald Jordan

Colombia: Patricia Wills Costa Rica: Quint Newcomer

Croatia: Ratko Profozic

Cyprus: Andreas Demetropoulos Dominican Republic: Patricia Lamelas

Ecuador: Segundo Coello, Pedro

Pounce

Egypt: Peter Schiess

El Salvador: Barbara Settles

Estonia: Maris Paju

Federated States of Micronesia:

Pamela Baker Gibraltar: John Cortes Greece: Dimitris Mitsatsos Grenada: Joseph Antoine Guatemala: Tulio Monterroso

Hong Kong: Doris Lau Indonesia: Rosemary Silva

Israel: Ellik Adler

Italy: Suzy Penco

Ivory Coast: Thomas Bonebo

Jamaica: Sheila Carter, Lisa Petersen Japan: Kojima Azusa, Yumi Kikuchi,

Edo Heinrich-Sanchez

Kenya: Gary Mullins Latvia: Peter Bormanis Lithuania: Indres Biskis Malaysia: Stephanie Lee

Malta: Melody Morgan-Busher

Marshall Islands: Kathleen Kirkpatrick Nash Mexico: Craig Caughlan, Minerva Mari Hadad,

Jose de la Garza, Roberto Marcin,

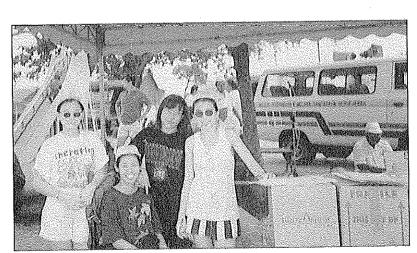
Ana Laura Lara-Dominguez, German Mendez

Montserrat: Wolf Krabs

Netherlands Antilles: Diana Gevers,

Kenny Buchanan, Francois van der Hoeven

Nigeria: Larry Awosika



Body Shop staff prepare for Malaysia's cleanup.

Norway: Paul Harstad Palau: Willie Watanabe

Panama: Amanda Barraza, Felipa Saavedra

Peru: J. C. Riveros Salcedo Philippines: Vaughan Pratt Poland: Thomasz Jozwiak Portugal: Lilia Fidalgo

St. Kitts and Nevis: Chelsey Davis, Alexis Knight St. Vincent and the Grenadines: Andrew Simmons Singapore: Evelyn Lim-Eng, Kate Grace Thome

Spain: Maria Dolores Moreno Mestre

Thailand: David Hoover

Kingdom of Tonga: Karina Ricks

Trinidad and Tobago: Boris Fabres, Sita Kuruvilla,

Louanna Martin

Turks and Caicos: Michelle Fulford,

Tommy Skippings

United Kingdom: Melissa Morton

United States: Center for Marine Conservation

Venezuela: Diego Diaz-Martin

CMC Staff Rose Bierce Robert Burgess David Hall

Laurel Halperin Jason Hunt

David Knight Donna Lewis

Linda Maraniss

Alison Merow

Barbara Miller

Deborah Mitchell Niki Neviaser

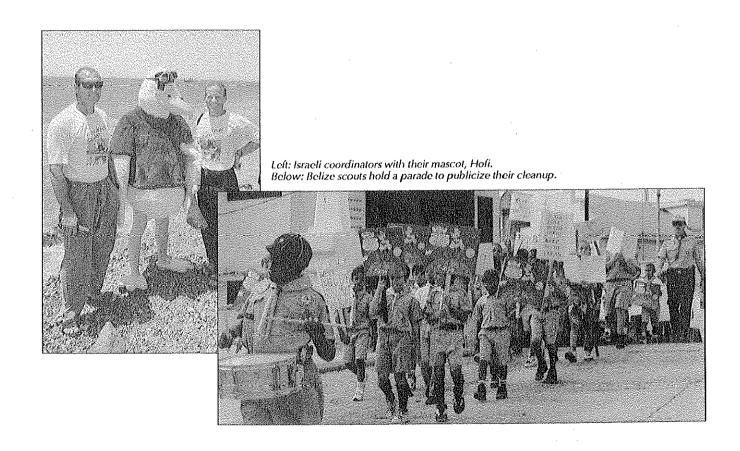
Kathryn O'Hara

Wendy Powers

Bruce Ryan

Betsy Schrader Seba Sheavly

Lori Weber



This report is dedicated to the 215,468 cleanup participants from 61 countries whose spirit of volunteerism and commitment to clean beaches and waterways and a healthy marine environment made the 1994 International Coastal Cleanup possible.

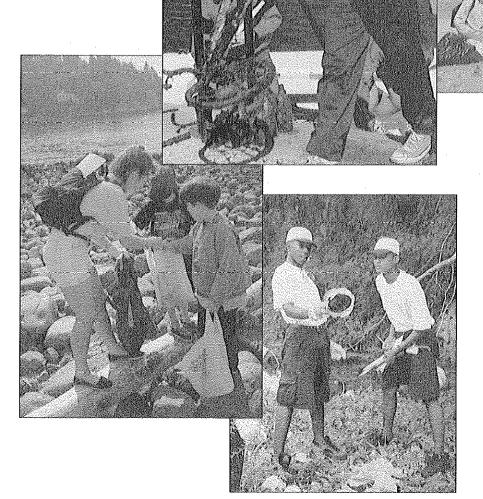




Above: Volunteers from the city council of the historical city of Nelaka, Malaysia. right: A bicycle was one item found by divers in Croatia. Below: A family works together in Whytecliffe Park, Canada.



Above: The Essor Group collects trash at Port Bouet Beach, Ivory Coast. Below: Some of Argentina's volunteers take a moment for a group photo at cleanup's end.

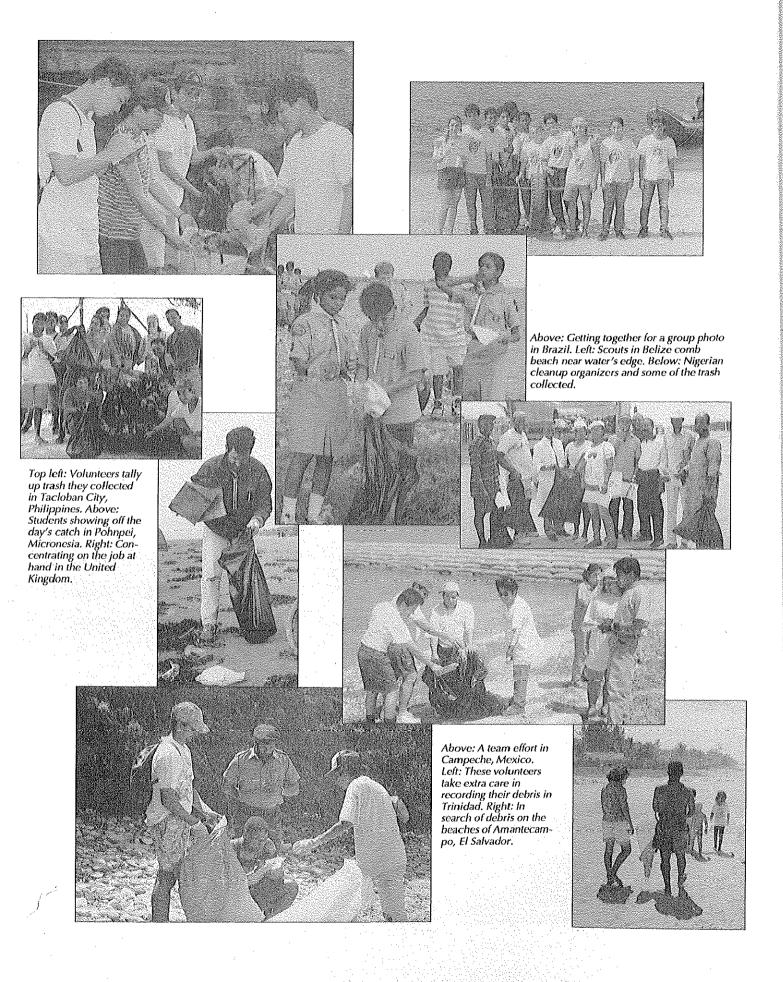


CENS SENIAL STREET

Above: Coordinators in the Dominican Republic used informative posters to guide cleanup volunteers. Right: Jamaican students discuss their find, pulled from a river bed.







INTRODUCTION

The mission of the International Coastal Cleanup is to remove debris from the shorelines, waterways, and beaches of the world's lakes, rivers, and bordering oceans; collect valuable information on the amount and types of debris; educate the public on the issue of marine debris; and use the information collected from the cleanup to effect policy changes and other measures needed to reduce marine debris and enhance marine conservation.

The Center for Marine Conservation (CMC) coordinated its ninth cleanup campaign in 1994. CMC's annual volunteer cleanup effort began in the Gulf of Mexico along beaches in the state of Texas in 1986. In 1988, the first U.S. nationwide cleanup took place, with 25 states and territories, just months before Annex V of the MARPOL Treaty took effect.¹ The Cleanup became an international event when Mexico and Canada participated in 1989. By 1994, the International Coastal Cleanup included 61 countries.² The Center coordinates these annual cleanups in cooperation with an extensive network of country-based coordinators. Country coordinators establish their own sponsors and organize volunteers to participate in the Cleanup.

The expansion of the Cleanup over the past nine years is a path of natural progression, and reflects the inter-relationship of the oceans and inland waterways. Tracing marine debris to its sources has shown us that much of the debris we find on our beaches actually originates further upstream—in rivers, lakes, and other drainage systems. Much of what is dumped inland in our waterways ends up on our beaches. The growth of the international cleanup campaign reflects the nature of the world's oceans. Oceans do not recognize cultural, political, or geographic boundaries. Neither does pollution, especially marine debris.

The marine debris picture shown in this report must be viewed as a snapshot of the marine debris issue. The data compiled was not collected using a rigorous, scientific protocol. Rather, the data is a glimpse into the current status or condition of the marine debris situation. Nevertheless, valuable insight can be gained from this image. The reality of the effects of marine debris are some of the most devastating on our planet in terms of habitats and biological resources. Marine debris presents aesthetic and economic problems along with health hazards for the planet. This report serves as a guidebook for citizens and policy makers in evaluating our progress in dealing with this serious form of pollution. As you will see, we have made some strides in combating debris in our waterways and along our beaches. Unfortunately, we still have much to do.

¹The International Convention for the Prevention of Pollution from Ships is commonly referred to as the MARPOL (MARine POLlution) Treaty. Ocean dumping of any ship-generated plastics has been prohibited since Annex V, an optional section of MARPOL, went into effect on December 31, 1988. The restrictions apply only to those countries and their territionial waters that have ratified this portion of the Treaty. As of May 1995, 74 countries had ratified MARPOL Annex V.

²Results from the 35 U.S. states and territories that participated in the 1994 International Coastal Cleanup appear in a companion volume titled 1994 U.S. National Coastal Cleanup Results, also available from CMC.

1994 INTERNATIONAL COASTAL CLEANUP RESULTS

OVERVIEW

The 1994 International Coastal Cleanup marked the ninth year of CMC's environmental effort devoted to removing debris from our shorelines, waterways, and beaches, and working to find solutions to the pollution problem of marine debris. In 61 countries and territories, 215,468 volunteers at more than 4,000 cleanup sites scoured approximately 12,858 kilometers (7,992 miles) of waterways and beaches to remove 1,820,647 kilograms (4,010,532 pounds) of debris (Table 1). In all, volunteers collected over 8,200,169 pieces of debris (Table 2).

The International Coastal Cleanup focuses on data collection and tabulation along with eyewitness observations of marine debris. CMC analyzed 23,514 individual data cards from the 1994 Cleanup. Interpretation of these results depends on appropriate standards of comparison regarding country, regional, and worldwide level computations. Detailed country analyses reflect direct tabulations of debris reported by volunteers. Regional figures are computed based on compiled country records. Worldwide percentages are determined from total debris collected.

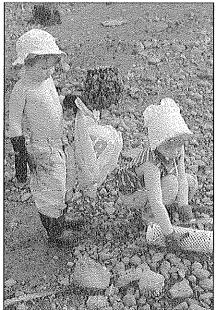
Compared to the 1993 Cleanup, there was a significant increase in the number of countries participating, from 39 in 1993 to an all time high of 61 in 1994. The following countries joined the Cleanup for the first time this year: Bangladesh, Cayman Islands (UK), Colombia, Costa Rica, Croatia, Egypt, El Salvador, Estonia, Gibraltar (UK), Latvia, Malta, Montserrat (UK), Palau, Peru, Philippines, Portugal, St. Vincent and the Grenadines, Thailand, Kingdom of Tonga, Trinidad and Tobago, and Turks and Caicos. Countries participating in the International Coastal Cleanup vary from year to year depending on a variety of factors, including the availability of resources and organizational logistics. For a complete listing and chronology of all countries participating in the Cleanup since 1989, see Appendix 1.

The volunteers who collected data on marine debris during the 1994 Cleanup helped to monitor the effectiveness of Annex V of the MARPOL Treaty. The International Convention for the Prevention of Pollution from Ships at Sea includes five annexes on ocean dumping. When a country signs onto MARPOL it automatically agrees to enforce Annexes I and II of the treaty (which cover oil and noxious liquid substances). Annexes III (packaged hazardous substances), IV (sewage), and V (garbage) are optional. Annex V specifically prohibits the disposal of plastics at sea and regulates the offshore disposal of other types of garbage. As of May 1995, 74 countries had ratified Annex V. Of special note is that Venezuela, an International Coastal Cleanup participant since 1991, recently ratified Annex V of the MARPOL Treaty due largely to the information and interest in the marine debris problem generated by the Venezuelan cleanups. **CONGRATULATIONS VENEZUELA!** For a complete listing of International Coastal Cleanup participants that are signatory to the MARPOL Treaty, see Appendix 2.

Caution must be exercised in comparing one country's statistics to another's. The demographics, resources, and geography of each country or territory play a role in the size of the cleanup along with weather conditions and volunteer participation. Detailed country/territory analyses are available from the Center for Marine Conservation.³ The countries that participated in the 1994 Cleanup have been organized regionally, based on the body of water the country borders—the Atlantic Ocean, Pacific Ocean, Indian Ocean, Baltic Sea, Persian Gulf, Mediterranean Sea, and the Wider Caribbean (including the Gulf of Mexico and the Caribbean Sea). In cases where a country's cleanup bordered more than one body of water (such as the United States or Mexico), the data was separated within a country to correspond to this orientation. Thus you will find "U.S. Atlantic" and "U.S. Pacific." This regional organization provides valuable insight into the problem of marine debris in specific areas.

Aside from the aesthetic, economic, and health reasons for cleaning beaches—a clean beach is more enjoyable, after all, than a dirty one—the data from the 1994 cleanup reveal a more serious issue, that of entanglement in and ingestion of debris by marine life. In the 1994 Cleanup, 105 animals were found entangled in various forms of debris, principally plastic. Of those 105, volunteers were able to release a seagull (United States) and a sea turtle (Belize). If 105 entanglements were discovered in one three-hour cleanup, imagine how many might occur during an entire year.

One of the many benefits of this annual cleanup is the realization that each volunteer is part of a huge international environmental effort, where hundreds of thousands of volunteers are doing the same thing—making a difference. Marine debris is one form of pollution that can easily be stopped by simply not permitting human-made materials to enter the water. Once you have participated in a cleanup, you can never look at an ocean, a river, or lake with the same perspective. You *can* make a difference, you *must* make a difference.



Canada

³Individual copies of country/territory analyses can be obtained through CMC's Atlantic Regional Office, 306A Buckroe Avenue, Hampton, Virginia, 23664, USA or through the appropriate country coordinator listed in Appendix 3.

TABLE 1. Country-by-Country Breakdown of 1994 International Coastal Cleanup

Country	Number of Volunteers	Kilograms/Pounds Collected	Kilometers/Mile Covered	
Anguilla (UK)	11	120/264	1.6/1	
Argentina	248	1076/2,370	8/5	
Bahamas	348	2,236/4,926	16.6/10.5	
Bahrain	1,000	11,120/24,520	6/4	
Bangladesh	30	57/126	1.6/1	
Barbados	20	82/180	1.6/1	
Belize	580	1,816/4,000	29/18	
Bermuda	250	4,540/10,000	32/20	
Brazil	212	2,050/4,520	1.6/1	
British Virgin Islands (UK)	209	2,551/5,620	10/6	
Canada	200	10,192/22,450	11/7	
Cayman Islands (UK)	136	4,958/10,920	22/14	
Colombia	180	2,679/5,900	1.6/1	
Costa Rica	1,200	13,620/30,000	110/68	
Croatia	100	1,816/4,000	3/2	
Cyprus	4,236	4,600/10,143	97/60	
Dominican Republic	503	4,231/9,319	8/5	
Ecuador	592	1,087/2,394	16/10	
Egypt	26	3,178/7,000	5/3	
El Salvador	180	136/300	24/15	
Estonia	171	454/1,000	13/8	
Federated States of Micronesia	1,500	18,160/40,000	48/30	
Gibraltar (UK)	80	305/671	2.25/1.4	
Greece	3,005	10,896/24,000	59/37	
Grenada	300	1,816/4,000	16/10	
Guatemala	300	Not Available	20/12	
Hong Kong	300	1,780/3,925	1.6/1	
Indonesia	53	179/394	1.6/1	
Israel	2,000	19,976/44,000	39/24	
Italy	2,289	9,080/20,000	31/19	
Ivory Coast	250	363/800	1.6/1	
Jamaica	459	3,598/7,925	6/4	
Japan	7,165	57,509/126,807	856/532	
-	375	4,195/9,240	19/12	
Kenya Latvia	7,000	70,355/154,967	250/155.25	
Lithuania	174	1,362/3,000	5/3	
	50	1,469/3,236	150/93	
Malaysia Malta	2	13/29	.06/.04	
Marshall Islands	70	726/1,600	1.6/1	
	2,424	55,060/121,277	69.4/43	
Mexico		636/1,400	.8/.5	
Montserrat (UK)	13	17,079/37,617	.87.5 8.9/5.53	
Netherlands Antilles	2,962	531/1,171	2.5/1.55	
Nigeria	150	800/1,764	.35/.22	
Norway	8	Not Available	,53/.22 5/3	
Palau	55	71,768/158,080		
Panama .	7,927	71,768/158,080 370/815	50/31	
Peru	48	7,375/16,244	15/9	
Philippines	3,080	1,3/3/10,244	1,546/961	

TABLE 1. (continued)

Country	Number of Volunteers	Kilograms/Pounds Collected	Kilometers/Miles Covered
Poland	2,240	8,672/19,102	224/139
Portugal	459	2,270/5,000	14/9
St. Kitts and Nevis	194	1,318/2,902	3/2
St. Vincent and the Grenadines	250	4,540/10,000	10/6
Singapore	767	32,298/71,217	25/16
Spain	828	4,113/9,060	20/12
Thailand	60	91/200	3/2
Kingdom of Tonga	803	Not Available	7/4
Trinidad and Tobago	507	4,449/9,800	8/5
Turks and Caicos	30	524/1,154	3/2
United Kingdom	2,123	15,598/34,394	209/130
United States	139,746	1,280,638/2,820,789	8,283/5,148
Venezuela	14,990	38,136/84,000	425/264
INTERNATIONAL TOTALS	215,468	1,820,647/4,010,532	12,858.26/7,991.9



Argentina

TABLE 2. Total Number of Debris Items Collected During 1994 International Coastal Cleanup

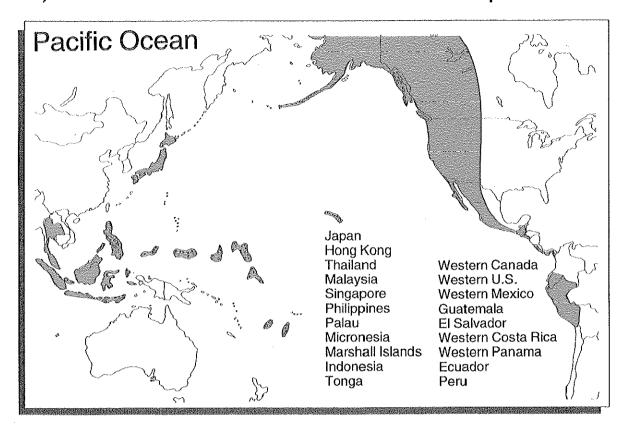
1994 International Coastal Ci	canap		
PLASTIC		GLASS	
Bags:		Bottles:	
food	382,405	beverage	318,104
salt .	9,598	food	42,319
trash	97,310	other	41,758
other	106,673	Fluorescent light tubes	8,171
Bottles:	100,015	Light bulbs	11,561
beverage	219,607	Pieces	390,213
bleach	43,611	Other	31,687
milk/water	54,301		
	49,816	RUBBER	
oil/lube other	74,821	Balloons	39,731
	16,860	Condoms	11,007
Buckets	320,635	Gloves	18,868
Caps/lids	1,523,880	Tires	15,251
Cigarette butts	42,104	Other	52,667
Cigarette lighters		Offici	
Cups/utensils/	194,082 25,488	METAL	
Diapers	25,488 40,727	Bottle caps	228,632
Fishing line	40,727 18,285	Cans:	DAU, W.
Floats/lures		aerosol	20,229
Fishing nets // 67	21,472	beverage	242,172
Hard hats	1,682	food	24,035
Light sucks	20,913	other	74,979
Pieces ////	448,259		6,120
Pipe thread protectors	6,938	Crab/fish traps	0,120
Rope	130,558	55-gallon drums:	13,921
Sheeting///long	16,665	rusty	1,962
short	23,391	new	59,005
Six-pack holders	45,300	Pieces	48,929
Strapping bands	32,729	Pull tibs	30,054
Straws) X 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Wire	
Syringes	(5) 1/8,929 Mg	Officer	70,308
Tampon applicators	23,789		
Toys	34,182	PAPER	00.030
Vegetable sacks ()	40,107	Bags	90,028
Write-protection rings	9.561	Cardboard	64,633
Other .	171,169	Carlons	36,960
11/62	. , ,	Cups []	74,695
FOAMED MASTIC		Newspaper	50,373
Buoys	// 20,160	Pieces /	333,281
Cups ///	. 142,548	Plates	30,056
Egg cartons	8,236	Other	89,018
Fast food containers	54,282		Andrew Company of the
Meat trays	19,209	WOOD	
Packaging	80,915	Crab/lobster traps	7,214
Pieces	. 406,299 .	Crafes	5,650
Plates	36,079	Lumber pieces	117,449
Other	59,742	Pallets	13,004
		Other _	6 56,343
		CONT. O CONT.	
		CLOTH	100 110
		Clothing/pieces	102,112
		TOTAL ITEMS:	8,200,169
		IOIME II ENIO	0,400,109

