

WWF NATIONAL ORGANIZATIONS

WWF-AUSTRALIA

GPO Box 528
Sydney NSW 2001
Tel: +61 2 9299 6366

WWF-AUSTRIA

Postfach 1, 1162 Vienna
Tel: +43 1 488 170

WWF-BELGIUM

608 Chaussée de Waterloo
1050 Brussels
Tel: +32 2 340 09 99

WWF-BRAZIL

SHIS EQ QL 6/8
Conjunto E - 2° andar
71620-430 Brasília
Tel: +55 61 248 2899

WWF-CANADA

90 Eglinton Avenue East
Suite 504
Toronto, Ontario M4P 2Z7
Tel: +1 416 489 8800

WWF-DENMARK

Ryesgade 3F
2200 Copenhagen N
Tel: +45 35 36 36 35

WWF-FINLAND

Lintulahdenkatu 10
00500 Helsinki 50
Tel: +358 9 774 0100

WWF-FRANCE

151 Boulevard de la Reine
78000 Versailles
Tel: +33 1 39 24 24 24

WWF-GERMANY

Hedderichstrasse 110
60591 Frankfurt a/M
Tel: +49 69 60 50 030

WWF-GREECE

26 Filellinon St
10558 Athens
Tel: +30 1 331 4893

WWF-HONG KONG

GPO Box 12721
Hong Kong
Tel: +852 2526 1011

WWF-INDIA

PO Box 3058
New Delhi 110 003
Tel: +91 11 469 3744

WWF-INDONESIA

PO Box 7928 JKSKM
Jakarta Selatan 12079
Tel: +62 21 720 3095

WWF-ITALY

Via Garigliano 57
00198 Rome
Tel: +39 6 844 971

WWF-JAPAN

Nihonseimei Akabanebashi
Building
3-1-14 Shiba, Minato-ku
Tokyo 105
Tel: +81 3 3769 1711

WWF-MALAYSIA

Locked Bag No 911
Jln Sultan PO
46990 Petaling Jaya
Tel: +60 3 703 3772

WWF-NETHERLANDS

Postbus 7, 3700 AA Zeist
Tel: +31 3069 37 333

WWF-NEW ZEALAND

PO Box 6237
Wellington
Tel: +64 4 499 2930

WWF-NORWAY

Postboks 6784, St Olavs plass
0130 Oslo
Tel: +47 22 03 65 00

WWF-PAKISTAN

PO Box 5180
Ferozepur Road
Lahore 54600
Tel: +92 42 586 2359

WWF-PHILIPPINES

No. 23-A Maalindog Street
UP Village, Diliman
Quezon City 1101
Tel: +63 2 921 2905

WWF-SOUTH AFRICA

PO Box 456
Stellenbosch 7599
Tel: +27 21 887 2801

WWF-SPAIN

ADENA
Santa Engracia 6
28010 Madrid
Tel: +34 91 308 23 09

WWF-SWEDEN

Ulriksdals Slott
170 81 Solna
Tel: +46 8 624 74 00

WWF-SWITZERLAND

Postfach, 8010 Zürich
Tel: +41 1 297 21 21

WWF-UNITED KINGDOM

Panda House
Weyside Park, Godalming
Surrey GU7 1XR
Tel: +44 1483 426 444

WWF-UNITED STATES

1250 24th Street, NW
Washington, DC 20037-1175
Tel: +1 202 293 4800

ASSOCIATES

ARGENTINA

FUNDACION VIDA SILVESTRE

Defensa 245/51, 6 Piso
1065 Capital Federal
Buenos Aires
Tel: +54 1 331 4864

ECUADOR

FUNDACION NATURA

Casilla 17-01-253, Quito
Tel: +593 2 447 922

NIGERIA

NIGERIAN CONSERVATION FOUNDATION

PO Box 74638, Victoria Island
Lagos
Tel: +234 1 264 2498

TURKEY

DHKD

PK 971, Sirkeci 34436 Istanbul
Tel: +90 212 528 20 30

VENEZUELA

FUDENA

Apartado Postal 70376
Caracas 1071-A
Tel: +58 2 238 2930

WWF INTERNATIONAL

Avenue du Mont-Blanc
CH-1196 Gland
Switzerland
Tel: +41 22 364 91 11
Fax +41 22 364 53 58
E-mail: infobox@wwfnet.org
Website: www.panda.org

© Text/graphics 1998 WWF

Printed on recycled paper
(including 75 per cent post-
consumer waste) using vegetable-
oil based inks. When disposing of
this publication, please try to
ensure that it is recycled.

