



Food and Agriculture
Organization of the
United Nations

Selected
FAO
FORESTRY
and other
PUBLICATIONS
2015



WFC2015
XIV World Forestry Congress

Forests and People: Investing in a Sustainable Future

SPECIAL EDITION

THE FAO PUBLISHING PROGRAMME

As the lead UN agency for agriculture and rural development, FAO publishes print and electronic publications covering all fields of food and nutrition, agriculture, forestry, fisheries, the environment, and related aspects of economic and social development.

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FRONT COVER PHOTO: © Wildwood Treecare

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Internal
back cover

Sharing knowledge about forests and trees for the benefit of all people

Forests are a crucial living natural resource for society. While celebrating the International Year of Soils, we should recall that they are the most efficient soil protectors. Mountain forests, the earth's magnificent water towers, provide a high share of the freshwater we use daily. Forests store as much carbon as the entire atmosphere. Small changes in forest cover have considerable consequences for the world's climate, which depends greatly on forests' role in recirculating rainfall and reflecting sunlight. Forests also host a very high share of terrestrial biodiversity. It is thus incumbent on us to preserve forests for many reasons, be they purely ethical or to support human health and agriculture.

Forests also frame our landscapes, in inland, coastal and mountain areas, and are considered a premium feature by the growing tourism sector. Forests provide food for millions of people, while woodfuel is used by a third of humankind to supply the energy for cooking food and boiling water. They are a crucial source of income for rural communities, and serve as safety nets in times of crisis or drought. Forests are the leading source of renewable raw materials, a role that will increase as we make the necessary transition towards greener economies, using natural materials such as wood or bamboo for housing, chemical or textile production and, critically, energy. Last but not least, forests contribute to society's well-being by meeting basic human demands for recreation areas and good health, demands that particularly among the growing urban population are set to rise.

Just over three centuries ago, sustainable forest management (SFM) came into being in response to the depletion of forests as a result of high demand for wood. SFM was also the inspiration for the emergence of the modern concept of sustainable development some three decades ago. Today SFM has received considerable support in many international processes, but there is still a long way to go before it becomes systematically and widely applied.

Since the formation of FAO's first Forestry Division in 1946, the compilation, documentation and dissemination of information on forests and forest peoples has been an important part of FAO's mandate. And as the subject areas have grown, so have the number of publications, transforming the results of research, studies, ideas and the fruit of expertise and experience into sound practical advice and action.

The forest community has used several landmark occasions (in particular the International Day of Forests on 21 March) to publicize sustainable forestry's long-established roots and to illustrate the breadth and richness of its socioeconomic, environmental and cultural services and benefits, particularly its centrality in food security, ecosystem and biodiversity conservation and climate change mitigation and adaptation. And this year, in September, the world will witness the adoption of the Sustainable Development Goals, with the expected acknowledgement of the valuable roles of forests and mountains. These events will no doubt increase the demand for reliable information on forests, as may November and December's UN Conferences of the Parties on Desertification and Climate Change respectively.

When we meet in Durban in September for the XIV World Forestry Congress, the first to be held in Africa, we will be providing, sharing and absorbing a wealth of information on forests and forestry communities as they are today, in order to decide on a new world vision of how, optimally, they can be in 2050. These debates and events, are expected to generate significant new knowledge, some of which will undoubtedly be informed by and build on the statistics, studies, analyses and reporting captured in the FAO publications presented in this catalogue.

Major publications referenced in this catalogue include the *State of the World's Forests 2014*, a source of key socioeconomic observations on global forestry, and *The State of the World's Forest Genetic Resources*, which provides an unparalleled compilation of country information on forest genetic resources. Other major works include the *Global Forest Resources Assessment 2015*, with its authoritative overview of global forest cover, as well as the *Yearbook of Forest Products 2013* and the *Contribution of the forest sector to national economies 1990–2011* which document forestry's importance in the global economy. These are complemented by a broad literature covering numerous dimensions of forestry as well as its interaction with other sectors. Some of these publications will be friends that you are meeting again, while others may be interesting discoveries. I hope you will find among them titles that will be of use in your professional, technical and community work, and in turn will share them widely with others. In this way, forestry can continue to support human development through knowledge-sharing and capacity building in countries and among all sectors of their societies.

Eduardo Rojas-Briales

Assistant Director-General, FAO Forestry Department

July 2015

FAO Forestry

MAJOR

PUBLICATIONS

State of the World's Forests 2014

Enhancing the socioeconomic benefits from forests

Across the world, forests, trees on farms, and agroforestry systems play a crucial role in the livelihoods of rural people by providing employment, energy, nutritious foods and a wide range of other goods and ecosystem services. They have tremendous potential to contribute to sustainable development and to a greener economy. This evidence is critical to inform policies on forest management and use, and to ensure that the benefits from forests are recognized in the post-2015 development agenda, not only with respect to the environment, but also for their contributions to broader social issues. This edition of *State of the World's Forests* addresses this knowledge gap by systematically gathering and analysing available data on forests' contributions to people's livelihoods, food, health, shelter and energy needs. Crucially, the report also suggests how information might be improved and policies adjusted, so that the socioeconomic benefits from forests can be enhanced in the future.

FAO, Rome, 2014
ISBN 978-92-5-108269-0 (print)
E-ISBN 978-92-5-108270-6 (PDF)
133 pp.

● **Available in:** all UN languages

<http://www.fao.org/3/a-i3710e.pdf>

E-book: <http://www.fao.org/publications/e-book-collection>

The State of the World's Forest Genetic Resources

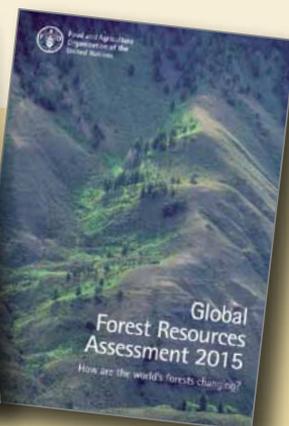
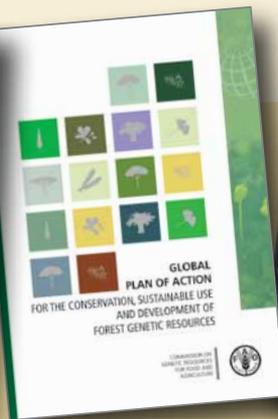
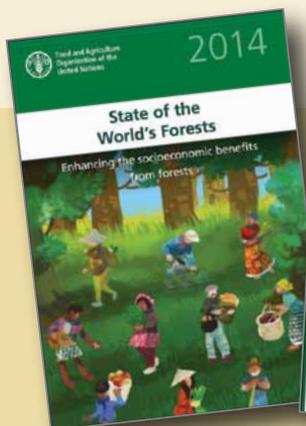
Forest genetic resources – the heritable materials maintained within and among trees and other woody plant species – are essential for the adaptation and the evolutionary processes of forests and trees as well as for improving their resilience and productivity. This first-ever report on *The State of the World's Forest Genetic Resources* constitutes a milestone in building the information and knowledge base required for action at the national, regional and international levels. Developed through a country-driven process, with the participation and contributions of representatives from national institutions, non-governmental and community-based organizations, and international organizations, the report synthesizes information from 86 national reports from countries covering 85 percent of global forest area.

FAO, Rome, 2014
ISBN 978-92-5-108402-1 (print)
E-ISBN 978-92-5-108403-8 (PDF)
304 pp.

● **Available in:** English

<http://www.fao.org/3/a-i3825e.pdf>

E-book: <http://www.fao.org/publications/e-book-collection>



Global Plan of Action

For the conservation, sustainable use and development of forest genetic resources

In June 2007, the Commission on Genetic Resources for Food and Agriculture highlighted the urgent need to conserve and sustainably use forest genetic resources (FGR). On the basis of information and knowledge compiled by FAO for *The State of the World's Forest Genetic Resources*, the Commission subsequently developed a Global Plan of Action on FGR. Adopted by the FAO Conference in June 2013, the Plan includes four priority areas for action: improving the availability of, and access to, information on FGR; conservation of FGR (*in situ* and *ex situ*); sustainable use, development and management of FGR; and policies, institutions and capacity-building. Under these areas, a total of 27 strategic priorities have been identified for specific action at the national, regional and global levels.

FAO, Rome, 2014
ISBN 978-92-5-108422-9
34 pp.

● **Available in:** Arabic, Chinese, English, French, Russian, Spanish

<http://www.fao.org/3/a-i3849e.pdf>

Global Forest Resources Assessment 2015

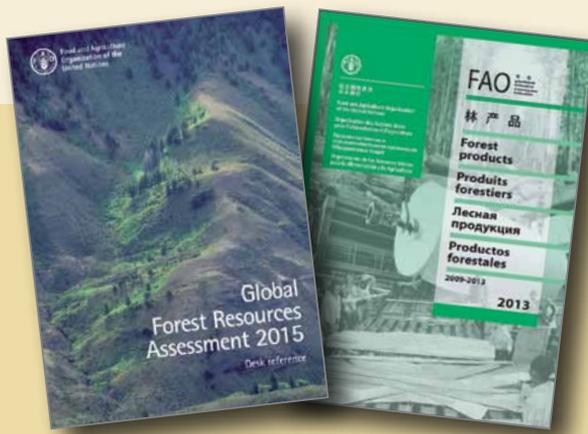
How are the world's forests changing?

The contributions of forests to the well-being of humankind are far-reaching. Forests provide vital wood supplies and help to combat rural poverty, ensure food security and provide decent livelihoods; they offer promising mid-term green growth opportunities; and they deliver vital long-term environmental services, such as clean air and water, biodiversity, and mitigation of climate change. Building on data that are more comprehensive and reliable than ever before, covering 234 countries and territories, the *Global Forest Resources Assessment 2015* shows encouraging signs of improved forest management and a global slowdown in deforestation. However these trends need to be strengthened, especially in countries that are lagging behind.

FAO, Rome, 2015
ISBN 978-92-5-108821-0
56 pp.

● **Available in:** all UN languages

<http://www.fao.org/3/a-i4793e.pdf>



Global Forest Resources Assessment 2015

Desk reference

The contributions of forests to the well-being of humankind are far-reaching. Forests provide vital wood supplies and help to combat rural poverty, ensure food security and provide decent livelihoods; they offer promising mid-term green growth opportunities; and they deliver vital long-term environmental services, such as clean air and water, biodiversity, and mitigation of climate change. Building on data that are more comprehensive and reliable than ever before, covering 234 countries and territories, the *Global Forest Resources Assessment 2015* shows encouraging signs of improved forest management and a global slowdown in deforestation. However these trend needs to be strengthened, especially in countries that are lagging behind. This Desk reference provides the data reported by countries for the *Global Forest Resources Assessment 2015*. Presented in easy-to-consult tabular form, it is a useful companion to the synthesis report as well as to the more detailed figures available on the Forest Land Use Data Explorer website.

FAO, Rome, 2015
ISBN 978-92-5-108826-5
248 pp.

● **Available in:** all UN languages

<http://www.fao.org/3/a-i4808e.pdf>

FAO Yearbook of Forest Products 2013

This 67th issue of the *FAO Yearbook of Forest Products* contains the latest data on the global production and trade in forest products for the years 2009–2013, and on the direction of trade in 2012 and 2013. Statistical information in the yearbook is based primarily on data provided to the FAO Forestry Department by countries in the form of replies to official questionnaires or publications. This edition benefits from expanded cooperation in gathering forest sector statistics among a number of international organizations.

FAO, Rome, 2015
ISBN 978-92-5-008811-2
ISSN 1020-458X
358 pp.

● **Available in:** all UN languages

<http://www.fao.org/3/a-i4746m.pdf>

unasyuva

First published in 1947, **unasyuva** is FAO's journal of forestry and forest industries.

Its goal is to bring globally significant developments in forestry to a broad range of readers – such as policy-makers, forest managers, technicians, researchers, students and teachers.

Unasyuva covers all aspects of forestry:

- > policy and planning
- > conservation and management
- > rural socioeconomic development
- > species improvement
- > industrial development
- > international trade
- > environmental considerations, including the role of forests and trees in maintaining a sustainable base for agricultural production and the effects of environmental change on forestry.

Each edition is produced in English, French, and Spanish.