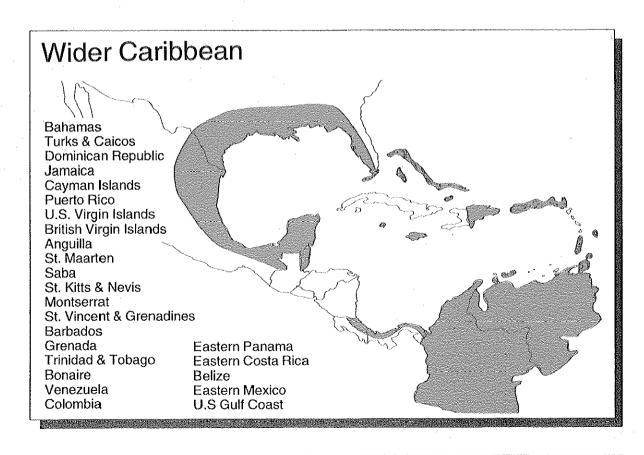
1994 CLEANUP HIGHLIGHTS

- The 1994 International Coastal Cleanup would not be possible were it not for the cooperation
 of the 61 countries that participated worldwide. Despite language barriers, diverse ethnic
 backgrounds, and other cultural differences, a clear message of making a difference for clean,
 healthy oceans prevailed.
- Children from all over the world played a leading role in the 1994 Cleanup. This is perhaps best summarized by the action of two children from Cozumel, Mexico who rescued six live sea turtles trapped under a pile of debris.
- Locals from the Kingdom of Tonga invited 50 "yachties" to join in the 1994 Cleanup. Afterward, the children sailed with the yachties to an outer island where they celebrated Tonganstyle, eating out of an earthen oven on banana-leaf plates.
- Several nautical debris items turned up, including a transom off the "TYMIL" from Norfolk, Virginia (British Virgin Islands), a ship's engine (Singapore), a 45 x 30 cm boat gas tank (Costa Rica), anchor line (Trinidad and Tobago), and a wooden boat keel (Mexico).
- Message in a bottle? Not exactly, but volunteers in Miramar, Argentina found an envelope containing papers with Chinese inscriptions and a bag of dehydrated soup. What could it mean?
- Notice to a 1987 Domino Trophy winner! Your trophy was recovered in the 1994 Cleanup in the British Virgin Islands.
- The \$117.84 found in cleanups across the United States would make a nice deposit to the porcelain piggy bank found in Singapore!
- WARNING! Part of a mortar shell from World War II was found in the Marshall Islands, a TNT bomb shell in Montserrat, bullet shells (casings) in Lithuania, rolls of barbed wire in Costa Rica, and a warhead missile from the Gulf War in Bahrain.
- Looking to build a car? The 1994 International Coastal Cleanup turned up enough automobile
 parts to do just that: a car body and car cover (Costa Rica), an engine block (British Virgin
 Islands), a transmission (Canada), an ignition (Trinidad and Tobago), a radiator (Cayman
 Islands), a muffler (Dominican Republic), a bumper (Saint Maarten), two car batteries (St. Kitts
 and Nevis, the Bahamas), a car seat (Jamaica), and shocks and a license plate (Mexico).
- According to a volunteer from the Dominican Republic, a new love interest was "found" during the Cleanup. Protecting the environment does have its advantages!

A complete listing of the "most peculiar" debris items found during the 1994 International Coastal Cleanup ranging from an "abdominizer" in Bahrain to a kitchen sink in the Kingdom of Tonga can be found in Appendix 4.

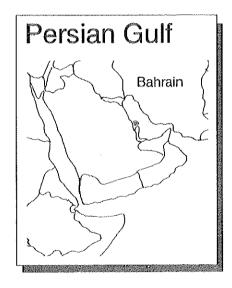
Major Water Bodies of the 1994 International Coastal Cleanup

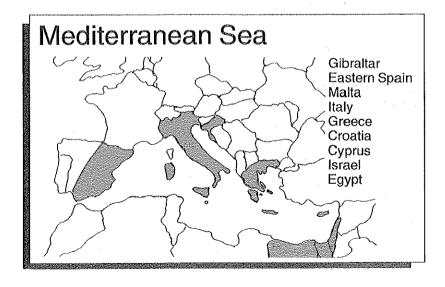


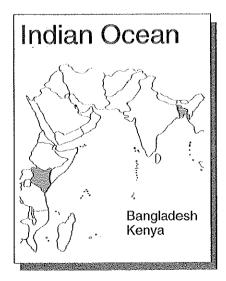










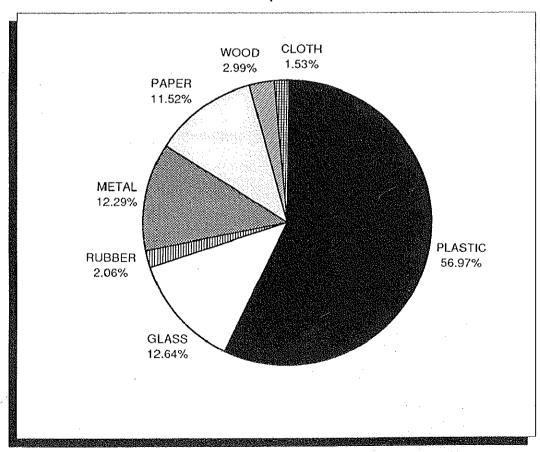


THE MOST PREVALENT TYPE OF DEBRIS ON THE WORLD'S BEACHES AND WATERWAYS

Data collected in the International Coastal Cleanup is standardized on data cards where debris is tallied from a list of 81 debris items in eight major categories: plastic, foamed plastic, glass, rubber, metal, paper, wood, and cloth (Appendix 5). The types of debris collected varies from region to region and country to country.

Worldwide, plastic (including foamed plastic) was once again the most abundant form of debris collected in the 1994 Cleanup. Overall, plastic made up 56.97% of the total debris (Figure 1), an increase from 53.82% in 1993. The second most notable form of debris was glass at 12.64%, followed by metal (12.29%) and paper (11.52%). Of the 61 countries and territories participating in the 1994 Cleanup, 32 countries exceeded the worldwide level for plastics. On the regional level, the highest percentages of plastic were recorded in the Wider Caribbean, followed by the Pacific and Atlantic Oceans (Figure 2). The highest level of plastic was collected in Barbados (82.33%), followed by Thailand (81.72%), Guatemala (78.87%), and Hong Kong (76.87%). The lowest level of plastic recorded in the 1994 Cleanup was in Estonia (24.03%).

FIGURE 1. Percent Composition of Debris Reported During 1994 International Coastal Cleanups



The percentages include all debris reported, minus cigarette butts in the "plastics" category. Because they are so abundant in our waterways and on our beaches, including cigarette butts would distort data interpretation.

THE 1994 INTERNATIONAL DIRTY DOZEN

The twelve most abundant debris items collected along the world's shorelines and waterways accounted for 61.68% of all debris. They were:

Rank	Debris Item	Total Number Reported	Percent of Total Debris Collected
1.	Cigarette butts	1,523,880	18.58
2.	Plastic pieces	448,259	5.47
3.	Foamed plastic pieces	406,299	4.95
4.	Glass pieces	390,213	4.76
5.	Plastic food bags/wrappers	382,405	4.66
6.	Paper pieces	333,281	4.06
7.	Plastic caps/lids	320,635	3.91
8.	Glass beverage bottles	318,104	3.88
9.	Plastic straws	244,351	2,98
10.	Metal beverage cans	242,172	2.95
11.	Metal bottle caps	228,632	2.79
12.	Plastic beverage bottles	219,607	2.68
	Total Dirty Dozen	5,057,838	61.68

The number one item again for the fourth consecutive year was cigarette butts. Smokers accounted for more than 18.5% of all the trash collected on the world's beaches and waterways. While the cigarette butt count in the 1994 is actually less than the 1993 level of 1,782,404, the 1,523,880 cigarette butts collected represent over 76,194 packs of cigarettes. It is important to note that 84.2% of these butts were collected in the U.S. cleanup. Cigarette butts were also the top debris item in Argentina, Bangladesh, Brazil, Canada, Cyprus, Japan, Malta, Marshall Islands, Singapore, and Spain.

The following items complete the list of the most abundant debris items reported in the 1994 Cleanup.

13.	Plastic cups and utensils	194,082	2.37
14.	Foamed plastic cups	142,548	1.74
15.	Plastic rope	130,558	1.59
16.	Lumber	117,449	1.43
17.	Miscellaneous plastic bags	106,673	1.30
18.	Clothing/pieces	102,112	1.25
19.	Plastic trash bags	97,310	1.19
20.	Paper bags	90,028	1.10
	Total Top Twenty	6,038,598	73.64

FIGURE 2. Plastic Debris Reported in During 1994 International Coastal Cleanups

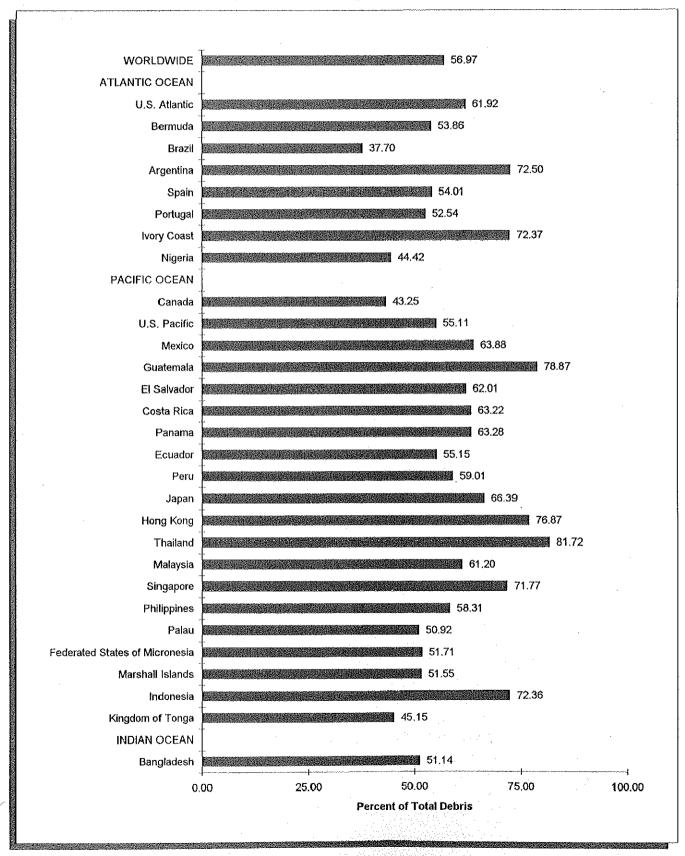
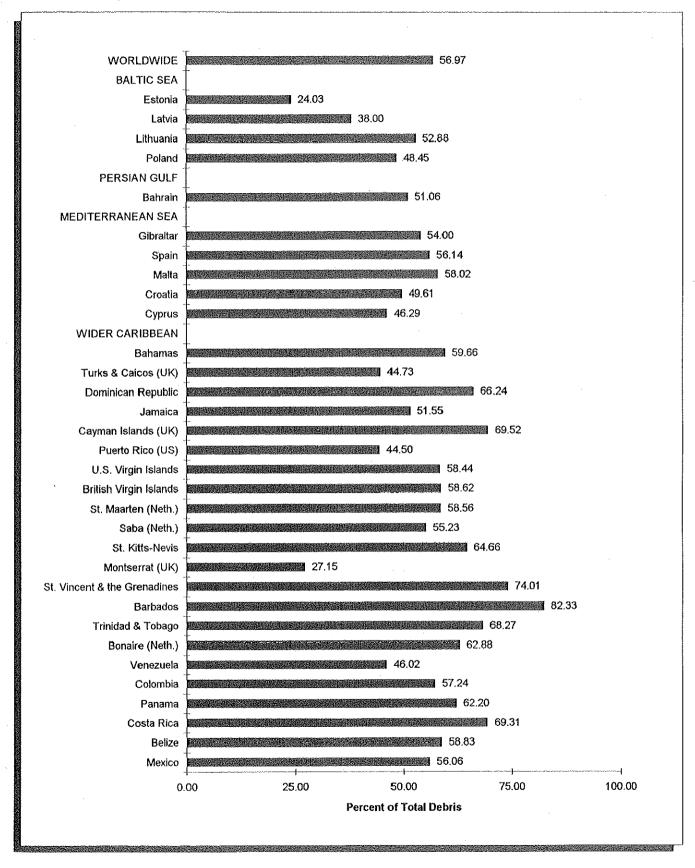
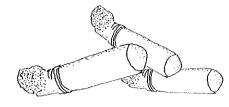


FIGURE 2. (continued)



CIGARETTE BUTTS

In 1990 cigarette butts were formally added to CMC's International Marine Debris Database as a line item within the plastics category due to the large number that volunteers were recording by hand on their data cards. After being added to the data card as an individual



debris item, cigarette butts have been the most common debris item reported for four consecutive years.

Why include them in the plastics category? Although they may be wrapped in paper, the filter portion of most cigarettes is made of cellulose acetate which is a synthetic polymer and a form of plastic. Based on the definition of what constitutes a plastic substance in the MARPOL Treaty, cigarette butts are thus considered to be plastic—not paper or cotton (cloth).

The inclusion of cigarette butts into the data base creates a bias for interpreting the data of the Cleanup, because the huge number of cigarette butts distorts the data. Thus, in calculating the percent plastic we have intentionally removed cigarette butts from the percentages.

Not all cigarette butts found on the beaches were left by beachgoers. Many butts likely arrive via storm drains which carried them from city streets and other waterways. Divers have also encountered them under the water's surface. Cigarette butts are not just an aesthetic problem. They have been found in the stomachs of juvenile birds, sea turtles, and countless other marine creatures.

BOTTLES AND ASSOCIATED GOODS

Six items are collectively analyzed as "bottles and associated goods" in the Cleanup. These items include plastic, metal, and glass beverage bottles and cans; plastic six-pack rings; metal bottle caps; and pull tabs. Internationally, bottles and associated goods constituted over



13.45% of all debris items reported (Figure 3). Regional analysis showed that the highest amount of bottles and associated goods was found in the Baltic Sea (20%) followed by the Wider Caribbean (17.76%) and Mediterranean Sea (13.00%). The Persian Gulf region had the lowest percentage with 9.69. The highest reported country/territory levels were Turks and Caicos with 42.62%, followed by Montserrat (38.31%), Malta (31.26%), Bonaire (29.88%), and Puerto Rico (27.78%). The lowest levels of 3.71% and 3.72% were reported in Latvia and Argentina, respectively (Figure 4).

FIGURE 3. Bottles and Associated Goods Reported from 1994 International Coastal Cleanups

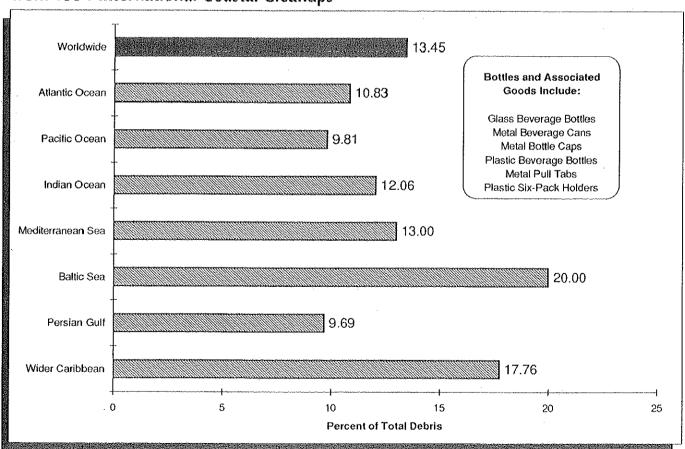


FIGURE 4. Bottles and Associated Goods Reported from 1994 International Coastal Cleanups (Country Analysis)

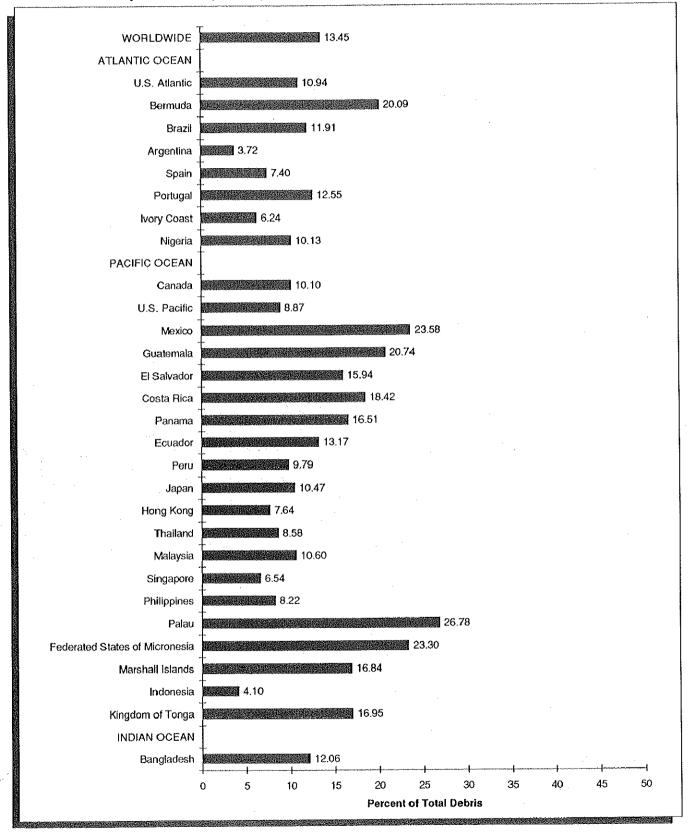
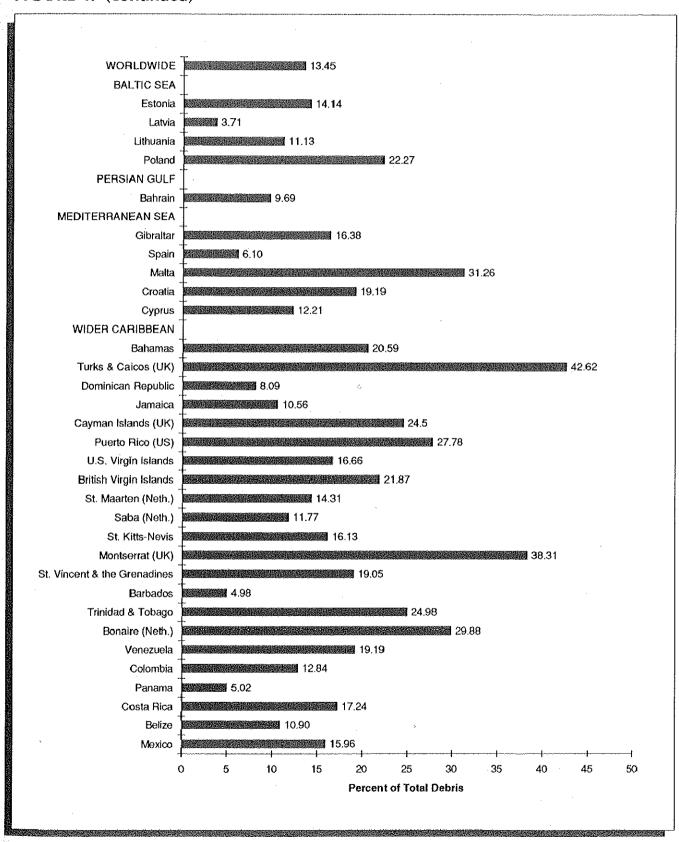


FIGURE 4. (continued)



THE IMPACTS OF MARINE DEBRIS ON WILDLIFE

As long as we allow garbage to enter our waterways and oceans, we will always find marine creatures in continual peril. Marine debris is a source of mortality and injury to many species including marine mammals, sea birds, sea turtles, fish, and shellfish. Any form of debris can be fatal to wildlife if it interferes in the animal's ability to eat or move around. And because many marine animals apparently cannot distinguish debris from food, or free themselves from entangling snares, it is solely *our* responsibility to keep dangerous items out of their environment.

In the 1994 International Coastal Cleanup, volunteers reported 73 incidents involving 105 animals entangled by marine debris (Table 3). A majority of all the entangled wildlife encountered during the Cleanup were birds such as seagulls, cormorants, herons, pelicans, a penguin, and a flamingo. Fish, sea turtles, snakes, a mouse, and numerous invertebrates (snails, crabs, and sea urchins) were also found entangled in various forms of debris. Of the 105 reported cases, 95 specifically listed plastic forms of debris (monofilament/fishing line, rope, six-pack rings, nets, bags, wrappers, mesh, and strapping bands) as the material entrapping the animals. Other materials included string, a metal crab trap, metal wire, ribbons and balloons, glass bottles, and a bucket. Only two animals were successfully rescued from

Dead loon entangled in balloon strings, United States.

entangling debris—one loggerhead sea turtle in Belize and a seagull in the United States. Remember, these findings are collected in just one, three-hour cleanup event. Imagine the potential number of animals that become entangled during the course of a month or year—just because we put garbage into the water.

