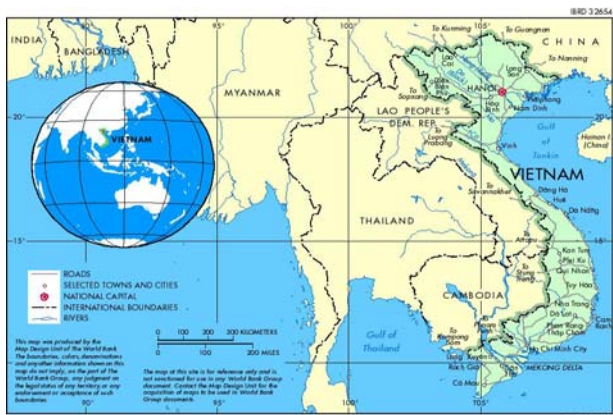


# Environment at a Glance 2004

## Vietnam



### Introduction



This map was produced by the Map Design Unit of the World Bank. The boundaries, colors, denominations and any other information shown on this map do not imply, on the part of the World Bank Group, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries.

### GOVERNMENT INVOLVEMENT: MULTINATIONAL AGREEMENTS

Vienna Convention (ozone)	1994
UNFCCC (climate change)	1994
UNCLOS (law of the sea)	1994
UNCCD (desertification treaty)	..
Ramsar Convention (wetlands)	1989
Kyoto Protocol (CO2 emissions)	1998 (signed only)
Convention on Biodiversity	..
CMS (migratory species treaty)	..
CITES (species trade treaty)	..

Vietnam is a Low Income country with per capita income of \$430. It is located in the East Asia and Pacific region. Its land area is 32,549 thousand hectares. Total population is 73.0 millions, of which 78% is rural. Population density is 247 people per sq. km.

Forest area accounts for 2% of total forests in East Asia and Pacific. Nationally protected areas cover 3.7% of the territory (the conventional target is 10%).

Fish catch is among the 10 highest in the world, with 1,451,800 tons per year.

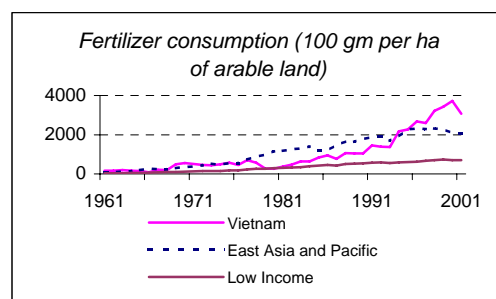
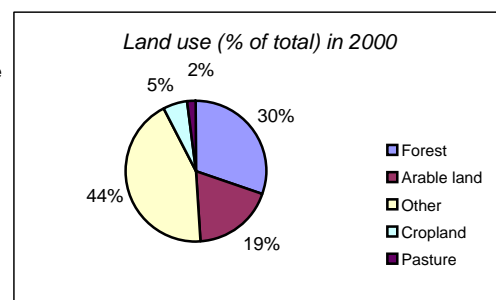
Health damages from particulate emissions (PM10) have been estimated to account for 0.4% of GNI.

Freshwater resources per capita are abundant. Access to improved water source is 77%, which is above the regional and income group levels. Access to sanitation facilities is 47%, which is below the regional level.

### Environment and Natural Resource Indicators

#### AGRICULTURE

	Vietnam		East Asia and Pacific	Low Income
	1995	2002	2002	2002
Population, total (millions)	73.0	80.4	1,839.2	2,269.7
Rural population (% of total)	77.8	75.1	61.8	69.4
	1995	2001	2001	2001
Land area (thousand ha)	32,549	32,549	..	..
Arable land (thousand ha)	5,403	6,500	..	..
Forest area (% of area)	28.6	30.2	27.2	27.1
Arable land (% of area)	16.6	20.0	13.3	12.5
Cropland (% of area)	4.1	6.0	2.7	1.5
Pasture (% of area)	1.0	2.0	34.4	28.5
Area under cereal production (thousand ha)	7,322	8,212	135,760	247,580
Irrigated land (thousand ha)	3,000	3,000	..	..
Fertilizer consumption (100 gm per ha of arable land)	2,264.9	3,075.7	2,076.9	709.8
Agriculture value added per worker (constant 1995 US\$)	216.5	258.5	..	389.0
Food production index (1989-91 = 100)	128.1	168.1	170.7	135.8