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Unasyuva@fao.org

www.fao.org/forestry/unasyuva

FAO Forestry

FORTHCOMING PUBLICATIONS





Forthcoming

***Unasylva* 245**

Forest and landscape restoration

This issue of *Unasylva* introduces the main concepts, approaches, issues, challenges and opportunities for forest and landscape restoration. It presents examples from around the world, covering a variety of approaches and contexts. These include an initiative to develop “close-to-nature” planted forests in China, opportunities for the use of bamboo in different regions, and the importance of taking genetic considerations into account to ensure successful forest restoration.

FAO, Rome, 2015
ISSN 0041-6436

● **Available in:** *English, French, Spanish*



Forthcoming

Forests, wood products and climate change mitigation

Opportunities, economics and moving forward

Climate change poses one of the greatest challenges of the twenty-first century. Yet anthropogenic greenhouse gas emissions continue to increase, rendering climate change mitigation options in the forest sector more relevant than ever before. There is increasing recognition that, when well financed and implemented, these options can contribute significantly to emission reduction goals. This publication explores the economics and prospects of six key forest sector mitigation options and suggests the actions needed to move forward. It aspires to provide decision-makers with sufficient information to make informed policy decisions aimed at harnessing the substantial untapped potential of forest and forest-product-based mitigation.

FAO Forestry Paper
FAO, Rome, 2015



Forthcoming

Global guidelines for the restoration of degraded forests and landscapes in drylands

Building resilience and benefiting livelihoods

Drylands cover 41 percent of the earth’s land surface and are home to 2 billion people. However, they are widely affected by desertification, degradation, biodiversity loss, poverty and food insecurity, problems that are exacerbated by climate change. Drylands’ importance is generally undervalued, which results in limited policy attention, funding and scientific research. Trees and forests are a central part of the solutions for drylands, and are also a source of resilience in the face of global changes. FAO member countries requested the Organization to collaborate with countries and stakeholders in the preparation of a comprehensive analysis, evaluation and documentation of relevant afforestation, reforestation and restoration actions in drylands. FAO’s response is the FAO Drylands Restoration Initiative (DRI). These global guidelines are one output of the DRI and are expected to be a major contribution to global restoration efforts.

FAO Forestry Paper
FAO, Rome, 2015

● **Available in:** *English, French*



Forthcoming

Forty years of community-based forestry

A review of extent and effectiveness

Two previous FAO reports (in 1991 and 2001) reviewed the development of community forestry at roughly the ten- and 25-year mark respectively. This latest report looks at implementation of community-based forestry (CBF) around the world over the last 40 years, through a review of the extent and effectiveness of the various types of CBF regimes in delivering biophysical and socio-economic outcomes. It is based on collated data from literature and the application of a CBF assessment framework recently developed by FAO. The report will be of value to policymakers, practitioners and researchers with an interest in improving sustainable forest management outcomes.

FAO, Rome, 2016



Forthcoming

Knowledge reference for national forest assessment

FAO has been monitoring global forest resources for many decades through its Global Forest Resources Assessment programme and by providing direct support to countries in the establishment of national forest monitoring systems. *Knowledge reference for national forest assessment* is the latest in a series of training monitoring material designed to draw attention to the importance of national forest inventories and, in particular, to equip countries with the means to undertake the continuous assessment of their forests with greater autonomy. The reference comprises a collection of scientific articles covering the wide range of actions and activities needed to establish and undertake national forest resources assessments. As such, it will be an invaluable resource for a broad range of stakeholders in government the private sector, civil society and academia. The reference's web portal contains a series of self-study exercises that are specifically targeted at students and the younger generation of foresters.

FAO, Rome, 2015



Forthcoming

Nature & Faune 29(2)

Forests and people: investing in Africa's sustainable future

The latest issue of the Regional Office for Africa's bi-annual journal, *Nature & Faune*, entitled *Forests and people: investing in Africa's sustainable future*, will feature several articles illustrating the main theme of the forthcoming World Forestry Congress from an African perspective. This special edition is timed for release in September 2015 to coincide with the Congress in Durban and will celebrate, in particular, the first time that a World Forestry Congress has been hosted on the continent. It explores the many needs and dimensions of investment in African forestry, in articles that highlight the experiences, challenges and vision of stakeholders, as they work to achieve a sustainable future for African forests and the people the forest supports.

FAO, Accra, 2015

E-newsletters



CLIM-FO-L is a free, electronic newsletter on forests and climate change compiled by FAO. It provides information on recent developments in climate change negotiations, scientific articles, publications, events, job opportunities, and multilateral processes in climate change, among other areas. More information, including on how to subscribe, can be viewed here:

www.fao.org/forestry/52578



Nature & Faune is a free, peer-reviewed, open access international publication, produced in English and French by the FAO Regional Office for Africa. It is a contribution to action on natural resources management for food security in Africa and is currently produced twice a year. More information, including on how to subscribe, can be viewed here:

www.fao.org/afrika/resources/nature-faune/submissions



NWFP Update, the successor to the NWFP Digest and Non-Wood News, is a free electronic newsletter on non-wood forest products (NWFPs). It places great store on readers' contributions as a means of building a dynamic platform for the exchange of views on NWFPs. More information, including on how to subscribe, can be viewed here:

www.fao.org/forestry/nwfp/85184



EU FLEGT Facility News

provides bimonthly updates, free-of-charge, on the work of the European Union and partner countries to combat illegal logging and to implement the EU Action Plan for Forest Law Enforcement Governance and Trade. It is produced in English by the European Forest Institute's EU FLEGT Facility in cooperation with the EU FAO FLEGT Programme and the European Union. More information, including on how to subscribe, can be viewed here:

www.euflegt.efi.int/newsletter

Forests for SOCIOECONOMIC DEVELOPMENT *and* FOOD SECURITY

Putting people at the centre

- Boosting forest income to improve food security and nutrition
- Organizing people and communities for greater local control in forestry
- Involving women and youth in sustainable forest management
- Forests and trees as drivers of socioeconomic development
- Managing forest-related conflicts
- Wildlife in local livelihood development

Acknowledging forests' cultural and recreational roles

- Traditional forest-related knowledge
- Public perceptions of forests
- Archaeology, anthropology and forests
- Art and forests

Accounting for the multiple benefits of forests

- Forests in national economic measures
 - Forests and the bioeconomy
 - Forest environmental services
-



Towards food security and improved nutrition

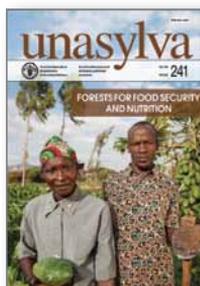
Increasing the contribution of forests and trees

In May 2013, FAO, in partnership with Bioversity International, the Center for International Forestry Research, the World Agroforestry Centre (ICRAF) and the World Bank, hosted the International Conference on Forests for Food Security and Nutrition. The meeting, the first of its kind, was attended by experts and stakeholders from more than 100 countries. Based on the knowledge shared and outcomes of the Conference, this brief makes several recommendations, including on tenure; cross-sectoral coordination and policy mechanisms; improving smallholder access to credit, technology and markets; gender equality; and strengthening mechanisms for data collection and dissemination.

FAO, Rome, 2013
16 pp.

● **Available in:** *English*

<http://www.fao.org/docrep/018/i2969e/i2969e.pdf>



Unasylya 241

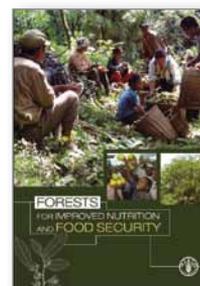
Forests for food security and nutrition

Ensuring food security and nutrition has always been at the heart of FAO's work. The Organization's constitution asserts that FAO's member nations are determined, among other things, to ensure "humanity's freedom from hunger." Food security requires healthy, diverse ecosystems, and forests and trees outside forests therefore have important roles. FAO brought together more than 400 experts from governments, civil-society organizations, indigenous and other local communities, donors and international organizations for the first global conference to address the role of forests and trees outside forests in food security and nutrition. This edition of *Unasylya* presents articles arising from the International Conference on Forests for Food Security and Nutrition held at FAO headquarters in May 2013.

FAO, Rome, 2013
ISSN 0041-6436
84 pp.

● **Available in:** *English, French, Spanish*

<http://www.fao.org/docrep/019/i3482e/i3482e.pdf>



Forests for improved nutrition and food security

Feeding the world's population is one of the most pressing challenges facing humanity in the twenty-first century. At the Millennium Development Goal (MDG) Summit held in New York in September 2010, countries reaffirmed their commitment to reaching the MDGs, including the eradication of extreme poverty and hunger. This publication highlights how forests, woodlands and trees support food and nutritional security, and provides policy recommendations on how the contribution of forests and trees to food security can be sustained and enhanced.

FAO, Rome, 2011
12 pp.

● **Available in:** *English*

<http://www.fao.org/docrep/014/i2011e/i2011e00.pdf>



Making forestry work for the poor

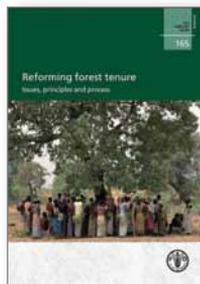
Assessment of the contribution of forestry to poverty alleviation in Asia and the Pacific

This publication documents the contribution of forests and forestry to poverty alleviation in 11 countries in the Asia and Pacific region. The sector's contribution is of great importance given the high prevalence of poverty in forested areas. Access to markets, lack of marketing knowledge, financial capital and investment, and insecure land and resource tenure are some of the main factors that impede rural people's rise out of poverty. However, in recent years some countries in the region have made great strides in forest management, and investments are now paying dividends at the local level in terms of poverty reduction, income generation and livelihoods improvement.

FAO, Bangkok, 2012
ISBN 978-92-5-107230-1
380 pp.

● **Available in:** English

<http://www.fao.org/docrep/016/i2732e/i2732e00.htm>



Reforming forest tenure

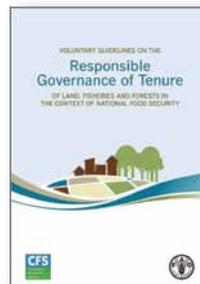
Issues, principles and process

FAO's *Global Forest Resources Assessment 2010 (FRA 2010)* shows that 80 percent of the world's forests are publicly owned, but forest ownership and management by communities, individuals and private companies are increasing – more in some countries than in others. A more diversified tenure system could provide a basis for improving forest management and local livelihoods, particularly where state capacities to manage forests are weak. An analysis of experiences in tenure and tenure reform suggests that the interactions among tenure, regulatory frameworks and governance are critical in determining the extent to which forest management objectives are achieved.

FAO Forestry Paper No. 165
FAO, Rome, 2011
ISBN 978-92-5-106855-7
110 pp.

● **Available in:** English

<http://www.fao.org/docrep/014/i2185e/i2185e00.pdf>



Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security

How people, communities and others gain access to land, fisheries and forests is defined and regulated through systems of tenure, which determine who can use which resources, for how long, and under what conditions. These voluntary guidelines, endorsed by the Committee on World Food Security in 2012, serve as a policy, legal and organizational framework, based on the principles of sustainable development and recognizing the centrality of land to development. They provide guidance on improving the governance of tenure of land, fisheries and forestry as part of the overarching goal of food security for all, the eradication of poverty, and the progressive realization of the right to adequate food. They are also consistent with, and draw on, international and regional instruments that address human and tenure rights.

FAO/Committee on World Food Security
FAO, Rome, 2012
ISBN 978-92-5-107277-6
48 pp.

● **Available in:** all UN languages

<http://www.fao.org/docrep/016/i2801e/i2801e.pdf>



Tenure security for better forestry

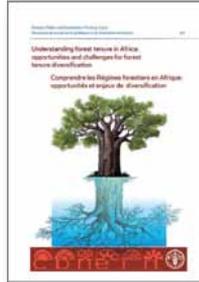
Understanding forest tenure in Africa

This policy brief is based on a series of reviews commissioned by FAO to increase understanding about the role of forest tenure in African countries, in particular of how it can promote sustainable forest management and alleviate poverty. The brief also provides information for the *Global Forest Resources Assessment*, including quantitative data from 17 countries, representing different ecoregions and a wide spectrum of tenure systems. This information is complemented by 11 analytical country case impact studies.

FAO, Rome, 2008
12 pp.