In a recent review of the interactions of marine debris with the world's oceans,⁴ the debris items found to most threaten marine life were monofilament line and net fragments from commercial and recreational fishing boats, and rope and strapping bands originating from any type of vessel. Ingestion of debris by wildlife is another problem. Plastic resin pellets and small fragments of processed plastic are the most common debris found in the stomachs of birds, while sea turtles, toothed whales, and manatees ingest plastic bags and small plastic fragments (Table 4).

⁴Marine Mammal Commission, 1994 Annual Report to Congress, January 31, 1995. Impacts of Marine Debris, D.W. Laist.

TABLE 3. Wildlife Affected by Debris Reported During 1994 International Coastal Cleanups

COUNTRY	ANIMAL	DEBRIS ITEM	COMMENTS
Argentina	penguin	unknown	entangled
Bahrain	flamingo	fishing net	entangled
	turtle	fishing net	entangled
	turtle	rope	entangled
	fish	unknown	entangled
Belize	loggerhead sea turtle	net	entangled and released
Bermuda	mouse	beer bottle	unknown
	heron	bucket	entangled
Brazil	eel	strapping band	entangled
Dominican Republic	sea urchin	mesh	entangled
El Salvador	fish	fishing line	entangled
Mexico	catfish	fishing net	entangled
	pelicans	fishing line	entangled
Panama	birds	unknown	entangled
Singapore	snake	plastic bag	entangled
	snake	rope	entangled
	fish (4)	plastic wrappers	entangled
	fish	plastic bag	entangled
Trinidad and Tobago	fish	plastic	entangled
	fish	string	entangled
United States	mouse	plastic bag	in
•	squirrel	plastic bag	entangled
	cormorants (2)	fishing line	entangled
	cormorant	ropes and net	entangled
	sea gulls (9)	fishing line	entangled; 1 released
	sea gulls	plastic strips	entangled
	sea gulls (4)	rope	entangled
	sea gulis (10)	mesh bags/nets	entangled
	sea gull	ribbons/balloons	entangled
	sea gull	plastic	entangled
	pelican	fishing line	entangled
	pelicans (4)	unknown	entangled
	heron	fishing line	entangled
	crane	fishing line	entangled
	dove	metal crab trap	entangled
	pigeon	six-pack ring	entangled
	pigeon	metal	entangled
	myna bird	fishing line	entangled
	birds (3)	fishing line	entangled
	birds (8)	rope	entangled
	birds (2)	string	entangled
	birds (2)	plastic bags	entangled
	bird	plastic material	entangled
	catfish	plastic strapping	entangled
	eel	fishing line	entangled
	fish (2)	six-pack ring	entangled
	fish (3)	fishing line	entangled
	sea urchins	plastic bags	entangled
	Murex sp. (sea snail)	monofilament line	entangled
	coral	monofilament line	entangled
	crabs (5)	fishing line	entangled
	crabs (2)	gill nets	entangled
	crabs (2)	rope	entangled
	crabs (2)	string	entangled
	crab	buoy	entangled
	crab	fishing net	entangled

TABLE 4. Number and Percentage of Marine Species Worldwide with Documented Marine Debris Entanglement and Ingestion Records, by Species Group (1994)

Species Group	Total Number of Species Worldwide	Enta	cies With nglement ecords	İn	cies With gestion ecords	One Ty	ies With or Both ypes of lecords
		No.	(%)	No.	(%)	No.	(%)
Sea Turtles	7	6	(86%)	6	(86%)	6	(86%)
Seabirds	312	51	(16%)	108	(35%)	135	(43%)
Penguins	16	6	(38%)	1	(6%)	6	(38%)
Grebes	19	2	(10%)	0	(0%)	2	(10%)
Albatrosses, Petrels, Shearwaters Pelicans, Boobies, Gannets,	99	10	(10%)	60	(61%)	61	(62%)
Cormorants, Frigatebirds, Tropicbirds	51	11	(22%)	8	(16%)	17	(33%)
Shorebirds, Skuas, Gulls, Terns, Auks	122	22	(18%)	39	(32%)	49	(40%)
Other Birds	*	5	·-	0	. -	5	-
Marine Mammals	115	31	(27%)	24	21%)	47	(41%)
Baleen Whales	10	6	(60%)	2	(20%)	6	(60%)
Toothed Whales	65	4	(6%)	19	(29%)	20	(31%)
Fur Seals, Sea Lions	14	11	(79%)	1	(7%)	11	(79%)
True Seals	19	8	(42%)	1	(5%)	8	(42%)
Manatees, Dugongs	4	1	(25%)	1	(25%)	1	(25%)
Sea Otters	1	1	(100%)	0	(0%)	1	(100%)
Fish		34	-	33	-	60	_
Crustaceans	- **	8		0	-	8	-
Squid	-	0	-	1	•	1	-
Species Total	•	135	ssi .	172	V+	262	to the

from Marine Mammal Commission 1994 Annual Report to Congress, January 31, 1995. Impacts of Marine Debris, D.W. Laist.

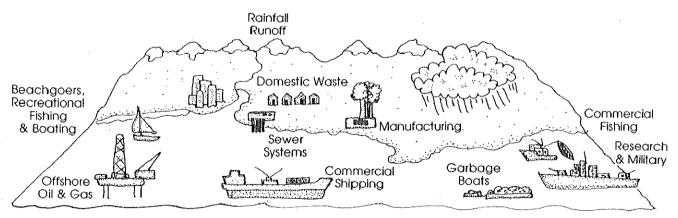
SOURCES OF MARINE DEBRIS

Debris is found in every aquatic environment on this planet. The sources of debris are classified into two categories: items that originate from human activity on the ocean, or **ocean-based**, and items that originate from activities on land, or **land-based**. Although identifying the source of individual debris items can be quite difficult due to the broad range of uses for many materials, CMC has developed a set of 28 "indicator items" that correspond to ocean-based and land-based activities to help trace the origin of the debris (Table 5).

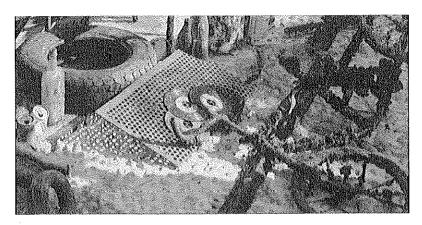
Sources of ocean-based debris have been associated with the following: recreational fishing/boating, commercial fishing, operational wastes, and galley wastes. Ocean-going vessels, from the smallest sail-boats to the merchant/container ships, are identified as the sources of ocean-based marine debris, as are offshore drilling platforms for oil and gas. Land-based sources of debris have been identified in sewage-associated wastes and medical wastes. Land-based debris is carried into our waterways and into the oceans via storm drains, sewers, creeks, streams, and rivers. Another land-based source are beachgoers who leave remnants of their visit to the beach in the sand. Although we point to boats, sewer systems, and storm drains as sources, **people** are the ultimate problem. Someone had to toss it overboard, into a toilet, or onto the street or beach.

Tracking debris is a complicated process. There may be several possibilities for how a specific type of debris ends up in a lake, a river, or the ocean. Regardless of how it got there, we have the power to prevent it from happening in the first place. Proper waste management and disposal are essential to solving the marine debris problem. In addition, citizen awareness and appreciation for aquatic environments will help to change our behavior, thus reducing the amount of debris we release into the environment.

Where Ocean Debris Comes From



Adapted from "Seas of Debris: A Summary of the Third International Conference on Marine Debris."



Croatia



Marshall Islands

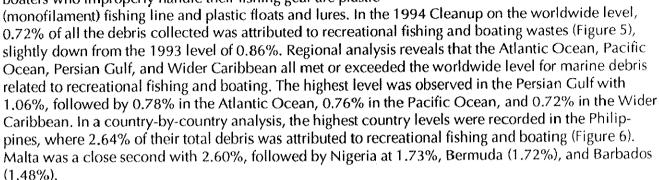
TABLE 5. Categories and Quantities of Indicator Items Reported During 1994 International Coastal Cleanups

Category	Indicator Item	Total Numb (% of Total	er Reported Debris Collecte
Recreational Fishing/	plastic fishing line	40,727	
Boating Wastes	plastic floats and lures	(1,8)285	
	Subtotal	259,012	(0.72%)
Commercial Fishing	plastic rope	130,558	
	plastic fishing nets	21,472	
	plastic light sticks	20,913	
	foamed plastic buoys	20,160	
	rubber gloves	18,868	
	plastic salt bags	9,598	
	wooden crab/lobster traps	7,214	
	metal crab/fish traps	6,120	
	•	0,120	•
	Subtotal	234,903	(2.86%)
Operational Wastes	plastic strapping bands	32,729	
	plastic sheeting longer than 2 ft	16,665	
	wooden pallets	13,004	
	glass light bulbs	11,561	
	write-protection rings	9,563	
	fluorescent light tubes	8,171	
· ////>>	plastic pipe thread protectors	6,938	
	wooden crates	5,650	
	plastic hard hats	1,682	
60	Subtoual Ma	105,963	(1.29%)
Galley Wastes (O.O.)	plastic trash bags	97,310	_
	plastic mik/water gallon jings	54,301	
	plastic bleach/cleaner bottles	43,611	
	plastic vegetable sacks	40,107	
W. II.	foamed plastic mean trays	19,209	
, w. \// / \	foamed plastic egg carrons	8,236	
	The state of the s		
	Subtotal	262,774	(3.20%)
Sewage-Associated Wastes	plastic tampon applicators	22,790	The state of the s
ourage Table 1	rubber condoms	23,789	
	Tubberscondoms	11,007	
	Subtotal	34,796	. (0.42%)
Medical Waste	plastic syringes	8,929	(0.11%)
Total Number of Indicator Items		706,377	(8.61%)

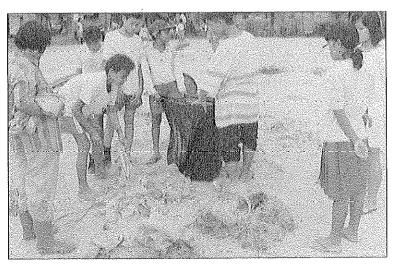
OCEAN-BASED SOURCES OF DEBRIS

Recreational Fishing and Boating Wastes

Recreational fishers and boaters use a variety of disposable items, from food packaging to bait and tackle supplies. The two specific indicator items used to identify recreational fishers and boaters who improperly handle their fishing gear are plastic



In all, during the 1994 International Coastal Cleanup, 40,727 pieces of plastic (monofilament) fishing line and 18,285 plastic floats and lures were collected by volunteers. Monofilament line is one of the most dangerous forms of debris in the aquatic environment. With or without lures and floats, it becomes a deathtrap to unsuspecting fish, birds, turtles, and marine mammals. Fishing line can also create problems when it gets wrapped around boat propellers. Efforts need to be focused on educating the public on the proper methods for handling line and on recycling used line by manufacturers.



Pile of collected fishing line at lower right rivals other types of debris as Philippine volunteers sort their day's haul.

FIGURE 5. Recreational Fishing and Boating Wastes Reported from 1994 International Coastal Cleanups (Regional Analysis)

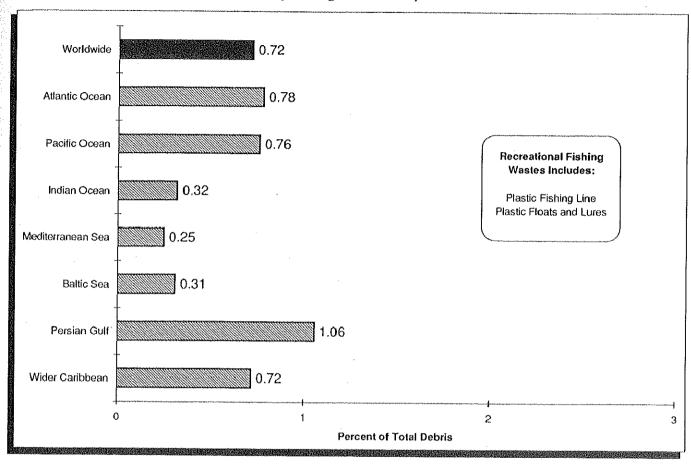


FIGURE 6. Recreational Fishing and Boating Wastes Reported from 1994 International Coastal Cleanups (Country Analysis)

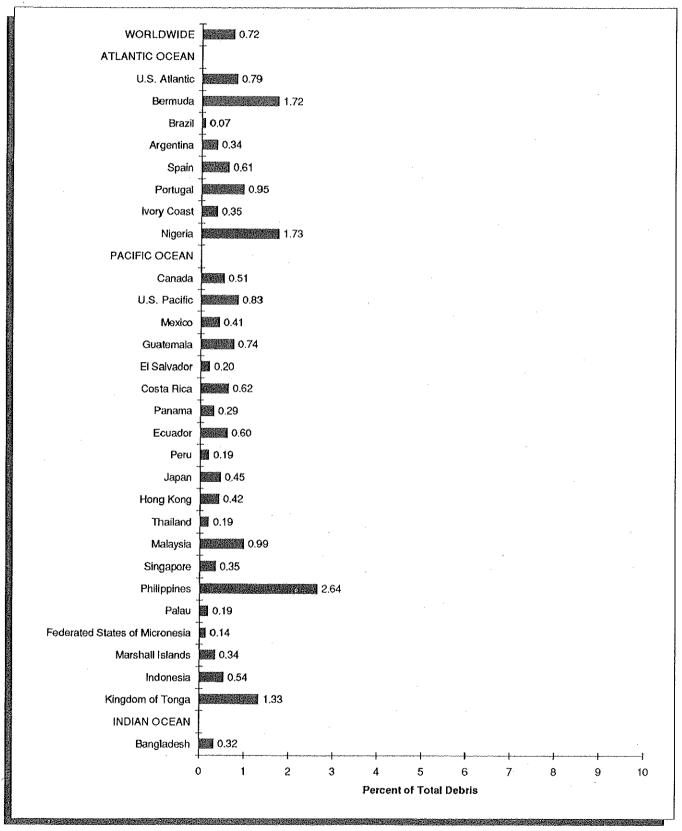
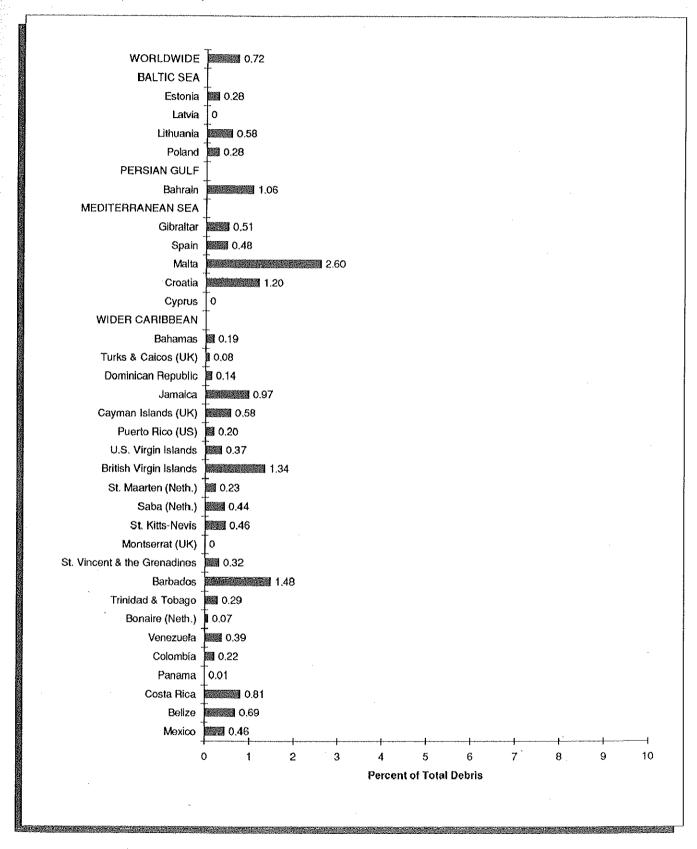


FIGURE 6. (continued)



Commercial Fishing Wastes

To track commercial fishing wastes, several indicator items have been identified, including plastic rope, plastic light sticks, foamed plastic buoys, rubber gloves, plastic fishing nets, plastic salt bags, metal crab/fish traps, and wooden crab/lobster traps. Each item tells a part of the story of what happens aboard different types of commercial fishing vessels and how fishing crews conduct their business.

Plastic rope, nets, and foamed buoys along with metal and wooden crab/lobster/fish traps indicate discarded tools used by commercial fishers who cut loose and toss overboard the tools of their trade. In some cases, especially with crab/lobster/fish traps and their marking buoys, fishers may abandon old traps instead of removing them from the water. In addition, some working traps may be destroyed by other boaters and, as a result, are irretrievable. Plastic (cyalume) light sticks are used by longline fishers. Rubber gloves and salt are used by many fishers when sorting their catch. Regardless of how they were lost or discarded, these materials become a hazard.

Analysis of the 1994 Cleanup data shows an increase in the worldwide level of marine debris attributed to commercial fishing, from 2.18% in 1993 to 2.86% in 1994. Regionally, the highest levels of marine debris related to commercial fishing activities were in the Persian Gulf with 8.31%, followed by the Indian Ocean with 7.87%, the Mediterranean Sea at 5.17%, the Wider Caribbean with 3.20%, and the Atlantic Ocean at 3.00% (Figure 7). In the country/territory analysis, Barbados reported the highest level with 22.71%, with Guatemala (20.37%), Ivory Coast (13.59%), Dominican Republic (11.81%), and the Philippines (11.29%) also at the high end (Figure 8). The lowest reported level (0.30%) was in Brazil.

FIGURE 7. Commercial Fishing Wastes Reported from 1994 International Coastal Cleanups (Regional Analysis)

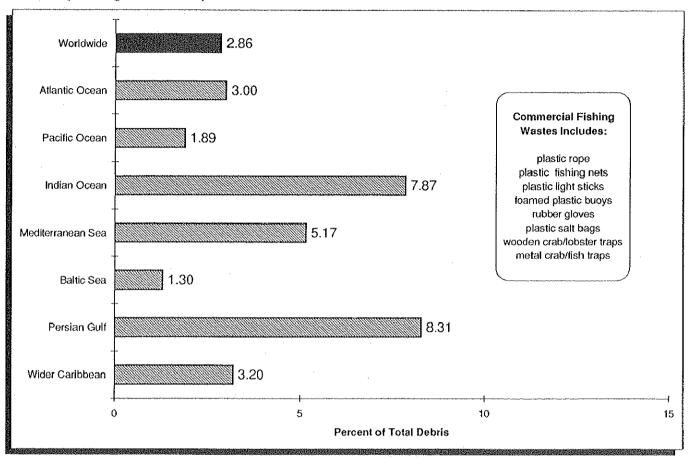


FIGURE 8. Commercial Fishing Wastes Reported from 1994 International Coastal Cleanups (Country Analysis)

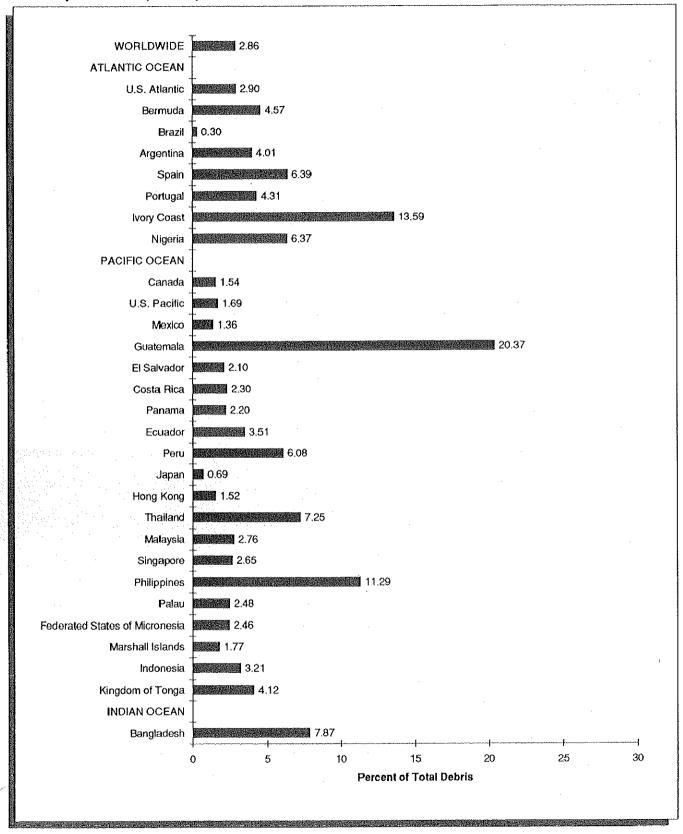
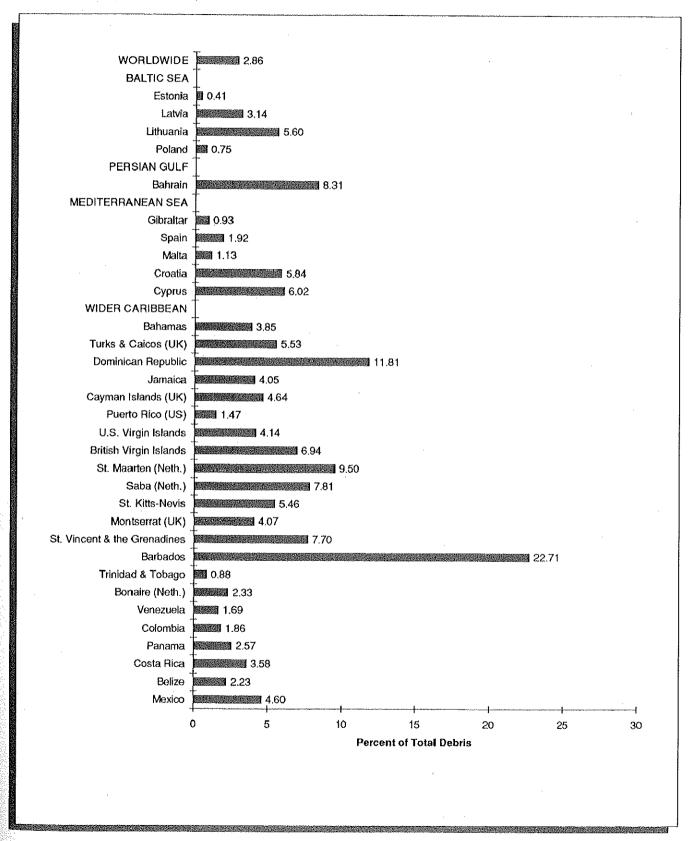
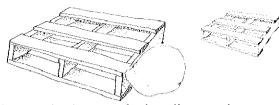


FIGURE 8. (continued)



Operational Wastes

Packaging, according to advertising experts, is important to the sale of the product. Unfortunately, most packaging has no use once the product has been removed. Aboard a ship or an oil rig these materials occupy valuable space.



