

Vital Forest Graphics



UNEP



United Nations
Forum on Forests

The United Nations Environment Programme, as the world's leading intergovernmental environmental organization, is the authoritative source of knowledge on the current state of, and trends shaping the global environment. The mission of UNEP is to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations.

The Food and Agriculture Organization of the United Nations (FAO) is one of the largest specialized agencies in the United Nations system and the lead agency for agriculture, forestry, fisheries and rural development. The Forestry Department helps nations manage their forests in a sustainable way. The Organization's approach balances social, economic and environmental objectives so that present generations can reap the benefits of the Earth's forest resources while preserving them to meet the needs of future generations.

The United Nations Forum on Forests Secretariat provides support to the international policy dialogue on sustainable forest management. The United Nations Forum on Forests (UNFF) is an intergovernmental body on global forest policy which promotes management, conservation and sustainable development of all types of forests. The UNFF Secretariat works with a wide range of international organizations and stakeholders to facilitate cooperation and coordination on global forest issues.

The contents of this report do not necessarily reflect the views or policies of UNEP, FAO, UNFF or any other contributory organizations. The designations employed and the presentations do not imply the expressions of any opinion whatsoever on the part of UNEP, FAO, UNFF or contributory organizations concerning the legal status of any country, territory, city or area or its authority, or concerning the delimitation of its frontiers or boundaries.

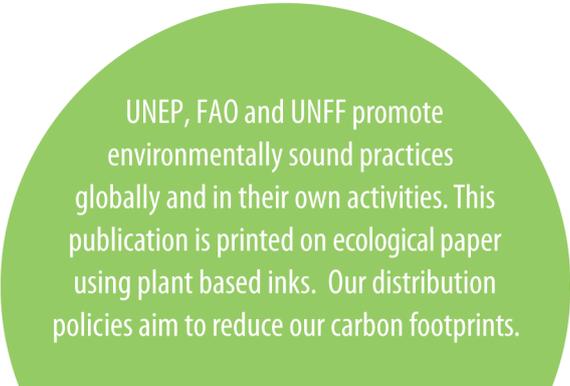
This publication may be reproduced in whole or in part and in any form for educational or non-profit purposes without special permission from the copyright holder, provided acknowledgement of the source is made. The United Nations Environment Programme (UNEP) would appreciate receiving a copy of any publication that uses this publication as a source. No use of this publication may be made for resale or any other commercial purpose whatsoever without prior permission in writing from the United Nations Environment Programme. Applications for such permission, with a statement of purpose and intent of the reproduction, should be addressed to the Division of Communications and Public Information (DCPI), UNEP, P.O. Box 30552, Nairobi 00100, Kenya.

Produced by **UNEP/GRID-Arendal**

© 2009 UNEP, FAO, UNFF
All rights reserved

FAO ISBN 978-92-5-106264-7
UNEP ISBN 978-92-807-2903-0

UNEP Job No: DEW/1032/NA



UNEP, FAO and UNFF promote environmentally sound practices globally and in their own activities. This publication is printed on ecological paper using plant based inks. Our distribution policies aim to reduce our carbon footprints.

Vital Forest Graphics

Core editorial team

Christian Lambrechts (UNEP)

Mette Løyche Wilkie (FAO)

Ieva Rucevska (UNEP/GRID-Arendal)

Mita Sen (UNFF Secretariat)

Editorial panel

Kevin M. Conrad (Coalition for Rainforest Nations)

Mahendra Joshi (UNFF Secretariat)

Lars Laestadius (Global Forest Watch)

Lars Løvold (Rainforest Foundation Norway)

Claude Martin

Risto Päivinen (The European Forest Institute)

Carsten Smith Olsen (Royal Veterinary and Agricultural University, Denmark)

Language editor: Kieran Cooke

Proof reader: Harry Forster

Cartography

Philippe Rekacewicz assisted by

Cécile Marin, Agnès Stienne, Giulio Frigieri, Riccardo Pravettoni, Laura Margueritte and Marion Lecoquierre

Authors and contributors

Frédéric Achard (European Commission Joint Research Centre)

John Bennett (Principal, Bennett & Associates)

Donné Beyer (Octopus Media)

Jim Carle (FAO)

Arnaldo Carneiro (Instituto Socioambiental, Brazil)

Peter Csoka (UNFF Secretariat)

Alberto Del Lungo (FAO)

Frédéric Durand (University of Toulouse, France)

Marianne Fernagut (UNEP/GRID-Arendal)

Lauren E. Haney (UNEP/GRID-Arendal)

John Innes (University of British Columbia)

David Kaimowitz

Marion Karmann (FSC International Centre, Germany)

Ashish Kothari (IUCN)

Ingelin Ladsten (Rainforest Foundation Norway)

Christian Lambrechts (UNEP)

Barbara Lassen (IUCN)