● **Available in:** *English*

<http://www.fao.org/docrep/011/i0352e/i0352e00.htm>



Understanding forest tenure in Africa

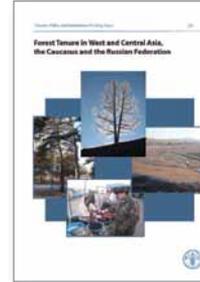
Opportunities and challenges for forest tenure diversification

Forest tenure determines who can use resources, for how long and under what conditions. It is a broad concept that includes ownership, tenancy, rights and obligations and other arrangements for the use of forests. Reform of forest tenure may have complex, wide-ranging implications, which are often poorly understood and may deter governments from initiating or supporting such reform processes. Understanding the implications of different forest tenure arrangements is therefore essential, for both government and local and other stakeholders. This paper presents facts and evidence from a series of studies conducted by FAO in Africa aimed at clarifying the relationships between forest tenure, sustainable forest management and poverty alleviation, and provides recommendations for more effective forest tenure systems.

Forestry Policy and Institutions
Working Paper 19
FAO, Rome, 2008
393 pp.

● **Available in:** *English, French*

<ftp://ftp.fao.org/docrep/fao/010/i0161B/i0161B.pdf>



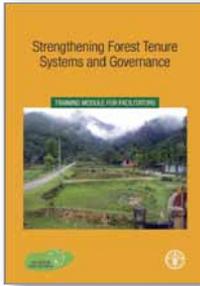
Forest tenure in West and Central Asia, the Caucasus and the Russian Federation

Deforestation, the effectiveness of public sector forest management and commitment to empowering local communities, decentralizing decision-making and increasing private sector involvement are issues that have steered the forest tenure debate over the last 20 years. This paper presents facts and evidence from a series of studies conducted by FAO in West and Central Asia, the Caucasus and the Russian Federation. It seeks to analyse and compare the various transformation processes taking place in these countries, with a view to identifying innovative and promising concepts and approaches for sustainable forest management and improved livelihoods at the local level.

Forestry Policy and Institutions
Working Paper 25
FAO, Rome, 2010
37 pp.

● **Available in:** *English*

<http://www.fao.org/docrep/012/k7544e/k7544e00.pdf>



Strengthening forest tenure systems and governance

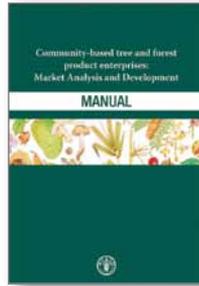
Training module for facilitators

Forest management worldwide has undergone substantial changes over the past decades, with ownership of and access to forest resources becoming more diversified. This shift characterizes ongoing forest tenure reform processes, which entail changes to regulatory frameworks and governance and the need for key stakeholders to adopt new and different roles in forest management. Within the framework of the *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security* and based on the forest tenure reform guidelines developed by FAO in 2011, this training module provides practical guidance for people involved in forest tenure reforms. It focuses on strengthening specific competences and demonstrating challenges, and introduces some tools to address them. The module also complements existing training modules produced by FAO and other organizations.

FAO, Rome, 2014
ISBN 978-92-5-108051-1
E-ISBN 978-92-5-108052-8 (PDF)
76 pp.

● **Available in:** English

<http://www.fao.org/docrep/019/i3521e/i3521e.pdf>



Community-based tree and forest product enterprises

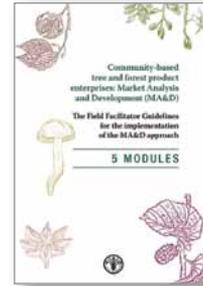
Market analysis and development: Manual

The market analysis and development approach was designed to assist individuals living in rural communities to develop the business skills and local enterprises needed to generate and increase their incomes, while ensuring the sustainable management of forest resources. The approach encompasses social and environmental concerns as well as the technological, commercial and financial aspects of small-enterprise development. When successful, it can empower producers, manufacturers and traders to plan and develop equitable, sustainable, ecologically sound, socially beneficial and financially viable tree and forest-product-based enterprises. The manual provides managers with the information and tools needed for decision-making in enterprise development projects.

FAO, Rome, 2011
111 pp.

● **Available in:** English

<http://www.fao.org/docrep/014/i2394e/i2394e00.pdf>



Community-based tree and forest product enterprises: market analysis and development (MA&D)

The field facilitator guidelines for the implementation of the MA&D approach – 5 modules

The MA&D guidelines, comprising five modules, draw on several years of experience in the implementation of MA&D projects in many countries. They are a powerful capacity-building tool for field facilitators to support the empowerment of local entrepreneurs. The guidelines use a detailed, step-by-step approach for the implementation of MA&D, with guidance that can be adapted to the context and needs of the local communities involved. Consequently, the tools proposed can be adjusted to relevant circumstances e.g. the timeframe for their use, the extent of local consultations and participation and the number of stakeholders in a given project.

FAO, Rome, 2011
384 pp.

● **Available in:** English

<http://www.fao.org/docrep/014/i2395e/i2395e.pdf>



Forest and Farm Facility brochure

Forest and farm producers include women and men, smallholder families, indigenous peoples and local communities who have a strong relationship with forests and farms within forested landscapes for their livelihood. The Forest and Farm Facility works to support them, by promoting cross-sectoral coordination and increasing the capacity of producers in community organization and advocacy, livelihoods, and sustainable landscape management. The Facility also funds partnership agreements and provides small grants centred around three pillars of support. This short brochure describes the pillars, the nature of the Facility's support and its experience with some producer groups.

FAO, Rome, 2014
8 pp.

● **Available in:** *English*

<http://www.fao.org/partnerships/forest-farm-facility/40164-06235131149de02b73b87ab61bc8cf9ed.pdf>



Making change happen

What can governments do to strengthen forest producer organizations?

Governments at all levels have key roles to play in the development of effective forest producer organizations (FPOs). This paper explores the scope, strategies and impacts of public measures that could be deployed to improve the institutional enabling environment for FPOs. It responds to recommendations by FAO regional forestry commissions and the FAO Committee on Forestry to increase the capacity of governments to meet the multiple challenges in forestry, and also to FAO's new strategic framework, which mandates FAO to improve the enabling environment for the rural poor. This paper is also a direct response to recommendations contained in the summary statement of the International Conference on Forest Producer Organizations, which was held in Guilin, China, in November 2013.

Forest and Farm Facility
Working Paper
FAO, Rome, 2014
43 pp.

● **Available in:** *English*

<http://www.fao.org/3/a-h0038e.pdf>



Multi-sectoral platforms for planning and implementation

How they might better serve forest and farm producers

Multi-sectoral platforms are processes that often become institutionalized bodies, drawing together stakeholder representatives from different sectors to make decisions. They are convened to harness the benefits of collaboration in tackling planning problems that span the jurisdiction of more than one sector and which therefore require a coordinated response in policy formulation and implementation. The first pillar of the Forest and Farm Facility's work is to strengthen forest and farm producer organizations for business, livelihoods and policy engagement. This publication looks at the role of multi-sectoral platforms, why they are needed, the challenges they face and what makes them work well.

Forest and Farm Facility
Working Paper 2
FAO, Rome, 2014
53 pp.

● **Available in:** *English*

<http://www.fao.org/3/a-i4168e.pdf>



Talking about forests and family farms: growing relationships on fertile ground

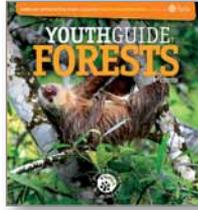
A conversation between forest-and-farm producers and governments

This publication summarizes the conversation that took place between various participants and key stakeholders at the “Family forestry is family farming” event co-organized by the Forest and Farm Facility and the International Family Forestry Alliance during World Forest Week held at FAO headquarters in Rome in June 2014. As a contribution to the International Year of Family Farming, the conversation testifies to the power of cooperation between forest-and-farm families and governments in preparing fertile ground. It also introduces some of the challenges faced by smallholders in forested landscapes and the role of forest-and-farm producer organizations in helping overcome such challenges.

FAO, Rome, 2014
56 pp.

● **Available in:** English

<http://www.fao.org/3/a-i4231e.pdf>



The youth guide to forests

The Youth and United Nations Global Alliance (YUNGA) is a partnership between United Nations agencies, civil society organizations and other groups working with children and young people. YUNGA publications are designed as an educational resource for schools, youth groups and other curious young learners. This fact-filled guide explores forests from the equator to the frozen poles, the depths of the rainforest to the mountain forests at high altitudes. It also demonstrates the many benefits that forests provide, discusses the negative impacts that humans can have on forests and explains how good management can help protect and conserve forests and forest biodiversity. It concludes with inspiring examples of youth-led initiatives and an easy-to-follow action plan that can help youth develop their own forest conservation activities and projects.

FAO, Rome, 2014
ISBN 978-92-5-108435-9 (print)
E-ISBN 978-92-5-108436-6 (PDF)
240 pp.

● **Available in:** English

<http://www.fao.org/3/contents/4dfc5b84-8084-4b9b-b082-10eb8b491966/i3856e.pdf>



Human-wildlife conflict in Africa

Causes, consequences and management strategies

Conflicts between humans and wildlife occur in every continent. In rural and peri-urban areas of Africa, such conflicts have become more frequent, with consequences for local people that include injury or death from encounters with dangerous animals to the loss of their crops, domestic livestock and damaged infrastructure. In recent decades, this situation has been fuelled by human population growth, the extension of transport routes and the expansion of agricultural and industrial activities into previously wild and uninhabited areas; it is also exacerbated by climate change. This publication, developed on the basis of a 2008 workshop, seeks to facilitate the coexistence of humans and wildlife and support local communities in applying best management practices. Focusing on some large herbivores and carnivores, it describes the issues involved in and different methods of conflict management, including a three-step framework for decision-making. It will be of interest to a broad range of stakeholders seeking to help resolve human-wildlife conflict in Africa, for which there is no unique solution.

FAO Forestry Paper 157
FAO, Rome, 2009
ISBN 978-92-5-106372-9
ISSN: 0258 6150
112 pp.

● **Available in:** English, French

<http://www.fao.org/documents/card/en/c/cee38ed6-0a07-57f8-a2d1-ea00ffde4684/>



The interaction between social protection and agriculture

A review of evidence

Social protection policies aim to reduce socioeconomic risks, vulnerability, extreme poverty and deprivation, while smallholder agricultural policies focus on improving productivity in crops, fisheries, forestry and livestock and improving access to markets. Both areas of policy are important in poverty reduction strategies, but little attention has been paid to the interaction between them and how that influences their design and implementation. The review seeks to provide an empirical rationale for building synergies and coordinating complementarities between social protection and smallholder agriculture in developing countries, especially in sub-Saharan Africa.

FAO, Rome, 2013
98 pp.

● **Available in:** English

<http://www.fao.org/3/a-i3563e.pdf>



The impact of social cash transfer programmes on community dynamics in sub-Saharan Africa

Social cash transfer programmes are on the rise in sub-Saharan Africa, building on the momentum generated by the African Union's 2008 Social Policy Framework Plan of Action. This plan motivated member countries to develop their own social policy frameworks and to give greater priority to social protection programmes. With support from development partners, individual governments are taking up the call, formulating new social protection policies with strategies, including cash transfers for the most vulnerable households. Social cash transfer programmes commonly address hunger and food insecurity; school enrolment and attendance; the health, nutrition and wellbeing of children and household members; and poverty reduction.

FAO, Rome, 2015
4 pp.

● **Available in:** English

<http://bit.ly/178eG8q>



The economic impacts of cash transfer programmes in sub-Saharan Africa

Cash transfer programmes in sub-Saharan Africa impact the productive activities of both beneficiary and non-beneficiary households in the communities where they are implemented. These programmes have led to an increase in agricultural activities in beneficiary households, including greater use of agricultural inputs, more land area in crop production and higher crop output. Beneficiary households have increased ownership of livestock and agricultural tools, as well as a greater tendency to participate in non-farm family enterprises. This brochure describes and assesses some of the impacts.

UNICEF/FAO, Rome, 2014
4 pp.

● **Available in:** English

<http://bit.ly/1zvGdf2>



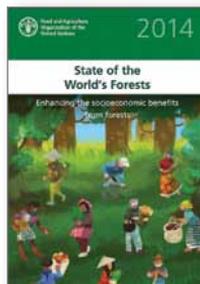
Social protection brochure

Well-designed and comprehensive social protection systems directly impact food security by increasing investments in agricultural assets, input use, farm output and increasing the quantity and quality of food produced and consumed in households. They can also impact agriculture by preventing risk-coping strategies that deplete households' agricultural assets, increasing investments in human capital (child education and health), and strengthening resilience against economic and natural shocks. This brochure highlights the overall goals of FAO's work on social protection, its current and ongoing projects, and how it is making a difference with its work.