By tradition, these materials have been tossed overboard as the standard means for handling trash at sea. But, with 74 countries now signatories to Annex V of the MARPOL Treaty, this tradition has become obsolete, right? Wrong. Based on the data collected in the annual Cleanup, shipboard materials are still being dumped, tossed, and blown into the water.

Several specific items can be traced to offshore operations, such as petroleum industry activities or cargo transport. Wooden pallets, plastic strapping bands, glass (incandescent) light bulbs, fluorescent light bulbs (tubes), write-protection rings, plastic pipe thread protectors, plastic sheeting (larger than two feet), plastic hard hats, and wooden crates are indicators of operational wastes. In the 1994 Cleanup, 32,729 plastic strapping bands, 16,665 plastic sheets longer than two feet, and 13,004 wooden pallets were collected along the world's shorelines. It definitely appears that there were offshore activities taking place all over the globe.

In the 1994 Cleanup, 1.29% of all the debris collected worldwide was operational-type waste (Figure 9). On the regional level, the highest concentrations of operational wastes were recorded in the Baltic and Mediterranean Seas with 8.38% and 3.17%, respectively. The Persian Gulf at 2.96% and the Indian Ocean at 2.28% also exceeded the worldwide percentage of operational wastes. The lowest level was found in the Atlantic Ocean (1.05%). Poland had the highest country level with 10.31%, trailed by Peru with 9.79%, Panama with 7.31%, Spain (Mediterranean Sea) at 6.86%, and Spain (Atlantic Ocean) at 6.02% (Figure 10). The Ivory Coast had the lowest amount with 0.05%.

FIGURE 9. Operational Wastes Reported from 1994 International Coastal Cleanups (Regional Analysis)

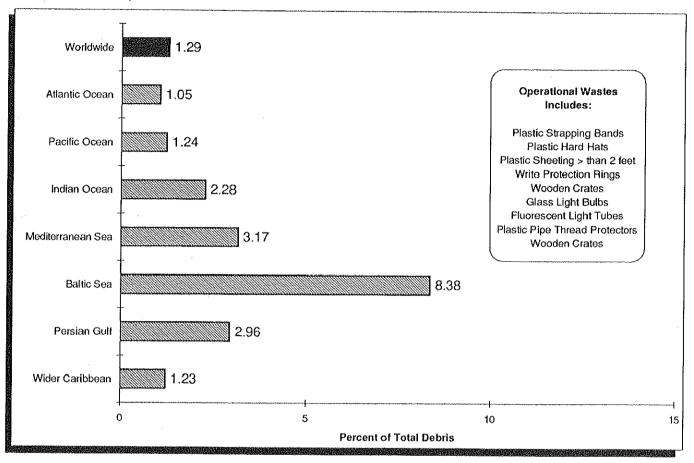


FIGURE 10. Operational Wastes Reported from 1994 International Coastal Cleanups (Country Analysis)

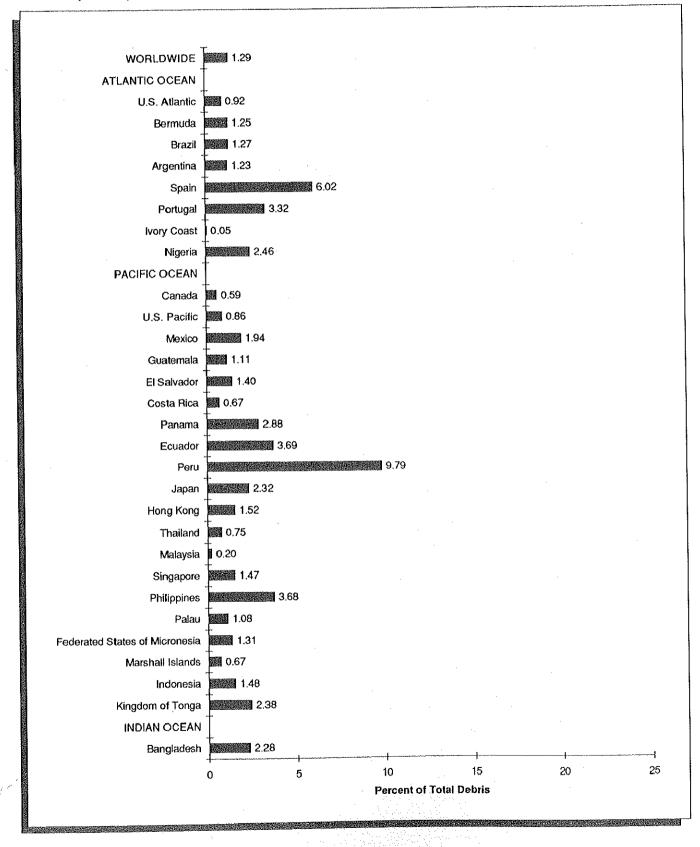
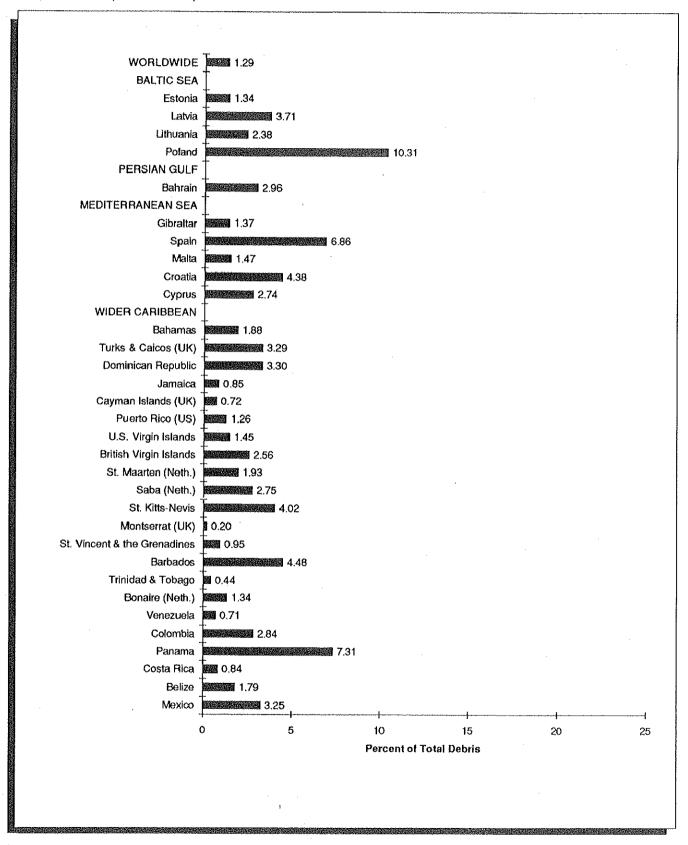


FIGURE 10. (continued)



Galley-Type Wastes

Galley-type wastes include packaging for food and cleaning products used in galleys on boats and ships. Plastic trash bags, plastic milk/water gallon jugs, plastic bleach/cleaner bottles, plastic vegetable sacks, and foamed plastic meat trays and egg



cartons are traceable to a ship's galley. As with operational wastes, galley-type wastes are a nuisance to a ship's crew because they will occupy valuable storage space on a ship. They will also smell. Again, the MARPOL Treaty should apply here, as it regulates how onboard ship waste is handled while out at sea.

Of all the ocean-based sources of debris, galley-type wastes were the highest at 3.20%. Over 97,310 plastic trash bags were collected in the 1994 Cleanup, along with 43,611 plastic bleach/cleaner bottles and 40,107 plastic vegetable sacks. Regionally, the highest levels of galley-type wastes were recorded in the Indian Ocean with 6.92% followed by the Baltic Sea with 6.33%, the Persian Gulf with 5.42%, and the Wider Caribbean with 4.94% (Figure 11). The lowest regional level was in the Mediterranean Sea at 1.62%. In the country/territory analysis, Panama (Wider Caribbean) had the highest level of galley-type waste with 11.29% followed by Mexico (Wider Caribbean) with 10.97%, Peru with 10.57%, and Thailand at 10.34% (Figure 12). Latvia reported no galley-type wastes. Items such as plastic jugs, egg cartons, and trash bags are not unique to ships' galleys, of course, and can also be the result of littering or improper trash disposal onshore.

FIGURE 11. Galley Wastes Reported from 1994 International Coastal Cleanups (Regional Analysis)

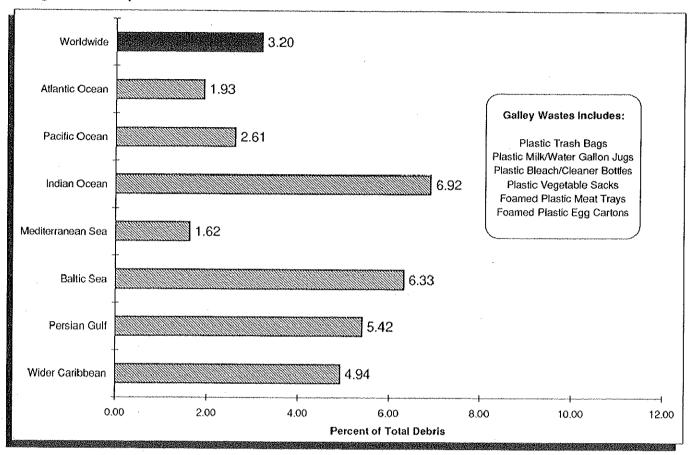


FIGURE 12. Galley Wastes Reported from 1994 International Coastal Cleanups (Country Analysis)

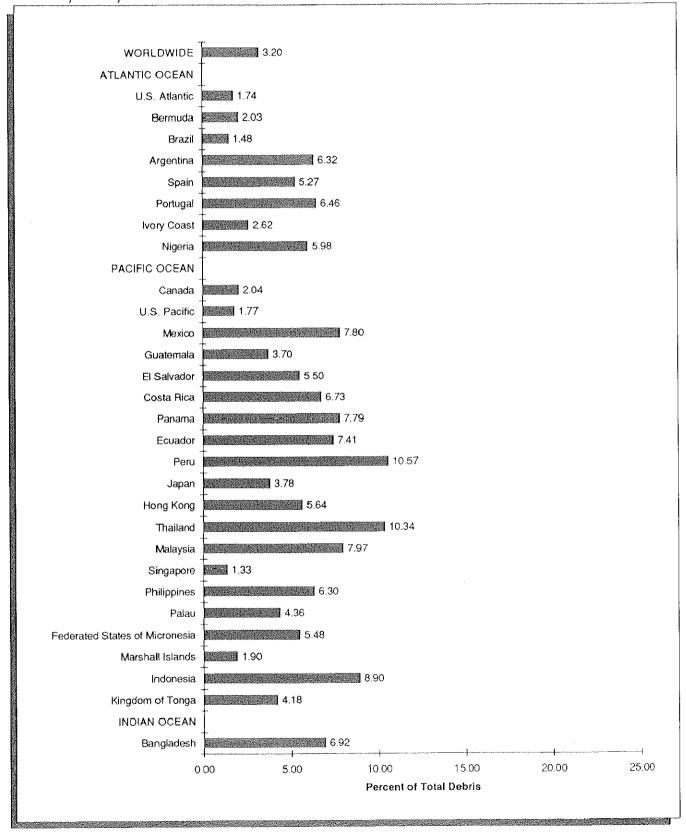
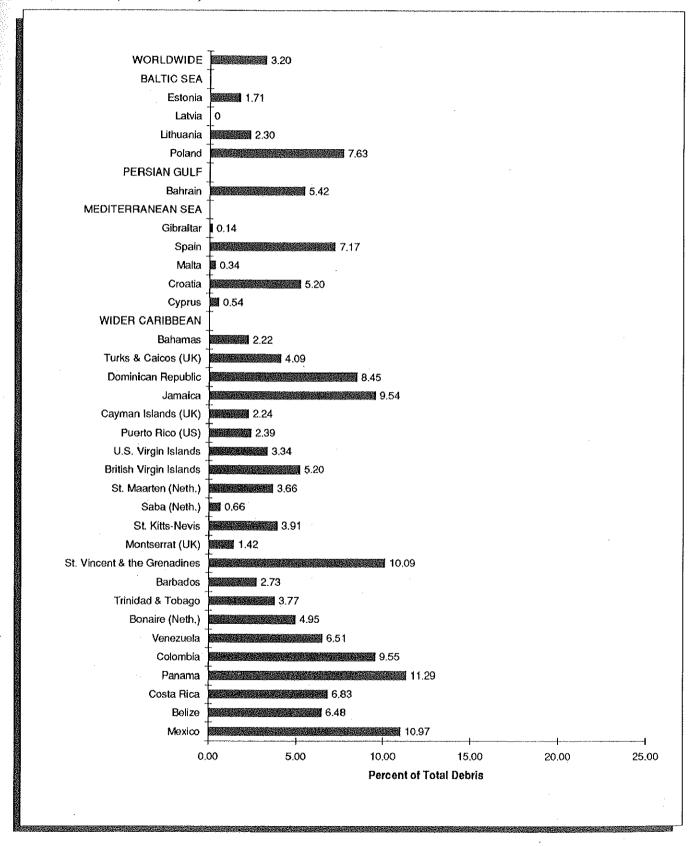


FIGURE 12. (continued)



LAND-BASED SOURCES OF MARINE DEBRIS

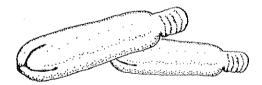
Overall, most of the debris found along our waterways, shorelines and beaches is not the result of improper handling or disposal of garbage in the oceans. A vast amount of the debris comes from antiquated sewage systems, inadequate solid waste disposal practices, and careless citizens. Sewage-associated wastes such as plastic tampon applicators and rubber condoms and medical wastes such as plastic syringes are indicative of land-based sources of marine debris. People traditionally dispose of these materials via the toilet and sewage system.

Sewage-associated wastes can end up in our waterways and ultimately on our beaches through combined sewer overflows (CSOs). These overflows usually occur in older sewer systems in which sewage and runoff from storms are combined in the same pipes flowing to a treatment facility. During heavy storms the pipes cannot carry the increased water load, so raw, untreated sewage as well as street runoff flows directly into the nearest waterway. In some areas, storm drain systems including gutters and ditches drain their contents into waterways that eventually flow into coastal areas. In countries that are less developed in terms of sewage treatment, many communities dispose of raw sewage into the streets, and use pits on the outskirts of the town to discard solid wastes. In some cases, dry river beds become community dump sites. When it rains, these areas flood, carrying a deluge of garbage into the ocean.

Monitoring the presence of sewage-associated debris items not only allows us to pinpoint specific areas where land-based sources are prevalent, but these items also serve as visible markers for tracing other more "invisible" pollutants. If tampon applicators and condoms are prevalent on a local beach, it is likely that the adjacent waters have been contaminated with untreated sewage.

Sewage-Associated Wastes

Debris items representing sewage-associated wastes collected in the 1994 Cleanup accounted for 0.42% of all the debris, compared to 1.61% in 1993 (Figure 13). In actual numbers, 23,789 plastic tampon applicators and



11,007 rubber condoms were collected worldwide in the 1994 Cleanup. Regionally, the highest level of sewage-associated wastes was in the Indian Ocean with 2.60%, followed by the Mediterranean Sea with 1.03% and the Atlantic Ocean with 0.65% (Figure 13). Spain (Mediterranean Sea) had the highest country level with 7.81%, followed at a distance by Bangladesh with 2.60%, the Ivory Coast with 1.96%, Croatia with 1.36%, and Ecuador with 0.93% (Figure 14). Brazil, Guatemala, Indonesia, Latvia, Malta, St. Kitts and Nevis, and Barbados all reported zero sewage-associated wastes.

FIGURE 13. Sewage-Associated Wastes Reported from 1994 International Coastal Cleanups (Regional Analysis)

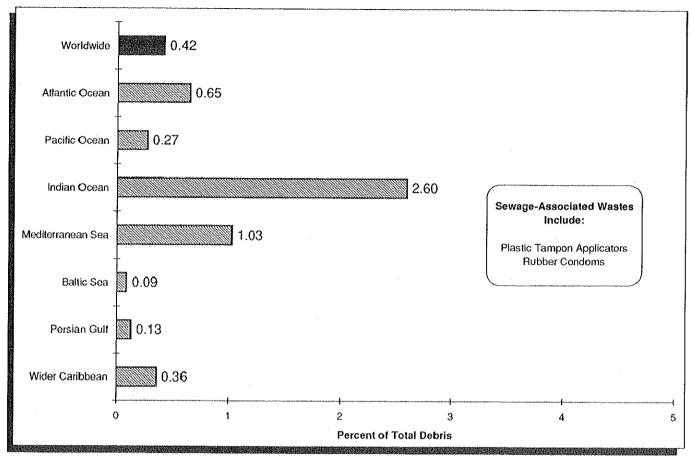


FIGURE 14. Sewage-Associated Wastes Reported from 1994 International Coastal Cleanups (Country Analysis)

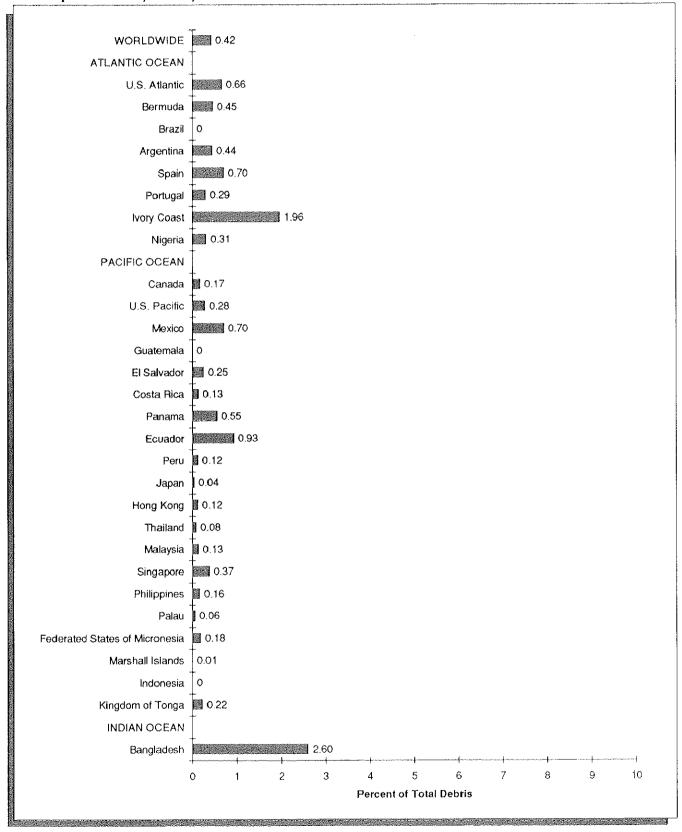
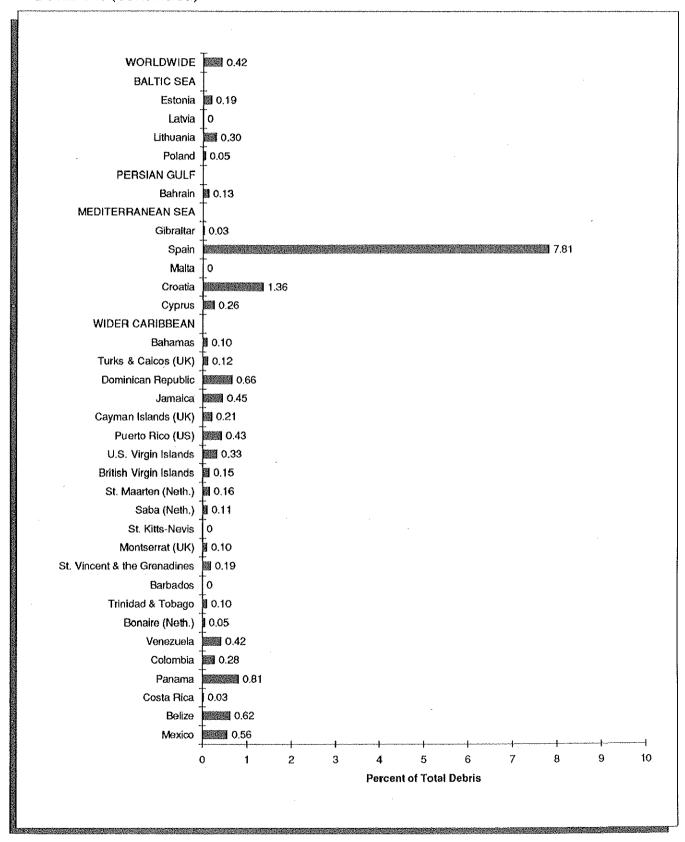


FIGURE 14. (continued)



Medical Wastes

The sole debris item associated with medical wastes are plastic syringes. The use of syringes ranges from physician prescribed, self-medication such as insulin for diabetics or pain control for chronic illnesses, to illegal use by drug addicts. Some become marine debris because of the way in which we dispose of these materials. Most at-home disposal is through municipal sewage or refuse systems. Needles handled on the streets usually end up discarded into the gutter. Both methods can send the needles into a waterway or onto a beach.