Arvydas Lebedys (FAO)

Mette Løyche Wilkie (FAO)

Claude Martin

Carolyn Marr (Down to Earth, UK)

Lera Miles (UNEP – WCMC)

Mukundi Mutasa (Southern Africa Research and Documentation Centre, Zimbabwe)

Christian Nellemann (UNEP/GRID-Arendal)

Vemund Olsen (Rainforest Foundation Norway)

Martina Otto (UNEP DTIE)

Jari Parviainen (Finnish Forest Research Institute)

Adriana Ramos (Instituto Socioambiental, Brazil)

Philippe Rekacewicz (Le Monde Diplomatique)

Ieva Rucevska (UNEP/GRID-Arendal)

John Sellar (CITES)

Carsten Smith Olsen (Royal Veterinary and Agricultural University, Denmark)

Barbara Tavora-Jainchill (UNFF Secretariat)

Frank Turyatunga (UNEP/GRID-Arendal)

Natalie Unterstell (Instituto Socioambiental, Brazil)

Jo Van Brusselen (The European Forest Institute)

Petteri Vuorinen (FAO)

Monika Weißschnur

Layout and cover: Boris Séméniako



Foreword

The world's forests provide a multitude of environmental, economic and social services, all of which are invaluable in supporting human development. Forests sustain the livelihoods of hundreds of millions of people globally, and contribute directly to the economies of numerous countries.

Yet, about 13 million hectares of forests continue to be lost every year with far reaching consequences in terms of carbon emissions, loss of biodiversity and environmental degradation. Whereas forests and forest soils store more than one trillion tonnes of carbon, current rate of deforestation and forest degradation is responsible for close to 17.4 percent of all anthropogenic greenhouse gas emissions, contributing to climate change. Increasingly, afforestation and reforestation are being promoted as means of climate change mitigation and adaptation. Forests often are at the nexus of the most pressing issues high on the global environmental and sustainable development agenda, namely: climate change, biodiversity loss, poverty eradication, ecosystem management, and environmental governance.

To help communicate the value of forests to policy-makers and the wider public, the United Nations Environment Programme, the Food and Agriculture Organization of the United Nations and the United Nations Forum on Forests Secretariat of the United Nations Department of Economic and Social Affairs joined efforts to analyse, synthesize and illustrate topical forest issues in this new publication, the *Vital Forest Graphics*.

A group of authors from around the world provided case studies and inputs. The publication was edited by a core team, guided by a high-level panel comprising experts from the academia, as well as from leading governmental and non-governmental institutions committed to forest conservation and sustainable management.

This edition of the Vital Graphics series is intended to serve as an advocacy tool to promote conservation and sustainable management of the world's forests through a better and wider understanding of the critical values they provide in support of global ecological stability, economic development and human well-being.

We are pleased to present this publication, and hope that you will find it both informative and thought-provoking.



Achim Steiner
Under-Secretary-General
Executive Director, UNEP



Jan Heino
Assistant Director-General
FAO Forestry Department



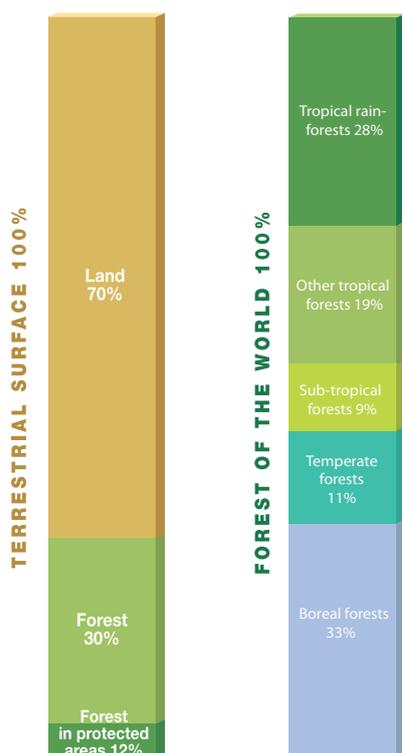
Jan McAlpine
Director
UNFF Secretariat

Contents

Introduction.....	4
Forest definition and extent.....	6
Forest losses and gains: where do we stand?	10
The relationship between indigenous people and forests	14
Forests sustain livelihoods	16
A hiding places for fighting forces and a refuge for victims.....	18
Forests under threat as agricultural commodities take over.....	20
Is fast-wood like fast-food?	24
Changing trends in forest products trade.....	26
Clearing forests for biofuels	30
Forests are a key source of ecological services	32
Climate change and its impact on forests - will forests migrate?.....	34
Forests and the carbon cycle.....	36
Forest animals threatened by habitat loss and poaching	38
The forests of Central Africa.....	40
The forests of Southeast Asia	42
The Amazon, the largest rainforest in the world.....	44
The boreal forests	46
Forests and fires	48
Forests suffer from air pollution	50
Local forest management	52
Certification for sustainable forest management.....	54
Economic incentives to protect forests	56
Are legal instruments sufficient to protect our forests?	58
Greening degraded forest landscapes.....	60
References	62