A BANSON Production
3 Turville Street, London E2 7HR

Editor: Jonathan Loh
Picture researcher: Michèle Dépraz
Designed by: Price Watkins
Diagrams and maps: David Burles,
Simon Blyth, Jonathan Rhind

Printed by: The KPC Group, UK

ISBN: 2-88085-211-8

Picture credits:
Front cover, from top to bottom
(figure indicates use on other
pages): WWF/Vin J. Toledo (12),
John Maier/Still Pictures (22), Andre
Bartschi/Still Pictures (6, 16), Norbert
Wu/Still Pictures (10, 14), J Frebet/
Still Pictures (8, 18), UNEP/Dave
Richards/Topham (2), UNEP/Antonius
Ablinger/Topham (20).

Published in 1998 by WWF—World
Wide Fund For Nature (formerly
World Wildlife Fund), Gland,
Switzerland. Any reproduction in full
or in part of this publication must
mention the title and credit the
above-mentioned publisher as the
copyright owner.

WWF aims to conserve nature and ecological processes by:

■
*preserving genetic, species, and
ecosystem diversity*

■
*ensuring that the use of renewable natural
resources is sustainable now and in the longer term,
for the benefit of all life on Earth*

■
*promoting actions to reduce
to a minimum pollution and the wasteful exploitation
and consumption of resources and energy.*

WWF-World Wide Fund For Nature is the world's largest and most experienced independent conservation organization. It has 4.7 million regular supporters and a global network active in 96 countries.

WWF is known as the World Wildlife Fund in Canada and the United States of America.



WWF®

WWF INTERNATIONAL, AVENUE DU MONT-BLANC
CH-1196 GLAND, SWITZERLAND

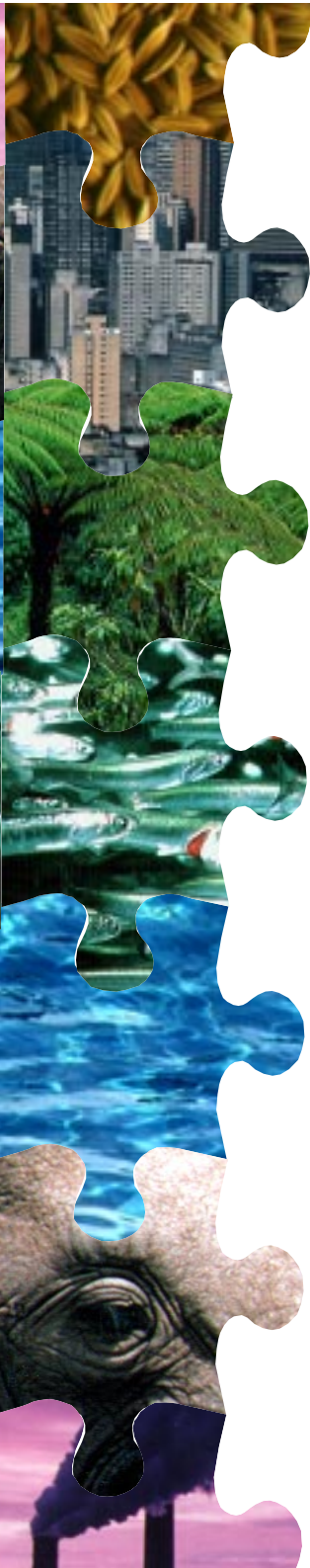
Tel: +41 22 364 91 11 Fax: +41 22 364 53 58