FAO, Rome, 2014
2 pp.

● **Available in:** *English*

<http://www.fao.org/3/a-i4053e.pdf>



State of the World's Forests 2014

Enhancing the socioeconomic benefits from forests

Across the world, forests, trees on farms, and agroforestry systems play a crucial role in the livelihoods of rural people by providing employment, energy, nutritious foods and a wide range of other goods and ecosystem services. They have tremendous potential to contribute to sustainable development and to a greener economy. This evidence is critical to inform policies on forest management and use, and to ensure that the benefits from forests are recognized in the post-2015 development agenda, not only with respect to the environment, but also for their contributions to broader social issues. This edition of *State of the World's Forests* addresses this knowledge gap by systematically gathering and analysing available data on forests' contributions to people's livelihoods, food, health, shelter and energy needs. Crucially, the report also suggests how information might be improved and policies adjusted, so that the socioeconomic benefits from forests can be enhanced in the future.

FAO, Rome, 2014
ISBN 978-92-5-108269-0 (print)
E-ISBN 978-92-5-108270-6 (PDF)
133 pp.

● **Available in:** *all UN languages*

<http://www.fao.org/3/a-i3710e.pdf>

E-book: <http://www.fao.org/publications/e-book-collection>



Moving Forward

Selected achievements of the FAO Forestry Programme in 2012–2013

In 2012–13, FAO defined a new strategic framework that consolidated its Strategic Objectives (SOs) – the Organization's key cross-cutting areas of work – into five new categories. This latest issue of FAO Forestry's biennial publication provides examples of how forests contribute substantially to the new SOs, be it in food security, the increased sustainable provision of goods and services, the fight against rural poverty, the value chain, and resilience. This contribution was accomplished in part thanks to one of FAO's strengths: its broad expertise in forestry spread through a dense network of regional, subregional, country offices and at headquarters. Designed to inform discussions of the Committee on Forestry, the publication also serves as a resource for new staff, partners and the media, by presenting the breadth of FAO Forestry's work and a selection of its main achievements in an attractive, accessible form.

FAO, Rome, 2014
48 pp.

● **Available in:** *English, French, Spanish*

<http://www.fao.org/3/a-i3816e.pdf>

FAO FORESTRY CAPACITY-BUILDING ONLINE TOOLS

Explore the SFM Toolbox

Modules

Tools

Cases

The Sustainable Forest Management (SFM) Toolbox

collates a large number of tools, case studies and other resources, organized in modules. It has been created to provide forest owners, managers and other stakeholders with easy access to those resources for the implementation of SFM.

The United Nations describes SFM as:

“[a] dynamic and evolving concept [that] aims to maintain and enhance the economic, social and environmental values of all types of forests, for the benefit of present and future generations”.

www.fao.org/sustainable-forest-management/toolbox/sfm-home

The Forestry Communication Toolkit

provides access to expert interviews on key forestry topics, videos from the field detailing macro issues and individual projects, FAO publications, images, comprehensive statistics, maps and other useful resources.



Browse by resource type from a wide range of materials, including:

- > videos from the field detailing macro issues and individual projects
- > expert interviews on key forestry topics
- > comprehensive statistics and maps
- > images
- > press coverage of forestry issues
- > relevant FAO publications



www.fao.org/forestry/communication-toolkit

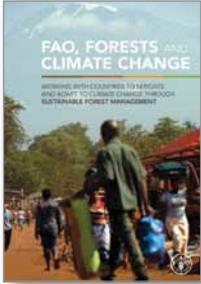
BUILDING RESILIENCE *with forests*

Forests as buffers against environmental change

- Forests and climate change
 - Enhancing adaptation to, and the mitigation of, climate change
 - The future of REDD+
- Forests and water
- The conservation of forest biodiversity

Increasing forest resilience to natural disasters and shocks

- Restoring the resilience of forests in drylands
 - Pests, diseases, fire and floods
-



FAO, forests and climate change

Working with countries to mitigate and adapt to climate change through sustainable forest management

Climate change poses enormous challenges for forests and people. Adaptation and mitigation are the two main responses to climate change: mitigation seeking to address its causes and adaptation aiming to reduce its impacts. Deploying sustainable forest management (SFM) can not only lessen the risks posed by climate change, it can generate opportunities, such as employment in forest restoration, forest conservation, wood production and wood-based manufacturing, tenure reform, and payments for forest-related services. This publication notes FAO's work, with its partners, to assist countries to mitigate and adapt to climate change as it relates to forests, trees and the people who depend on them.

FAO, Rome, 2013
20 pp.

● **Available in:** *English*

<http://www.fao.org/docrep/017/i2906e/i2906e00.pdf>



Climate change guidelines for forest managers

Forests have a significant role in climate change mitigation: acting as “sinks”, by absorbing carbon from the atmosphere and storing carbon in biomass and soils. But, when cleared or degraded, they are also significant sources of greenhouse gas emissions. Sustainable forest management can help reduce the negative effects of climate change on forests and forest-dependent people, and help ensure that forests play their role in mitigating climate change. These guidelines aim to support forest managers in responding to climate change challenges and opportunities at the forest management unit level and assist them in incorporating climate change considerations into forest management plans and practices. They complement the FAO publication *Climate change for forest policymakers*.

FAO Forestry Paper 172
FAO, Rome, 2013
ISBN 978-92-5-107831-0 (print)
E-ISBN 978-92-5-107832-7 (PDF)
122 pp.

● **Available in:** *English, French, Spanish*

<http://www.fao.org/docrep/018/i3383e/i3383e00.htm>



Climate change for forest policymakers

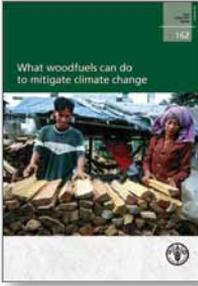
An approach for integrating climate change into national forest programmes in support of sustainable forest management

In many countries, forest and climate-related policies are the competencies of different sections of government and involve various stakeholders and experts, often with limited exchange of information across boundaries. The result is that forestry and climate change mitigation and adaptation policies and strategies may not address all needs and dimensions or fully appreciate potential impacts. National forest programmes (NFPs) are commonly agreed country frameworks for developing and implementing comprehensive forest policies for sustainable forest management. This publication, the outcome of a consultative process involving countries and experts, seeks to provide senior government officials and representatives of other stakeholders with a practical approach to the process of integrating climate change considerations into NFPs.

National Forest Programme
Facility
FAO, Rome, 2011
50 pp.

● **Available in:** *English*

<http://www.fao.org/docrep/015/i2429e/i2429e00.pdf>



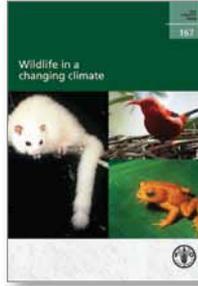
What woodfuels can do to mitigate climate change

At the core of most proposals for the adaptation and mitigation of climate change is the reduction of greenhouse gas emissions through reducing energy use and switching to cleaner energy sources, with opportunities on both the demand and the supply sides. Demand-side fuel-switching strategies include the use of bioenergy to supply residential, industrial and transport energy demands. This publication explores the scope and potential for woodfuels to replace fossil fuels, thereby contributing to climate change mitigation, an option many developing countries have successfully pursued. It suggests that many barriers have been identified that preclude the full use of this mitigation potential. Policy reforms to encourage environmental sustainability, increased productivity, improved infrastructure and planning are therefore essential for large-scale implementation.

FAO Forestry Paper 167
FAO, Rome, 2010
ISBN 978-92-5-106653-9
ISSN 0258-6150
98 pp.

● **Available in:** English

<http://www.fao.org/docrep/013/i1756e/i1756e00.htm>



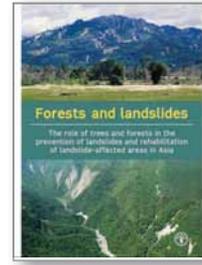
Wildlife in a changing climate

Although climate change has been observed and monitored over several decades, there are few long-term studies on how it is affecting wildlife. There is, however, growing evidence that the phenomenon significantly exacerbates many major human-induced pressures, including overexploitation of wildlife resources. Using a series of case studies, this publication analyses and presents information on how climate change affects or is likely to affect wild animals and their habitats, focusing mainly on tropical terrestrial ecosystems. It highlights climate-induced changes and their likely consequences, provides up-to-date information on how these could be addressed and concludes with a proposed way forward.

FAO Forestry Paper 167
FAO, Rome, 2012
ISBN 978-92-5-107089-5
ISSN 0258-6150
118 pp.

● **Available in:** English, Spanish

<http://www.fao.org/docrep/015/i2498e/i2498e00.htm>



Forests and landslides

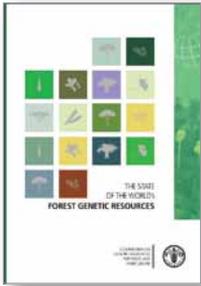
The role of trees and forests in the prevention of landslides and rehabilitation of landslide-affected areas in Asia

The potential for loss of life and destruction of assets through landslides is increasing in many mountainous and hilly areas of Asia. Climate change predictions also suggest that landslide frequency will increase in some areas of the region as the frequency of extreme storms increases. Understanding the roles of trees and forests in preventing landslides and in rehabilitating landslide-affected areas, also because of landslides' impacts on water resources and water quality, is therefore very important. This publication seeks to bridge the gap between science and policy and help inform decision-making on improving the management of forests on sloping land, both in Asia and elsewhere in the world.

FAO, Bangkok, 2013
ISBN 978-92-5-107576-0
70 pp.

● **Available in:** English

<http://www.fao.org/3/a-i3245e/index.html>



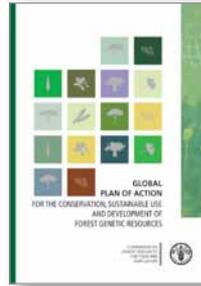
The State of the World's Forest Genetic Resources

Forest genetic resources – the heritable materials maintained within and among trees and other woody plant species – are essential for the adaptation and the evolutionary processes of forests and trees as well as for improving their resilience and productivity. This first-ever report on *The State of the World's Forest Genetic Resources* constitutes a milestone in building the information and knowledge base required for action at the national, regional and international levels. Developed through a country-driven process, with the participation and contributions of representatives from national institutions, non-governmental and community-based organizations, and international organizations, the report synthesizes information from 86 national reports from countries covering 85 percent of global forest area.

FAO, Rome, 2014
ISBN 978-92-5-108402-1 (print)
E-ISBN 978-92-5-108403-8 (PDF)
304 pp.

● **Available in:** English

<http://www.fao.org/3/a-i3825e.pdf>
E-book: <http://www.fao.org/publications/e-book-collection>



Global Plan of Action

For the conservation, sustainable use and development of forest genetic resources

In June 2007, the Commission on Genetic Resources for Food and Agriculture highlighted the urgent need to conserve and sustainably use forest genetic resources (FGR). On the basis of information and knowledge compiled by FAO for *The State of the World's Forest Genetic Resources*, the Commission subsequently developed a Global Plan of Action on FGR. Adopted by the FAO Conference in June 2013, the Plan includes four priority areas for action: improving the availability of, and access to, information on FGR; conservation of FGR (*in situ* and *ex situ*); sustainable use, development and management of FGR; and policies, institutions and capacity-building. Under these areas, a total of 27 strategic priorities have been identified for specific action at the national, regional and global levels.

FAO, Rome, 2014
ISBN 978-92-5-108422-9
34 pp.

● **Available in:** Arabic, Chinese, English, French, Russian, Spanish

<http://www.fao.org/3/a-i3849e.pdf>



The State of the World's Forest Genetic Resources – thematic study

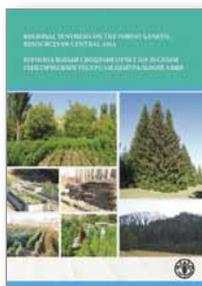
Genetic considerations in ecosystem restoration using native tree species

One of the major and growing environmental challenges of the twenty-first century will be the rehabilitation and restoration of forests and degraded lands. Forests have a crucial role in resilient landscapes at multiple scales, and restoring forest ecosystems is therefore a key strategy. Bioversity International coordinated this thematic study as an input to FAO's landmark report on *The State of the World's Forest Genetic Resources*. The study provides fundamental information for knowledge-based ecosystem restoration using native tree species and draws attention to the importance of embedding genetic considerations in restoration activities.