Forests: Suppliers of multiple

Global forest types



Over the last few years, two closely related key environmental issues have been at the top of the environmental agenda: climate change and deforestation. Deforestation, estimated at around 13 million hectares a year, has immediate consequences in terms of increased carbon emissions and loss of biological diversity. Most of the losses in forest cover are taking place in developing countries, in particular in South America, Africa and Southeast Asia. One of the root causes behind deforestation is the weak governance structure for forest conservation and sustainable management of forest resources. This applies particularly to publicly owned forests that represent over 80 per cent of global forest cover.

In order to help address forest governance, it is essential to further the understanding of policy-makers and the general public at large regarding the importance of forests, the underlying causes of their loss and the exciting successful practices available to help conserve them. This calls for a strengthening of the interface between science and policy



← Global forest distribution

services to nature and humankind

and for efforts to ensure that scientific findings are translated into a common, user-friendly language.

Environmental assessments, such as the Vital Graphics series, are fundamental communication tools that promote interaction between science and various stages of the policy and decision-making cycle. The format of the Vital Graphics series with its extensive graphic component reduces complexity and adds value by summarizing, synthesizing and illustrating critical environmental issues.

Forest issues are wide ranging. In order to effectively raise the awareness and understanding of policy-makers and the general public, Vital Forest Graphics focuses on a number of selected issues that are topical and important.

The publication starts by setting the stage and looking at what defines a forest. It examines changes in forest cover in various parts of the world over the last century. The publication also provides an analysis of the most salient features of the largest forest ecosystems, including the tropical forests

of the Amazon, the Congo Basin and Southeast Asia, as well as the boreal forests. The Vital Forest Graphics also analyses the role and importance of forests with regard to the most pressing environmental issues of our time, including: climate change; loss of biodiversity; trade and environment; air pollution; energy and biofuels; agriculture and food security.

In order to further the understanding of the importance of the forests, the publication reviews the main ecological functions they provide in support of human well-being. These include the regulation of ecological processes, including the hydrological cycle and micro-climatic conditions.

Finally the Vital Forest Graphics highlights some of the proven or innovative practices, including legal or economic tools, which have been implemented to help conserve the forests and secure the livelihoods of forest-dependent communities.

Forest definition and extent

*How much forest
is there in the world?
A surprisingly difficult
question to answer*

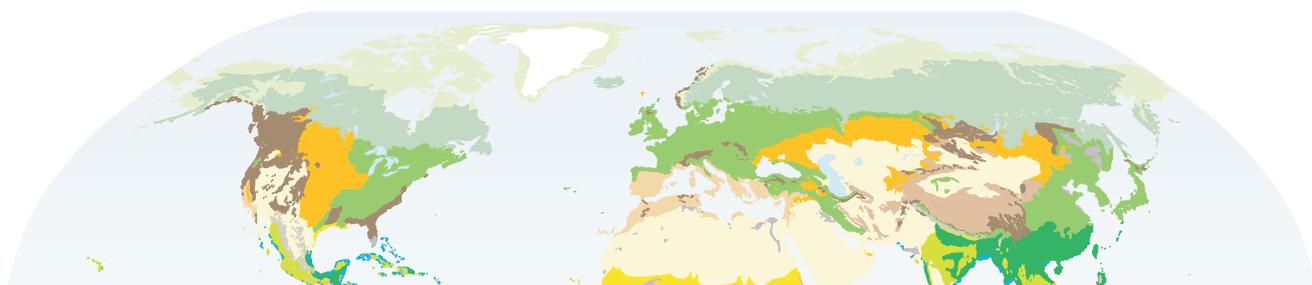
Defining what constitutes a forest is not easy. Forest types differ widely, determined by factors including latitude, temperature, rainfall patterns, soil composition and human activity. How a forest is defined also depends on who is doing the defining. People living in the British Isles or Scandinavia might identify forests differently from people in Africa or Asia. Similarly, a business person or economist might define and value a forest in a very different way from a forester, farmer or an ornithologist.

A recent study of the various definitions of forests (Lund 2008) found that

more than 800 different definitions for forests and wooded areas were in use around the world – with some countries adopting several such definitions at the same time!

It should be kept in mind that different definitions are required for different purposes and at different scales. An assessment focusing on the availability of timber for commercial or industrial purposes may exclude small wooded areas and types of forest not considered to be of commercial value. A definition based on physical characteristics, such as the canopy cover, will most likely be used for an assessment

▣ The main biomes of the world



预览已结束，完整报告链接和

<https://www.yunbaogao.cn/report/index/report?r>