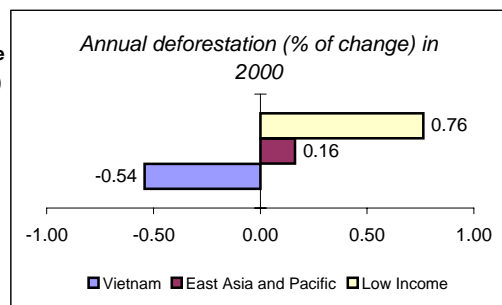
# Environment at a Glance 2004

## Vietnam



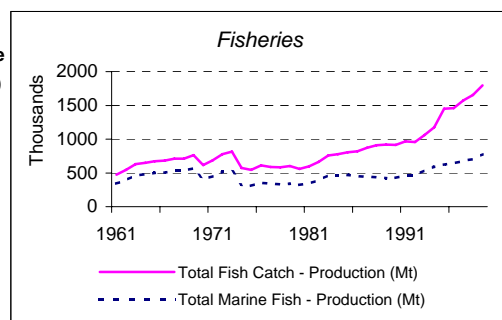
### FORESTS

	Vietnam		East Asia and Pacific	Low Income
	1990	2000	2000	2000
Forest area (sq km)	93,030	98,190	4,238,100	9,031,300
Forest area (% of area)	28.6	30.2	27.2	27.1
Deforestation (sq km per annum)	..	(516)	11,613	73,087
Annual deforestation (% of change)	..	(0.54)	0.16	0.76



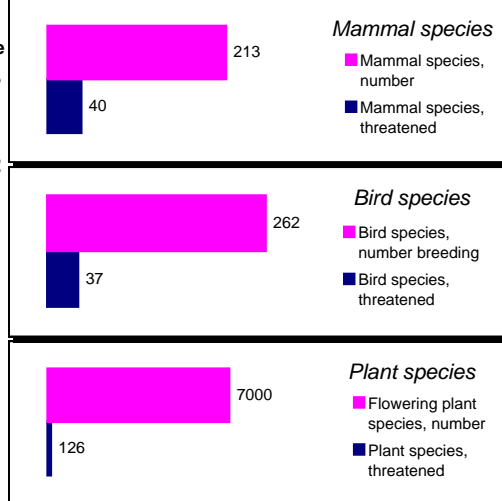
### FISHERIES

	Vietnam		East Asia and Pacific	Low Income
	1989	1995	1998	1999
Total Fish Catch - Production (Mt)	921,050	1,451,800	1,652,500	1,794,900
Total Fish Catch - Exports (Mt)	2,626	4,469	28,715	57,418
Total Fish Catch - Imports (Mt)	-	180	49	178
Total Marine Fish - Production (Mt)	421,130	622,660	707,860	777,000
Total Marine Fish - Exports (Mt)	2,562	291	27,645	57,199
Total Marine Fish - Imports (Mt)	-	157	-	2



### BIODIVERSITY

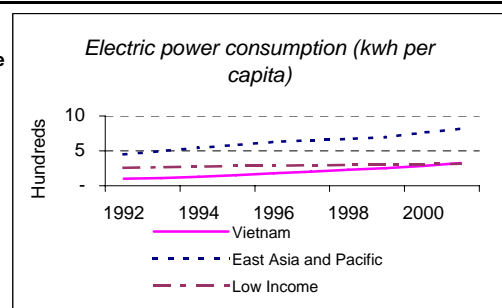
	Vietnam		East Asia and Pacific	Low Income
	1996	2003	2003	2003
Nationally protected areas (% of total area)	..	3.7	..	9.1
Mammal species, number	..	213	..	..
Mammal species, number threatened	38	40	..	..
Bird species, number breeding	..	262	..	..
Bird species, number threatened	47	37	..	..
Fish species, number	..	257	..	..
Fish species, number threatened	3	9	..	..
Flowering plant species, number	7,000	..	..	..
Plant species, number threatened	..	126	..	..



Note: Flowering plant species, number is for 1999.

