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GLOBAL ENVIRONMENTAL POLICY PROJECT

Country Comparison Charts

JOHN F. KENNEDY SCHOOL OF GOVERNMENT



COUNTRY COMPARISON CHARTS

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the**

GLOBAL ENVIRONMENTAL POLICY PROJECT

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ACKNOWLEDGEMENTS

These charts were put together by a team of researchers at the Global Environmental Policy Project at Harvard University. This information was gathered and prepared by Anthony Baker and Meghan Hynes, working under the direction of Henry Lee, Executive Director of the Energy and Environmental Policy Center, and William Clark, Senior Research Associate at the Science, Technology and Public Policy Program. Funding for this project was received from the Office of Program, Planning and Evaluation of the U.S. Environmental Protection Agency.

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

COUNTRY COMPARISON CHART 1: CHINA, INDIA, INDONESIA, JAPAN, SAUDI ARABIA

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

COUNTRY COMPARISON CHART: #1

(Sources of all figures can be found in Appendix 1.)

	CHINA	INDIA	INDONESIA	JAPAN	SAUDI ARABIA
GREENHOUSE GASES:					
CARBON DIOXIDE (average annual 1980-86 release): (1)					
Carbon Emissions (million tonnes/year)	456	126	117	256	27
Percentage Emissions from Fossil Fuel Use	96	86	23	100	100
Percentage Emissions from Deforestation/Land Clearing	4	14	77	0	0
Carbon Emissions (Percent of world total)	7.5	2.1	1.9	4.2	0.4
Carbon Emissions (world rank)	3	9	11	5	38
Per Capita Carbon Production (tonnes/person)	0.4	0.2	0.7	2.1	2.2
Per Capita Carbon Production (world rank)	32	33	30	18	35
CFC's (1988): (2)					
CFC Producer	YES	YES	NO	YES	NO
Halon Producer	YES	NO	NO	YES	NO
CFC Annual Consumption (thousand tonnes)	20	6	5	120	
CFC Annual Consumption (Percent of world total)	2	0.5	0.4	10	
CFC Per Capita Use (kg/person)	0.02	0.01	0.03	0.48	

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HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	CHINA	INDIA	INDONESIA	JAPAN	SAUDI ARABIA
DEMOGRAPHICS: (3)					
Population (million) (1986)	1,055	781	165	121	12
Average Annual Population Growth Rate (percent) (1985-90)	1.4	2.1	1.6	0.4	4.0
Projected Population in the year 2000 (million)	1,286	1,042	205	129	21
Projected Population in the year 2025 (million)	1,492	1,446	258	129	45
Projected Average Annual Population Growth Rate (percent) (1986-2025)	0.9	1.6	1.2	0.2	3.4
ECONOMIC GROWTH: (4)					
GNP (billion 1986 \$US) (1986)	315	213	82	1,560	83
Per Capita GNP (\$US) (1986)	300	270	500	12,850	6,930
Recent Annual GNP Growth Rate (percent) (1973-86)	7.6	4.5	6.1	4.1	3.4
Projected Annual GNP Growth Rate (percent) (1990-95)	7.0	6.0	5.0	3.8	
TRADE (1986): (5)					
Value of Exports as a Percent of GNP	10	6	16	13	24
Value of Imports as a Percent of GNP	14	7	16	8	23
Value of Fuel Exports as a Percent of Total Exports	12	3	53	<1	90
Value of Fuel Imports as a Percent of Total Imports	1	14	14	31	1

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	CHINA	INDIA	INDONESIA	JAPAN	SAUDI ARABIA
FOREIGN AID: (1984-86 average) (6)					
Donor/Recipient	R	R	R	D	D
Annual Amount (million \$US)	957	1,732	662	-4,583	-3,101
Foreign Aid as Percent of GNP	0	1	1	0.30	-3.53
EXTERNAL DEBT: (million \$US) (1986) (7)					
Public/Publicly Guaranteed Long-Term Debt	17,193	31,913	31,901		
Official Creditors	6,958	26,899	17,660		
Private Creditors	10,234	5,014	14,241		
World Bank	1,529	13,196	4,834		
FORESTS: (8)					
Country Area (million hectares)	960	329	190	38	215
Percent Forested Area (1986)	12	20	64	67	<1
Average Annual Change in Forest Area Extent (Percentage, 1981-86)	-0.1	-0.3	-0.5	0	0

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	CHINA	INDIA	INDONESIA	JAPAN	SAUDI ARABIA
ENERGY PROFILE:					
EFFICIENCY: (9)					
Energy Intensity (E demand/GDP) (1986)	1.4	0.79	0.35	0.29	0.42
Average Annual Percent Change in Energy Intensity since 1973	-1.3	1.4	3.3	-2.7	8.8
PRIMARY ENERGY PRODUCTION: (10)					
Total Commercial Energy Production (million metric toe) (1986)	582	140	100	75	269
Composition of Commercial Energy Production (1986) (Percent of Total)					
Solids	74	70	1	13	0
Liquids	22	22	71	1	97
Gas	2	4	27	2	3
Electricity (Hydro, Nuclear, Geothermal)	2	4	1	84	0
Percent Change in Commercial Energy Production: 1986-2000	59			64	
Projected Composition of Commercial Energy Production by year 2000 (Percent of Total)					
Solids	67			4	
Liquids	21			2	
Gas	12			4	
Electricity				88	

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	CHINA	INDIA	INDONESIA	JAPAN	SAUDI ARABIA
ENERGY PROFILE (continued):					
ENERGY CONSUMPTION: (11)					
Per Capita Energy Consumption (kgs of coal eq.) (1973)	633	196	136	3,918	1,272
Per Capita Energy Consumption (kgs of coal eq.) (1986)	706	272	280	3,625	4,148
Average Annual Percent Change in Per Capita Energy Consumption since 1973	1	2.5	5.7	-0.6	9.5
Commercial Energy Use by Sector (1985)					
Percent Energy Consumed in Transportation Sector	8	24	28	23	32
Percent Energy Consumed in Industry Sector	63	53	44	48	51
Percent Energy Consumed in Commercial and Residential Sector	22	15	28	20	?
Percent Energy Consumed in Other Uses	7	0	0	9	17
ELECTRICITY: (12)					
Electricity Generating Capacity (million kilowatts) (1986)	87	55	8	173	14
Electricity Generating Capacity Composition (1986) (Percent of Total)					
Thermal	69	69	80	64	100
Hydro/Geothermal	31	29	20	20	0
Nuclear	--	2	--	15	0
Percent Change in Electricity Generating Capacity: 1986-2000	176			37	
Projected Composition of Electricity Generating Capacity by year 2000 (Percent of Total)					
Thermal	33			47	
Hydro/Geothermal	64			14	
Nuclear	3			38	

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	CHINA	INDIA	INDONESIA	JAPAN	SAUDI ARABIA
PUBLIC OPINION ON GLOBAL CLIMATE CHANGE: (13)					
Percent of Public That Is Very Concerned That The Climate is Becoming Worse	25	52		22	28
Percent of Leaders That Are Very Concerned That The Climate is Becoming Worse	26	46		12	37
Percent of Public That Thinks Climate Change is a Major Problem	32	61		67	25
Percent of Leaders That Think Climate Change is a Major Problem	28	40		75	35
Ranking of Public Perceptions of 11 Major Environmental Problems					
(Highest rank given to issue considered major problem by greatest number of respondents.)					
Climate Change	11	11		11	11
Loss of Agricultural Land	2	1		6	3
Desertification	3	5		6	7
Deforestation	3	3		10	8
Drinking Water Pollution	1	1		1	1
Lake and River Pollution	3	4		2	4
Nuclear Power Plant Dangers	6	9		3	2
Air Pollution	8	7		4	6
Toxic Wastes	7	5		4	4
Pesticide/Herbicide Use	10	10		6	10
Acid Rain	9	8		6	9

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	CHINA	INDIA	INDONESIA	JAPAN	SAUDI ARABIA
GOVERNMENT ACTION ON GLOBAL CLIMATE CHANGE:					
INTER-GOVERNMENTAL PANEL ON CLIMATE CHANGE PARTICIPATION:(14)					
SCIENCE WORKING GROUP	X			X	
IMPACTS WORKING GROUP		X	X	X	
RESPONSES WORKING GROUP	X	X		X	X
IPCC CONTACTS/PARTICIPANTS: (14)					
Environment/Forestry Ministry		X		X	
Meteorological Agency/Institute	X			X	
Science/Industry Ministry				X	
Energy/Natural Resources Ministry	X				
External Affairs Ministry					
Finance/Economics Ministry					X
Other					
MONTREAL PROTOCOL: (September, 1989 status) (15)					
Signatory				X	
Non-ratifying Signatory			X		
Intends to Sign in Future					

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	CHINA	INDIA	INDONESIA	JAPAN	SAUDI ARABIA
SUMMARY: (16)					
AMOUNTS: (1986)					
Population Density (person/hectare)	1.1	2.4	.87	3.2	.06
GNP (billion 1980 \$US)	315	213	82	1,560	83
Real Per Capita GNP (\$US)	300	270	500	12,850	6,930
Energy Consumed (mtoe)	520	147	33	308	35
Energy Consumed/GNP (tonnes of oil/1000 \$US)	1.65	0.69	0.40	0.20	0.42
AMOUNTS: (1973)					
Population Density (person/hectare)	0.85	1.7	0.66	2.8	0.04
GNP (billion 1980 \$US)	122	120	38	929	54
Real Per Capita GNP (\$US)	150	209	305	8,570	6,398
Energy Consumed (mtoe)	346	77	12	292	7
Energy Consumed/GNP (tonnes of oil/1000 \$US)	2.83	0.64	0.32	0.31	0.14
AVERAGE ANNUAL RATES OF CHANGE: (1973-86) (Percentage)					
Population Density	2.0	2.7	2.1	1.0	3.2
Real Per Capita GNP (\$US)	5.5	2.0	3.9	3.2	0.6
Energy Consumed/GNP	-4.1	0.58	1.7	-3.3	8.8

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

**COUNTRY COMPARISON CHART 2:
FRANCE, FEDERAL REPUBLIC OF GERMANY, NORWAY,
POLAND, AND THE U.S.S.R.**

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

COUNTRY COMPARISON CHART: #2

(Sources of all figures can be found in Appendix 1.)