Worldwide in 1994, medical wastes accounted for 0.11% (which represents 8,929 plastic syringes) of the debris collected, a slight decrease compared to 0.14% in 1993 (Figure 15). The regional picture for this form of marine debris reveals that several areas met or exceeded the worldwide figure including: the Indian Ocean (1.33%), Mediterranean Sea (0.61%), Wider Caribbean (0.14%), and the Persian Gulf (0.11%). In the country/territory analysis, the Ivory Coast led with 1.96% followed by Bangladesh with 1.33%, Cyprus with 0.78%, Thailand with 0.75%, and Panama (Pacific Ocean) with 0.55% (Figure 16). No syringes were reported in Brazil, Guatemala, Malaysia, Palau, Indonesia, Estonia, Latvia, Gibralter, Malta, Jamaica, Saba, Montserrat, St. Vincent and the Grenadines, Barbados, or Bonaire.

FIGURE 15. Medical Wastes Reported from 1994 International Coastal Cleanups (Regional Analysis)

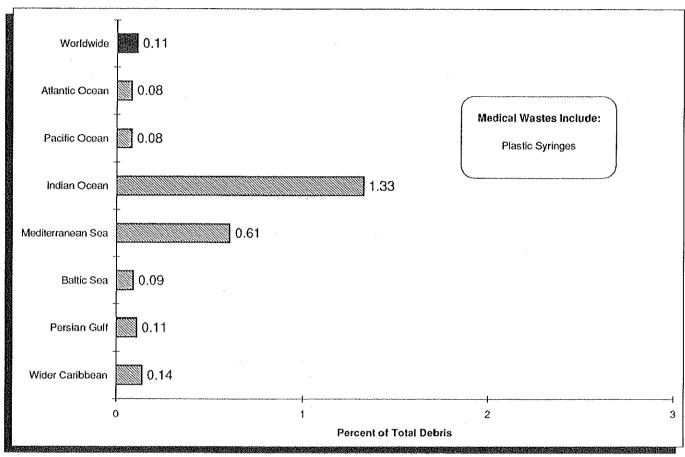


FIGURE 16. Medical Wastes Reported from 1994 International Coastal Cleanups (Country Analysis)

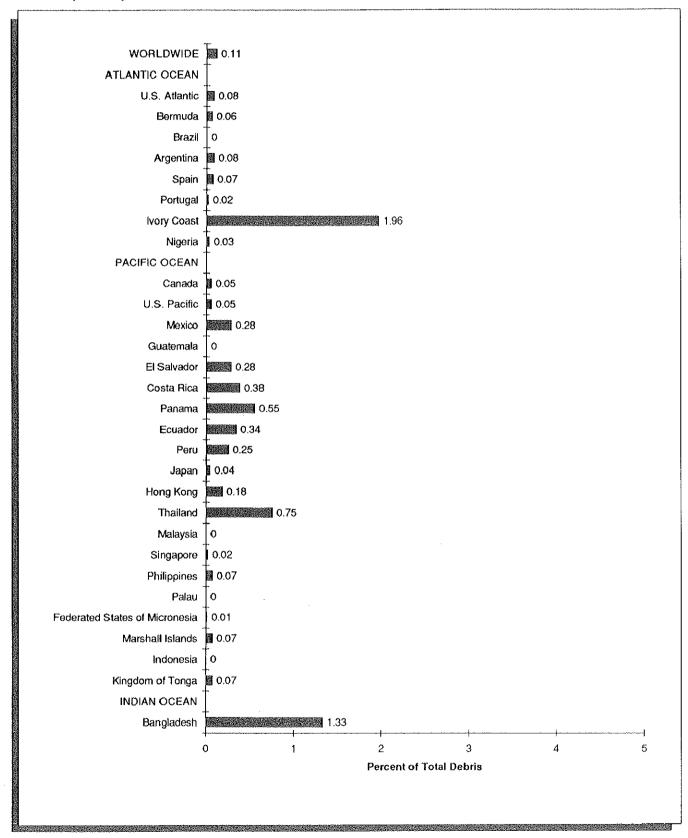
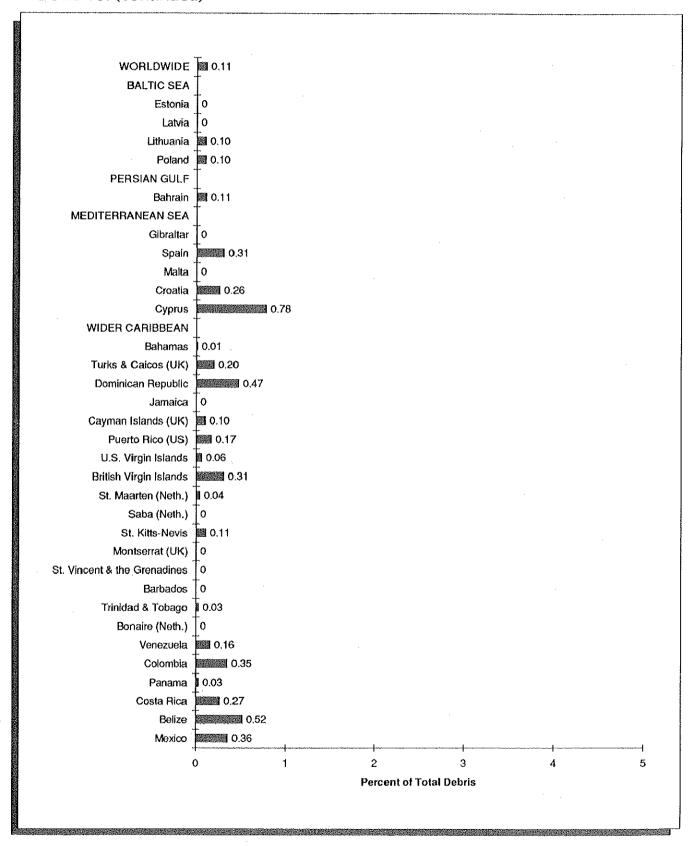


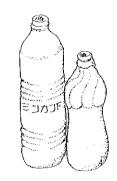
FIGURE 16. (continued)



FOREIGN SOURCES OF MARINE DEBRIS

Oceans do not recognize political, cultural, or geographic boundaries. Neither does marine debris. It goes wherever the winds and currents carry it after it has been dumped into the water.

From the types of foreign items found during the 1994 Cleanup, it looks like someone went on an international shopping spree. Cleanup volunteers in five countries collected debris items from 24 different nations, including Palestinian plastic medicine bottles reported in Bahrain, plastic bottles from France in the



Cayman Islands, plastic bottles from the United States in Belize, Belgian hand cleaner and Spanish orange juice in the United States, and Canadian lobster trap tags in Portugal and the United States. Foreign debris was identified based on labels and other markings (Table 6). It is important to remember that just because a can or a bottle has a foreign label does not mean that it was dumped into the water by an individual from that country. Bottles and cans purchased in one location can become debris at an entirely different location.

Annex V of the MARPOL Treaty, which regulates the dumping of debris from ships, can do a lot to prevent the occurrence of foreign debris on our beaches. Countries that have signed on to Annex V are prohibited from dumping their plastic wastes from ships into any waterway, anywhere in the world. Further, ships entering a signatory's waters, even if from a non-signatory country, are prohibited from dumping their plastics. But Annex V cannot prevent a ship from a non-signatory country from dumping its wastes into the waters of another non-signatory country. To date, 74 countries have signed onto Annex V (see Appendix 2). Clearly, many more countries must be persuaded to sign Annex V so that all of the world's beaches and waterways will be protected.

A coordinated, global effort, where all countries are working together to stop ocean dumping, is essential to reducing the amount of debris that enters the world's oceans. If one country works at controlling their debris, and their neighbors are not participating in similar practices, any progress will be negated by the winds and currents that traverse the planet. Stopping marine debris simply cannot be accomplished without global cooperation.

TABLE 6. Foreign Debris Items Reported During the 1994 International Coastal Cleanup

LOCATION	SOURCE	TYPE OF DEBRIS
Bahrain	*Palestine	medicine bottles
Belize	United States	plastic bottle
Cayman Islands	France	plastic bottle
Portugal	Canada	lobster strap SF34-859-00203
United States	Australia	beer can
	Barbados	plastic lid
	Belgium	hand cleaner
	Brazil	milk carton, gallon jug, can
	Canada	lobster tag, lobster trap, can, strapping band, shipping label, drum lid, box, plastic orange juice bottl plastic bucket
	China	plastic jug, aerosol can, can, bag, plastic wrapper
	Cuba	water bottle
	Denmark	glass, plastic plant
	Dominican Republic	plastic container, glass bottle
	El Salvador	coffee burlap bag
	France	bottle, plastic wrapper
	Germany	plastic bottle, spray can
	Greece	plastic bottle
	Italy	plastic tube
	Japan	plastic bottle, plastic wrappers (2), chili peppers, bottle, milk carton, newspaper, bottles (3)
	Mexico	bleach bottle, plastic bottles (4), fishing net float, can, plastic wrapper, air freshener, dishwashing detergent
	Saudi Arabia	can
	Spain	plastic lid, orange juice container
	Taiwan	aluminum can
	United Kingdom	aerosol can, jar
	Venezuela	plastic bottle
	*Arabic	hand lotion bottle
	*Korean	eggcase tray, aerosol can

CONCLUSION

In reviewing the results of the 1994 International Coastal Cleanup, one is overwhelmed with the sheer size of this environmental campaign. The 215,468 individuals and countless other supporters and sponsors in 61 countries who devoted their time, resources, and energies to this endeavor are to be commended for such a monumental effort.⁵ The information they collect puts a very serious pollution issue into focus.

One must look at the problem of marine debris from the perspective of the bodies of water that our lands surround. Viewing it from this perspective reveals that, based on the amount and types of marine debris collected in certain areas, several bodies of water are potentially stressed ecosystems. The following chart summarizes the "hot spots" for particular sources of debris including recreational fishing, commercial fishing, operational, and galley wastes, sewage-associated wastes, and medical wastes.

REGION	REC. FISHING	COMM. FISHING	OPERATIONAL	GALLEY	SEWAGE	MEDICAL
ATLANTIC OCEAN	×	×			×	
PACIFIC OCEAN	Х					
INDIAN OCEAN		×	X	×	X	X
MEDITERRANEAN SEA		×	x		×	×
BALTIC SEA			Х	×		
PERSIAN GULF	Х	×	Х	×		
WIDER CARIBBEAN	×	X		X		×

X's indicate region's debris in that category was equal to or above the worldwide percentage in that category.

The volume of foreign debris reported in the 1994 International Coastal Cleanup emphasizes the global nature of marine debris and the need for international cooperation in solving this pollution problem. Have strides been made in combating this form of pollution? Yes, but there is still much to do. People produce, promote, propagate, and sustain pollution on this planet. People are also the only beings capable of preventing pollution. The purpose behind the International Coastal Cleanup is to ultimately stop marine debris at its source.

The dedication of the hundreds of thousands of volunteers participating in the International Coastal Cleanup, day after day and year after year, demonstrates that we have the potential to eliminate this form of pollution. We are only temporary inhabitants on this planet. Let's leave it in a condition that will be worthy of future generations.

1994 International Coastal Cleanup Results

⁵A complete listing of country sponsors for the 1994 International Coastal Cleanup can be found in Appendix 6.



TABLE 7. 1994 International Coastal Cleanup Raw Data Summary

DATA COUNTRY ARGENTINA BAHAMAS BAHRAIN BILASTIC; food bags/wrappers ARGENTINA BAHAMAS BAHRAIN BILASTIC; food bags/wrappers ARGENTICHINA BAHAMAS BAHRAIN BILASTIC; food bags/wrappers AT 24 133 chash bags 147 24 133 cheap plastic backerage bottles 47 24 133 cheap, cleaner bottles 47 320 3412 milk/waber gallon jugs 470 914 1417 bleeach, cleaner bottles 47 329 781 oil, lube bottles gallon jugs 47 339 781 oil, lube bottles 47 40 575 buckets 14 9 428 caps/ling 14 47 17 1709 caps/ling nets 47 40 57 184 cigarette lighters 5 41 376 fishing ine 77 19 438 184 fishing nets 41 47 47 47 loget thread protectors 223 186 184 <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>Ì</th> <th></th> <th></th> <th>The same of the sa</th> <th>,</th> <th></th>							Ì			The same of the sa	,	
S S S S S S S S S S S S S S S S S S S												
2000	S BAHRAIN BAI	NGLADESH BARE	ADOS BEI	1ZE		BRITISH VIRGIN	VIRGIN	CANADA	CAYMAN ISLANDS	COLOMBIA	COSTA RICA	CROATIA
1450 477 477 477 133 133 142 142 147 1477 6471 6471 6471 77 123 9 9 9 9 9 12 12 12 12 13 14 41 14 41 17 18 18 18 18 18 18 18 18 18 18	52 4309	65 80	80	523	376	367	362	1202	183	339	1620	278
1450 477 470 470 470 133 142 144 411 6471 6471 6471 6471 6471 75 75 75 75 853 853 853 878 878 878 878 878 878 878 87	133	43	e	36	0	2	4	0		*		47
477 470 100 100 100 142 142 144 41 41 41 41 41 41 41 41 4	1646	24	0	248	81	116	238	241				112
85 100 100 142 142 142 143 144 147 147 173 173 174 173 174 174 175 175 176 177 177 177 18 18 18 19 19 11 18 18 19 19 10 10 10 10 10 10 10 10 10 10 10 10 10	3412	29	158	533	142	277	270	261	77	117	708	118
85 132 147 1477 6471 6471 6471 6471 6471 123 9 9 9 9 123 653 658 8 1089 118 118 118 118 118 119 119 1	1417	41	80	307	243	137	813	132				431
100 133 143 147 1477 173 173 174 175 176 187 18 19 19 19 19 11 19 11 1089 19 19 10 10 10 10 10 10 10 10 10 10 10 10 10	275	51	54	246	54	106	407	25				51
133 142 142 143 16471 6471 6471 173 174 45 62 62 62 62 91 121 121 121 121 121 121 121	589	18	24	107	<u></u>	64	208	57				86
147 1477 1477 6477 6477 75 75 76 91 92 92 92 92 92 92 92 92 92 92	210	ဖ	6	215	28	82	375	26			3	179
18 1477 6471 4 1 173 75 75 75 76 9 9 12 9 12 12 12 12 12 12 12 12 12 12	781	27	180	244	118	104	328	92				210
1477 6471 173 173 173 174 45 62 62 62 62 9 9 12 12 12 12 12 12 12 12 12 12	104	26	9	85	37	2	86	62				97
6471 235 173 77 46 46 46 60 91 121 121 91 121 91 121 91 123 92 92 92 93 94 77 77 77 78 19 118 118 118 118 118 118 118	1209	37	232	237	213	368	1037	340				239
235 173 173 174 145 16 10 10 10 10 10 10 10 10 10 10 10 10 10	573	203	18	197	301	6649	294	4082				181
235 173 174 45 46 62 62 62 62 63 91 121 121 121 121 121 121 121	352	S)	თ	33	56	5	123	17				42
7.7 7.7 6.2 6.2 9.2 9.3 9.3 9.4 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2	711	ধ	67	449	341	467	717	275				187
75 46 46 46 60 62 92 92 93 12 22 22 22 22 22 23 42 42 42 42 42 42 42 42 42 42	133	7	O	129	œ	*	90	22				26
45 45 46 0 0 0 0 0 0 0 123 9 121 121 121 121 121 121 121	189	5	40	44	109	10	122	17				87
45 0 0 0 0 0 0 1230 12 12 12 12 13 14 17 18 19 19 19 19 19 19 19 19 19 19	428	0	4	32	32	4	126	72				19
0 0 0 0 0 62 62 91 121 121 121 121 121 121 121 121 121	376	10	257	12	14	0	358	4				72
2230 62 62 93 9 121 121 121 77 77 77 77 77 77 18 18 18 18 18 19 18 18 18 18 18 18 18 18 18 18 18 18 18	77	o	o	2	4	0	19	2				4.
2230 9 9 9 121 121 121 22 22 22 33 32 42 42 42 42 42 42 42 42 42 42 42 42 42	386	3	52	6	58	0	105	9				တ္သ
929 91 121 121 121 91 91 92 22 22 22 42 77 77 77 77 77 77 77 77 77 7	2032	49	900	372	554	1224	972	597				197
929 9 12 121 91 91 42 22 22 23 32 42 42 42 42 42 42 42 42 42 4	257	2	0	10	8	0	35	5				+
9 121 121 121 853 22 22 22 42 42 42 42 42 42 42 42 42 42	2916	48	379	75	249	21	697	167				139
12 12 12 12 22 22 22 22 42 42 42 42 17 77 77 11 11 19 19 19 19 115 115 115 115 115 1	184	0	0	<u></u>	15	3	43	21				72
121 553 22 22 24 42 42 5 77 698 698 11 11 18 19 19 18 78 78 78 78 78 78 78 78 78 7	436	O	0	œ	7	35	73	32				26
553 22 22 32 42 42 77 77 77 698 8 8 11 18 19 18 18 18 18 18 19 18 18 18 18 18 18 11 18 11 18 11 11 11	46	٥	-	2,	£	o	-	153				6
553 22 22 42 42 77 77 77 77 11 11 18 18 18 18 18 18 18 18	118	_	108	24	88	3	177	37				22
22 32 42 42 5 698 77 77 11 11 18 18 19 19 19 11 18 11 18 11 18 11 18 11 18 11 18 11 18 11 18 11 18 19 10 10 10 10 10 10 10 10 10 10	329	0	27	352	144	1211	481	186				86
32 42 42 5 698 698 77 78 1089 24 11 11 11 11 11 11 11 11 11 1	62	21	0	22	က	1	57	6	İ			23
85 11 15 16 16 16 16 16 16 16 16 16 16 16 16 16	12	o	۵	15	28	0	22	12				29
5 698 698 11 1 1 1 1 1 1 1 1 1 1 1 1	131	40	0	37	47	თ	\$	33				71
\$ 177 \$ 118 \$ 188 \$ 188 \$ 198 \$ 198	400	7	0	64	2	0	<u>ئ</u>	4				87
\$ 698 28 28 11 1 1 1 1 19 19 19 19 19 19 19 19 19 1	110	0	0	17	ო	5	25	7				11
28 26 1 1 19 19 1089 1089 115 115	976	0	44	273	161	ţ3	334	396				17
28 26 19 19 18 18 3 3 3 115 115	253		7	47	23	35	38	62				108
26 19 1089 3 3 13 13	622	21	0	258	143	စ	254	204				332
1089 1089 115 115 13 13	160	10	0	2	m	o (52	m				35
1089 1089 3 3 7 8 115 13 13	557	[0]	0	G :	20 (0	502	3.5				21
1089 3 78 715 115	8	- 0	2	44	۽ م	9	42	28				29
10859 3 7 7 115 13 13	450	7 c	٥	187	29	0	526	159				119
115 115 13 13 13	1446	14	20	355	261	359	718	570	İ			202
115 13 3 3 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	268	ĵ.	o i	203	99	4	146	89				175
110	717	0	0 !	26	172	16	73	124				ō
2 0 4	16/0	63	4/	342	60/	110	1281	541	ļ			634
13	294	52	16	22	24	4	152	65				155
2 C	65	o	25	114	132	24	88	8				224
	47	0 8	o (19	-	<u>.</u>	Ω	0				88
	797	22	16	29	4	7	23	15				33
Glass preces	con+	=	2/2	na7	9/3	6797	£	1813				253

1994 International Coastal Cleanup Raw Data Summary, (cont.)

	COUNTRY							ļ	BRITISH VIRGIN		CAVMAN			
DATA	ARGENTINA BAHAMAS BAHRAIN	BAHAMAS	BAHRAIN	BANGLADESH	ANGLADESH BARBADOS BELIZE BERMUDA	BELIZE	BERMUDA	BRAZIL	ISLANDS	CANADA		COLONBIA	ISLANDS COLOMBIA COSTA BICA CECATIA	ALTACRO
other glass	12	75	264	<u>L</u>	0	30	118	4			~	3	200000	75 57
RUBBER: balloons	48	10	309	05					74					
condorns	84	29	92					ı						
gloves	21		373		4			ı						74
tires	21		112	တ				l						
other rubber	223		914					ŀ						
METAL: bottle caps	58		835					1 1						
aerosol cans	54					36		l						
beverage cans	286	1	Ì	26		224	222	137	1062		402 476	6 257	7 1755	358
food cans	10		283			138								
other cans	11	51	278			109								
crab/lobster traps	0		100			2								
rusty drums	က	•	291			28								
new drums	0					2								2 18
metal pieces	115					115								
pull tabs	16		167			74								71
Wire	24		333	\$		76								
other metai	32		765			213								
PAPER: bags	64	,	652			137								
cardboard	171	154	693	11		115								33
cartons	203		1033			127								
paper cups	21		487			159								
newspaper	159					8		1		Ì				
paper pieces	1525	*				104								
plates	3	163	103			89								
other paper	305		851			57								
WOOU; crab/lobster traps	0		294			2								7 17
crates	8		204			12								
lumber	920	302	3635			267								
pallets	09		459			72		l						
other wood	133		2617	2		8	36				133		1 23	3
CLOTH; clothing/pieces	180		1462			290					99 81	į		
TOTAL ITEMS/ZONE	26257	37452	58128			10970		ı		ľ				

TABLE 7. 1994 International Coastal Cleanup Raw Data Summary, (cont.)