E-mail: infobox@wwfnet.org

Website: www.panda.org

Let's leave our children a living planet





WORLD CONSERVATION
MONITORING CENTRE



WWF®



LIVING PLANET REPORT

1998

Overconsumption is driving the rapid decline of the world's natural environments

CONTENTS

Executive Summary	1	Marine Fish Consumption	14
		Global trend	
The Living Planet Index	2	Consumption by region	
Forest ecosystems index		Map 7: Consumption by country	15
Freshwater ecosystems index			
Marine ecosystems index		Wood Consumption	16
Map 1: Threatened bird and mammal species	3	Global trend	
		Consumption by region	
		Map 8: Consumption by country	17
Consumption Pressure	4		
Consumption pressure: top 20 countries		Freshwater Withdrawals	18
Consumption pressure by region		Global trend	
Map 2: Global distribution of consumption pressure	5	Withdrawals by region	
		Map 9: Withdrawals by country	19
Forest Ecosystems	6	Carbon Dioxide Emissions	20
Natural forest cover by region		Global trend	
Original and remaining forest cover		Emissions by region	
Map 3: Original and remaining forest cover	7	Map 10: Emissions by country	21
Freshwater Ecosystems	8	Cement Consumption	22
Freshwater species population trends		Global trend	
Freshwater ecosystems index		Consumption by region	
Freshwater lakes		Map 11: Consumption by country	23
Map 4: Freshwater species trends	9		
		Technical Notes	24
Marine Ecosystems	10		
Marine species population trends		Tables	
Marine ecosystems index		National and Regional Consumption per person	28
Map 5: Marine species trends	11	National and Regional Consumption	32
		Living Planet Index and Forest Ecosystems Data	36
Grain Consumption	12		
Global trend		Sources	37
Consumption by region			
Map 6: Consumption by country	13	Map 12: Countries and regions in the <i>Living Planet Report</i>	38

AUTHORS

Jonathan Loh¹

Jørgen Randers¹

Alex MacGillivray²

Val Kapos³

Martin Jenkins³

Brian Groombridge³

Neil Cox³

1. WWF INTERNATIONAL
 AVENUE DU MONT-BLANC
 CH-1196 GLAND
 SWITZERLAND
 Tel: +41 22 364 91 11
 Fax: +41 22 364 53 58
 E-mail: infobox@wwfnet.org
 Website: www.panda.org

2. NEW ECONOMICS FOUNDATION
 1st FLOOR VINE COURT
 112-116 WHITECHAPEL ROAD
 LONDON E1 1JE
 UK
 Tel: +44 171 377 56 96
 Fax: +44 171 377 57 20
 E-mail: info@neweconomics.org
 Website: www.neweconomics.org

3. WORLD CONSERVATION MONITORING CENTRE
 219 HUNTINGTON ROAD
 CAMBRIDGE CB3 0DL
 UK
 Tel: +44 1223 27 73 14
 Fax: +44 1223 27 71 36
 E-mail: info@wcmc.org.uk
 Website: www.wcmc.org.uk

SOURCES and further reading

Bohn, U. and G.D. Katenina (1994)

Map of Natural Vegetation. Scale 1:2,500,000. Komarov Botanical Institute, St Petersburg.

Carnahan, J.A. (n.d.)

Australia - Natural Vegetation. Australian Surveying and Land Information Group, Department of Administrative Services. 1:5 million scale.

Centre for Concrete Information (1997)

Global Cement Report. Trade Ship Publications Ltd, Dorking.

Costanza, R., R. d'Arge, R. de Groot, S. Farber, M. Grasso, B. Hannon, K. Limburg, S. Naeem, R.V. O'Neill, J. Paruelo, R.G. Raskin, P. Sutton, M. van den Belt (1997)

The value of the world's ecosystem services and natural capital. *Nature*. Vol. 387 pp. 253-260.

Daily, G.C. (1997)

Nature's Services: Societal Dependence on Natural Ecosystems. Island Press, Washington, D.C. and Covelo, California.

Dinerstein, E., D.M. Olson, D.J. Graham, A.L. Webster, S.A. Primm, M.P. Bookbinder and G. Ledec (1995)

A Conservation Assessment of the Terrestrial Ecoregions of Latin America and the Caribbean. Published in association with The World Wildlife Fund. The World Bank, Washington, DC.

European Commission (1995)

Europe's Environment: Statistical Compendium for the Dobris Assessment. Office for Official Publications of the European Communities, Luxembourg.

FAO (1995)

Forest Resources Assessment 1990: Global Synthesis. FAO Forestry Paper 124. FAO, Rome.

FAO (1997)

The State of the World's Fisheries and Aquaculture 1996. FAO Fisheries Department, FAO, Rome.

FAO (1997)

The State of the World's Forests 1997. FAO, Rome.