	FRANCE	F.R.G.	NORWAY	POLAND	U.S.S.R.
GREENHOUSE GASES:					
CARBON DIOXIDE (average annual 1980-86 release): (1)					
Carbon Emissions (million tonnes/year)	108	188	7	116	912
Percentage Emissions from Fossil Fuel Use	102	100	99	97	95
Percentage Emissions from Deforestation/Land Clearing	-2	0	1	3	5
Carbon Emissions (Percent of world total)	1.8	3.1	0.1	1.9	14.9
Carbon Emissions (world rank)	13	6	67	10	2
Per Capita Carbon Production (tonnes/person)	2.0	3.1	1.8	3.1	3.2
Per Capita Carbon Production (world rank)	20	11	50	10	8
CFC's (1988): (2)					
CFC Producer	YES	YES	NO	NO	YES
Halon Producer	YES	YES	NO	NO	YES
CFC Annual Consumption (thousand tonnes)		100	0.7	6	120
CFC Annual Consumption (Percent of world total)		8	<1	0.5	10
CFC Per Capita Use (kg/person)	1.1	1.1	0.18	0.15	0.4

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HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	FRANCE	F.R.G.	NORWAY	POLAND	U.S.S.R.
DEMOGRAPHICS: (3)					
Population (million) (1986)	55	61	4	37	281
Average Annual Population Growth Rate (percent) (1985-90)	0.4	-0.2	0.3	0.6	0.8
Projected Population in the year 2000 (million)	58	60	4	40	308
Projected Population in the year 2025 (million)	60	54	4	45	351
Projected Average Annual Population Growth Rate (percent) (1986-2025)	0.2	-0.3	0.2	0.5	0.6
ECONOMIC GROWTH: (4)					
GNP (billion 1986 \$US) (1986)	595	736	64	76	1,107
Per Capita GNP (\$US) (1986)	10,740	12,080	15,480	2,039	3,936
Recent Annual GNP Growth Rate (percent) (1973-86)	2.1	2.0	3.8	<1	2.4
Projected Annual GNP Growth Rate (percent) (1990-95)		2.5	2.1	3.5	4.1
TRADE (1986): (5)					
Value of Exports as a Percent of GNP	20	33	28	16	9
Value of Imports as a Percent of GNP	22	26	32	15	8
Value of Fuel Exports as a Percent of Total Exports	3	2	43	13	43
Value of Fuel Imports as a Percent of Total Imports	13	12	6	22	0

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	FRANCE	F.R.G.	NORWAY	POLAND	U.S.S.R.
FOREIGN AID: (1984-86 average) (6)					
Donor/Recipient	D	D	D	R	D
Annual Amount (million \$US)	-4,296	-3,185	-637		-3,286
Foreign Aid as Percent of GNP	-0.74	-0.45	-1.06		-0.29
EXTERNAL DEBT: (million \$US) (1986) (7)					
Public/Publicly Guaranteed Long-Term Debt				35,200	
Official Creditors				23,252	
Private Creditors				11,949	
World Bank				---	
FORESTS: (8)					
Country Area (million hectares)	55	25	32	32	2240
Percent Forested Area (1986)	27	29	26	28	42
Average Annual Change in Forest Area Extent (Percentage, 1981-86)	0	0	0	0	0

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	FRANCE	F.R.G.	NORWAY	POLAND	U.S.S.R.
ENERGY PROFILE:					
EFFICIENCY: (9)					
Energy Intensity (E demand/GDP) (1986)	0.25	0.30	0.38	1.6	1.2
Average Annual Percent Change in Energy Intensity since 1973	-2.5	-1.7	-1.7	0.5	0.9
PRIMARY ENERGY PRODUCTION: (10)					
Total Commercial Energy Production (million metric toe) (1986)	46	129	83	125	1,581
Composition of Commercial Energy Production (1986) (Percent of Total)					
Solids	27	63	1	97	23
Liquids	8	4	52	<1	39
Gas	9	9	29	3	36
Electricity (Hydro, Nuclear, Geothermal)	57	24	17	<1	2
Percent Change in Commercial Energy Production: 1986-2000		-1	-8		1
Projected Composition of Commercial Energy Production by year 2000 (Percent of Total)					
Solids		57	2		22
Liquids		0	46		30
Gas		10	29		37
Electricity		33	24		11

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	FRANCE	F.R.G.	NORWAY	POLAND	U.S.S.R.
ENERGY PROFILE (continued):					
ENERGY CONSUMPTION: (11)					
Per Capita Energy Consumption (kgs of coal eq.) (1973)	4,480	5,885	5,087	4,553	4,684
Per Capita Energy Consumption (kgs of coal eq.) (1986)	3,881	5,672	6,618	4,700	6,389
Average Annual Percent Change in Per Capita Energy Consumption since 1973	-1	-0.3	2	0.2	2.4
Commercial Energy Use by Sector (1985)					
Percent Energy Consumed in Transportation Sector	24	22	20	8	13
Percent Energy Consumed in Industry Sector	38	35	44	47	60
Percent Energy Consumed in Commercial and Residential Sector	33	37	30	45	27
Percent Energy Consumed in Other Uses	5	6	6	0	0
ELECTRICITY: (12)					
Electricity Generating Capacity (million kilowatts) (1986)	92	83	24	30	322
Electricity Generating Capacity Composition (1986) (Percent of Total)					
Thermal	27	69	1	93	71
Hydro/Geothermal	25	8	99	7	19
Nuclear	48	23	0	--	9
Percent Change in Electricity Generating Capacity: 1986-2000		23	35		
Projected Composition of Electricity Generating Capacity by year 2000 (Percent of Total)					
Thermal		64	8		
Hydro/Geothermal		4	92		
Nuclear		32	0		

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	FRANCE	F.R.G.	NORWAY	POLAND	U.S.S.R.
PUBLIC OPINION ON GLOBAL CLIMATE CHANGE: (13)					
Percent of Public That Is Very Concerned That The Climate is Becoming Worse	36	21	23		
Percent of Leaders That Are Very Concerned That The Climate is Becoming Worse		19	24		
Percent of Public That Thinks Climate Change is a Major Problem		36	30		
Percent of Leaders That Think Climate Change is a Major Problem		48	38		
Ranking of Public Perceptions of 11 Major Environmental Problems					
(Highest rank given to issue considered major problem by greatest number of respondents.)					
Climate Change		9	10		
Loss of Agricultural Land		11	9		
Desertification		10	11		
Deforestation		8	8		
Drinking Water Pollution		7	6		
Lake and River Pollution		1	1		
Nuclear Power Plant Dangers		6	5		
Air Pollution		5	2		
Toxic Wastes		1	4		
Pesticide/Herbicide Use		3	7		
Acid Rain		3	3		

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	FRANCE	F.R.G.	NORWAY	POLAND	U.S.S.R.
GOVERNMENT ACTION ON GLOBAL CLIMATE CHANGE:					
INTER-GOVERNMENTAL PANEL ON CLIMATE CHANGE PARTICIPATION:(14)					
SCIENCE WORKING GROUP		X			X
IMPACTS WORKING GROUP					X
RESPONSES WORKING GROUP	X		X		X
IPCC CONTACTS/PARTICIPANTS: (14)					
Environment/Forestry Ministry	X	X	X		
Meteorological Agency/Institute	X	X	X	X	X
Science/Industry Ministry					
Energy/Natural Resources Ministry					
External Affairs Ministry					
Finance/Economics Ministry					
Other					
MONTREAL PROTOCOL: (September, 1989 status) (15)					
Signatory	X	X	X		X
Non-ratifying Signatory				X	
Intends to Sign in Future					

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	FRANCE	F.R.G.	NORWAY	POLAND	U.S.S.R.
SUMMARY: (16)					
AMOUNTS: (1986)					
Population Density (person/hectare)	1.0	2.4	.12	1.2	0.12
GNP (billion 1980 \$US)	595	736	64	76	1,107
Real Per Capita GNP (\$US)	10,740	12,080	15,480	2,039	3,936
Energy Consumed (mtoe)	149	241	19	123	1,258
Energy Consumed/GNP (tonnes of oil/1000 \$US)	0.25	0.33	0.30	1.6	1.1
AMOUNTS: (1973)					
Population Density (person/hectare)	0.95	2.5	0.12	1.0	0.11
GNP (billion 1980 \$US)	454	520	40	71	814
Real Per Capita GNP (\$US)	8,700	8,391	9,975	2,128	3,260
Energy Consumed (mtoe)	160	250	14	104	802
Energy Consumed/GNP (tonnes of oil/1000 \$US)	0.35	0.48	0.35	1.5	0.98
AVERAGE ANNUAL RATES OF CHANGE: (1973-86) (Percentage)					
Population Density	0.4	-0.3	-0.2	1.4	0.7
Real Per Capita GNP (\$US)	1.6	2.8	3.4	-0.3	1.5
Energy Consumed/GNP	-2.5	-2.8	-1.2	0.5	0.9

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

**COUNTRY COMPARISON CHART 3:
BRAZIL, CANADA, COLOMBIA, MEXICO
AND THE UNITED STATES**

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

COUNTRY COMPARISON CHART: #3

(Sources of all figures can be found in Appendix 1.)