										•	_			
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	01.00	DOMINICAN DOMINICAN	11 0004	100	4 × 17 0 × 10 0	FEDERATED STATES OF			4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	0,000	A 10 Die	1	4 (14444)	4
Pi ASTIC: food hads/wranners		1350	100400R	7,01	AND COL	SICACINE SIA	00	מארואא פ	GIBRALIAN GOALEMALA DONG	2002	AGA AGA	200	ANIMIAICA 1405	14917
salt bags				32		***************************************	15	0	205	50		0	72	123
trash bags	0	2	35	351			216	0	0	5				
other plastic bags	4097			669			362	389	20	15				3627
plastic beverage bottles	0		,	524			928	0	30	32				Ιi
bleach, cleaner bottles	0	0/9	257	137			129	0	0	ေ				
milk/water gallon jugs	0			147			53	0	10	59				396
oit, lube bottles	0		•	61			46	0	0	5				372
other plastic bottles	2058			264			88	528	ဇ	138				ı
buckets	0	234		42			22	O	0	0				ı
caps/lids	0			540			96	271	13	ග				ı
cigarette butts	16210			546			429	O	3	166				i.
cigarette lighters	0			86			318	ဓွ	0	2				1856
cups/utensils	0	69		398			102	33	10	24				
diapers	311	507	264	ហ			88	10	0	0				
fishing line	0		`	22			2	26	2	9				ı
floats/fures	0			5			11	9	0	-				ı
fishing nets	1389	.,		7			2	9	0	4				126
hard hats	0	98	12	2			31	0	0	0				o
light sticks	0			83			107	0	5	1				
plastic pieces	0	()	13	310			418	0	0	426				26809
pipe thread protectors	0			6			12	o	0	c				
горе	1549		_	92			20	43	o	20				
long sheeting	0			က			6	0	0	-				
short sheeting	0			15			12	71	0	0				328
six-pack holders	835			157			150	7	o	m				
strapping bands	0	304		11			9	13	က	15				j
straws	4121		1222	1087			တ	114	25	42				
syringes	439	276		38			-	0	0	m				95
tampon applicators	0		216	υ.			80	-	0	2				
toys	378			84			17	13	0	8				1123
vegetable sacks	0			4			66	<u>ω</u>	0	0				
write protection rings	0			13			0	0	0	-				
other plastic	0	7		128			٥	1546	0	68				- 1
FOAMED PLASTIC: buoys	0 107			77			S (6	5 6	o C	2 6				- 1
sdno	200		804	170			270	77	7	3				
egg canons	SUS	147		84.0			17	20 0	D	- 0			ŀ	
moot trous	3			3			S C	5	0 6	o u				
nackading material	572			32			2 4	9	5 6	57				
foamed niastic pieces				201			186	3 6	5 0	27.6				1
plates	200		308	203	5 8		3 8	0) un	2 41	- 0	2	334	324
other foamed plastic	251			45			2	0	0	0				1
GLASS: beverage bottles	1521	1589		400			234	0	9	52				ı
food jars	275	195	182	46			96	0	S	3				1
other glass bottles	0			102			88	232		-				ı
fluorescent light tubes	0		12				9	0	0	0				1
light bulbs	260			39			41	+1	O	***				163
glass pieces	-	2839	1599	308			114	332	Ö	46				7488

TABLE 7. 1994 International Coastal Cleanup Raw Data Summary, (cont.)

		DOMINICAN				FEDERATED STATES OF							
DATA	CYPRUS REPUBLIC		ECUADOR EL SAL	VADOR	ESTONIA	ESTONIA MICRONESIA	GIBRALTAR	GUATEMALA	HONG KONG	AISENOGNI	GIBRALTAR GUATEMALA HONG KONG INDONESIA INORY COAST	MAICA	NAGAL
other glass	188	187	115	30		***************************************		8			0	1540	639
RUBBER: balloons	0	58		53	មា		12		0	0		20	
condoms	146	97		58	9							Ī	
gloves	433	100	4 1	27	8				0	1		1	1
tires	222	351	145	42	14			-				ł	
other rubber	264	1053		76					25				
METAL: bottle caps	2379	1519		111						e			1
aerosol cans	571	619		82								Ì	
beverage cans	2106	701		282								1	1.
food cans	560	274	253	107	129	173	83	2	2	***	(0)	511	810
other cans	0	183		13								1	ł
crab/lobster traps	0	56		10		***************************************					The state of the s		1
rusty drums	0	209		6								1	1
new drums	168	124	11	2									
metal pieces	0	459		58								ı	
pull tabs	0	374		87								1	
wire	389	263		80								1	
other metal	399	120	ļ	36								ı	ŀ
PAPER: bags	1739	364		342								ı	
cardboard	õ	539	485	88						16	ĺ	ı	8
cartons	2315	449		269								ı	1
paper cups	810	87		194						4		ı	1
newspaper	704	225	629	190									
paper pieces	3183	622	1687	364				3				ł	
plates	o	808	129	106					0			1	
other paper	511	163	270	54								1	
WOOD: crab/lobster traps	0	75	25	28								1	
crates	1185	159	138	36				0		4			1
lumber	0	1254	1921	151		107			17			ļ	7261
pallets	06	403	844	76								1	1
other wood	587	186		134									3047
CLOTH: clothing/pieces	369	2087	698	289				0	29			l	
TOTAL ITEMS/ZONE	56006	59275		13590				27			,		

1994 International Coastal Cleanup Raw Data Summary, (cont.) TABLE 7.

			-	AND THE PARTY OF T											
							FIN	S O							
DATA		LATVIA LITHUANIA MALAYSIA MALTA M	LAYSIA	WALTA MARSHALL	ISLANDS M	EXICO MO	ARSHALL ISLANDS MEXICO MONTSERRAT ANTILLES		NIGERIA P.	ALAU P.	PANAMA PER	ERU PH	PERU PHILIPPINES POLAND PORTUGAL	DLAND PO	RTUGAL
PLASTIC: food bags/wrappers		280	8	0	96	4734	29	408	778	194	5172	133	3650	2672	388
sall bags	0	<u>6</u>	-	0	2	452	o	156	5	0	380	129	431	46	52
ofher plastic back	2 2	07.6	77	000	42	2226	o u	211	902	25	2054	529	848	421	434
plastic beverage bottles	30	220	80	20	171	4260	100	247	146	3,5	5467	300	527	5373	402
bleach, cleaner bottles	0	£4	7.	0	9	1734	4	61	8	98	2400	0	430	4391	142
milk/water gallon jugs	0	55	76	0	22	1899	ধ	77	222	88	1565	0	584	212	375
oil, tube bottles	0		m	o	17	3278	4	99	20	20	2391	228	444	179	108
other plastic bottles	23	61	120	-	50	1590	10	238	173	195	1395	299	607	855	185
buckets	0	4	7	o	7	215	2	33	25	6	588	35	126	\$	27
caps/lids	0	467	33	150	123	2672	9	421	170	41	2683	602	398	824	93
cigarette butts		304	\$	300	1377	3816	72	285	512	124	823	439	2559	0	227
cigarene ngriers		စ ဖွ	g c	7	4.00	387	0 5	9 6	9/	9 3	138	0	197	139	۳ ا
diapore	* C	00 84	7	4 C	320	4540	2 0 c	3 5	2	3 8	2402	9	504	522	112
fishing line	0	2 8	12) t	0 4	201	0 0	2 0	- 1	*, 0	727	5	747	8 8	T O
floats/lures	c	25	2 6	-	5 6	787) C	0 u	124	7 10	3 6	2 0	373	2 8	o ų
fishing nets	O	58	7	2	2	403	0	84	57	-	255		1476	133	184
hard hats	ō	1	0	0	-	67	0	37	60	2	8	0	61	2 0	σ
light sticks	o	18	9	0	S	289	0	28	110	-	67	0	1441	0	*
plastic pieces	0	177	55	0	623	2230	0	301	65	137	2065	204	422	o	182
pipe thread protectors	o	20	0	0	4	229	0	9	10	0	609	20	74	o	104
горе	÷	362	S	80	45	1777	37	528	129	52	926	72	744	ō	352
long sheeting	0	80	က	0	5	193	0	9	6	2	724	0	81	7077	4
short sheeting	0	55	m	2	2	142	O.	27	2	4	1803	0	09	2639	ю
six-pack holders	0	2	0	2	53	2190	0	271	4	29	1111	30	42	807	291
strapping pands	3	325	٦	13	13	349	2	56	ន	£Ο -	330	0	655	0	29
Straws	5 0	420	0	100	27	5608	0 (352	269	-	474	193	1697	0	135
synniges famon applicators	2 0	- +	ΣF	O C	n v	- QS	O 4	73 0	n (0 0	43/	<u></u>	23	9	4
tovs) t	45	- m	> -	- 7	490		0 12	2 80	ο σ	1090	5 ~) C	7 8 0	e c
vegetable sacks	o	102	2	· (c)	-	473	0	. «	100	6	284	21	550	} c	175
write protection rings	0	9	0	0	- 7	401	0	- F	5 5	ω	78	0	52	0	9
other plastic	80	211	44	20	106	1564	တ	718	98	69	2209	159	707	3098	3261
FOAMED PLASTIC: buoys	0	70	8	0	64	653	9	20	108	75	195	33	384	116	121
cups		16	-	0	74	1186	12	274	144	61	1575	12	488	206	22
egg cartons	0	m	2	0	13	410	٥	20	73	¥	440	0	207	0	15
fast food containers	0	70	27	0	23	559	0	83	123	22	2935	0	451	0	88
meat trays	٥	36	2	0	9	969	0	34	23	14	653	0	170	374	16
packaging material		28	88	13	308	739	0	66	238	78	728	0	612	272	83
toamed plastic pieces		2270	×0	0	524	4737	41	340	215	476	1371	2	515	0	406
plates		00	S	0	83	1181	13	143	88	123	745	28	328	192	7
other loamed plastic		88	23	0	4	879	o	268	142	147	ည္က	0	467	1050	484
CLASS: beverage bornes	13	272	₽,	2	82	4926	147	707	225	372	2422	12	897	2301	682
lood ars	0	20	7	0	23	812	12	78	85	တ	920	0	344	£68	28
other glass bottles	ي م	55	0	0	22	1415	00	195	137	20	1092	5	541	28	131
Tuorescent iignt tubes	2	O U	5 0	٥	2	126	0 0	45	5 5	3 0	3 82	0	85	1,4	S
night Duits	5 0	53	2	⊃ ∞	S C	702	2 6	07	2 5	70 00	8/7	4 6	185	S 22	5 6
3		2	2) 		2007	2	3	r.	3	272	2	1 502	7.25	756

TABLE 7. 1994 International Coastal Cleanup Raw Data Summary, (cont.)

		ľ	1											
					- 1		NETHERLAND							
DATA	ATVIA I	HUANIA	LATVIA LITHUANIA MALAYSIA MALTA M	MALTAIN	ARSHALL ISLANDS M	EXICO MONTSERRA	T ANTILLES	NIGERIA	NIGERIA PALAU PANAMA	PANAMA	PERU PH	II IPPINES P	OLAND POR	TUGAL
other glass	0	367	25	0						215	0	210	089	347
RUBBER: balloons	0	49	3	o						193	0	78	155	Į.
condoms	0	22	4	0	ł			ĺ		203	9	16	35	15
gioves	0	22	5	0					1	183	76	35	237	22
fires	13	34	9	0						800	22	291	165	25
other rubber	0	0	38	2						433	2	467	436	333
METAL: bottle caps	0	230	17	200	ļ.					1343	108	1509	3836	110
aerosol cans	0	5	g-m	0	ł					775	17	299	305	8
beverage cans	O	148	23	3	l					2492	136	609	2365	547
food cans	0	17	73	1	14	816 7	7 65	126	62	731	302	936	31 302 936 416 47	47
other cans.	0	27	1	O						652	485	337	396	58
crab/lobster traps	o	0	1	0	l				ŀ	10	0	121	0	
rusty drums	Q	0	2	0						391	0	103	32	12
new drums	0	0	O	0	} .					102	0	4	ო	ŵ
metal pieces	21	59	6	0						1075	-	210	425	200
pull tabs	0	38	0	0	ı					691	33	63	0	120
wire	မ	46	4	***						1415	4	377	121	m
other metal	1	200	18	4						291	સ	387	0	629
PAPER: bags	3	Ø	15	8	l					1210	∞	470	1248	353
cardboard	7	120	10	3						1189	o	428	1008	85
cartons	o	56	15	1						1309	2	602	134	85
paper cups	0	8	-	0						1212	10	300	1049	56
newspaper	2	77	56	0					·	417	12	661	396	121
paper pieces	o,	115	15	9						1339	13	580	8802	382
plates	0	80	0	0						696	186	205	318	14
other paper	τ	356	20	1						394	S	124	1968	716
WOOD: crab/lobster traps	0	7	14	0						50	0	378	0	4
crates	0	Ć.	0	0						115		112	116	66
lumber	63	484	3	0	1					2061	88	1483	111	935
pallets	0	75	0	0						853	484	330	21	336
other wood	7	744	31	2					l	4	4	1224	1068	8
CLOTH: clothing/pieces	12	326	20	4					46	28	69	1433	1030	908
TOTAL ITEMS/ZONF	350	10902	4540	886	1.	-		۲	l	000	2002	99997	*****	7

TABLE 7. 1994 International Coastal Cleanup Raw Data Summary, (cont.)

DATA			ST. KITTS- S		_		త	ا تعہ				
A CONTRACTOR OF THE PARTY OF TH	SINGAPORE	SPAIN N	+	ES	THAILAND T		17	CAICOS UNI	UNITED KINGDOM L	UNITED STATES VENEZUELA	ENEZUELA G	GRAND TOTAL
PLASTIC, food bags/wrappers	4020	3396	165	58	666	470	3925	30		259143	58097	382405
salt bags	59	78	0	0	2	S	23	0		6729	0	8558
trash bags	395	1758	90	40	580	45	843	4		47937	15504	97310
other plastic bags	837	1027	101	19	1016	245	1598	4		72538	O	106673
plastic beverage bottles	1033	613	354	199	74	108	7364	227		140971	34482	219607
bleach, cleaner bottles	168	162	120	75	13	74	680	46		15151	12381	43611
milk/water gallon jugs	307	450	50	25	80	84	204	38		30711	13503	54301
oil, lube bottles	159	259	181	53	5	15	677	æ		17494	17740	49816
other plastic bottles	629	345	119	83	29	141	1322	121		46138	8805	74821
buckets	61	94	44	11	58	40	64	16		8501	5172	16860
caps/lids	1868	1002	405	96	194	114	3788	88	14603	215822	53199	320635
cigarette butts	19944	8208	13	0	94	266	274	21	1462	1283718	89840	1523880
cigarette lighters	249	126	34	34	32	137	92	ග	882	31312	4742	42104
cups/utensils	964	870	332	55	21	စ္က	971	47		109338	52249	154082
diapers	25	276	7	o	*	20	127	0	268	10266	9755	25488
fishing line	227	193	15	0	8	29	130	-		33415	2925	40727
floats/lures	37	75	14	5	က	30	17	Ψ-		14218	1293	18285
fishing nets	178	261	56	0	80	46	7.2	30	3491	8326	2616	21472
hard hats	4	7	•	1	0	22	0	G		1097	0	1682
light sticks	208	£.,	10	40	0	102	13	<u>0</u>		11865	824	20913
plastic pieces	4579	1939	406	87	476	108	2132	99	6999	354689	21674	448259
pipe thread protectors	22	9	29	0	4	25	18	4 (5009	0	8889
	1347	1890	257	(3)	434	7.	92	53	C1081	60000	0.40	ocenes.
long sheeting	108	190	46	0	4	ဓ္က	12	0		5242	///	16665
short sheeting	131	9	24	0		45	ပ ပ	0 ;	3249	11//11	1447	73391
six-pack holders	17	383	2	0		102	D ;	200	******	70000	77071	45300
strapping bands	4/6	207	7.9	0 9	4	85	100	2 (4/07	19900	2002	476776
straws	6026	400	15/	57	344	92	SUS.	ກ່	000	1,9900	2/3/0	0000
syringes	13	4 C	~ c	0	44	n c	4 5	n c	7847	16304	3176	73789
tarripon applicators	307	070	5 5	12	r 40	1 60	2 5	o «	1748	21910	4172	34182
manatahla canto	23	1 7	s c	ic	2 6	, r.	62	0	282	7733	28164	40107
write protection rings	141	150:	, ,	0	0	2	8	0		8005	0	9563
other plastic	1460	1498	320	1	57	96	811	113	26804	107005	3437	171169
FOAMED PLASTIC: buovs	71	184	31	6	-	Ø	99	34	228	12123	2581	20160
	437	208	126	18	2	46	2427	9	2046	122306	2079	142548
egg cartons	36	85	13	5	0	31	4	13		5504	0	8236
fast food containers	278	6	45	ග	13	46	307	11	1791	34816	7848	54282
meat trays	74	38	20	15	9	16	112	₹**		13416	0	19209
packaging material	1184	68	191	S	29	121	236	5	6367	61331	3057	80915
foamed plastic pieces	9886	572	303	О	213	8	4710	34	2885	301793	28356	406239
plates	141	79	04	16	•	88	618			27515	0	35078
other foamed plastic	1489	235	61	46	m 30	152	283	291	194	46344	1050	25/56
GLASS: beverage bottles	192	64	386	7)	157	4 5	C0/7	208		202081	19370	47240
food jars	£	5	38	0	7	2 8	507	ar i	0107	0000	2 0	61676
other glass bottles	88	352		5 6	φ.	2	440	7	RCS.	0/007	4730	2178
fluorescent light tubes	42	37	ļ	7 0	7	20	- 00	35	828	0007	05/4	11561
light builds	4 64	o F	7 5	71	7 7	67	2117	3 6	76.45	2000	2 4 4 9 0	210000

TABLE 7. 1994 International Coastal Cleanup Raw Data Summary, (cont.)

		ST. KITTS	1			TRINIDAD &	TURKS &				
DATA	SINGAPORE	SPAIN NEVIS	THE GRENADINES THAILAND TONGA TOBAGO	THAILAND	TONGA	TOBAGO		UNITED KINGDOM LIMITED STATES VENEZIELA COAND TOTAL	INITED STATES	VENIEZI IEL A	COASID TOTAL
other glass	44	54	23	0	88	173	2		24200	1018	14101 CM200
RUBBER: balloons	136	160	0	2	23				26047		
condoms	45	283	9		1			*****	7187		İ
gloves	121	131	0		1			- Company	14490		
tires	21	110	10		1				8176	ŀ	
other rubber	1101		174	193	8	1107	49	2649	36278	1177	52657
METAL: bottle caps	786	353 136						, , , , , , , , , , , , , , , , , , ,	125826		
aerosol cans	197								11482		
beverage cans	606	1007 169							182878		
food cans	67							-	14676		
other cans	53	•			ı				9641		
crab/tobster traps	7	19 0							3284		
rusty drums	27								2522		
new drums	2	. 56						29	347		
metal pieces	291	267 72	0						39511	1	
pull tabs	2002						ļ		36512		
wire	255	259 29							17088		
other metal	357	552 157							55343		
PAPER: bags	78								40890		
cardboard	237	464 90							32032		
cartons	650								22743		
paper cups	150	297 28							50722		74695
newspaper	301			,				099	30179	10686	50373
paper pieces	2105	1326 75							244468		333281
plates	41	36	-						20109		30056
other paper	963	704 29	-	ļ	- 1			11373	61864		89018
WOOU; crab/lobster traps	12		***************************************	Ì	- 1				2119		7214
crates	20			1	- 1		10	273	2087		5650
umber	2096		***************************************		1				79521		117449
pailets	184	1940 48	***************************************		- 1			393	3993		
other wood	1052	-		İ	- 1		35	1651	34043	5516	56343
CLOTH: clothing/pieces	522				- 1		·	9776	53828	15726	
TOTAL ITEMS/ZONE	75570 45637	45637 6522	•					162539	5635662	10685001	

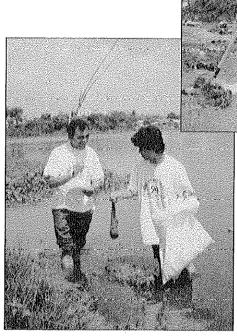


Brazil

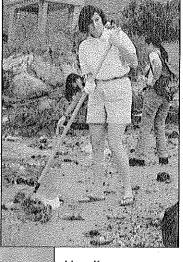


United States

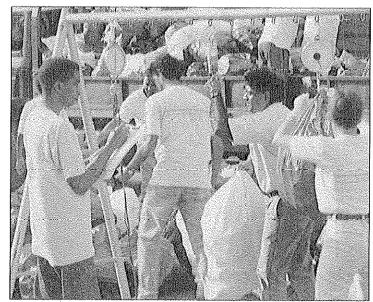
APPENDICES



Bangladesh



Hong Kong



Trinidad

APPENDIX 1. Countries Participating in the International Coastal Cleanup, 1989-1994⁶

COUNTRY	1989	1990	1991	1992	1993	1994
Anguilla (UK)					X	Х
Antigua & Barbuda				Х		
Argentina				X	X	Х
Aruba					X	
Australia				Х		
Bahamas				Х	Х	Х
Bahrain					Х	Х
Bangladesh						Х
Barbados				Х	Х	Х
Belize				Х	Х	Х
Bermuda					Χ	Х
Brazil					Х	Х
British Virgin Islands			х	х	Х	Х
Canada	х	Х	Х	х		Х
Cayman Islands						Х
Colombia						Х
Costa Rica						Х
Croatia						Х
Cuba			Х	Х	х	
Cyprus			Х	Х		Х
Denmark				х		
Dominican Republic				Х	Х	Х
Ecuador					X	Х
Egypt						Х
El Salvador						х
Estonia						Х
Federated States of Micronesia					х	Х
Finland				Х		

⁶The International Coastal Cleanup Program began in the United States in Texas in 1986, expanded nationally in 1989, and developed into an international event in 1989.