FAOSTAT

FAO online database. <http://apps.fao.org>

Gaston, K.J. (ed.) (1996)

Biodiversity. A Biology of Numbers and Difference. Blackwell Science, Oxford.

Grainger, R. and S. Garcia (1996)

Chronicles of Marine Fishery Landings (1950-1994): Trend Analysis and Fisheries Potential. FAO Fisheries Technical Paper 359. FAO, Rome.

ILEC

International Lake Environment Committee Foundation. *Lake Database*. <http://www.biwa.or.jp/ilec/database/database.html>

INPE (1998)

Brazilian National Institute for Space Research. <http://www.inpe.br/amz-04.htm>

IPCC (1995)

Climate Change 1994. Radiative Forcing of Climate Change and An Evaluation of Emission Scenarios. Houghton, J.T. et al. (eds.) Cambridge University Press, Cambridge.

IUCN (1996)

1996 IUCN Red List of Threatened Animals. J. Baillie and B. Groombridge (eds.) IUCN, Gland, Switzerland.

Kuusela, K. (1994)

Forest Resources in Europe, 1950-1990. European Forest Research Institute Research Report 1. Cambridge University Press, Cambridge.

Lünzer, I. (1992)

quoted in E. von Weizsäcker, A.B. Lovins and L.H.Lovins. 1997. *Factor Four: Doubling Wealth, Halving Resource Use. The New Report to the Club of Rome*. p. 50. Earthscan, London.

Luther, H. and J. Rzóška (1971)

Project Aqua: A Source Book of Inland Waters Proposed for Conservation. IBP Handbook No 21. IUCN Occasional Paper No 2. International Biological Programme. Blackwell Scientific Publications, Oxford.

Marland, G. and T.A. Boden (1998)

Global, Regional and National CO₂ Emissions. *Trends: A Compendium of Data on Global Change*. Carbon Dioxide Information Analysis Centre, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

Milanova, E.V. and A.V. Kushlin

(eds.) (1993) *World Map of Present-Day Landscapes. An Explanatory Note*. Prepared by Moscow State University and the United Nations Environment Programme, Nairobi.

MacKinnon, J. (unpublished, 1996)

Review of the Indomalayan Protected Areas. Asian Bureau for Conservation, UK.

Pimentel, D., J. Houser, E. Preiss, O. White, H. Fang, L. Mesnick, T. Barsky, S. Tariche, J. Schreck and S. Alpert (1997)

Water resources: agriculture, environment and society. An assessment of the status of water resources. *Bioscience*, Vol. 47, No.2, pp. 97-106.

Postel, S.L., G.C. Daily and P.R. Ehrlich (1996)

Human appropriation of renewable fresh water. *Science*. Vol. 271, pp. 785-788.

Scott, D.A. (ed.) (1989)

A Directory of Asian Wetlands. IUCN, Gland, Switzerland.

Shiklomanov, I.A. et al. (unpublished, 1997)

Assessment of Water Resources and Water Availability in the World. State Hydrological Institute, St. Petersburg.

Singh, K.D. and A. Marzoli (1995)

Deforestation Trends in the Tropics: A Time Series Analysis. Paper presented at WWF Conference on the Potential Impacts of Climate Change on Tropical Forests, Puerto Rico, April 1995.

Tobler, W., U. Deichmann, J. Gottsegen and K. Maloy (1995)

The Global Demography Project. National Center for Geographic Information and Analysis, University of California, Santa Barbara. <http://ncgia.ucsb.edu/pubs/gdp/pop.html#GLOBAL>

UNDP/UNEP (1997)

Critical Trends: Global Change and Sustainable Development. United Nations Department of Policy Coordination and Sustainable Development, New York.

White, F. (1983)

The Vegetation of Africa. UNESCO, Paris.

World Conservation Monitoring Centre (1992)

Global Biodiversity: Status of the Earth's Living Resources. Chapman and Hall, London. pp. 139-141.

World Meteorological Organization, UN agencies and Stockholm Environment Institute (1997)

Comprehensive Assessment of the Freshwater Resources of the World. World Meteorological Organization, Geneva.

World Resources Institute, UNEP, UNDP and World Bank (1996)

World Resources 1996-97. Oxford University Press, New York and Oxford.