	BRAZIL	CANADA	COLOMBIA	MEXICO	U.S.
GREENHOUSE GASES:					
CARBON DIOXIDE (average annual 1980-86 release): (1)					
Carbon Emissions (million tonnes/year)	256	83	122	133	1,297
Percentage Emissions from Fossil Fuel Use	19	85	10	47	98
Percentage Emissions from Deforestation/Land Clearing	81	15	90	53	2
Carbon Emissions (Percent of world total)	4.2	1.4	2.0	2.2	21.2
Carbon Emissions (world rank)	4	16	10	8	1
Per Capita Carbon Production (tonnes/person)	1.8	3.2	4.2	1.7	5.4
Per Capita Carbon Production (world rank)	21	9	5	24	1
CFC's (1988): (2)					
CFC Producer	YES	YES	NO	YES	YES
Halon Producer	NO	NO	NO	NO	YES
CFC Annual Consumption (thousand tonnes)	9	17.6		5	329
CFC Annual Consumption (Percent of world total)	0.7	1.5		0.4	29
CFC Per Capita Use (kg/person)	0.07	0.68		0.07	0.84

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HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	BRAZIL	CANADA	COLOMBIA	MEXICO	U.S.
DEMOGRAPHICS: (3)					
Population (million) (1986)	138	26	29	81	245
Average Annual Population Growth Rate (percent) (1985-90)	2.1	0.9	2.1	2.2	0.8
Projected Population in the year 2000 (million)	179	28	38	107	266
Projected Population in the year 2025 (million)	246	32	52	150	301
Projected Average Annual Population Growth Rate (percent) (1986-2025)	1.5	0.5	1.5	1.6	0.5
ECONOMIC GROWTH: (4)					
GNP (billion 1986 \$US) (1986)	250	362	35	149	4,222
Per Capita GNP (\$US) (1986)	1,810	14,100	1,230	1,850	17,500
Recent Annual GNP Growth Rate (percent) (1973-86)	4.0	2.9	3.6	3.8	2.6
Projected Annual GNP Growth Rate (percent) (1990-95)		2			3
TRADE (1986): (5)					
Value of Exports as a Percent of GNP	9	23	15	11	5
Value of Imports as a Percent of GNP	6	22	11	8	9
Value of Fuel Exports as a Percent of Total Exports	4	10	12	43	4
Value of Fuel Imports as a Percent of Total Imports	27	5	6	1	10

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	BRAZIL	CANADA	COLOMBIA	MEXICO	U.S.
FOREIGN AID: (1984-86 average) (6)					
Donor/Recipient	R	D	R	R	D
Annual Amount (million \$US)	154	-1,650	71	160	-9,226
Foreign Aid as Percent of GNP	0	-0.48	0	0	-0.23
EXTERNAL DEBT: (million \$US) (1986) (7)					
Public/Publicly Guaranteed Long-Term Debt	82,523		11,437	74,962	
Official Creditors	18,729		6,087	10,714	
Private Creditors	63,794		5,349	64,248	
World Bank	6,032		2,568	4,418	
FORESTS: (8)					
Country Area (million hectares)	851	998	114	197	937
Percent Forested Area (1986)	66	35	45	23	28
Average Annual Change in Forest Area Extent (Percentage, 1981-86)	-0.4	0.5	-0.6	-1.1	-1.4

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	BRAZIL	CANADA	COLOMBIA	MEXICO	U.S.
ENERGY PROFILE:					
EFFICIENCY: (9)					
Energy Intensity (E demand/GDP) (1986)	0.68	0.75	0.25	0.56	0.56
Average Annual Percent Change in Energy Intensity since 1973	2.1	-1.3	7.4	2.2	-2.3
PRIMARY ENERGY PRODUCTION: (10)					
Total Commercial Energy Production (million metric toe) (1986)	51	278	29		1,579
Composition of Commercial Energy Production (1986) (Percent of Total)					
Solids	7	14	25		34
Liquids	57	31	55		31
Gas	5	24	14		24
Electricity (Hydro, Nuclear, Geothermal)	31	31	6		10
Percent Change in Commercial Energy Production: 1986-2000		35			8
Projected Composition of Commercial Energy Production by year 2000 (Percent of Total)					
Solids		17			44
Liquids		26			20
Gas		25			22
Electricity		31			14

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	BRAZIL	CANADA	COLOMBIA	MEXICO	U.S.
ENERGY PROFILE (continued):					
ENERGY CONSUMPTION: (11)					
Per Capita Energy Consumption (kgs of coal eq.) (1973)	615	9,632	666	1,160	11,738
Per Capita Energy Consumption (kgs of coal eq.) (1986)	761	9,694	779	1,604	9,489
Average Annual Percent Change in Per Capita Energy Consumption since 1973	2	0.05	1	2	-2
Commercial Energy Use by Sector (1985)					
Percent Energy Consumed in Transportation Sector	21	25	16	37	35
Percent Energy Consumed in Industry Sector	45	39	22	37	31
Percent Energy Consumed in Commercial and Residential Sector	29	31	7	13	30
Percent Energy Consumed in Other Uses	5	5	62	13	4
ELECTRICITY: (12)					
Electricity Generating Capacity (million kilowatts) (1986)	45	98	6	24	719
Electricity Generating Capacity Composition (1986) (Percent of Total)					
Thermal	14	31	30	71	76
Hydro/Geothermal	84	58	70	29	12
Nuclear	2	11	--	--	12
Percent Change in Electricity Generating Capacity: 1986-2000		42			45
Projected Composition of Electricity Generating Capacity by year 2000 (Percent of Total)					
Thermal		22			72
Hydro/Geothermal		60			11
Nuclear		17			16

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	BRAZIL	CANADA	COLOMBIA	MEXICO	U.S.
PUBLIC OPINION ON GLOBAL CLIMATE CHANGE: (13)					
Percent of Public That Is Very Concerned That The Climate is Becoming Worse	47			48	
Percent of Leaders That Are Very Concerned That The Climate is Becoming Worse	34			25	
Percent of Public That Thinks Climate Change is a Major Problem	77			63	
Percent of Leaders That Think Climate Change is a Major Problem	62			42	
Ranking of Public Perceptions of 11 Major Environmental Problems					
(Highest rank given to issue considered major problem by greatest number of respondents.)					
Climate Change	11			11	
Loss of Agricultural Land	5			2	
Desertification	10			9	
Deforestation	4			3	
Drinking Water Pollution	1			1	
Lake and River Pollution	1			5	
Nuclear Power Plant Dangers	8			8	
Air Pollution	9			4	
Toxic Wastes	5			6	
Pesticide/Herbicide Use	3			10	
Acid Rain	5			7	

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	BRAZIL	CANADA	COLOMBIA	MEXICO	U.S.
GOVERNMENT ACTION ON GLOBAL CLIMATE CHANGE:					
INTER-GOVERNMENTAL PANEL ON CLIMATE CHANGE PARTICIPATION:(14)					
SCIENCE WORKING GROUP	X				X
IMPACTS WORKING GROUP		X		X	
RESPONSES WORKING GROUP	X	X			X
IPCC CONTACTS/PARTICIPANTS: (14)					
Environment/Forestry Ministry		X			X
Meteorological Agency/Institute		X			X
Science/Industry Ministry					X
Energy/Natural Resources Ministry					X
External Affairs Ministry		X			X
Finance/Economics Ministry					X
Other	X				
MONTREAL PROTOCOL: (September, 1989 status) (15)					
Signatory		X		X	X
Non-ratifying Signatory					
Intends to Sign in Future					

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	BRAZIL	CANADA	COLOMBIA	MEXICO	U.S.
SUMMARY: (16)					
AMOUNTS: (1986)					
Population Density (person/hectare)	0.16	0.03	0.25	0.41	.26
GNP (billion 1980 \$US)	250	362	35	149	4,222
Real Per Capita GNP (\$US)	1,810	14,100	1,230	1,850	17,500
Energy Consumed (mtoe)	74	174	16	91	1,595
Energy Consumed/GNP (tonnes of oil/1000 \$US)	0.29	0.48	0.17	0.61	0.38
AMOUNTS: (1973)					
Population Density (person/hectare)	0.12	0.02	0.20	0.28	0.22
GNP (billion 1980 \$US)	150	250	22	92	3,016
Real Per Capita GNP (\$US)	1,479	11,279	954	1,692	14,335
Energy Consumed (mtoe)	42	146	10	45	1,694
Energy Consumed/GNP (tonnes of oil/1000 \$US)	0.28	0.58	0.46	0.49	0.56
AVERAGE ANNUAL RATES OF CHANGE: (1973-86) (Percentage)					
Population Density	2.2	1.6	1.7	3.0	1.3
Real Per Capita GNP (\$US)	1.6	1.7	2.0	0.7	1.5
Energy Consumed/GNP	0.3	-1.4	-7.4	1.7	-2.9

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

**COUNTRY COMPARISON CHART 4:
AUSTRALIA, EGYPT, KENYA, NIGERIA AND THE
UNITED KINGDOM**

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

COUNTRY COMPARISON CHART: #4

(Sources of all figures can be found in Appendix 1.)