COUNTRY	1989	1990	1991	1992	1993	1994
Gibraltar (UK)						х
Greece			X	X	Х	Х
Grenada				Х	Х	Х
Guatemala		X			Х	Х
Hong Kong				X		х
Indonesia				X	Х	х
Israel			Х	Х	Х	х
Italy					Х	Х
Ivory Coast					Х	X
Jamaica					X	Х
Japan		Х	Х	Х	Х	Х
Кепуа					Х	Х
Latvia						Х
Lithuania					Х	X
Malaysia				Х		Х
Malta						X
Marshall Islands	·				X	Х
Mexico	Х	Х	Χ	X	Х	Х
Montserrat (UK)						Х
Netherland Antilles			Х	Х	Х	Х
New Zealand				X	Х	
Nigeria				Х		Х
Norway				X		Х
Pakistan				X		
Palau						Х
Panama				X	Х	Х
Peru	·					Х
Philippines						Х
Poland					Х	Х
Portugal						Х
Singapore		· · · · · · · · · · · · · · · · · · ·		X	Х	Х
South Korea				Х	Х	

COUNTRY	1989	1990	1991	1992	1993	1994
Spain					Х	X
St. Kitts and Nevis				Х	Х	Х
St. Vincent and The Grenadines						Х
Thailand						Х
Kingdom of Tonga						Х
Trinidad and Tobago						Χ.
Turkey					х	
Turks and Caicos						. X
United Kingdom			X	х	х	X
United States	Х	X	Х	х	х	Х
Venezuela			Х	х	х	Х

APPENDIX 2. MARPOL Signatory Countries that Participated in the 1994 International Coastal Cleanup

Country/Territory	Annexes · I&II	Annex III	Annex IV	Annex V
Argentina	X	X	X	X
Bahamas	X	X		Х
Barbados	X	X		Х
Brazil	X			
Canada	X			
Colombia	X	X	X	X
Croatia	X	X	Х	X
Cyprus	X			Х
Ecuador	X	X	X	X
Egypt	X	X	X	X
Estonia	х	X	X	X
Greece	X	X	Х	X
Indonesia	X			
Israel	X			
Italy	X	X	X	X
Jamaica	X	X	X	X
Japan	X	Х	X	Х
Kenya	X	X	Х	x
Latvia	X	Х	X	X
Lithuania	X	Х	X	х
Malta	X			
Marshall Islands	х	X	Х	Х
Mexico	X			
Netherlands Antilles	X	Х		X
Norway	X	х		X
Panama	X	Х	Х	X

Country/Territory	Annexes I&II	Annex III	Annex IV	Annex V
Peru	X	X	Х	х
Poland	X	Х	x	Х
Portugal	X	Х	х	Х
St. Vincent & the Grenadines	X	Х	X	х
Singapore	х	X		
Spain	Х	X	Х	Х
United Kingdom Anguilla*	Х	X		Х
Bermuda British Virgin Islands*	Х	X		Х
Cayman Islands	X	X		X
Gibraltar	X	X		X
Hong Kong Montserrat* Turks and Caicos*	Х	Χ .		
United States	Х	Х		Х
Venezuela	Х	Х	Х	Х

^{*} Indicates British Crown Colonies that have not yet petitioned the United Kingdom for the adoption of MARPOL.

APPENDIX 3. Country Coordinators of the 1994 International Coastal Cleanup

ANGUILLA

John Benjamin Rotary Club of Anguilla P.O. Box 165 The Valley ANGUILLA 809-497-3470

ARGENTINA

Daniel Rolleri ICC/Argentina 1103 Blair Court Newark, DE 19711 USA 302-733-7957

Maria Rosa Gibson Calle 22 #1785 (7607) Miramar, ARGENTINA 54-1-831-6588

Aldo Brandani Centro para el Manejo de Costas El Salvador 4834 5L (1414) Buenos Aires, ARGENTINA 54-1-831-6588

BAHAMAS

Donna Lee Crawford General Delivery Fresh Creek, Andros BAHAMAS 809-368-4048

Laura Urian The Dolphin Experience P.O. Box F2433 Freeport, Grand Bahama Island BAHAMAS 809-373-1244

Lynn Gape, Public Relations Officer Bahamas National Trust P.O. Box N4105 Nassau, BAHAMAS 809-393-1317 Candace Key/Chere Pinder/Randy Brown Clean Islands International and Friends of the Environment Hope Town, Abaco c/o Candace Key, Principal Hope Town All Age School BAHAMAS 809-366-0177

BAHRAIN

Deirdre Maher Ecology Club Bahrain School FPO AE 09834 BAHRAIN 973-727-828

BANGLADESH

Brozo Gopal Biswas 81, Purana Paltan Lane Dhaka-1000, BANGLADESH 880-2-884030

BARBADOS

Sandra Prescod Barbados Environmental Association P.O. Box 132 Bridgetown, BARBADOS 809-426-5973

BELIZE

Hilberto B. Riverol
The Scout Association of Belize
Civic Center
Central American Boulevard
Belize City, BELIZE
501-272-168

BERMUDA

Dwayne Williams Keep Bermuda Beautiful P.O. Box 2227 Hamilton, HMJX BERMUDA 809-295-5142

BRAZIL

Dr. Sheila M. Simao UFRRJ P.O. Box 74544 Seropedica-Itaguai-Rio de Janeiro 23851-970 BRAZIL 55-21-682-1128

BRITISH VIRGIN ISLANDS

Julie Overing Conservation and Fisheries Department P.O. Box 860 Road Town, Tortola BRITISH VIRGIN ISLANDS 809-494-5681

CANADA

Margaret Butschler Vancouver Aquarium Door #5, On Stanley Park Vancouver, BC V6B 3X8 CANADA 604-631-2537

Melissa Higgs Burrard Inlet Environmental Action Program 1208-510 West Hastings Street Vancouver, BC V6B 1L8 CANADA 604-0 775-5196

CAYMAN ISLANDS

Netha Ebanks/Doreen de Sousa Lima The Cayman Islands Watersports Operators Association P.O. Box 31495 SMB Grand Cayman British West Indies CAYMAN ISLANDS 809-949-8522 Cayman Islands Coastal Cleanup Coordinator c/o Donald Jordan Bank of America Dept. 3130, P.O. Box 3700 San Francisco, CA 94137 415-241-3701

COLOMBIA

Patricia Wills IOCARIBE Apartado Aereo 1108 Cartegena, COLOMBIA 57-5-660-0407

COSTA RICA

Quint Newcomer Centro de Conservacion y Desarollo Sostenible de los Ecosistemas Costeros c/o AAA Express Mail Service 1641 NW 79 Avenue Miami, FL 33126-1105 506-273-3022

CROATIA

Ratko Profozic EKO RIJEKA PRIMORJE 50 51 222 Bakar CROATIA

CYPRUS

Cyprus Marine Environment Protection Association (CYMEPA) Irinis Square & Navarinou Street P.O. Box 6671 Limassol, CYPRUS 357-5-343311

DOMINICAN REPUBLIC

Patricia Lamelas CEBSE 131 Jose Contreras Mata Hambre Santo Domingo, DOMINICAN REPUBLIC 809-538-2042

ECUADOR

Dr. Segundo Coello Programa de Manejo de Recursos Costeros Av. Quito y Padre Solano, Edificio MAG, piso 20 P.O. Box 09-01-5850 Guayaquil, ECUADOR 593-4-281-114

Pedro Ponce
Education Director
Charles Darwin Research Station
P.O. Box 17-01-5850
Quito, ECUADOR
593-2-244-803

EGYPT

Peter Schiess COPE-Sinai Ghazala Hotel Sharm El Sheikh South Sinai, EGYPT 20-62-600-150

EL SALVADOR

Barbara Settles Escuela Americana Box (01) 35 San Salvador, EL SALVADOR

ESTONIA

Ms. Maris Paju Tartu Keskonnamet TARTU MAAVALITSUS AKadeemia 4 EE2400 Tartu, Estonia 372-7-430-015

FEDERATED STATES OF MICRONESIA

Pamela Baker Sea Grant, Community College of Micronesia P.O. Box 159 Kolonia, Pohnpei FM 96941 FEDERATED STATES OF MICRONESIA 691-320-2482

GIBRALTAR

John Cortes
Marine Section
Gibraltar Ornithological & Natural History
Society
PO Box 843
GIBRALTAR
350-726-39

GREECE

Dimitris Mitsatsos HELMEPA 5 Pergamou Street Nea Smyrni 171 21 Athens, GREECE 30-1-93-40-3088

GRENADA

Joseph Antoine Friends of the Earth Grenada P.O. Box 521 St. George's, GRENADA 809-444-8838

GUATEMALA

Tulio Monterosa ARCAS Section 135 P.O. Box 02-5289 Miami, FL 33102-5289 502-2-69-05-70

HONG KONG

Doris Lau 53-55 Lockhart Road, 2/F Wanchai, HONG KONG 852-2-528-5588

INDONESIA

Rosemary Silva Jakarta International School P.O. Box 79 JKS Jakarta 12430 INDONESIA 62-21-769-255, ext. 344

ISRAEL

Ellik Adler Marine and Coastal Environment Division Ministry of the Environment P.O. Box 34033 Jerusalem, ISRAEL 95464 972-2-231-119

ITALY

Suzy Penco Lega Ambiente Via Salaria 280 00199 Roma ITALY 39-6-884-1552

IVORY COAST

Thomas Bonebo ESSOR 22 BP 358 Abidjan 22 Ivory Coast, West Africa 225-23292

JAMAICA

Lisa Petersen/Sheila Carter U.S. Peace Corps 1A Holburn Road Kingston 10, JAMAICA 809-927-1085

JAPAN

Kojima Azusa/Yumi Kikuchi JEAN 3F/Komatsu Bldg. 3-23-2 Minamimachi Kokubunji-shi, TOKYO 185 JAPAN 81-423-22-0712

Edo Heinrich-Sanchez Okinawa International Clean Beach Club 33-Aza-Maeda, Onna-Son Okinawa, 904-04 JAPAN 81-98-965-5371

KENYA

Dr. Gary R. Mullins P.O. Box 80147 Mombasa, KENYA East Africa

LATVIA

Peter Bormanis Keep Latvia Tidy Foundation P.O. Box 48 Jurmala 15, LV 2015 Latvia 317-2-760-538

LITHUANIA

Indre Biskis Barboros Radvilaites 5-16 Vilnius, LITHUANIA 370-2-611-360

MALAYSIA

Stephanie Lee The Body Shop Rampainiaga Son, BHD NO: 5, JLN USJ 10/1C 47620 UEP SUBANG JAYA Selangor, MALAYSIA 603-732-4313

MALTA

Melody Morgan-Busher c/o ISD/MSU Gattard House National Road Blata L-Bajda HMR 02 MALTA 356-25-992340 / 356-25-234701 fax

MARSHALL ISLANDS

Kathleen Kirkpatrick Nash USAKA Office of Environmental Compliance P.O. Box 26 (ATTN: CSSD-KA-IV) APO AP 96555 MARSHALL ISLANDS 805-238-7994 ext. 4218

MEXICO

Craig Caughlan
The Bay and Beach Cleanup Group
of Puerto Vallarta
APDO 50 Terminal Maritima
Puerto Vallarta, Jalisco, 48321
MEXICO
52-322-325-41

Prof. Minerva Mari Hadad Fundacion de Parques y Museos de Cozumel Museo de la Isla de Cozumel Av. Rafael Melgar, Calle 6 Norte Cozumel 77600 Quintana Roo, MEXICO 52-987-2-14-75

Arq. Jose Luis de la Garza P.O. Box 4623 Brownsville, TX 78521 52-88-13-30-43

Ing. Roberto Reyes Marcin
Secretaria de Ecologia Del gobierno Del Estado
Direccion de Formacion y Educacion Ambiental
Calle 64, No. 437 x 53 x 47 A Centro
Merida, Yucatan
MEXICO
52-99-24-47-98/65-07

Ana Laura Lara-Dominguez
Programa de EPOMEX, University of
Campeche
Av. Agustin Melgar y Juan de la Barrera
Apartado Postal 520, Campeche 24000
MEXICO
52-981-116-00

D.V.M. German R. Mendez P.O. Box 396 Cozumel Q. Roo 77600 MEXICO 987-21232

MONTSERRAT

Wolf Krabs Sea Wolf Diving P.O. Box 289 Plymouth, MONTSERRAT 809-491-7807

NETHERLANDS ANTILLES

Diana Gevers
Keep Bonaire Clean
Tourism Corporation Bonaire
Kaya S. Bolivar 12, Bonaire,
NETHERLANDS ANTILLES
599-7-8322

Kenny Buchanan Saba Marine Park P.O. Box 18 The Bottom, Saba NETHERLANDS ANTILLES 599-4-632-95

Francois van der Hoeven St. Maarten National Parks Foundation P.O. Box 426 Philipsburg, St. Maarten NETHERLANDS ANTILLES 599-5-244-54

NIGERIA

Larry Awosika
Nigerian Institute for Oceanography
and Marine Research
P.M.B. 12729
Victoria Island, Lagos
NIGERIA
234-1-617-530

NORWAY

Paul Harstad Dykkesenteret 1 Molde N-6400 Molde, NORWAY 47-71-252-700

PALAU

Willie Watanabe Mindszenty High School P.O. Box 495 Koror, PALAU 96940 680-488-2437

PANAMA

Felipa Saavedra ANCON P.O. Box 1387 Panama 1 **PANAMA** 507-64-8100

Amanda Barraza Fundacion PROMAR Apartado 6-10140 El Dorado **PANAMA** 507-644-876

PERU

I.C. Riveros Salcedo APECO Parque Jose de Acosta 187 Magdalena Lima 17, PERU 51-14-62-54-10

PHILIPPINES

Dr. Vaughan Pratt International Marinelife Alliance-Philippines P.O. Box 12648, Ortigas Center Post Office Pasig, Metro Manila 1600 **PHILIPPINES** 63-2-631-6442

POLAND

Thomasz Jozwiak Sopot Ecological Institute 23 Marca 91b/86 Str. 81-820 Sopot **POLAND** 48-58-51-56-94

PORTUGAL

Lilia Fidalgo Parque Natural de ria Formosa Quinta de Marin-Quelfes 8700 Olhao **PORTUGAL**

ST. KITTS and NEVIS

Chesley Davis The Nevis Environmental Education Committee P.O. Box 563 Charleston, NEVIS 809-469-5786

Alexis Knight **Environmental and Tourism Awareness** Programme Room 21, Pelican Shopping Mall Basseterre, ST. KITTS 809-465-4276

ST. VINCENT and THE GRENADINES

Andrew Simmons JEMS Progressive Community Organization **Enhams Post Office** ST. VINCENT & THE GRENADINES 809-457-2607

SINGAPORE

Evelyn Lim-Eng/Kate Grace Thome The Nature Society 601 Sims Drive, #04-04 Pan-I Complex Singapore 1431 65-741-2036

SPAIN

Maria Dolores Moreno Mestre Fundacion "Centro de Estudios Marinos" Aula del Mar Apartado AA8; IS 440-Lepe Huelva SPAIN 34-59-38-31-87

THAILAND

David Hoover International School of Bangkok P.O. Box 20-105 Ha Yaek Pakkret Nontahburi 11120 THAILAND 662-583-5432

KINGDOM OF TONGA

Karina Ricks
United States Peace Corp Volunteer
c/o Erin Barlow, PCV
Peace Corps, Box 147
Nuku'alofa, KINGDOM OF TONGA

TRINIDAD and TOBAGO

Boris Fabres, Sita Kuruvilla and Louanna Martin Fisheries Division Ministry of Agriculture, Land and Marine Resources St Clair Circle Port of Spain TRINIDAD AND TOBAGO 809-634-4505

TURKS and CAICOS ISLANDS

Michelle Fulford & Tommy Skippings c/o Dept. Environment & Coastal Resources South Base, Grand Turk TURKS & CAICOS ISLANDS British West Indies 809-946-2855

UNITED KINGDOM

Melissa Morton Marine Conservation Society 9 Gloucester Road Ross-on-Wye, Herefordshire HR9 5BU England, UNITED KINGDOM 44-989-566-017

UNITED STATES

Center for Marine Conservation Atlantic Regional Office 306A Buckroe Avenue Hampton, Virginia 23664 804-851-6734

VENEZUELA

Diego Diaz-Martin FUDENA Edificio Central Empresarial Sederos Piso 6, Oficina 611-a Los cortijos de Lourdes Caracas 1071-A, VENEZUELA 58-2-238-1761

APPENDIX 4. Items Identified as "Most Peculiar" by 1994 International Coastal Cleanup Volunteers

ARGENTINA

Miramar

tube of dental anesthesia, toothbrush, washing machine lid, toilet lid,

penicillin

BAHAMAS

Grand Bahamas

toilet bowl, fuel tank

New Providence

car battery

BAHRAIN

Askar Beach

cassette tape, phone card, abdominizer, porno playing card

BERMUDA

Pembroke & Devon

tent pole

Spanish Point

two complete pair of shoes

BRAZIL

Muriqui

chair, couch, refrigerator door, latrine

BRITISH VIRGIN ISLANDS

Handsome Bay South Sound cricket bat, 2 plastic lemons

Road Harbour

1987 Domino trophy, toothpaste, thermometer, gas cylinders

Paraguita Bay

hammocks

Wickhams Cay

water pump, shopping cart, umbrella, car parts, toy phone

CANADA

Vancouver

hip waders, quarter, mattress, toy soldier, resumes, patio umbrella, meat patties

North Vancouver

teapot, cast iron stove seat cushions

Kits Point Whytecliff Beach

Christmas tree light

Fulford Harbour

transmission

COSTA RICA

Cobano

batteries

Golfo De Nicoya

car body

Central Pacific

fence, gas cylinder, paint roller, car cover

Southern Caribe

rolls of barbed wire, bed posts, dishrack, goalie glove

CROATIA

Baker Bay

mirror, chairs, records

DOMINICAN REPUBLIC

Samana Beaches

car muffler, medicine kit

ECUADOR

Iambeli

rare sea mollusks

EL SALVADOR

La Libertad

gold earring, light bulb socket, alarm clock, carved figure of a woman

JAMAICA

Palisadoes Strip Harbour Head

singer sewing machine, car seat, record lamp, plunger, electrical socket, air filter

LITHUANIA

Klaipeda

stuffed dummy matchmaker from a Lithuanian wedding, plaster cast for a leg

MEXICO

Campeche Jalisco

cows head, car shock absorbers, license plates television cover, grill, ice cream cart, stove parts

NETHERLANDS ANTILLES

Sint Maarten

bumper

NIGERIA

Victoria Island

milk can, candle

PÁNAMA

Veracruz

pantyhose, ET doll, toothbrush

PORTUGAL

Manta Rota

refrigerator

ST. KITTS and NEVIS

Airport Beach

car battery

Indian Castle Beach

toilet seat cover

SINGAPORE

East Coast Park Changi Beach porcelain piggy bank, insecticide, toothbrush, toilet cleaner, engine

barbecue grill, army spade

SPAIN

Punta Umbria

headache tablets, tennis racquet, compress, medication

KINGDOM OF TONGA

Vava'u

washing machine agitator cap, sink, horse tooth

TRINIDAD and TOBAGO

William's Bay

television frame

Chagville Beach

car ignition part, plastic harmonica,

Hart's Cut

fire extinguisher, tennis racquet, plastic curler, scrubbing brush

Scotland Bay

lipstick

Monos Island

blue toilet seat, cabbage patch doll

UNITED KINGDOM

North Pier

three shopping trolleys, British rail trolley, cooker, wash basin, stereo,

two gates

UNITED STATES

Alabama refrigerator, ice tray, toilet seat, laundry basket, fire extinguisher, lawn

mower, battery

Alaska rug, sofa

California Christmas tree, basting brush, frying pan, roll of film, traffic cone, shopping cart

Colorado hatchet, plastic bread tray, trash can

Connecticut flower pots, bowl, gas grill, bicycle, fire extinguisher, shock absorbers,

radiator hose

Delaware muffler, Christmas decorations, rubber rabbit, bread crate toothbrush,

parking ticket

Florida washing machine, toilet, credit card, makeup kit, hotel key, baby bottle.

water heater

Georgia bathroom rug, broom, full jar of peanut butter, bike tire, model airplane body Hawaii

umbrella, fake fingernails, car battery, cd player, mattress, pillow, pager,

Illinois five small metal bells, toy soldier, ear plugs, fortune cookie, teddy bear

Indiana cooking sheet, Ronald McDonald bandaid

Louisiana steering wheel, ear plug, tent, hula hoop, headlight, broom, vacuum,

wagon, love seat

long underwear, doll dress, exhaust pipe, love letter, glasses, earphones, Maine

soap, carpet

Maryland bedspring, sunroof, golf club, shower head, lipstick, lamp post, sit and spin toy

Massachusetts crowbar, bedsheet, brake shoe, bag of marijuana, food stamps, sink, toilet

seat, watch

Michigan lincoln logs, headboard, alarm clock, \$20.00, keys, eyeglasses, plastic

lobster toy

muffler, tailpipe, bed spring, tv antenna, air mattress, walkman, car radio Minnesota Mississippi

rosary, toupee, window, stop sign, ski belt, telephone book, hub cap, pillow,

crutches

New Hampshire long underwear, carpet, binoculars, auto fan belt, doll head, leash, manhole