FAO, Rome, 2014
ISBN 978-92-5-108469-4 (print)
E-ISBN 978-92-5-108470-0 (PDF)
282 pp.

● **Available in:** English

<http://www.fao.org/3/a-i3938e.pdf>
E-book: <http://www.fao.org/publications/e-book-collection>



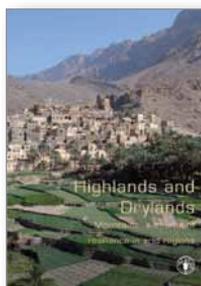
Regional synthesis on the forest genetic resources of Central Asia

The preparation of the report on *The State of the World's Forest Genetic Resources* included regional consultation workshops. The process further paved the way for the implementation of regional projects and programmes and development of international collaboration, given that the geographic distribution of FGR goes beyond country boundaries. This regional synthesis presents the key features of forest genetic resources (FGR) in the region and identifies the needs and priorities for actions identified during the regional consultation meeting held in August 2012 in Dushanbe, Republic of Tajikistan. It is based on the country reports of Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan

FAO, Ankara, 2013
ISBN 978-92-5-007601-0
E-ISBN 978-92-5-007602-7
139 pp.

● **Available in:** *English and Russian*

<http://www.fao.org/3/a-i3257b.pdf>



Highlands and drylands

Mountains, a source of resilience in arid regions

Remote mountain regions have become increasingly recognized as home to many of the world's poorest and hungriest people, where living conditions and livelihood opportunities are among the harshest and most difficult in the world. While the understanding and appreciation of the global significance of mountains is increasing, political and economic support for their sustainable development remains insufficient. This general situation is even worse in dryland mountains, important ecosystems which represent more than one third of all mountains, whose populations and natural resources are under increasing threat from a variety of causes. This publication highlights these key but fragile ecosystems' importance and helps raise awareness in important global processes of the need to strengthen political will and procure new financial resources for the dryland mountains and the communities they support.

FAO, Rome, 2011
ISBN 978-92-5-106891-5
115 pp.

● **Available in:** *English*

<http://www.fao.org/docrep/014/i2248e/i2248e00.pdf>



Mountain forests in a changing world

Realizing values, addressing challenges

Covering over 9 million km² of the Earth's surface, mountain forests represent 23 percent of the Earth's forest cover and have a key role in mountain areas, providing goods and services that are essential to the livelihood of both highland and lowland communities. The biodiversity stored in healthy mountain forests provides local populations with a range of life-sustaining products, such as food, timber, fuel, medicinal and aromatic plants, and fodder. Mountains also have a crucial role in monitoring the planet's health because of their sensitivity to climatic changes. This publication seeks to encourage communities, scientists and policymakers to consider long-term policies for the conservation and protection of these unique and fundamental ecosystems, for the benefit of mountain and adjacent lowland communities.

FAO, Rome, 2011
ISBN 978-92-5-107076-5
84 pp.

● **Available in:** *English*

<http://www.fao.org/3/a-i2481e.pdf>



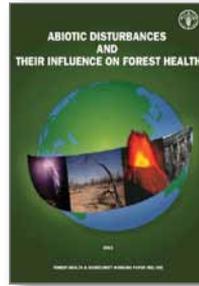
Guide to implementation of phytosanitary standards in forestry

New threats to forest health are emerging from insects, pathogens and other non-indigenous pests due to growing global trade, the exploitation of new market opportunities, and habitat modification, including the impacts of local climatic change. Management of pests and preventing their spread has a key role in helping to ensure that forests remain healthy, meeting sustainable forestry objectives. This FAO-initiated guide is the result of a multi-stakeholder activity to provide the forest sector with clear and concise guidance on forest health practices, including plain-language descriptions of the International Standards for Phytosanitary Measures (ISPMs) with suggestions for their improved national implementation. The guide also seeks to promote vital understanding of forest health and better communication between national policymakers, planners and managers.

FAO Forestry Paper 164
FAO, Rome, 2011
ISSN 0258-6150
112 pp.

● **Available in:** *English*

<http://www.fao.org/docrep/013/i2080e/i2080e.pdf>



Abiotic disturbances and their influence on forest health

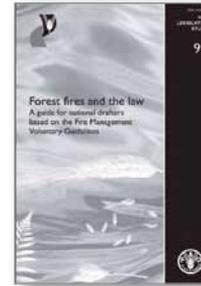
A review

Abiotic disturbances – caused by non-living factors – are a natural and integral part of forest ecosystems and can have major impacts, both positive and negative. When disturbances exceed their normal range of variation, the effect on forests can be extreme, affecting entire landscapes and causing large-scale tree mortality and the complete destruction of undergrowth and soils. Global climate change is also exacerbating many of these impacts. This paper reviews current knowledge of the influence of abiotic disturbances on forest health in five areas: meteorological; climatological; hydrological; geophysical; and anthropogenic.

Forest Health and Biosecurity
Working paper FBS/35E
FAO, Rome, 2011
51 pp.

● **Available in:** *English*

<http://www.fao.org/docrep/014/am664e/am664e00.pdf>



Forest fires and the law

A guide for national drafters based on the Fire Management Voluntary Guidelines

The *Fire Management Voluntary Guidelines* support the formulation of legal and regulatory conditions in holistic fire management. Specifically, principle eight of the guidelines recognizes the role of legislation in supporting and institutionalizing fire management. This comparative analysis, a joint project of the Development Law Service and the Forest Resources Development Service, seeks to systematically identify the elements of solid legislation on forest fires, in national and subnational legislation, drawing on FAO's advice to member countries in different regions and with different ecosystems and legal traditions. The study concludes with the formulation of systematic recommendations for the analysis, review and drafting of forest fire legislation in holistic fire management.

FAO Legislative Study 99
FAO, Rome, 2009
ISBN 978-92-5-106151-0
ISSN 1014-6679
175 pp.

● **Available in:** *English*

<http://www.fao.org/3/a-i0488e.pdf>



Fire Management Voluntary Guidelines

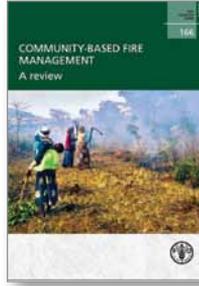
Principles and strategic actions

These non-binding, voluntary guidelines set out a framework of priority principles to support the formulation of policy, legal, regulatory and other enabling conditions and strategic actions for more holistic approaches to fire management at the international level. They describe the cross-sectoral issues, principles and attributes needed to balance the socioeconomic, cultural and environmental dimensions of fire management, and prescribe key actions for the planning and management of natural and planned fires in forests, woodlands, rangelands, grasslands, agricultural and rural/urban landscapes. The guidelines have been tailored primarily for land-use policymakers, planners and managers in fire management, including states, the private sector and non-governmental organizations.

Fire Management Working Paper
FAO, Rome, 2006
74 pp.

- **Available in:** Arabic, Chinese, English, French, Korean, Russian, Spanish

<ftp://ftp.fao.org/docrep/fao/009/j9255e/j9255e00.pdf>



Community-based fire management

A review

The second of two approaches to forest fire management, community-based fire management seeks to involve the local population in all aspects of relevant policy development and fire management practices. The review focuses on promoting activities that extend beyond the suppression of wildfire and the provision of equipment to the inclusion of prevention and preparedness in a landscape perspective. It highlights state-of-the-art practices in community-based fire management and provides updated information that complements the approach published in the *Fire Management Voluntary Guidelines*, addressing aspects of, and limitations in, implementation, training and capacity building, policy and legal frameworks and funding as well as climate-change-related issues.

FAO Forestry Paper 166
FAO, Rome, 2011
ISBN 978-92-5-107094-9
ISSN 0258-6150
99 pp.

- **Available in:** English

<http://www.fao.org/docrep/015/i2495e/i2495e.pdf>



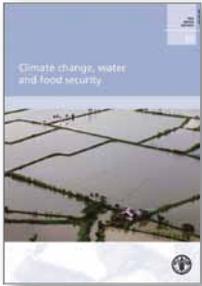
Wildland fire management handbook for trainers

Fire is an important land management tool, but careless or criminal use of fire may have catastrophic impacts. Wildfire can be a major cause of ecosystem degradation and may result in loss of human life, economic devastation, social disruption and environmental deterioration. However, in fire-adapted ecosystems, managed fire plays a positive role in ecosystem health and vitality. A guide for trainers in fire management was first produced by the Finnish National Board of Education in 1993, to train people in developing countries in fire detection and suppression, the priorities at the time. The present handbook is an updated version of the earlier publication and aims to provide more holistic guidance to field trainers and instructors and to complement other wildland fire management handbooks.

FAO, Rome, 2010
15 pp.

- **Available in:** English

<http://www.fao.org/forestry/14203-0146e7ff63ad7e546930ddf5e26ebde13.pdf>



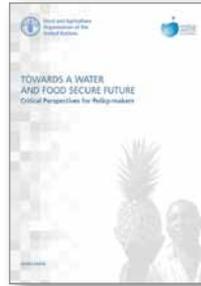
Climate change, water and food security

Climate change will have an impact on the extent and productivity of both irrigated and rain-fed agriculture across the globe. Both the livelihoods of rural communities and the food security of a predominantly urban population are therefore at risk from water-related impacts linked primarily to climate variability. The rural poor, who are the most vulnerable, are likely to be disproportionately affected. This report summarizes current knowledge of the anticipated impacts of climate change on water availability for agriculture. The implications for local and national food security are examined and the methods and approaches to assess climate change impacts on water and agriculture are discussed. The report also emphasizes the need for a closer alignment between water and agricultural policies, including the implementation of “no regrets” strategies.

FAO Water Reports 36
FAO, Rome, 2011
ISBN 978-92-5-106795-6
ISSN 1020-1203
200 pp.

● **Available in:** English

<http://www.fao.org/3/a-i2096e.pdf>



Towards a water and food secure future

Critical perspectives for policymakers

The aim of this white paper is to provide policymakers with a useful overview of the technical and economic aspects of water use in agriculture, with particular emphasis on crop and livestock production. It is expected that, up to 2050, in many countries agriculture will remain an important determinant of economic growth, poverty reduction, and food security, even as, over time, the proportion of agricultural revenue in national gross income declines. The focus of this report is therefore on the regional and national aspects of food security. The science and policy of water resources are complex, yet the fundamental challenge for policymakers is straightforward. Appropriate policies must be implemented and the right investments must be made at regional and national levels.

FAO/World Water Council
FAO, Rome, 2011
76 pp.

● **Available in:** English

http://www.fao.org/nr/water/docs/FAO_WWC_white_paper_web.pdf



Multiple uses of water services in large irrigation systems

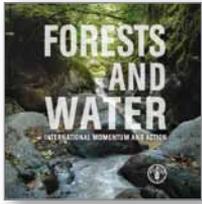
Auditing and planning modernization – the MASSMUS approach

Water is life and its use needs to be multifaceted. In irrigated command areas people use water primarily for crops, while in domestic water systems gardening and small business develop where there is access to water. The Mapping Systems and Services for Multiple Uses of Water Services (MASSMUS) approach sees opportunities at the local level to increase water productivity and reduce water scarcity by allowing water to serve different purposes. These guidelines draw on FAO's long experience in the auditing and modernization planning of irrigation management. They provide information to help interested parties understand the MASSMUS concept as well as inform those who wish to carry out specific assessments on water use in their own systems.

FAO Irrigation and Drainage Paper 67
FAO, Rome, 2013
ISBN 978-92-5-107887-7 (print)
E-ISBN 978-92-5-107888-4 (PDF)
ISSN 0254-5284
227 pp.

● **Available in:** English

<http://www.fao.org/docrep/018/i3414e/i3414e.pdf>



Forests and water

International momentum and action

Forests have a crucial role in and influence on the hydrological cycle and thus have an effect on water resources, both quantitatively and qualitatively. However, a key challenge faced by land, forest and water managers is to maximize the entire range of forest benefits without detriment to water resources and ecosystem function. This is particularly relevant in the context of adaptation to climate change and the consequent need for more robust sustainable forest management. This publication is a synthesis of the main experiences, outcomes and recommendations emanating from several events on forests and water organized by FAO and other institutions between 2008 and 2011, as part of the follow-up to the Shiga Declaration and to the Warsaw Resolution 2. It is a contribution to the development of a comprehensive and practical agenda for future action on international forests and water.