	AUSTRALIA	EGYPT	KENYA	NIGERIA	U.K.
GREENHOUSE GASES:					
CARBON DIOXIDE (average annual 1980-86 release): (1)					
Carbon Emissions (million tonnes/year)	55	16	3	56	154
Percentage Emissions from Fossil Fuel Use	60	99	33	21	100
Percentage Emissions from Deforestation/Land Clearing	40	1	67	79	0
Carbon Emissions (Percent of world total)	0.9	0.3	0.1	0.9	2.5
Carbon Emissions (world rank)	22	46	98	19	7
Per Capita Carbon Production (tonnes/person)	3.5	0.3	0.2	0.6	2.7
Per Capita Carbon Production (world rank)	7	111	123	31	12
CFC's (1988): (2)					
CFC Producer	YES	NO	NO	NO	YES
Halon Producer	NO	NO	NO	NO	YES
CFC Annual Consumption (thousand tonnes)	12	3			
CFC Annual Consumption (Percent of world total)	1	0.2			
CFC Per Capita Use (kg/person)	0.78	0.06			1.1

9/89

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	AUSTRALIA	EGYPT	KENYA	NIGERIA	U.K.
DEMOGRAPHICS: (3)					
Population (million) (1986)	16	50	21	103	57
Average Annual Population Growth Rate (percent) (1985-90)	1.2	2.6	4.2	3.4	0.1
Projected Population in the year 2000 (million)	19	67	38	159	57
Projected Population in the year 2025 (million)	23	94	78	301	57
Projected Average Annual Population Growth Rate (percent) (1986-2025)	0.9	1.6	3.4	2.8	1.2
ECONOMIC GROWTH: (4)					
GNP (billion 1986 \$US) (1986)	190	38	6	66	505
Per Capita GNP (\$US) (1986)	11,910	760	300	640	8,920
Recent Annual GNP Growth Rate (percent) (1973-86)	2.4	7.0	4.3	0.1	1.4
Projected Annual GNP Growth Rate (percent) (1990-95)	3.0	5.8	5.9		2.0
TRADE (1986): (5)					
Value of Exports as a Percent of GNP	11	13	20	10	21
Value of Imports as a Percent of GNP	13	27	27	9	25
Value of Fuel Exports as a Percent of Total Exports	22	70	11	94	12
Value of Fuel Imports as a Percent of Total Imports	5	4	15	2	7

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	AUSTRALIA	EGYPT	KENYA	NIGERIA	U.K.
FOREIGN AID: (1984-86 average) (6)					
Donor/Recipient	D	R	R	D	D
Annual Amount (million \$US)	-759	1,734	436	-7	-1,570
Foreign Aid as Percent of GNP	-0.42	5	7	0	-0.33
EXTERNAL DEBT: (million \$US) (1986) (7)					
Public/Publicly Guaranteed Long-Term Debt		22,788	3,438	21,496	
Official Creditors		16,984	2,798	8,383	
Private Creditors		5,805	640	13,113	
World Bank		1,963	1,179	1,747	
FORESTS: (8)					
Country Area (million hectares)	769	100	58	92	24
Percent Forested Area (1986)	14	0	6	16	9
Average Annual Change in Forest Area Extent (Percentage, 1981-86)	0	0	-0.8	-2	1.6

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	AUSTRALIA	EGYPT	KENYA	NIGERIA	U.K.
ENERGY PROFILE:					
EFFICIENCY: (9)					
Energy Intensity (E demand/GDP) (1986)	0.45	0.62	0.20	0.18	0.34
Average Annual Percent Change in Energy Intensity since 1973	-0.6	2.5	-3.9	9.4	-1.9
PRIMARY ENERGY PRODUCTION: (10)					
Total Commercial Energy Production (million metric toe) (1986)	138	46	0.2	76	246
Composition of Commercial Energy Production (1986) (Percent of Total)					
Solids	68	--	--	<1	25
Liquids	21	90	--	96	53
Gas	9	8	--	4	16
Electricity (Hydro, Nuclear, Geothermal)	3	2	100	<1	6
Percent Change in Commercial Energy Production: 1986-2000	24				-18
Projected Composition of Commercial Energy Production by year 2000 (Percent of Total)					
Solids	75				28
Liquids	8				45
Gas	14				18
Electricity	2				9

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	AUSTRALIA	EGYPT	KENYA	NIGERIA	U.K.
ENERGY PROFILE (continued):					
ENERGY CONSUMPTION: (11)					
Per Capita Energy Consumption (kgs of coal eq.) (1973)	5,936	294	138	81	5,599
Per Capita Energy Consumption (kgs of coal eq.) (1986)	6,700	702	78	171	5,363
Average Annual Percent Change in Per Capita Energy Consumption since 1973	1	7	-4	6	-0.3
Commercial Energy Use by Sector (1985)					
Percent Energy Consumed in Transportation Sector	38	22	9	9	26
Percent Energy Consumed in Industry Sector	40	55	8	8	30
Percent Energy Consumed in Commercial and Residential Sector	18	15	1	82	37
Percent Energy Consumed in Other Uses	5	8	82	0	7
ELECTRICITY: (12)					
Electricity Generating Capacity (million kilowatts) (1986)	33	6	0.6	4	67
Electricity Generating Capacity Composition (1986) (Percent of Total)					
Thermal	78	54	29	53	83
Hydro/Geothermal	22	46	71	47	6
Nuclear	--	--	--	--	11
Percent Change in Electricity Generating Capacity: 1986-2000	52				17
Projected Composition of Electricity Generating Capacity by year 2000 (Percent of Total)					
Thermal	91				77
Hydro/Geothermal	9				2
Nuclear	0				19

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	AUSTRALIA	EGYPT	KENYA	NIGERIA	U.K.
PUBLIC OPINION ON GLOBAL CLIMATE CHANGE: (13)					
Percent of Public That Is Very Concerned That The Climate is Becoming Worse			61	49	37
Percent of Leaders That Are Very Concerned That The Climate is Becoming Worse			60	42	
Percent of Public That Thinks Climate Change is a Major Problem			56	41	
Percent of Leaders That Think Climate Change is a Major Problem			54	30	
Ranking of Public Perceptions of 11 Major Environmental Problems					
(Highest rank given to issue considered major problem by greatest number of respondents.)					
Climate Change			8	11	
Loss of Agricultural Land			1	1	
Desertification			3	2	
Deforestation			1	4	
Drinking Water Pollution			4	2	
Lake and River Pollution			5	5	
Nuclear Power Plant Dangers			11	9	
Air Pollution			7	7	
Toxic Wastes			6	5	
Pesticide/Herbicide Use			9	8	
Acid Rain			10	9	

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	AUSTRALIA	EGYPT	KENYA	NIGERIA	U.K.
GOVERNMENT ACTION ON GLOBAL CLIMATE CHANGE:					
INTER-GOVERNMENTAL PANEL ON CLIMATE CHANGE PARTICIPATION:(14)					
SCIENCE WORKING GROUP			X		X
IMPACTS WORKING GROUP	X			X	
RESPONSES WORKING GROUP	X				X
IPCC CONTACTS/PARTICIPANTS: (14)					
Environment/Forestry Ministry	X	X			
Meteorological Agency/Institute	X		X		X
Science/Industry Ministry	X				
Energy/Natural Resources Ministry	X				
External Affairs Ministry					X
Finance/Economics Ministry					
Other					X
MONTREAL PROTOCOL: (September, 1989 status) (15)					
Signatory	X	X	X	X	X
Non-ratifying Signatory					
Intends to Sign in Future					

HARVARD GLOBAL ENVIRONMENTAL POLICY PROJECT

	AUSTRALIA	EGYPT	KENYA	NIGERIA	U.K.
SUMMARY: (16)					
AMOUNTS: (1986)					
Population Density (person/hectare)	.02	0.50	.36	1.1	2.4
GNP (billion 1980 \$US)	190	38	6	66	505
Real Per Capita GNP (\$US)	11,910	760	300	640	8,920
Energy Consumed (mtoe)	75	24	1	12	212
Energy Consumed/GNP (tonnes of oil/1000 \$US)	0.39	0.62	0.20	0.18	0.42
AMOUNTS: (1973)					
Population Density (person/hectare)	0.02	0.36	0.21	0.65	2.3
GNP (billion 1980 \$US)	140	16	4	65	421
Real Per Capita GNP (\$US)	10,687	450	280	1,091	7,531
Energy Consumed (mtoe)	54	7	1	3	215
Energy Consumed/GNP (tonnes of oil/1000 \$US)	0.38	0.45	0.34	0.05	0.51
AVERAGE ANNUAL RATES OF CHANGE: (1973-86) (Percentage)					
Population Density	1.6	2.6	4.2	4.1	0.3
Real Per Capita GNP (\$US)	0.8	4.1	0.5	-4.0	1.3
Energy Consumed/GNP	0.2	2.5	-3.9	10	-1.5

APPENDIX 1:

ENDNOTES

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8. U.N. Food and Agricultural Organization (FAO), "1986 Production Yearbook", 1987, Table 1, pp. 47-58.

Note: The figures on the extent of deforestation in some tropical countries are much lower than in some other publications including USDOE's "Comparison of Tropical Forests", June 1986.

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Note: Figures for Saudi Arabia, France, Colombia, and Kenya are calculated from 1973 and 1986 United Nations figures; 1973 United Nations figures are in mtce and were converted to mtoe by using multiplier 0.6859.

10. United Nations, "1986 United Nations Energy Statistics Yearbook", Table 2, pp. 30-57; Table 32, pp. 320-348.

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14. USIPCC News, No. 1, 1989, p. 2.