New Jersey nail glue, gas tank, sheet, photo, credit card, clothes basket, hockey glove,

welcome mat

New York oxygen mask, medical bracelet, hairpiece, tricycle, television, tub, stove,

day bed

towel rack, bath tub, watertank, doorknob, ace bandages, birth controlpills North Carolina

metal spoon, two pennies, candle holder, radiator caps, flashlight, antenna,

toothbrush

Puerto Rico car dash cover, chair, barbed wire, mouthwash, car motor

Rhode Island sissors, mattress, car stereo, broom, boat windshield, flowerpot, dishtowel,

car bumper

South Carolina makeup applicator, scouring pad, pipe, dental retainer, medical supplies,

cutting board

Texas garage door, refrigerator door, ladder, toothbrush, hairbrush, muffler, quarter,

shock absorber, boat engine, plastic owl, placemat, cooking pot, plates, rug, Virginia.

lipstick

U.S. Virgin Islands grill, cassette, car brake, stuffed bird, plate eagle head, hairbrush, telephone,

camera

Washington bed springs, headlight, car part

Oregon

APPENDIX 5. Data Card Used by 1994 International Coastal Cleanup Volunteers (front)

way to keep track of the items you find is by ma Example:	TOTAL.		TOTAL
egg carrons HHT HHT 1		cups 444 444 444 1441 11	[2.2.]
		STIC	Total
	Total number of items		number of itsus
bags:	or items	fishing nets	1.00 (0
food bags/wrappers		hard hats	· · · · · · · · · · · · · · · · · · ·
salt		light sticks	
trash		pieces	
other bags	response to a comment	pipe thread protector	\$1011101-01
beverage, soda	[]	sheeting	Managaran A
bleach, cleaner		longer than 2 feet	Charles and a second
milk/water gal. jugs		2 feet or shorter	
oil, lube		6-pack holders strapping bands	
other bottlesbuckets		strains	grant and
caps, lids		syringes	
rigarette butts		tampon applicators	The second secon
cigarette lighters		toys	4
cups, mensils		vegetable sacks	
fishing line		other plastic (specify)	
fishing lures, floats			ţ
and the second s	A 84777	DI ACTIC	***************************************
· 100 - 100	OAMED	PLASTIC	
buoys	3000000000	packaging material	£11.00 **** 1
с врз	# 1000 CO CO CO CO	places	
egg cattons		other foamed plastic (specify)	
ineat trays		A. C. Communication of the Com	
bottles/jars: heverage bottles		fluorescent light tubes light bulbs	
food jarsother bottles/jars		other glass (specify)	
	RUE	BER	
baltoons	*******		
condoins	44,100,100,000	other rubber (specify)	
gloves			
	ME	TAL	
bottle caps		55 gallon drums:	Į · · · · · · · · · · · · · · · · · · ·
cors:	promiser.	rusty	gramma and an area of
aerosol beverage		pieces	
food		pull cabs	The section of the se
other		MMG - Strong strong and constituted systems of the parties of the control of the	
ctab/lobster traps		other metal (specify)	**************************************
	PA	PER	
bags	A	newspapers/magazines	ļ********
cardboard		pieces	Production and Control of A
eastons	\$	plates	Transport of the
cups		other paper (specify)	
		OOD od on the beach)	
crab/lobster traps		pallets	
		other woods (specify)	\$10.00 man
Crates			1 1
lumber pieces	l 1	games pages, an program of the Edward or Spirite and a sequence of Edward and a sequence of the Spirite of Spirite of Edward and Spi	parking to 1

APPENDIX 5. Data Card Used by 1994 International Coastal Cleanup Volunteers (back)

K1		Center for Marine Conservation's International Marine Debrimarine debris.
Name	$-10^{-1}\sqrt{2} \left(a_1 + b_2 + b_3 + b_4 + b_4 + b_5 + b_4 + b_4 + b_5 + b_5 + b_5 + b_5 + b_5 + b_5 + b_6 + $	Affiliation
Address	katin angayaringan daririndhi karanggangarind Africaint (galadisin andara) (ganamakikan	Occupation
	State	Country
ge:	$(1,1,2,\dots,1,2,1,1,1,1,1,1,1,1,1,1,1,1,1,1,$	Phone ()
Ibday's Date: Month	Day Year	Name of Coordinator
Zone Name/Location Cleaner	d with the second to the second secon	Nearest County
Tow did you hear about the ϵ	deanup?	
Yumber of people working	g together on this data care	d Estimated distance of beach cleaned
Number of bags filled:	er en en en de ferman de kontre (en en en en en en en en en en en en en e	Total Estimated Weight:
Do you currently receive the f not, would you like to be	he International Coastal C	leanup newsletter, Coastal Connection? [] Yes [] No
	SAFE	TY TIPS
 Do not go near any large dr Be careful with sharp object 	GDE,	4. Stay out of the dunes and natural areas.
J. Wear gloves,	s ana syringes.	 Watch our for wildlife. Don't lift anything too heavy.
		OU TO BE SAFE
	and the second s	
	national use therefore not all listin	
Data collected since 1986 and determine how plastic trash wil	analyzed by CMC has been use if be handled by ships at sea, at p	ed in reports, in public testimony and at International meetings to orts, and on land all around the world.
FOREIGN LABELS. Please lint al military identification or debris wi are common to your local area, i.e	no reases and or angress of empore a imported water or heer	markings to help us identify the item's origin (such as emiss line names, g. fishing, or oil/gas exploration companies. Please do not list items that
		The state of the s
ABC Shipp	zing Company	plastic strapping band
and the state of the state of the state of the state of the state of the state of the state of the state of the	no market e son constitue summinante de la constitue se constitue de la consti	
e. Die Sammer von de vonstigte, word verfangt is die voorden was de proper van de verseel van de verseel van de v	en en en dentre plante, e en entre en roman en en fregresignet proposition en en element e element, e es	
and distributed a transfer of the second of a second of the second of the second of the second of the second of	en de alterne en la companie de la c	
and distributed a transfer of the second of a second of the second of the second of the second of the second of	en de alterne en la companie de la c	type of animal and type of entangling debris. Be as specific as you can.)
EAD, LIVE AND/OR ENTANG	ILED ANIMALS (Please describe t	type of animal and type of entangling debris. Be as specific as you can.)
EAD, LIVE AND/OR ENTANG	HED ANIMALS (Please describe t	type of animal and type of enrangling debris. He as specific as you can.)
EAD, LIVE AND/OR ENTANG	ILED ANIMALS (Please describe t	type of animal and type of entangling debris. Be as specific as you can.)
EAD, LIVE AND/OR ENTANG	ILED ANIMALS (Please describe t	type of animal and type of enrangling debris. He as specific as you can.)
EAD, LIVE AND/OR ENTANG	ILED ANIMALS (Please describe t	type of animal and type of enrangling debris. Be as specific as you can.)
EAD, LIVE AND/OR, ENTANG That was the most peculiar item your mutents	ILED ANIMALS (Please describe t	type of animal and type of entangling debris. Be as specific as you can.)
EAD, LIVE AND/OR ENTANG	ILED ANIMALS (Please describe t	type of animal and type of enrangling debris. Be as specific as you can.)
EAD, LIVE AND/OR, ENTANG that was the most poculiar item you	ILED ANIMALS (Please describe t	type of animal and type of emangling debris. Be as specific as you can.)
EAD, LIVE AND/OR, ENTANG That was the most peculiar item your mutents	ILED ANIMALS (Please describe t	Please return this card to your area coordinator or mail it to: CENTER FOR MARINE CONSERVATION
EAD, LIVE AND/OR, ENTANG That was the most peculiar item your mutents	ILED ANIMALS (Please describe t	Please return this card to your near coordinator or mail it to:
EAD, LIVE AND/OR, ENTANG That was the most peculiar item your mutents	ILED ANIMALS (Please describe t	Please return this card to your new coordinator or noil it to: CENTER FOR MARINE CONSERVATION International Marine Debris Database 308 A Buckroe Ave, Hampton, VA 23884
EAD, LIVE AND/OR, ENTANG That was the most peculiar item your mutents	ILED ANIMALS (Please describe t	Please return this card to your area coordinator or mail it to: CENTER FOR MARINE CONSERVATION International Marino Debris Database 306 A Buckroo Ave.
EAD, LIVE AND/OR, ENTANG That was the most peculiar item your mutents	ILED ANIMALS (Please describe t	Please return this card to your new coordinator or noil it to: CENTER FOR MARINE CONSERVATION International Marine Debris Database 308 A Buckroe Ave, Hampton, VA 23884
EAD, LIVE AND/OR ENTANG that was the most peculiar item younnents hank you!	ILED ANIMALS (Please describe to collected?	Please return this card to your area coordinator or mail it to: CENTER FOR MARINE CONSERVATION International Marino Debris Database 306 A Buckroe Ave. Hampton, VA 23664 USA Center for Marine Conservation
EAD, LIVE AND/OR ENTANG that was the most peculiar item younuents hank you!	ILED ANIMALS (Please describe to collected?	Please return this eard to your area coordinator or mail it to: CENTER FOR MARINE CONSERVATION International Marino Debris Database 306 A Buckroe Ave. Hampton, VA 23684 USA Center for Marine Conservation A Momborship Organization
EAD, LIVE AND/OR ENTANG that was the most peculiar item younnents hank you!	ILED ANIMALS (Please describe to collected?	Please return this card to your area coordinator or mail it to: CENTER FOR MARINE CONSERVATION International Marino Debris Database 306 A Buckroe Ave. Hampton, VA 23664 USA Center for Marine Conservation

APPENDIX 6. Sponsors of the 1994 International Coastal Cleanup, by Country

ARGENTINA

Administracion Fanton **Bomberos Voluntarios** Consejo Deliberante Constanza Bachmann Farmacia Miramar Imprenta Genazzini La Baja Los Dulces de Ofelia Miramar Televisora Color Municipalidad de General Alvarado Policia de la Provincia de Buenos Aires Su Papelera

BAHAMAS

Aguapure Atlantic Undersea Test and Evaluation Center Bahamas Waste Management Base Road Sanitation Caribbean Bottling Chilly Willy Ice D'Albenas Dolphin Experience International Field Studies Pepsi Cola Ltd. Asa H. Pritchard Solid Waste Management The Tribune **Underwater Explorers Society** 100 JAMZ

BELIZE

Belize City Council Belize Defence Force **Belize Tourist Board** Belize Waste Control Big-H Products of Cayo Tropical Fruits Ltd Bowen & Bowen Ltd. Department of the Environment Fisheries Department Grace Kennedy Ltd. James Brodie & Company Ltd.

BERMUDA

Bermuda Biological Station for Research Bermuda Police Cadets Bermuda Sub Agua Club Bermuda Telephone Company Ltd.

BERMUDA, cont.

John and Sons Ltd. Ministry of Works and Engineering

BRAZIL

Universidade Federal Rural Do Rio De Ianeiro

BRITISH VIRGIN ISLANDS

Bobby's Supermarket **BVI Yacht Club** Road Town Wholesale TICO **Timothy Warner**

CANADA

Adopt-a-Shoreline **BC** Environment Burrard Inlet Environmental Action Program City of Vancouver Department of Fisheries and Oceans District of North Vancouver **Environment Canada** Greater Vancouver Regional District Premier Marine Starbucks Vancouver Port Corporation

CAYMAN ISLANDS

British Sub Aqua Club B.T. Dynamite Cayman Diving Lodge Cayman Island Boy Scouts Cayman Island Government, Department of Environmental National Trust Cayman Island Marine Institute Cayman Islands Watersports Operators Association Cayman National Bank Coutts and Company Dive Inn Don Fosters Fish Eye Overseas Students Association Parrot's Landing

CAYMAN ISLANDS, cont.

Ralphies for the love of diving Red Sail Sports Sunset Divers Z-99 Radio Station

COLOMBIA

AIESEC BUZCA CARACOL CIOH Coca Cola **ECOPETROL** Fondo Mixto de Promocio Turistica de Cartagena Fundacion Islas del Rosario Hotel Las Americas **INDERENA INPA IOCARIBE** La Tortuga Dive School LIME Naval School of Cartagena **TORAUTOS** Univesidad Jorge Tadeo Lozano

COSTA RICA

ASEPALECO British School Camisetas Oceanos Pacificos Canadian Embassy Centro de Aventura Cervecena de Costa Rica Club Ecologico Yiski Coca Cola Costa Rica Sun Tours Costa Rica Today **EcoTreks** Fundacion Tiskita Frutas Socas Internacionales **FUNTI** Grupo Situr HB Fuller Horizontes **Jacks** limenez & Tanzi Kodak Los Suenos Resort

COSTA RICA, cont.

Marian Baker School Playas del Coco Trash Committee Rios Tropicales Tiendas La Gloria Tiskita Lodge U.S. Peace Corps Villas Nicolas

CROATIA

IND-EKO
"3.MAJ" Shipyard
RIPELLE
SUNADRIA
Municipal Authorities

CYPRUS

Cyprus Popular Bank Cyprus Scouts Association Dioryx Maritime Corporation Stelmar Tankers (Management) Ltd.

DOMINICAN REPUBLIC

Agroquimicos Sanchez Asociacion de Comerciantes Ayuntamiento Municipal Banco Higuamos Barco "Pretty Woman" Bernardo Casa Almonte Casa Chambero Casa Chavan Casa Mildania/Dr. Vincente Cervantes Barba Cia. Embotelladora Colmado carrasco Colmado Cervantes Colmado Ramoncito Colmado Wernobia Dan Benjamin Diputado. Braulio Adames Espino Dole Dominicana Domingo Espinal **Empresas Robles (Santiago)** Eugenio Gonzalez Farmacia Bahia Farmacia Mercedes Farmacia Sanchez

DOMINICAN REPUBLIC, cont.

Ferreteria Calcano Ferreteria Marianita Ferreteria Polanco Ferreteria Carrasco/Bruno Carrasco Ferreteria Jose Miguel Fior de Vincente Gasolinera Isla

Helados Bon

Helados El Polo Hotel Brisas de la Bahia

Hotel Fortuna/Domingo Espinal

Jose J. Ramierez Julio Santana Marina de Guerra

Miguel Rodriguez
Muebleria la Esperan

Muebleria la Esperanza

Narcisco Estevez

P. Andres Dumas Msc.

Pescaderia Gabriel

Piragua Disco

Plaza Simi Baez

Ramon Frias

Repuestos Portes

Rest. Alporticciolo Restaurante Camilo

Restaurante Lucrecia

Rest. El Nautico

Rest. Las Malvinas

Rest. Le France

Rolando Reyes

Sindicato de Choferes Sobre las Olas Disco

Sr. Tom Phipps

Subsecretaria de Recursos Naturales

Tavarez Comercial Tienda el Gallo

Wilfredo D. Benjamin

EL SALVADOR

Escuela Americana of San Salvador Betty Kossik Jose Kyle Jesscia Porter Barb Settles Denise Trudeau Bonny Wejnert

GUATEMALA

Columbus Zoo (Ohio, USA) The Government of Japan Prensa Libre

HONG KONG

Esprit Asia (Distribution) Ltd. Hong Kong International School (High School) Hong Kong PATA Chapter

INDONESIA

Bontang International School Envoronmental Concerns Club Mahasiswa Pencinta Lingungan Hidup -Environment Lover Organization Middle School Conservation Club, Jakarta International School Surabaya International School

JAPAN

National

Arsoa
Earth Environmental Fund
Environment Beautification Fund
ESSO
Kanagaua Beach Cleaning Foundation
NEC
Maruberi

Maruberi Sankus and Associates Sapporo Beer WWF-Japan

Regional

Ebara Corportaion
Coca-Cola Bottling Company
Sony Corporation, Sendai Technology Center
Daiwa Securities Co., LTD. Osaka Branch,
Capital Markets Dept.
The Yasuda Fire & marine Insurance Company,
LTD.
SANYO Electric Co., LTD.
Kinki Coca-Cola Bottling Co., LTD.

Okinawa

Mr. Tsughira Toma Akane Creation Taishi Communications

JAPAN, cont.

Okinawa, cont. Pro Shop GARA-Miyako Is. Meiji-Okinawa Japan Update-Viking Corporation FM Okinawa RYUKYU Broadcasting Corporation-RBC Radio Tokyo TV-Yamada Kuniko Okuma-I.A.L. Private Resort Sun Marina Hotel Okinawa Visitor's Bueau Malibu Beach Resort Marine Blue 21-Japan Okinawa Prefectural Government Sun Marina Hotel Okinawa Visitor's Bueau Malibu Beach Resort

LITHUANIA

Marine Blue 21-Japan

Klaipeda Kristionio Donelaitis School Peace Corps Phillip Morris

Okinawa Prefectural Government

MALAYSIA

The Body Shop The Eco Shop

MEXICO

Army 33nd Military Zone Campeche Assoc. for Change for the 21st Cen-Center of Technological Studies of the Sea (CETMAR) Dr. Roman Pina Chan City Government Coca-Cola Coordinating Service and State Health Secretary Cozumel Island Park and Museum Foundation Department of Diffusion **Environmental Protection Procurement** (PROFEPA) Guadalupe victoria Ministery of Agiculture and Hydrological Resources and National Water Commission Ministery of Communication and Transportation Ministery of Education

MEXICO, cont.

Ministery of Fisheries-Regional Center of Fishery Reseach (SEPESCA-CRIP) Ministery of Government Ministery of Labor and Social Provision Ministery of Social Development (SEDESOL) Municipality of Campeche Oceanographic Station Pemex (Öil Industry) Port Captain Pronatura Regional Technical Council of the National Contingency Plan Rotary Club of Matamoros Schools Seven Marine Sector of the Navy State Radio & Television Technological Institute of Sea (ITMAR) University of Campeche

NETHERLANDS ANTILLES

Big Rock Market
Captain's Quarters Hotel
Corner Deli & Gourmet Shop
Eskay Home and Hardware
HES Home Center
In Too Deep Bar & Restaurant
Juliana's Hotel
My Store
Nivak Wholesales
Pop's Place
Promart Utilities
Saba Drug Store
Willard's Hotel

NIGERIA

Polyproducts Ltd Nigerian Institute for Oceanography and Marine Research Nigerian Television Authority The Spring Water Ltd U.A.C. Foods Place

PALAU

EQPB Koror State Government Marine Resource Center

PANAMA

Amigos Conservacionistas de Remedios

Amisconde

ANCON

Anglo Mexican School

Aproremar

ASSA-Compania de Seguros, S.A.

Auboubon Society of Panama

Bomberos de Panama

Celloprint

City of Bocas del Toro

City of Colon

City of Panama

City of Penonome

Club de Leones

Coca-Cola

Comercio y Tecnologia, S.A.

Comite Ambiental de Alanje

Cruz Roja Panamena

DIMA

Ecological Group of Florida State University

Enrico Fermi, Italian Academy

Federacion Ecologica de Azuero

GITEC

Grupo Comunidad B'hai

Grupo Ecologico Los Halcones

INRENARE

Interact Club of Panama

Mayor of Panama

Ministerio de Salud

Mr. Pan

Muchachas guias de Panama

National Association of Ecotourism guides

National System of Cival Protection

(SINAPROC-PANAMA)

Natural Resources Institute of Panama

Nautical School of Panama

Panama's Industrial Association (SIP)

Polymer

Rotaract Club of Northeast Panama

Rotaract Club South

Rotaract Club West

Rotaract Club of Panama

Rotary Club of Panama

RPC TV Channel 4

Scouts Association of Panama

Scuba Panama

Scouts de Panama

SINAPROC

Sociedad de Jovenes Antoneros

PANAMA. cont.

SPI

Telementro TV Channel 13

Tourism Bureau of Panama

TVN Channel 2

Volunteers of Fundacion Promar

PHILIPPINES

Barangay Bancao-Banco Officials

Boy Scouts

DA-FSP Coastal Resource Management Team

Fourth Coast Guard Group

Negros Forest and Ecological Foundation

Palawan Geographic Society

Palawan State College

Philippine First Asylum Camp

Sepak Takraw Group

Tubbataha Foundation

VRC Youth Organization

ST. KITTS and NEVIS

Evelyn's Drug Store

Superfoods

TDC

The Nevis Historical and Conservation Society

Tony's Supermarket

U.S. Peace Corps

ST. VINCENT and THE GRENADINES

The Community Development Division of the Ministry of Housing

TURKS and CAICOS

Department of Environment & Coastal Resources

UNITED KINGDOM

Marine Conservation Society Readers Digest

UNITED STATES

American Plastics Council

ARCO Foundation

Ashland Chemical Company-Drew Marine

Division

Bell Atlantic Corporation

UNITED STATES, cont.

Berkley

Body Śhop of America

Busch Entertainment Corporation

Chevron Corporation

The Coca-Cola Company

earth preserv

U.S. Environmental Protection Agency (EPA)

Faber-Castell Corporation

Florida Power Corporation

Georgia-Pacific Corporation

Hewlett-Packard

Jantzen, Inc.

Jenkins Foundation

Mobil Chemical Corporation

NAPCOR

National Oceanic & Atmospheric

Administration (NOAA)

U.S. Navy

Professional Association of Dive Instructors

(PADI) A.W.A.R.E. Foundation

The Proctor & Gamble Fund

The Society for the Plastics Industry

Southern Bell

Trull Foundation

Underwater Discovery, Inc.

Wheelabrator Technologies

VENEZUELA

AEROTUY

ASCERCA

Banco del Caribe

Casa Hellmund

CEDESA

Cerveceria Polar

Dupont de Venezuela

Fundacion Polar

Hotel Eurobuilding

Hotel Tamanaco

Holanda de Venezuela

INDULAC

Inversiones Sabenpe

MAVESA C.A.

MMC Automotriz

P.D.V.S.A.

Pequiven

Proctor & Gamble

Productos Quaker-Gatorade

Sun Chichi Hoteles

VENEZUELA, cont.

TELCEL

Toyoca Motors C.A.

Venterminales