FAO, Rome, 2013
ISBN 978-92-5-107418-3
84 pp.

● **Available in:** English

<http://www.fao.org/docrep/017/i3129e/i3129e.pdf>



The wealth of waste

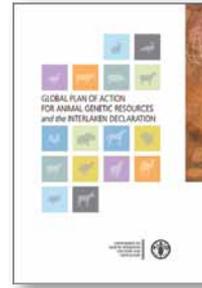
The economics of wastewater use in agriculture

Many regions of the world are experiencing growing water stress. This arises from a relentless growth of demand for water in the face of static, or diminishing, supply and periodic droughts due to climatic factors. The use of reclaimed water in agriculture is an option that is increasingly being investigated and taken up in regions with water scarcity, growing urban populations and growing demand for irrigation water. This report presents an economic framework for the assessment of the use of reclaimed water in agriculture, as part of a comprehensive planning process in water resource allocation strategies to provide for a more economically efficient and sustainable water utilization. It also suggests that recycling of urban wastewater is a key link in integrated water resource management.

FAO Water Reports 35
FAO, Rome, 2010
ISBN 978-92-5-106578-5
ISSN 1020-1203
142 pp.

● **Available in:** English, Spanish

<http://www.fao.org/docrep/012/i1629e/i1629e.pdf>



Global Plan of Action for Animal Genetic Resources and the Interlaken Declaration

The first-ever *Global Plan of Action for Animal Genetic Resources*, comprising 23 strategic priorities, was produced to help combat the erosion of animal genetic diversity and to ensure the sustainable use of these resources. The plan is the culmination of a process involving 169 countries and was adopted by 109 country delegations at an international conference in 2007. The same conference also adopted the *Interlaken Declaration on Animal Genetic Resources*, thereby confirming their common and individual responsibilities for the conservation, sustainable use and development of animal genetic resources for food and agriculture, food security and nutrition and rural development.

FAO, Rome, 2007
ISBN 978-92-5-105848-0
48 pp.

● **Available in:** English

<http://www.fao.org/3/a-a1404e.pdf>



Incentives for ecosystem services in agriculture

Ecosystem services in agriculture are the benefits society gets from the environment thanks to farmers' interventions. Nutritious food, clean water, healthy soils, pest and disease control and biodiversity are just a few examples of those benefits. This FAO Land and Water project aims to raise awareness and establish a basis for informed decision-making by public and private actors to support ecosystem services and contribute to long-term food security and sustainable agriculture development.

FAO, Rome, undated
8 pp.

● **Available in:** *English*

http://www.fao.org/nr/water/docs/FAO_IES.pdf



Land degradation assessment in drylands

Questionnaire for mapping land degradation and sustainable land management – Version 2

In the next 20 years, in addition to the past emphasis on global and national economic management, the international community will also need to address environmental management effectively. This will require adequate, reliable, up-to-date data and knowledge, including on where in the world land degradation is taking place, the levels of intensity, and the methods of sustainable land management (SLM) that land-users are applying. This publication has been produced to help fill this gap in knowledge, by providing an overview of the current status in SLM and mapping out a route forward. It describes the work of three global projects that address assessment and mapping methodology, support for innovation and decision-making processes in SLM; and connecting scientists with stakeholders on promising alternative land-use and management conservation strategies respectively.

Land Degradation Assessment in Drylands Project
FAO, Rome, 2011, 2013
ISBN 978-92-5-107564-7 (print)
E-ISBN 978-92-5-107565-4 (PDF)
67 pp.

● **Available in:** *English*

<http://www.fao.org/docrep/017/i3240e/i3240e.pdf>



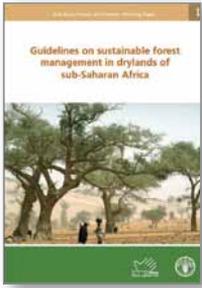
INTEGRATING *forests* *and* OTHER LAND USES

The role of forests in sustaining landscapes

- Addressing the drivers of deforestation and forest degradation
- Forests and landscape restoration
- Planted forests versus forest plantations – a new era of forest management

Integrating approaches to landscape management

- Finding synergies between forestry, agriculture, water and energy
 - Agroforestry and trees outside forests
 - The role of urban forests in fuelling and feeding cities and providing environmental and social services
-



Guidelines on sustainable forest management in drylands of sub-Saharan Africa

More than anywhere else, the drylands of sub-Saharan Africa have the potential to contribute to poverty reduction and food security. The peoples of these areas are mostly farmers, herders and forest-product gatherers, whose livelihoods are largely dependent on forest and woodland services. However, for drylands to be effectively protected and sustainably managed, these communities must derive the consequent benefits. Forest management should therefore respond to their many and diverse needs. In recent decades, several factors and dynamics have created conditions conducive to degradation, deforestation and desertification, prompting FAO member countries to request support. In response, FAO launched and coordinated a process for the preparation of these guidelines, which seek to guide forestry decision-makers and managers in prioritizing drylands and in improving forest planning and management, for the benefit of local populations.

Arid Zone Forests and Forestry Working Paper 1
FAO, Rome, 2010
58 pp.

● **Available in:** English, French

<http://www.fao.org/docrep/012/i1628e/i1628e00.pdf>



Fighting sand encroachment

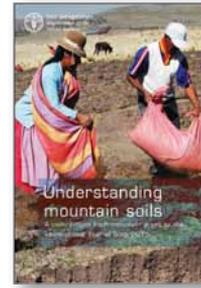
Lessons from Mauritania

One of the main features of desertification is the encroachment of moving sands, with its devastating environmental and socioeconomic impacts. This phenomenon reduces arable and grazing land and the availability of water resources. It also affects agricultural productivity and yields and the food security and standards of living of local populations. Other impacts include large-scale migration of people, infrastructural damage and substantial economic losses. Mauritania, one of the most severely affected countries in sub-Saharan Africa, has accumulated a great deal of experience in combating sand encroachment over several decades. This publication, produced as part of FAO's support to the Government of Mauritania's efforts to combat desertification, synthesizes the lessons learned and describes sand encroachment processes and control techniques. It also addresses project management and institutional factors, emphasizing a participatory approach. The publication is aimed at all stakeholders engaged in combating desertification.

FAO Forestry Paper 158
FAO, Rome, 2010
ISBN 978-92-5-106531-0
ISSN 0258-6150
87 pp.

● **Available in:** English

<http://www.fao.org/docrep/012/i1488e/i1488e.pdf>



Understanding mountain soils

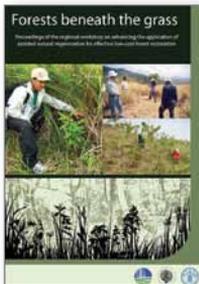
A contribution from mountain areas to the International Year of Soils 2015

Mountain soils have long performed a host of vital ecosystem services that help to ensure food security and nutrition for 900 million mountain people around the world and provide benefits to billions more living downstream. These soils host 25 percent of terrestrial biodiversity, but each year an estimated 12 million ha are lost through soil degradation. They are particularly susceptible to climate change, deforestation, unsustainable farming practices and resource extraction methods that affect their fertility and trigger land degradation, desertification and disasters such as floods and landslides. This publication, co-produced as a contribution to the International Year of Soils 2015, seeks to raise awareness of the global importance of mountain soils and the need for their sustainable management. It presents a series of lessons learned, case studies, recommendations and solutions that sustainable mountain management can provide, to inform mountain communities, policymakers, development experts and academics.

FAO, Rome, 2015
ISBN 978-92-5-108804-3
169 pp.

● **Available in:** English

<http://www.fao.org/3/a-i4704e.pdf>



Forests beneath the grass

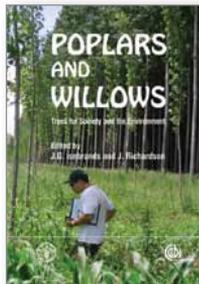
Proceedings of the regional workshop on advancing the application of assisted natural regeneration for effective low-cost forest restoration

Vast areas of deforested and degraded lands in Asia and the Pacific have been taken over by highly invasive grasses such as *Imperata cylindrica*. These largely unproductive grasslands harbour little biodiversity and provide very few livelihood options for local people. Assisted natural regeneration (ANR) is a forest restoration and rehabilitation approach successfully used for converting *Imperata cylindrica* and other grass-dominated areas into productive forests. It is a simple, inexpensive and effective technique that relies on the natural processes of plant succession. It is also particularly successful in engaging local communities, reducing the risk of forest fires and creating new income-generating opportunities. The proceedings of an FAO regional workshop held in the Philippines in 2009 document the main achievements and key aspects of a three-year ANR project in the Philippines as well as the experience of other countries in the region.

FAO, Bangkok, 2011
ISBN 978-92-5-106639-3
94 pp.

● **Available in:** English

<http://www.fao.org/docrep/014/i1734e/i1734e00.htm>



Poplars and willows

Trees for society and the environment

Poplars and willows, members of the *Salicaceae* family, are trees and shrubs that have many valuable characteristics and provide multiple benefits to society and the environment. This FAO/Centre for Agricultural Bioscience International (CABI) publication synthesizes the latest knowledge and technology in current research, with a worldwide overview and guide to the basic characteristics, cultivation, challenges and trends related to poplars and willows. It also explores the trees' industrial, environmental and economic applications and benefits.

FAO/CABI International, Rome,
2014
ISBN 978-9251071854
(co-publisher FAO)
699 pp.

● **Available in:** English

<http://www.fao.org/3/a-i2670e.pdf>



Unasylyva 242, 2014

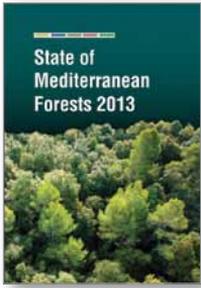
A renewed dynamic for Mediterranean forests

Mediterranean forests are interwoven with the lives of the people of the region. They provide wood, cork and other products as well as being a source of income for many. Equally importantly, they contribute to the conservation of biodiversity, capture and store carbon, protect soil and water, and offer areas for recreation. Yet these forests are under increasing pressure, including as a result of ongoing social and environmental transformations in the region. These factors and dynamics require a more holistic assessment of the goods and services that Mediterranean forests provide in order to define sustained and integrated solutions. The positive message that emerges from this issue of *Unasylyva* is that there is a strong technical basis and political will across the countries of the Mediterranean to find such solutions, and to tackle these issues collaboratively. A number of initiatives, in particular the work of the Collaborative Partnership on Mediterranean Forests, are coming together to ensure that both research and policy are tying in with a regional approach and translating political will into action.

FAO, Rome, 2014
ISSN 0041-6436
84 pp.

● **Available in:** English, French, Spanish

<http://www.fao.org/3/a-i3837e.pdf>



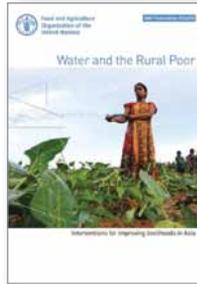
State of Mediterranean Forests 2013

Forest ecosystems and other wooded lands are an important component of Mediterranean landscapes, contributing significantly to rural development, poverty alleviation and food security. They also provide important ecosystem services as well as being crucial for many of the region's other economic sectors. However, global changes strongly affect the Mediterranean region. If unmanaged, these changes can lead to the loss of biodiversity, increased risk of wildfire, the degradation of watersheds, and desertification. At its 2010 meeting in Antalya, Turkey, the Committee on Mediterranean Forestry Questions—*Silva Mediterranea* decided to prepare this first report as an information and monitoring tool. Using objective, reliable and available data from regional and international institutions, the aim is to regularly assess the status of and changes in Mediterranean forest ecosystems and to present this information to the various stakeholders involved in their management.

FAO, Rome, 2013
ISBN 978-92-5-107984-3 (print)
E-ISBN 978-92-5-107538-8 (PDF)
186 pp.

● **Available in:** English, French

<http://www.fao.org/docrep/017/i3226e/i3226e.pdf>



Water and the rural poor

Interventions for improving livelihoods in Asia

In Asia, most of the poor live in areas where natural resource conditions are suboptimal and water-related constraints are the root cause of low production and increasing vulnerability to natural disasters and climate variability. Water is fundamental to productive agriculture and other livelihood needs, so how it is used and managed will have a significant impact on alleviating hunger and poverty. This joint publication assesses the current trends and transformations in water and rural livelihoods, and maps the links between poverty and water, by identifying where water interventions will have a greater or lesser impact on poverty levels in rural areas. It demonstrates that there is tremendous potential to improve rural livelihoods through investment in water, and argues for increased attention to the rural non-farm sector and for investments in “neo-agriculture”.