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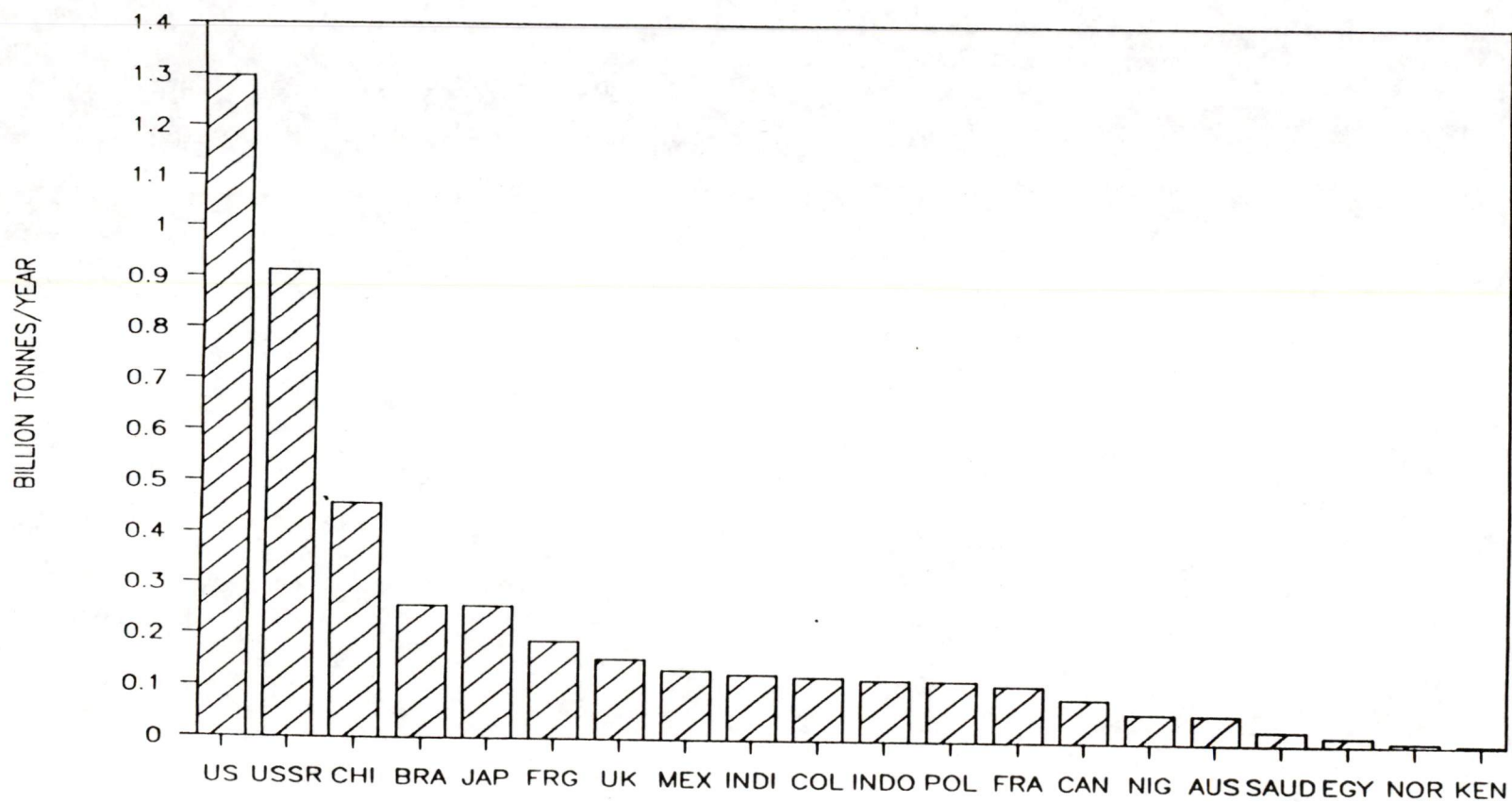
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FIGURE 1:

AVERAGE ANNUAL CARBON EMISSIONS (billion tonnes/year, 1980-86)



PRELIMINARY
DELEGATION LIST

CURRENT AS OF
APRIL 9, 1990; 12:30 P.M.

Additions: Australian delegation

AUSTRALIA

(tentative)

Name

Title

Neal Blewett

Member of Parliament,
Minister for Trade
Negotiations

Professor Ralph Slatyer

Chief Scientist,
Department of Prime
Minister and Cabinet

Dr. McGregor Tegart

Secretary, Australian
Science and Technology
Council

Alan Brown

First Assistant
Secretary, Department of
Foreign Affairs and Trade

Nelson Quinn

First Assistant
Secretary, Department of
Arts, Sport, Environment,
Tourism and Territories

Dr. John Zillman

Director, Bureau of
Meteorology

Rod Shogren

Assistant Secretary,
Treasury

Robert Allan

Acting Assistant
Secretary, Department of
Primary Industries and
Energy

(Official from Department of Industry, Technology and Commerce)

Michael Lumb

Victorian State
Government

BRAZIL

(tentative)

Name

Title

Jose Lutzenberger

Environment Secretary

Jose Goldemberg

Science Secretary

April 9, 1990

CANADA

(tentative)

<u>Name</u>	<u>Title</u>
Lucien Bouchard	Federal Environment Minister
Jak Epp	Federal Energy Minister
Dr. Geraldine Kenney Wallace	Chair, Science Council of Canada
Dr. Arthur W. May	President, Natural Sciences and Engineering Research Council
Dr. Anne White	Chair, Canadian IGBP Committee
Liz Dowdswell	Assistant Deputy Minister, Atmospheric Environment Service, Environment Canada
Judith Maxwell	Chair, Economic Council of Canada
Mr. Olton	Assistant Deputy Minister, Energy Policy Department of Energy Mines and Resources
George Anderson	Assistant Deputy Minister, Department of Finance
His Excellency Derek Burney	Ambassador to the United States

EUROPEAN COMMUNITY

(tentative)

Name

Title

Laurens Jan Brinkhorst

Director-General for
Environment, Nuclear
Safety and Civil
Protection

Jurgen Henningsen

Director for
Environmental Quality and
Natural Resources

Michael Emerson

Director for Economic
Evaluation of Community
Policies, Directorate-
General for Economic and
Financial Affairs

Philippe Bourdeau

Director for Environment
and Non-Nuclear Energy
Sources, Directorate-
General for Science,
Research and Development

Stanley Johnson

Director for Energy
Policy, Directorate-
General for Energy

David Wright

Central Advisory Group,
Secretariat-General of
the Commission

FEDERAL REPUBLIC OF GERMANY

(confirmed)

<u>Name</u>	<u>Title</u>
Professor Dr. Klaus Topfer	Federal Minister for the Environment, Nature Protection and Nuclear Safety
Dr. Gebhard Ziller	State Secretary, Ministry for Research and Technology
Dr. Wilhelm Knittel	State Secretary, Ministry of Transportation
Baldur Wagner	Assistant Secretary, Federal Chancellery
Dr. Mario Graf von Matuschka	Assistant Secretary, Foreign Ministry
Dr. Horst Glatzel	Deputy Assistant Secretary, Federal Chancellery
Walter Lotz	Deputy Assistant Secretary, Ministry of Economics
Professor Dr. Ansgar Vogel	Deputy Assistant Secretary, Ministry for Environment, Nature Protection, and Nuclear Safety
Dietrich Kupfer	Director, Office of International Cooperation, Ministry for Environment, Nature Protection and Nuclear Safety
Professor Dr. Hartmut Gross	Scientist, Max Planck Society, Hamburg

April 9, 1990

FRANCE

(tentative)

<u>Name</u>	<u>Title</u>
Hubert Curien	Minister of Research and Technology
Brice Lalonde	Secretary of State for the Environment
Jean Audouze	Science Advisor to the President
Claude Alegre	Special Advisor to the Minister of Education
Ambassador Jean Ripert	Ministry of Foreign Affairs (Environment)
Yves Martin	Chairman of the Interministry Committee on Greenhouse
Madame Borione	Ministry of Foreign Affairs
Andre LeBeau	General Director of the Meteorological Center
M. Nasse	Ministry of Economy and Budget
Sylvie Faucheux	Professor of Economy at Paris I

INDIA

(tentative)

Name

Title

Ms. Maneka Gandhi

Minister of State for
Environment and Forests

Dr. Vasant Gowarikar

Secretary of Department
of Science and Technology

Mahesh Prasad

Secretary of Ministry of
Environment and Forests

Dr. A.P. Mitra

Director General of
Council for Science and
Industrial Research

INDONESIA

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Name

Title

Prof. Dr. Ing. B.J. Habibie

Minister of State for
Research and Technology;
Chairman of the Agency
for the Assessment and
Application of Technology

Prof. Dr. Samaun Samadikun

Chairman of the
Indonesian Institute of
Sciences

Prof. Dr. John A. Katili

Vice Chairman of the
National Research Council

Prof. Dr. Gunawan Satari

Permanent Secretary,
Office of the Minister of
State for Research and
Technology

Mr. Poedji Kuntarso, MA

Director General for
Foreign Economic
Relations; Ministry of
Foreign Affairs

Prof. Dr. Rustam Didong

Deputy Chairman for
Economic Affairs,
National Development
Planning Agency

Prof. Dr. Harsono Wiryosumarto

Deputy Chairman for
Technology Development;
Agency for the Assessment
and Application of
Technology

Prof. Dr. S.B. Joedono

Assistant Minister IV
(Industry, Energy and
Mining), Office of the
Coordinating Minister for
the Economy, Finance,
Industry and Development
Supervision

April 9, 1990

INDONESIA

(continued)

Name

Title

Dr. M. Alwi Dahlan

Assistant Minister I
(Population), Office of
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Population and the
Environment

His Excellency Abdulrachman Ramly

Ambassador of the
Republic of Indonesia to
the United States of
America

ITALY

(tentative)

<u>Name</u>	<u>Title</u>
Hon. Adolfo Battaglia	Minister of Industry, Head of Delegation
Prof. Umberto Colombo	Director of the National Agency for Nuclear and Renewable Energies
Prof. Giuseppe Biorci	Vice President of the National Research Council
Prof. Giuseppe Bianchi	Director General for Energy Sources, Ministry of Industry
Prof. Antonio Praturlon	President of the CNR Committee on Geological Sciences
Prof. Roberto Frassetto	CNR Institute of the Dynamics of Great Masses
Prof. Emilio Gerelli	Economic Counselor to the Minister of Environment
Dr. Corrado Clini	Director General for Pollution Prevention, Ministry of Environment
Prof. Guido Visconti	Department of Physics, University of L'Aquila
Dr. Giovanni Sacco	Vice Director General of Treasury, Ministry of Treasury