### ENERGY

	Vietnam		East Asia and Pacific	Low Income
	1995	2001	2001	2001
Electric power consumption (kwh in millions)	11,185	25,851	..	..
Electric power consumption (kwh per capita)	153	325	816	317
Electricity production (kwh in millions)	14,665	30,608	1,849,800	1,017,200
Electricity production from coal sources (% of total)	13.8	10.5	65.1	49.2

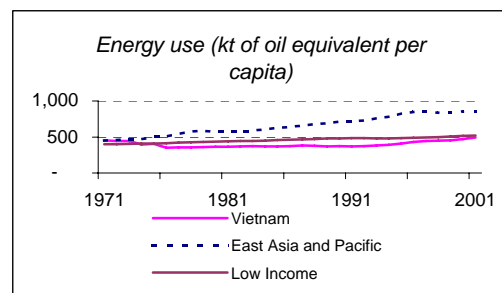
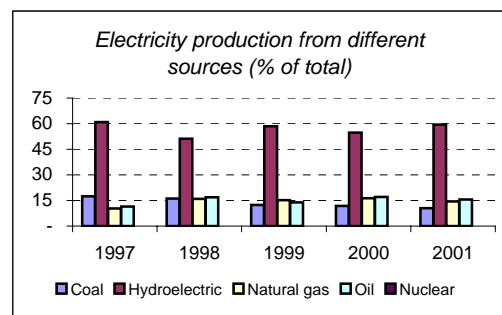


# Environment at a Glance 2004

## Vietnam

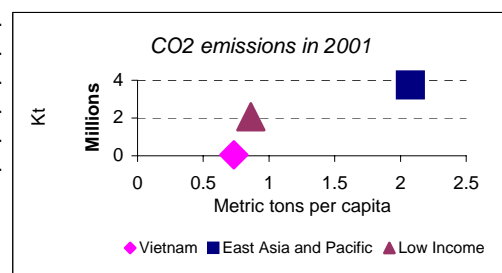
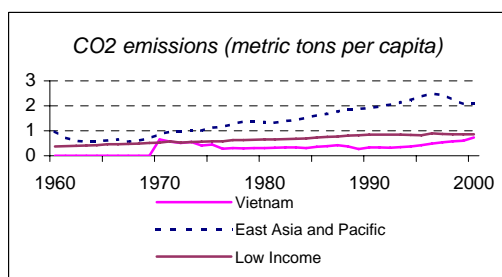


	1995	2001	2001	2001
Electricity production from hydroelectric sources (% of total)	72.2	59.5	18.3	22.7
Electricity production from natural gas sources (% of total)	5.3	14.5	9.5	16.4
Electricity production from nuclear sources (% of total)	..	..	0.9	2.1
Electricity production from oil sources (% of total)	8.8	15.5	5.2	8.8
Energy use (kt of oil equivalent)	29,905	39,356	1,550,600	1,233,400
Energy use (kg of oil equivalent per capita)	410	495	854	518
Energy production (kt of oil equivalent)	34,510	50,346	1,595,500	1,330,600
Combustible renewables and waste (% of total energy use)	70.1	58.3	21.0	46.2
GDP per unit of energy use (constant 1995 PPP \$ per kg of oil equivalent)	3.5	4.0	..	3.6
Private investment in energy (current US\$, millions)	..	..	3,730	1,697



### EMISSIONS and POLLUTION

	Vietnam		East Asia and Pacific	Low Income
	1995	2000	2000	2000
CO2 emissions (kt)	31,063	31,063	4,061,000	1,793,400
CO2 emissions (metric tons per capita)	0.4	0.7	2.1	0.9
CO2 emissions (kg per 1995 US\$ of GDP)	1.5	2.0	2.1	1.8
Organic water pollutant (BOD) emissions (kg per day)	..	..	..	..
Organic water pollutant (BOD) emissions (kg per day per worker)	..	..	..	..
<b>Water pollution by industry (% of total BOD emissions)</b>	<b>1995</b>	<b>2000</b>	<b>2000</b>	<b>2000</b>
Chemical	..	..	..	..
Clay	..	..	..	..
Food	..	..	..	..
Metal	..	..	..	..
Paper	..	..	..	..
Textile	..	..	..	..
Wood	..	..	..	..