FAO, Bangkok, 2014
ISBN 978-92-5-108263-8 (print)
E-ISBN 978-92-5-108264-5 (PDF)
162 pp.

● **Available in:** English

<http://www.fao.org/3/a-i3705e.pdf>



Coping with water scarcity

An action framework for agriculture and food security

Water scarcity arises as a consequence of a high rate of aggregate demand from all water-using sectors compared to available supply under prevailing institutional arrangements and infrastructural conditions. Of all economic sectors, agriculture is where water scarcity has the greatest relevance, currently accounting for 70 percent of global freshwater withdrawals and more than 90 percent of its consumptive use. This report aims to provide a conceptual framework to address food security under conditions of water scarcity in agriculture, by assessing the options and scope for adjustment in agricultural water use as a response to water scarcity. It offers views on the FAO's water scarcity programme, proposes a set of definitions associated with the concept of water scarcity, and indicates the main principles on which FAO should base its actions in support of its member countries.

FAO Water Reports 38
FAO, Rome, 2012
ISBN 978-92-5-107304-9
ISSN 1020-1203
100 pp.

● **Available in:** Arabic, English, French, Spanish

<http://www.fao.org/docrep/016/i3015e/i3015e.pdf>



Participatory land use planning workshop – proceedings

Participatory land use planning (PLUP) is the systematic assessment of physical, social and economic factors that encourage and assist land users in selecting options that increase their productivity, are sustainable, and meet communities' needs. PLUP is centred on local users, and employs simple, low-cost planning techniques to foster their active participation and consensus decision-making. The publication presents the proceedings of the training workshop for English-speaking Caribbean countries held in Guyana in 2013, which built on participants' vision and experiences, to elaborate methodological bases for territorial negotiation and the landscape approach.

Land and Water Division
Working Paper 5
FAO, Rome, 2013
84 pp.

● **Available in:** *English*

<http://www.fao.org/docrep/019/mi375e/mi375e.pdf>



Advancing agroforestry on the policy agenda

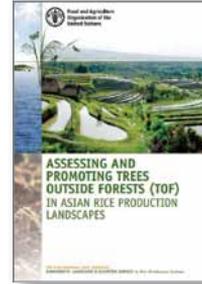
A guide for decision-makers

Agroforestry systems include both traditional and modern land-use systems in which trees are managed together with crops and/or animal production systems in agricultural settings. Agroforestry is practised in both tropical and temperate regions and provides a broad range of benefits and services. However, low investment in the development of agroforestry systems together with policy, legal and coordination constraints has meant that the potential of the sector to enrich farmers, communities and, by extension, national economies, has not been fully exploited. This co-produced guide is designed to promote agroforestry in national policy frameworks and optimize its contribution to national development.

Agroforestry Paper 1
FAO, Rome, 2013
ISBN 978-92-5-107470-1
50 pp.

● **Available in:** *English, French, Spanish*

<http://www.fao.org/docrep/017/i3182e/i3182e00.pdf>



Assessing and promoting trees outside forests

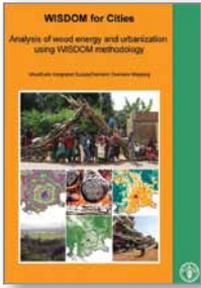
in Asian rice production landscapes

Over the last few years, it has become widely accepted that overall productivity of agricultural systems cannot be measured on the basis of yield alone but should also take into account the products and services delivered by agroecosystems as a whole. This holistic approach is essential for managing and collaborating across landscapes and sectors, given that ecosystem services and products generated by agriculture, forestry and fisheries contribute to the increased sustainability and resilience of landscapes. They also have a crucial role in the livelihoods and wellbeing of rural communities. Drawing on results from FAO's Regional Rice Initiative and a pilot project on "The assessment of trees outside forests in Asian rice production landscapes", this publication provides policy and decision-makers with evidence of the role of trees in rice production landscapes.

FAO, Rome, 2014
ISBN 978-92-5-108611-7
42 pp.

● **Available in:** *English*

<http://www.fao.org/3/a-i4161e.pdf>



WISDOM for cities

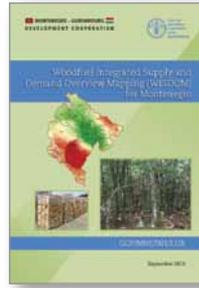
Analysis of wood energy and urbanization using WISDOM¹ methodology

Forests and trees are the source of a myriad of products, services and functions for people in urban and peri-urban areas as well as for rural peoples, who earn their living by responding to urban demand. However, the impacts of urban areas have, over time, extended beyond peri-urban boundaries, leading to forest degradation, deforestation and devegetation around cities. Historically, fuelwood has been viewed as the main contributor to degradation. In reality, the situation is considerably more complex. The WISDOM tool was developed to better assess and clarify the nexus between urban woodfuel (fuelwood and charcoal) consumption and natural supply capacities. The present analysis aims to facilitate the development of comprehensive wood energy strategies and projects, by highlighting how WISDOM for cities can better integrate the concerns of rural and urban areas, restore and rehabilitate tree and forest resources, where necessary, and improve the livelihoods of poor communities.

FAO, Rome, 2008
126 pp.

● **Available in:** English, French

<http://www.fao.org/docrep/010/i0152e/i0152e00.HTM>



Woodfuel integrated supply and demand overview mapping (WISDOM) for Montenegro

The *Woodfuel integrated supply and demand overview mapping (WISDOM)* for Montenegro is part of a series of FAO initiatives to promote strategic wood energy planning and policy formulation. WISDOM, developed by FAO, takes into account the particular characteristics of national wood energy systems, while meeting the needs for a planning tool that integrates relevant socioeconomic information and data on woodfuel production and consumption provided by forestry and energy agencies. The results of the WISDOM project raise the prospects for developing a holistic vision and a clear definition of priorities related to wood energy and formalizing woodfuel trade, as well as streamlining the collection and analysis of information on woodfuel demand and supply.

FAO, Podgorica, 2013
84 pp.

● **Available in:** English

<http://www.fao.org/3/a-i1371e.pdf>



Stratégie de développement et plan d'action

Pour la promotion de la foresterie urbaine et périurbaine de la ville de N'Djaména, Tchad

Over the past decades, increasing urbanization has given rise to some serious challenges. Among them are the impacts of a growing population coupled with a lack of urban planning, and the consequent degradation in towns and surrounding areas. In Chad, particularly around the capital, N'Djaména, the situation had become extremely problematic, with the progressive disappearance of the forests that used to serve as barriers against violent winds and provide food and fuel for the populations. In 2009, in response to a request from Chad's highest authorities, FAO developed, through an inclusive multi-stakeholder process, the present urban and peri-urban forestry strategy for the capital. It is envisaged that the recommendations may also be applied to other cities in the country.

Document de travail sur la foresterie urbaine et périurbaine 5
FAO, Rome, 2012
115 pp.

● **Available in:** French

<http://www.fao.org/docrep/016/i2850fwp5/i2850fwp5.pdf>

¹ Woodfuels integrated supply/demand overview mapping

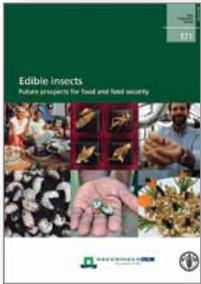
Encouraging PRODUCT INNOVATION *and* SUSTAINABLE TRADE

Increasing the range of products from sustainably managed forests

- Energy: formalizing the woodfuel supply
- Innovative wood-based products:
 - The use of wood in infrastructure and building
 - Biomaterials and nanomaterials
- Innovative non-wood forest products
- Shaping the dialogue on biotechnology

Towards sustainable trade

- Domestic, regional and international trade
 - Linking producers to markets
 - Improving trade transparency
 - The impacts of certification
-



Edible insects

Future prospects for food and feed security

Edible insects are a key part of many human diets. However, their contribution to global food security and nutrition could increase, particularly to meet the needs of a growing world population. Traditionally, most edible insects have been gathered from forest habitats, but innovation in mass-rearing systems has begun in many countries, presenting opportunities for merging traditional knowledge and modern science, in both developed and developing countries. The roots of this publication lie in an effort by FAO's Forestry Department to recognize these traditional practices and to document the related ecological impacts on forest habitats. It has developed with partners into a broad-based effort to examine the multiple dimensions of insect gathering and rearing, for both food and feed, as a viable option for increasing food security and incomes. Drawing on a wide range of scientific research, the publication highlights insects' many valuable roles in sustaining nature and human life.

FAO Forestry Paper 171
FAO, Rome, 2013
ISBN 978-92-5-107595-1 (print)
E-ISBN 978-92-5-107596-8 (PDF)
ISSN 0258-6150
201 pp.

● **Available in:** English, French, Korean

<http://www.fao.org/docrep/018/i3253e/i3253e.pdf>



Edible forest insects: humans bite back!!

In today's fast-paced world, there is a tendency to consider traditional habits and customs as outdated or primitive. Yet experience across numerous fields has highlighted the value and benefits of combining customary knowledge and approaches with modern science and understanding. Such is the case with edible forest insects, the consumption of which dates back thousands of years and has been documented in nearly every part of the world. This publication, containing the edited proceedings of the FAO workshop, "Forest insects as food: humans bite back", held in Thailand in 2008, aims to raise awareness of edible insects' potential as a source of nutritious food, income and jobs for rural people in Asia and the Pacific. It also serves to document the linkages to sustainable forest management and conservation.

FAO, Bangkok, 2010
ISBN 978-92-5-106488-7
241 pp.

● **Available in:** English

<http://www.fao.org/docrep/012/i1380e/i1380e00.pdf>



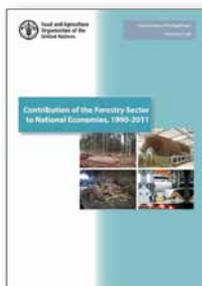
Six-legged livestock: edible insect farming, collection and marketing in Thailand

Based on the expected trajectory of global population growth, and expanding economic wealth and purchasing power, FAO estimates that by 2050 global food production will need to increase by an estimated 60 percent to meet global food requirements. Satisfying this huge demand will also require an increase in the production and consumption of currently under-utilized and under-appreciated foods. Rich in proteins, vitamins and minerals with a high food-conversion efficiency ratio, resulting in lower impacts on the environment, edible insects are one food in this category. Moreover, as they are invariably sourced from wild habitats or farmed by small-scale producers, they can generate significant income and employment opportunities for rural households. This publication provides insights into all aspects of edible insect production and trade in Thailand, one of the few countries to have developed a viable and thriving insect farming sector.

FAO, Bangkok, 2013
ISBN 978-92-5-107578-4 (print)
E-ISBN 978-92-5-107579-1 (PDF)
69 pp.

● **Available in:** English

<http://www.fao.org/docrep/017/i3246e/i3246e00.htm>



Contribution of the forestry sector to national economies, 1990–2011

The forestry sector's contribution to national economies is one dimension of sustainable forest management, and information on its evolution is needed to monitor progress adequately. FAO has produced this statistical series to help decision-makers better understand the sector's importance in national economies and in sustaining the livelihoods of forest-dependent people. The present publication, the second update of FAO's original report, presents data and analysis to the year 2011 at the global, regional and country levels, using three indicators: employment in the sector; value-added; and the value of forest product exports and imports. It also presents national- and international-level economic data obtained from other sources and provides a reasonable estimation of general regional and global trends.

Forest Finance Working Paper
FAO, Rome, 2014
168 pp.

● **Available in:** English, Spanish

www.fao.org/3/a-i4248e.pdf



FAO Yearbook of Forest Products 2013

This 67th issue of the *FAO Yearbook of Forest Products* contains the latest data on global production and trade in forest products for the years 2009–2013, and on the direction of trade in 2012 and 2013. Statistical information in the yearbook is based primarily on data provided to the FAO Forestry Department by countries in the form of replies to official questionnaires or publications. This edition benefits from expanded cooperation in gathering forest sector statistics among a number of international organizations.

FAO, Rome, 2015
ISBN 978-92-5-008811-2
ISSN 1020-458X
358 pp.