JAPAN

(tentative)

Name

Title

Ishimatsu Kitagawa

Minister of Environment

Shigeto Nagano

Parliamentary Vice
Minister of Science and
Technology

Koji Watanabe

Deputy Minister, Ministry
of Foreign Affairs

Tadashi Yasuhara

Director General,
Planning and Coordination
Bureau, Environment
Agency

Dr. Michio Hashimoto

Advisor to the Minister
of Environment

Sousaburo Okamatsu

Director General,
Industrial Location and
Environmental Protection
Bureau, Ministry of
International Trade and
Industry

Keiichi Yokobori

Executive Director,
Research Institute of
International Trade and
Industry, Ministry of
International Trade and
Industry

Mr. Yoshikawa

Deputy Director General,
Planning Bureau, Economic
Planning Agency

Hiroto Ishida

Deputy Director General,
Office of Minister of
Science and Technology,
Science and Technology
Agency

Yuji Ikeda

Deputy Director General,
United Nations Bureau,
Ministry of Foreign
Affairs

April 9, 1990

MEXICO
(tentative)

<u>Name</u>	<u>Title</u>
Lic. Patricio Chirinos	Secretary of Urban Development and Ecology
Dr. Jose Sarukhan	Rector, National Autonomous University
Dr. Herminio Blanco	Undersecretary for Foreign Commerce, Secretariat of Commerce and Industrial Development
Ing. Alberto Escofet	Undersecretary for Energy, Secretariat of Energy, Mines and Parastatal Industries
Lic. Jose Angel Gurria	Undersecretary for International Financial Affairs, Secretariat of the Treasury
Fis. Sergio Reyes	Undersecretary for Ecology
Amb. Alberto Szekely	Legal Counsel, Secretariat of Foreign Affairs
Dr. Julian Adem	Director, Center for Atmospheric Studies, National Autonomous University
Dr. Manuel Ortega	Director General, National Council for Science and Technology
Hector Santana	Staff Aide to Secretary Chirinos

NIGERIA

(tentative)

NAME

TITLE

Major General Mamman Kontagora

Minister of Works and
Housing

Gordian Ezekwe

Minister of Science and
Technology

Dr. Bukar Shaïs

Chairman of Federal
Environmental Protection
Agency

Dr. E. O. Aina

Director and Chief
Executive of Federal
Environmental Protection
Agency

Dr. J. A. Adejokun

Director, Department of
Meteorological Services,
Ministry of Aviation

Professor Tudor

Director of Nigerian
Institute of
Oceanographic and Marine
Research

(one unnamed official from Ministry of Justice)

Alhaji Ahmed Abubakar

Director General, Federal
Ministry of Finance and
Economic Development

THE NETHERLANDS

(tentative)

<u>Name</u>	<u>Title</u>
Hans Alders	Minister for Housing, Physical Planning and Environment
Dr. B.C.J. Zoeteman	Deputy Director-General for Environment
Dr. Pier Vellinga	Coordinator for National Climate Programs
N.D. Van Egmond	Director for Chemistry and Physics, State Institute for Public Health and Environmental Hygiene
I.G. Roos	Directorate-General for European Cooperation, Ministry of Foreign Affairs
Dr. H.M. Fijnaut	Director of the Royal Dutch Meteorological Institute
Dr. A.P.M. Baede	Head of the Department for Dynamical Meteorology
D.F.W.T. Pietermaat	Environmental Coordinator in the Directorate- General for Energy, Ministry of Economic Affairs
Prof. J.B. Opschoor	Professor of Ecology, Free University, Amsterdam

NORWAY

(confirmed)

Name

Title

Kristin Hille Valla

Minister of Environment

Einar Steensnaes

Minister of Education and
Science

His Excellency, Kjeld Vibe

Norwegian Ambassador to
the United States

Oddmund Graham

Secretary General,
Ministry of Environment

Kaare Bryn

Director General,
Ministry of Foreign
Affairs

Dr. Tore Olsen

Director General,
Ministry of Education and
Research

Per M. Bakken

Coordinator, Air
Pollution, Ministry of
Environment

Lorents Lorentsen

Director of Research,
Central Bureau of
Statistics

Professor Dr. Ivar Isaksen

University of Oslo

Leif Westegaard

Science Officer,
Norwegian Embassy in
Washington

THE OECD
(tentative)

Name

Title

Robert Cornell

Deputy Secretary-General

William L. Long

Director for Environment

John Ferriter

Deputy Executive
Director, International
Energy Agency

Andrew Dean

Administrator, Department
for Economic Affairs and
Statistics

George Kowalski

Head of the Division of
Economic Analysis,
International Energy
Agency

POLAND*

(tentative)

<u>Name</u>	<u>Title</u>
Jan Janowski	Deputy Prime Minister; Head of the Agency for Science and Technological Progress and Application
Prof. Dr. Roman Andrezejewski	Deputy Minister of the Environment
Dr. Tadeusz Diem	Deputy Minister of National Education
Dr. Marcin Rybicki	Undersecretary of State, Central Planning Office
Kazimierz Duchowski	Director, Department of Economic Cooperation, Ministry of Foreign Affairs
Stanislaw Wiackowski	Chairman, Parliamentary Commission on Environmental Protection
Prof. Leszek Stakel	Polish Academy of Sciences
Prof. Maciej Sadowski	Institute of Meteorology and Water Management
Dr. Wlodzimierz Bojarski	Member of the Senate
His Excellency, Jan Kinast	Polish Ambassador to the United States

* All English speaking

April 9, 1990

SOVIET UNION

(confirmed)

<u>Name</u>	<u>Title</u>
Nikolay Pavlovich Laviorov	Chairman of the U.S.S.R. State Committee on Science and Technology
Juriy Antonievich Israel	Chairman of the U.S.S.R. State Committee on Hydrometeorology
Artem Andreevich Troizkiy	Deputy Chairman of the U.S.S.R. State Planning Committee
Victor Fedorovich Kostin	Deputy Chairman of the U.S.S.R. State Committee on Nature Protection
Alexandr Petrovich Metalnikov	Deputy Chairman of the U.S.S.R. State Committee on Hydrometeorology
Vladimir Mihailovich Kotliakov	Director of the Institute of Geography, U.S.S.R. Academy of Sciences
Juriy Vladimirovich Vakaluyk	Chief, Division of Global Geophysical Problems, Climate Change and Economic Consequences, State Committee on Hydrometeorology
Juriy Leonidovich Golubev	Assistant to the Chairman, State Committee on Hydrometeorology
Boris Vladimirovich Pihanov	State Committee on Hydrometeorology, Department of International Cooperation
Nataliy Jur'yevna Vail	State Committee on Hydrometeorology, Department of International Cooperation

April 9, 1990

UNITED KINGDOM

(tentative)

<u>Name</u>	<u>Title</u>
David Trippier RD, JP, MP	Minister for the Environment and Countryside
Sir John Fairclough	Chief Scientific Adviser, the Cabinet Office
Sir Crispin C.C. Tickell, GCMG, KCVO	United Kingdom Permanent Representative to the United Nations
Dr. John T. Houghton CBE	Director-General, Meteorological Office
J.G. Odling-Smee	Deputy Chief Economic Adviser; HM Treasury
Dr. David J. Fisk	Chief Scientist, Department of Environment
Dr. W. David Evans	Chief Scientist, Department of Energy
Dr. Eileen Buttle	Secretary, Natural Environment Research Council

April 9, 1990

UNITED STATES OF AMERICA

(confirmed)

Name

Title

Nicholas F. Brady

Secretary of the Treasury

Manuel Lujan, Jr.

Secretary of the Interior

Clayton Yeutter

Secretary of Agriculture

Robert A. Mosbacher

Secretary of Commerce

Admiral James D. Watkins (Ret)

Secretary of Energy

William K. Reilly

Administrator,
Environmental Protection
Agency

Richard H. Truly

Administrator, National
Aeronautics and Space
Administration

John A. Knauss

Under Secretary of
Commerce for Oceans and
Atmosphere; and Director,
National Oceanic and
Atmospheric
Administration

Erich Bloch

Director, National
Science Foundation

Richard Schmalensee

Member, Council of
Economic Advisers

ZAIRE

(tentative)

Name

Title

Citoyen Lobo Kanza Kanza

Secretary of State
(Deputy Minister);
Ministry of
Environment and
Conservation of Nature

April 9, 1990

As of 4/9; Noon

HEADS OF DELEGATIONS

COUNTRY	NAME OF DELEGATE	TITLE
Australia	Neal Blewett	Minister for Trade Negotiations
Brazil	Jose Lutzenberger (Tentative)	Secretary of Environment
Canada	Lucien Bouchard	Federal Environment Minister
Federal Republic of Germany	Klaus Toepfer	Federal Environment Minister
France	Hubert Curien	Minister of Research & Technology
India	Maneka Gandhi	Min. of State for Environment
Indonesia	B.J. Habibie	Min. of State for Res. & Tech.
Italy	Adolfo Battaglia	Minister of Industry
Japan	Ishimatsu Kitagawa	Minister of Environment
Mexico	Patricio Chirinos	Sec. of Urban Dev. & Ecology
Netherlands	Hans Alders	Minister of Environment
Nigeria	Maj. Genl. Mamman Kontagora	Minister of Works and Housing
Norway	Kristin Hille Valla	Minister of Environment
Poland	Jan Janowski	(also Head of S&T Cooperation) Deputy Prime Minister
Soviet Union	Nikolay Laverov	Chmn. St. Cmte. Sci. & Tech.
United Kingdom	David Trippier	Minister for Environment
United States	Nicholas Brady	Secretary of Treasury
Zaire	Citoyen Lobo Kanza Kanza	Depty. Minister of Environment
European Community (EC)	**Laurens Jan Brinkhorst	Director-General for Environment
OECD	Robert Cornell	Deputy Secretary-General

**Some confusion between EC and Irish. We now have 14 names; also indications that delegation head might be Filippo Maria Pandolfi, Commissioner (Vice President) in charge of Science, Research and Development.