# Environment at a Glance 2004

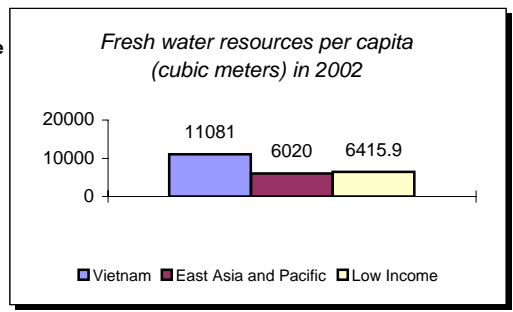
## Vietnam



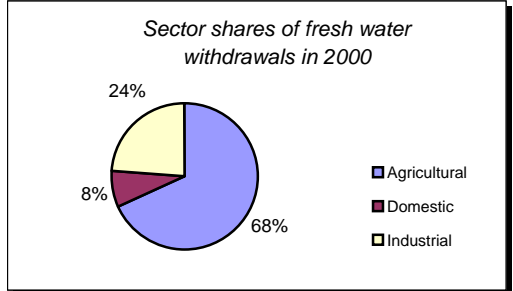
WATER and SANITATION	Vietnam		East Asia and Pacific	Low Income
	1990	2002	2002	2002
Freshwater resources per capita (cubic meters)	..	11,081	6,020	6,416
Freshwater use (% of total water resources)	..	6.1	7.2	6.5
Note: Freshwater use (% of total water resources) number for the country is for 2000.				
	1990	2000	2000	2000
Agricultural water use (%)	..	68.0	..	..
Domestic water use (%)	..	8.0	..	..
Industrial water use (%)	..	24.0	..	..
<b>Access to improved water source</b>	<b>1990</b>	<b>2000</b>	<b>2000</b>	<b>2000</b>
% of population with access	55.0	77.0	75.9	75.7
% of rural population with access	48.0	72.0	67.5	69.9
% of urban population with access	86.0	95.0	93.1	89.7
<b>Access to improved sanitation facilities</b>	<b>1990</b>	<b>2000</b>	<b>2000</b>	<b>2000</b>
% of population with access	29.0	47.0	47.1	42.6
% of rural population with access	23.0	38.0	35.8	30.9
% of urban population with access	52.0	82.0	72.4	70.6
Mortality rate, under-5 (per 1,000)	53	30	45	128
Private investment in water and sanitation (current US\$, mil)	..	20	94	236

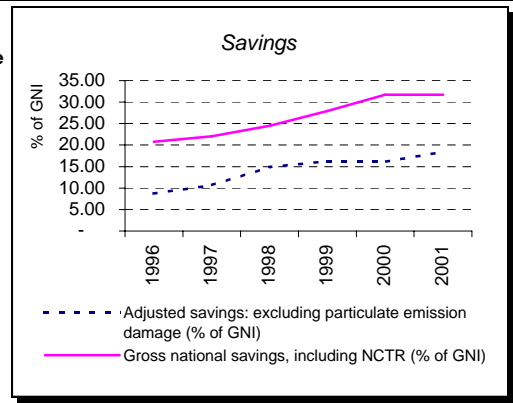
NATIONAL ACCOUNTING AGGREGATES	Vietnam		East Asia and Pacific	Low Income
	1995	2002	2002	2002
GDP (current US\$ billions)	20.7	35.1	1,833.1	1,123.9
GNI (current US\$ billions)	20.5	35.1	1,805.4	1,103.6
GNI per capita, Atlas method (current US\$)	250	430	960	430
Gross national savings, including NCTR (% of GNI)	..	33.6	36.3	22.2
Consumption of fixed capital (% of GNI)	7.7	8.1	9.2	8.4
Net national savings (% of GNI)	..	25.4	29.6	13.1
Education expenditure (% of GNI)	2.8	2.8	2.2	2.6
Energy depletion (% of GNI)	3.4	6.7	3.4	5.9
Mineral depletion (% of GNI)	0.1	0.0	0.3	0.4
Net forest depletion (% of GNI)	2.1	0.7	0.1	0.8
CO2 damage (% of GNI)	0.9	1.1	1.8	1.3
Particulate emission damage (% of GNI)	..	0.4	0.8	0.6
Adjusted net savings (% of GNI)	..	19.3	25.5	6.7



Countries with the renewable fresh water annual resources below a 1,700 m<sup>3</sup> per capita threshold, will experience water stress, below 1,000 m<sup>3</sup> per capita threshold will experience water scarcity, and below 500 m<sup>3</sup> per capita threshold will experience absolute water scarcity.



Note: Private investment in water and sanitation (current US\$) is for 1996 in the 1990 column.



Adjusted net savings is a sustainability indicator that measures the true rate of savings in an economy after taking into account net national savings, investments in human capital, depletion of natural resources, and damage caused by pollution.

Note: for 1995, Adjusted net savings exclude particulate emissions damage.

Sources: WDI, FAO, FAO AQUASTAT, WRI, and IUCN.

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November 2004

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