PRELIMINARY SCHEDULE
for
THE WHITE HOUSE CONFERENCE
on
SCIENCE AND ECONOMICS RELATED
TO
GLOBAL CHANGE

April 17-18, 1990
J.W. MARRIOTT HOTEL
WASHINGTON, D.C.

MONDAY, APRIL 16, 1990

10:00 a.m.

PRESS CREDENTIALING BEGINS
Rayburn Room
Contact: Debbie Smith 724-0602

10:30 a.m.

REGISTRATION BEGINS
Front Lobby

Contact: Carol Jensen
Site Phone: 724-0664 or 724-0665

1:00- 3:00 p.m.

AGENCY OF INTERNATIONAL
DEVELOPMENT LUNCHEON

Room: Salon D
Contact: Julie Hanson
Beeper: 719-1169
Attendees: 70
Press Plan: CLOSED

Hosts: Ronald Roskens,
Administrator for the
Agency for International
Development

4:45 p.m.

SEC. MOSBACHER (TIGER TEAM)
Dept. of Commerce
Secretary's Conference Room

5:45- 6:15 p.m.

HEADS OF DELEGATION PRE-RECEPTION
Presidential Suite
Contact: Melinda Andrews
Beeper: 719-3816
Attendees: 30
Press Plan: Closed
Mix & Mingle/ Photo-Op w/ Co-Chairs
Photographer: Vincent Rickardall

Hosts: Michael Boskin
Alan Bromley
Michael Deland

MONDAY, APRIL 16, 1990 CONT;

[6:15 p.m.] Delegation heads ARE ESCORTED by Melinda Andrews from Presidential Suite to 14th street entrance for departure to Air & Space Museum

6:20 p.m. Delegates gather at Pennsylvania Street entrance for departure to Air & Space Museum
Met by: Nicholas Graham

[6:25 p.m.] Delegation Heads DEPART J.W. MARRIOTT from 14th Street entrance of J.W. Marriott en route Air & Space Museum
Met by: Caroline Sabel
Drive Time: 20 Minutes

6:45 p.m. Delegates begin DEPARTING J.W. MARRIOTT from Pennsylvania Ave. entrance en route Air & Space Museum
Drive Time: 20 Minutes
Movement Contact: Melinda Andrews
BEEPER: 719-3816

[6:45 p.m.] Delegation Heads ARRIVE AIR & SPACE MUSEUM'S East End Entrance off of Jefferson Ave
Met by: Alyce Best
Site Phone: 357-4022
Greeted by: Sec. Mosbacher
 RADM Truly
 Dean Anderson
 Dr. Martin Harwit

 Photo-Op upon arrival w/ Sec. Mosbacher and RADM Truly
Photographers: Vincent Rickardall
 Cynthia Johnson

6:55 p.m. Delegates ARRIVE AIR & SPACE MUSEUM'S South Lobby entrance off of Independence Ave
Escorted by Caroline Sabel to Theater entrance upon arrival

MONDAY, APRIL 16, 1990 CONT;

7:15 p.m. UNDERSECRETARY ANDERSON makes
welcoming remarks and introduces
Dr. Harwit

7:17 p.m. DR. HARWIT delivers remarks and
introduces Sec. Mosbacher

7:19 p.m. SEC. MOSBACHER makes remarks
(6 Min)

7:25 p.m. DR. HARWIT introduces RADM TRULY

7:26 p.m. RADM Truly delivers remarks

7:28 p.m. Jim Wetherbee introduces IMAX Film

7:29- 7:36 p.m. IMAX FILM

7:36 p.m. Delegates are escorted by Caroline
Sabel, Alyce Best to Pioneers of
Flight area for Reception

7:40- 8:30 p.m. RECEPTION
PIONEERS OF FLIGHT AREA

Contact: Alyce Best
Site Phone: 357-4022
Attendees 350
Press: CLOSED

Hosts: Robert Mosbacher,
Secretary of Commerce

Dean Anderson,
Undersecretary
Smithsonian

Martin Harwit,
Director Air & Space
Museum

MONDAY, APRIL 16, 1990 CONT;

8:30 p.m.

DELEGATES DEPART AIR & SPACE MUSEUM
VIA JEFFERSON AVENUE EN ROUTE J.W.
MARRIOTT

Drive Time: 20 Minutes

8:50 p.m.

DELEGATES ARRIVE PENNSYLVANIA
AVENUE ENTRANCE J.W. MARRIOTT

RON J.W. MARRIOTT HOTEL
WASHINGTON, D.C.

TUESDAY, APRIL 17, 1990

6:00 a.m.

DIVISON HEADS MEETING
Suite 1153

7:00 a.m.

PRESS PRE-SET
Contact: Reed Boatright
724-0602

7:30- 8:30 a.m.

DELEGATION HEADS BREAKFAST
Commerce Room

Contact: Julie Hanson
BEEPER: 719-1169
Attendees: 35
Press Plan: CLOSED

Hosts:

Clayton Yeutter
Manuel Lujan, Jr.

8:00- 9:15 a.m.

CONTINENTAL BREAKFAST FOR
DELEGATES

Location: CAPITOL FOYER,
BALLROOM LEVEL

Attendees: 250

Contact: Lyz Long
BEEPER: 719-1125

8:30- 9:30 a.m.

U.S. DELEGATION BRIEFING

Presidential Suite

Attendees: 25

8:50- 9:00 a.m.

PRESS- PRE-SET
Contact: Reed Boatright
724-0602

TUESDAY, APRIL 17, 1990 CONT,

9:45 a.m.

PLENARY SESSION I

Location: Salons II, III, IV
of Grand Ballroom

Contact; Lyz Long
BEEPER: 719-1125

Attendees: 350
Press Plan: OPEN

Moderator: Michael Boskin

Scenario:

9:30 a.m.

ALL DELEGATES ARE SEATED

PRESIDENT BUSH ARRIVES J.W.
MARRIOTT AND PROCEEDS TO HOLDING
ROOM

9:45- 9:49 a.m.

Michael Boskin opens Plenary
Session I with brief welcoming
remarks

9:49 a.m.

Michael Boskin introduces Sec.
Brady

9:50- 9:58 a.m.

Welcoming Remarks:
Nicholas F. Brady,
Secretary of the Treasury

9:59 a.m.

SECRETARY BRADY INTRODUCES THE
PRESIDENT

10:00- 10:10 a.m.

WELCOME: PRESIDENT BUSH

10:11 a.m.

President departs Plenary Session

TUESDAY, APRIL 17, 1990 CONT;

10:14 a.m.	Michael Boskin introduces Alan Bromley
10:15- 10:25 a.m.	Goals & Expectations for the Conference: D. Allan Bromley
10:26 a.m.	Bromley introduces J. Janowski
10:27- 10:37 a.m.	Opening Remarks by Visiting Delegate: J. Janowski, Deputy Prime Minister of Poland
10:38 a.m.	BOSKIN CLOSES PLENARY SESSION I AND ANNOUNCES THAT WORKING ALLOCATIONS WILL BE DISTRIBUTED AT 10:45 A.M.
10:38- 11:00 a.m.	BREAK

TUESDAY, APRIL 17, 1990 CONT;

11:00 a.m.

PLENARY SESSION II COMMENCES

Location: Grand Ballroom
Attendees: 350
Press Plan: OPEN

Moderator: Michael R.
Deland

Scenario:

11:01 a.m.

MICHAEL DELAND OPENS SESSION AND
INTRODUCES ALAN BROMLEY

11:03- 11:18 a.m.

Theme I Presentation: "The
Science and Economics
Research Challenge"- D.
Alan Bromley

11:19 a.m.

Michael Deland introduces Michael
Boskin

11:20- 11:34 a.m.

Theme II Presentation:
"Integrating Science and
Economics Research in the
Policy Process"- Michael
Boskin

11:35- 11:50 p.m.

Theme III Presentation:
"Building Partnerships for
Science and Economics
Research- Michael R. Deland

11:50 a.m.

MICHAEL DELAND CLOSES PLENARY
SESSION II AND MAKES
ANNOUNCEMENTS AS ALL DELEGATES
PREPARE TO PROCEED INTO
CAPITOL BALLROOM FOR LUNCHEON

TUESDAY, APRIL 17, 1990 CONT;

12:00-1:30 p.m.

LUNCHEON

Location: CAPITOL BALLROOM E, F & G

Attendees: 250

Press Plan: OPEN

Contact: Julie Hanson

BEEPER: 719-1169

Guest Speaker: ADM. WILLIAM
REILLY

Scenario:

12:05 p.m.

All Delegates are seated for
Lunch

12:15 p.m.

ENTREE IS SERVED

12:56 p.m.

ALL HOTEL SERVICE ENDS FOR
PROGRAM TO BEGIN

12:57 p.m.

Michael Boskin introduces Adm.
Reilly

1:00- 1:25 p.m.

Speaker: William Reilly,
Administrator Environmental
Protection Agency

1:26 p.m.

MICHAEL BOSKIN CLOSES LUNCHEON
AND MAKES ANNOUNCEMENTS

TUESDAY, APRIL 17, 1990 CONT;

1:45- 4:15 p.m.

WORKING GROUP SESSIONS I & II
Grand Ballroom Salons, 1,2, & 4

Contact: Julie Hanson
BEEPER: 719-1169
Session I Rapporteur:
Session II Rapporteur:

SESSION I

1:47- 1:56 p.m.

International Co-Chairman opens
working group

1:57- 2:06 p.m.

International Co-Chairman II
delivers remarks

2:07- 2:16 p.m.

Scientist Presentation

2:17- 3:17 p.m.

GENERAL DISCUSSION

3:18- 3:28 p.m.

Wrap-Up & Conclusion

3:30- 3:45 p.m.

BREAK

SESSION II

3:46- 3:55 p.m.

International Co-Chairman opens
Working Session II

3:56- 4:06 p.m.

International Co-Chairman II
delivers remarks

4:07-4:16 p.m.

Economist Presentation

4:17- 5:16 p.m.

DISCUSSION

5:17- 5:27 p.m.

Wrap-Up & Conclusion

5:30 p.m.

WORKING SESSION II CONCLUDES

TUESDAY, APRIL 17, 1990 CONT;

5:50 p.m. Delegates gather at Pennsylvania Ave. entrance for departure to National Academy of the Sciences
Contact: Joe MaGuire
BEEPER: 719-3775

6:00 p.m. Delegates begin shuttle departures from J.W. MARRIOTT en route National Academy of Sciences every 15 minutes

Shuttle Contact: Joe MaGuire
BEEPER: 719-3775

6:20 p.m. Delegates begin arriving at National Academy of the Sciences C Street entrance

Site Contact: Caroline Sabel
Site Phone: 334-2000

7:50 p.m. Sweep Car departs J.W. Marriott en route State Department

8:00 p.m. Final Shuttle departs J.W. Marriott en route State Department

6:00- 7:30 p.m. **NAS RECEPTION**
National Academy of the Sciences

Room: The Great Hall
Attendees: 350
Press Plan: CLOSED

Program: NONE

Hosts: Frank Press, President of the NAS

Robert White, President of the NAE

TUESDAY, APRIL 17, 1990 CONT;

7:00 p.m.

Delegates are escorted by foot
by Julie Hanson & staff en route
State Department's C Street
entrance

7:10 p.m.

DELEGATES ARRIVE STATE
DEPARTMENT'S C STREET ENTRANCE
AND ARE ESCORTED INTO JEFFERSON
ROOM FOR PRE-DINNER COCKTAILS

Contact: Lyz Long
BEEPER: 719-1125

7:00- 7:40 p.m.

Cocktails in Jefferson Room

TUESDAY, APRIL 17, CONT;

OFFICIAL DELEGATE DINNER

U.S. State Department

Contact: Lyz Long

BEEPER: 719-1125

Room: Franklin Room

Attendees: 250

Press Plan: CLOSED

Dress: Business Suit

HOST: Lawrance Eagleburger

Speaker: Bert Bolin, Chairman
IPCC

Scenario:

7:40 p.m.

Guests proceed into Franklin Room

8:00 p.m.

Guests are seated for Dinner

8:05- 8:08 p.m.

Eagleburger makes welcoming
remarks

8:10 p.m.

Dinner is served

9:28 p.m.

Eagleburger introduces Bert Bolin

9:30- 9:50 p.m.

BERT BOLIN DELIVERS REMARKS

9:51 p.m..

EAGLEBURGER CONCLUDES DINNER &
GUESTS DEPART STATE DEPARTMENT
VIA C STREET ENTRANCE

10:00 p.m.

Bus shuttles begin to DEPART
STATE DEPARTMENT en route J.W.
Marriott

Drive Time: 15 Minutes

10:15 p.m.

Shuttle Buses begin ARRIVING J.W.
MARRIOTT

RON J.W. MARRIOTT HOTEL
WASHINGTON, D.C.

WEDNESDAY, APRIL 18, 1990

7:30- 8:30 a.m.

U.S. DELEGATION BRIEFING
Presidential Suite

7:30- 8:30 a.m.

CONTINENTAL BREAKFAST
Capitol Ballroom Foyer

8:30- 11:30 a.m.

WORKING GROUP SESSIONS III & IV
Grand Ballroom, Salons 1,2 & 4
Contact: Julie Hanson
BEEPER: 719-1169
Session Rapporteur:
Session Rapporteur:

WORKING SESSION III

8:31- 8:40 a.m.

International Co-Chairman opens
Working Session III

8:41- 8:50 a.m.

International Co-Chairman II
delivers remarks

8:51- 9:51 a.m.

Discussion

9:52- 10:00 a.m.

Wrap-Up & Conclusion

10:00- 10:20 a.m.

BREAK

WEDNESDAY, APRIL 18, 1990 CONT;

WORKING SESSION IV

10:21- 10:30 a.m.	U.S. Delegate opens Session
10:31- 11:31 a.m.	Discussion
11:32- 11:40 a.m.	Wrap-Up & Conclusion
11:40 a.m.	WORKING GROUP SESSIONS CONCLUDE WITH ANNOUNCEMENTS

WEDNESDAY, APRIL 18, 1990 CONT;

12:00-1:30 p.m.

DELEGATE LUNCHEON

Location: Capitol Ballroom E, F & G
Contact: Julie Hanson
BEEPER: 719-1169

Attendees: 250
Press Plan: OPEN

Speaker: Adm. James Watkins

Scenario:

12:00 Noon

LUNCHEON BEGINS

12:05 p.m.

Lunch is served

12:25 p.m.

12:55 p.m.

ALL HOTEL SERVICE ENDS FOR
PROGRAM TO BEGIN

12:58 p.m.

Michael Deland introduces Sec.
Watkins

1:00- 1:25 p.m.

Speaker: James Watkins,
Secretary, Department of Energy

1:26 p.m.

MICHAEL DELAND CLOSES LUNCHEON
AND MAKES ANNOUNCEMENTS

WEDNESDAY, APRIL 18, 1990 CONT;

1:45-3:00 p.m.

PLENARY SESSION II
Grand Ballroom, Salons II, III &
IV

Contact: Lyz Long
BEEPER: 719-1125

Moderator: D. Allan Bromley

Scenario:

2:00 p.m.

Allan Bromley opens Plenary
Session with brief remarks

2:04 p.m.

Alan Bromley introduces Michael
Deland

2:05- 2:29 p.m.

Review of Co-Chairmen's Report:
Michael Deland

PRESIDENT ARRIVES J.W. MARRIOTT
AND PROCEEDS TO HOLDING ROOM

2:29 p.m.

OFF-STAGE INTRODUCTION OF THE
PRESIDENT

2:30- 2:45 p.m.

PRESIDENT DELIVERS CLOSING
REMARKS

2:46 p.m.

CONFERENCE CONCLUDES

U.S.-led conference assailed by ecologists

By Terry Atlas

Chicago Tribune

WASHINGTON—European officials and environmentalists arriving Monday for a White House-sponsored conference on global warming complained that the two-day meeting is only an administration tactic to delay international measures to combat the expected warming.

The 17-nation conference could become the latest battleground between those who favor quick international agreement on steps to limit emissions of "greenhouse gases," which are believed to cause a gradual warming of the planet, and a hesitant Bush administration.

The meeting, which begins Tuesday, represents an effort by President Bush to direct the debate toward the scientific uncertainties about global warming and the potentially enormous economic costs of curtailing the emissions tied to climate changes.

Bush is expected to use the conference to call for increased research on the problem and not endorse the Europeans' call for a quick international agreement limiting carbon dioxide emissions from autos and industry.

Bush's approach has been criticized by West German Chancellor Helmut Kohl, who wrote the president recently to complain about American inaction on global warming, a gradual process that many experts fear will lead to serious environmental changes by the middle of the next century.

A member of the Dutch delegation to the conference Monday also criticized what he called the administration's "reluctant approach," and a representative from the European Community said that scientific and economic uncertainties were not reason enough to postpone actions to curtail carbon dioxide emissions.

"Available scientific knowledge shows that we are facing potential climatic changes which could in the long-term have unacceptable disruptive consequences for all mankind," said Irish Environment Minister Padraig Flynn, who will represent the 12-nation European Community at the conference. "In spite of remaining uncertainties on some aspects of the issue, an effective response policy must be established now."

A United Nations panel of climate experts is expected to report this fall that significant global warming is taking place, confirming the basic validity of projections that the heat trapped by greenhouse gases will warm the Earth by 3 to 8 degrees Fahrenheit by the year 2050.

Their report could provide the basis for international negotiations to begin late this year or early next year on measures to try to slow the anticipated warming.

White House economic adviser Michael Boskin, one of the three administration co-chairmen for the conference, last week played down the significance of the potential heating.

He said the climate change would "roughly translate into a change in temperature less than moving from Washington to Atlanta. So while there may be some serious economic consequences, nobody's talking about something that's sort of wildly outside the range of human experience to adapt to."

Skeptical about the scientific basis for global warming projections, Boskin said it would cost the U.S. alone as much as \$200 billion a year to try to counter the warming trend by reducing carbon dioxide emissions 20 percent by the year 2005, as Western European nations have suggested.

But James Hansen of the Goddard Institute for Space Studies, one of the leading experts on global warming, said Boskin misses a key point: Such a climate change would have enormous environmental consequences. Even a small increase in overall temperatures would create droughts in much of the South's agricultural areas, as well as in large parts of Africa, hurting food production and living conditions.

"There will be big repercussions, even if we are only half right," Hansen said.

The Europeans have complained that the public sessions of the conference are dominated by administration officials and give no time for them publicly to present their differing views.

"The whole agenda is kind of one-way traffic," said Pier Vellinga, a senior official in the Dutch Environment Ministry. "We are concerned that this conference is focusing on economic issues and not on the question of political will."

Chgo. Trib.

4/17/90