● **Available in:** all UN languages

<http://www.fao.org/3/a-i4746m.pdf>



Forest products

Annual market review,
2013–2014

The *Forest products annual market review, 2013–2014* provides a comprehensive analysis of markets in the UNECE¹ region and reports on the main market influences emanating from outside the region. Covering forest to end-user products – from roundwood and primary processed products to value-added and innovative wood products – the review includes analyses of policies on forests and forest products, innovative wood products and the markets for wood energy, value-added wood products and housing. It also discusses the main drivers and trends and the effects of the prevailing economic situation on markets for forest products.

Geneva Timber and Forest
Study Paper 36
FAO/UNECE, Geneva, 2014
ISBN 978-92-1-117081-8
E-ISBN 978-92-1-056875-3
ISSN 1020-2269
156 pp.

● **Available in:** English, French,
Russian

<http://www.unece.org/fileadmin/DAM/timber/publications/FPAMR-2014-final.pdf>

¹ Members of the UN Economic Commission for Europe



Pulp and paper capacities

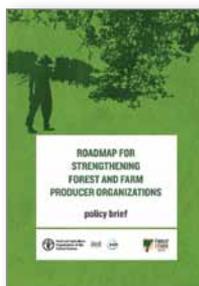
Survey 2013–2018

FAO's annual survey of world pulp and paper capacities is based on figures received from correspondents worldwide, many of whom represent pulp or paper associations or, in their absence, paper companies. The 2014 survey presents statistics on pulp and paper capacity and production by country and by grade. The results reflect information obtained through a computer questionnaire, distributed to all FAO member countries, with the replies, from 33 countries, processed and stored by computer. These countries represent approximately 85 percent of world production of paper and paperboard.

FAO, Rome, 2014
ISBN 978-92-5-008489-3 (print)
E-ISBN 978-92-5-008490-9 (PDF)
ISSN 0255-7665
176 pp.

● **Available in:** English, French, Spanish

<http://www.fao.org/3/a-i3961t.pdf>



Roadmap for strengthening forest and farm producer organizations

Policy brief

Indigenous peoples, local communities and private smallholders own or manage a growing proportion of the world's forests – now estimated at 30 percent of the global forest estate – and evidence shows that they are able to reduce deforestation and manage forests sustainably. They are not only major private-sector actors but also the private-sector segment with the greatest potential to deliver poverty reduction. Forest and farm producer organizations can unleash the economic power and entrepreneurial potential of these various stakeholders at scales that transform landscapes. This policy brief aims to help them do this, sustainably. It sets out a roadmap for boosting support for forest and farm producer organizations, through sharing information and news, creating an enabling environment, clearing a path for increased finance, connecting forest smallholders to markets and services and building a global coalition.

FAO, Rome, 2014
21 pp.

● **Available in:** English

<http://www.fao.org/3/a-i3886e.pdf>



Strength in numbers

Effective forest producer organizations

Given the increasing amount of forest and forest land now managed and controlled by individuals and communities, the need to strengthen cooperation in forest products (wood and non-wood) and services is compelling. A crucial constraint, however, is the isolation of individual smallholders from each other as well as from markets, sources of finance, policymakers and information. Forest producer groups can overcome this isolation by organizing themselves into self-governing groups. They therefore have the potential to enable large numbers of poor rural families to join and benefit from both domestic markets and international schemes for sustainable forestry and carbon capture. This publication is a compilation of cases on forest farmer organizations and the lessons drawn. It seeks to provide ideas and motivation to service providers and farmers alike.

FAO, Rome, 2012
50 pp.

● **Available in:** English

<http://www.fao.org/docrep/016/ap452e/ap452e00.pdf>

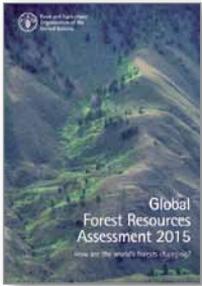
MONITORING *forests for* BETTER DECISION-MAKING

What the data tells us

- The state of forests and forestry
- Information gaps

Progress in forest monitoring

- Developments in national forest monitoring systems
- Information on forest policies and governance
- Innovative technologies for data collection and sharing
 - Remote sensing
 - Open-source applications
- Smallholder access to technologies and data
- Information needs on forests and other land uses for the United Nations Framework Convention on Climate Change



Global Forest Resources Assessment 2015

How are the world's forests changing?

The contributions of forests to the well-being of humankind are far-reaching. Forests provide vital wood supplies and help to combat rural poverty, ensure food security and provide decent livelihoods; they offer promising mid-term green growth opportunities; and they deliver vital long-term environmental services, such as clean air and water, biodiversity, and mitigation of climate change. Building on data that are more comprehensive and reliable than ever before, covering 234 countries and territories, the *Global Forest Resources Assessment 2015* shows encouraging signs of improved forest management and a global slowdown in deforestation. However these trends need to be strengthened, especially in countries that are lagging behind.

FAO, Rome, 2015
ISBN 978-92-5-108821-0
56 pp.

● **Available in:** all UN languages

<http://www.fao.org/3/a-i4793e.pdf>



Global Forest Resources Assessment 2015

Desk reference

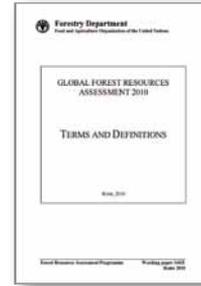
The contributions of forests to the well-being of humankind are far-reaching. Forests provide vital wood supplies and help to combat rural poverty, ensure food security and provide decent livelihoods; they offer promising mid-term green growth opportunities; and they deliver vital long-term environmental services, such as clean air and water, biodiversity, and mitigation of climate change. Building on data that are more comprehensive and reliable than ever before, covering 234 countries and territories, the *Global Forest Resources Assessment 2015* shows encouraging signs of improved forest management and a global slowdown in deforestation. However these trend needs to be strengthened, especially in countries that are lagging behind.

This Desk reference provides the data reported by countries for the *Global Forest Resources Assessment 2015*. Presented in easy-to-consult tabular form, it is a useful companion to the synthesis report as well as to the more detailed figures available on the Forest Land Use Data Explorer website.

FAO, Rome, 2015
ISBN 978-92-5-108826-5
248 pp.

● **Available in:** all UN languages

<http://www.fao.org/3/a-i4808e.pdf>



Global Forest Resources Assessment 2010

Terms and definitions

At the request of its member countries, FAO regularly monitors the world's forests and their management and uses through the Forest Resources Assessment Programme. The *Global Forest Resources Assessment 2010 (FRA 2010)* was undertaken at the request, in 2007, of the FAO Committee on Forestry. This working paper includes the terms and definitions applied in the country reporting process for FRA 2010 and should be regarded as an authoritative document on the terms and definitions used. The working paper can also be used in meetings and training exercises, at all levels, as a contribution to strengthening of national capacity in forest resources assessment and reporting in general.

FAO, Rome, 2010
27 pp.

● **Available in:** English

<http://www.fao.org/docrep/014/am665e/am665e00.pdf>



Soil carbon monitoring using surveys and modelling

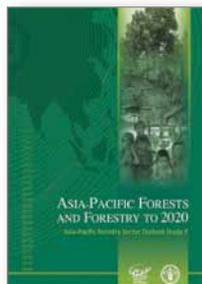
General description and application in the United Republic of Tanzania

Under the mechanism for reducing emissions from deforestation and forest degradation in developing countries (REDD), within the broader objective of climate change mitigation, a financial value is placed on the carbon stored in forests. One of the most important carbon stocks is forest soil. To benefit from the incentives presented by the REDD mechanism, developing countries need to report on their forest carbon stocks and changes in these stocks over time. This publication describes the application of REDD-compatible survey- and modelling-based methods for monitoring soil organic carbon stock and its changes, using the example of the soil carbon stock inventory of the national forestry resources monitoring and assessment project of the United Republic of Tanzania. It demonstrates how to design such an inventory and discusses the advantages and drawbacks of alternative approaches.

FAO Forestry Paper 168
FAO, Rome, 2012
ISBN 978-92-5-107271-4
ISSN 0258-6150
60 pp.

● **Available in:** English

<http://www.fao.org/docrep/015/i2793e/i2793e.pdf>



Asia-Pacific forests and forestry to 2020

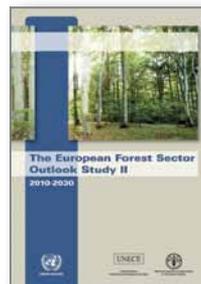
Report of the second Asia-Pacific forestry sector outlook study

In the 12 years from 1998 to 2010, when the first *Asia-Pacific forestry sector outlook study* (APFSOS) was completed, the region underwent tremendous changes. These changes were particularly profound in the forestry sector, where society dramatically increased its demands and expanded its expectations of forests and forestry. This publication summarizes the key findings and results of the second APFSOS, a comprehensive effort spanning nearly four years and involving all member countries of the Asia-Pacific Forestry Commission. It synthesizes observations and findings from almost 50 country and thematic reports, to provide analyses of the status and trends of all aspects of Asia-Pacific forestry, including drivers of change. It also presents three scenarios for 2020. The report concludes by outlining priorities and strategies to move the region's forestry sector onto a more sustainable footing in order to provide continued benefits to future generations.

FAO, Bangkok, 2010
ISBN 978-92-5-106566-2
207 pp.

● **Available in:** English

<http://www.fao.org/docrep/012/i1594e/i1594e00.htm>



The European forest sector outlook study II

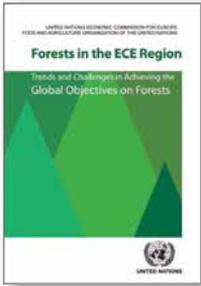
2010–2030

Expectations of the European region's forests to meet increasing environmental, social and economic demands have never been higher. European forest sector policymakers are therefore under greater pressure to design sustainable forest policies that also address major challenges, including climate change, protection of biodiversity, space for recreation and leisure, and energy and raw material needs. *The European forest sector outlook study II* addresses and discusses the forest sector's interaction with these challenges, through an objective reference scenario analysis and four policy scenarios that present the long-term consequences of possible policy choices. These scenarios cover European forest resources and products from 2010 to 2030, and have been designed to help policymakers make well-informed decisions.

FAO/UNECE, 2011
ISBN 978-92-1-117051-1
111 pp.

● **Available in:** English, Russian

<http://www.fao.org/docrep/016/ap406e/ap406e00.pdf>



Forests in the ECE Region

Trends and challenges in achieving the Global Objectives on Forests

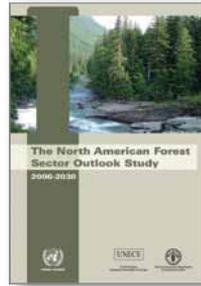
The region comprising countries of the UN Economic Commission for Europe (ECE)¹ is rich in forest resources, with a forest area of 1.89 billion ha, representing 41.4 percent of the global total. It is also the region where the majority of global wood-based production is located. This study is the Eleventh Session of the United Nations Forum on Forests, and its review of the effectiveness of the current International Arrangement on Forests. Using the best available data, the study examines the progress of the region's forest sector in achieving the four Global Objectives on Forests, adopted by the United Nations General Assembly in 2007. Drawing on this assessment and the forest sector outlooks and policy commitments produced by ECE member states, 13 major challenges for the region's forest sector have been identified and analysed. The study complements these with policy recommendations for consideration at the UNFF discussions.

FAO/UNECE, 2015
ISBN 978-92-1-117088-7
E-ISBN 978-92-1-057335-1
ISSN 1020-2269
212 pp.

● **Available in:** English

<http://www.unece.org/fileadmin/DAM/timber/publications/forests-in-the-ec-region.pdf>

¹ Member countries of the UN Economic Commission for Europe



The North American forest sector outlook study

2006–2030

Traditionally, the *North American forest sector outlook study* has sought to quantify the implications for the forest sectors of Canada and the United States of America of projections of the region's and the rest of the world's growth in economic output, population, and the bioenergy sector. This study differs because of its use of a global forest sector model, which recognizes the interdependence between North America, Europe and the rest of the world, and of a new scenario-based format, based on specific storylines outlined by the Intergovernmental Panel on Climate Change. The study also presents new projections of the evolution of comparative advantage in forest products for Canada, the United States, and other regions. The results aim to help forest sector decision-makers, analysts and economists in their choices regarding wood-energy policies, forest sector investment and linkages across countries and forest industries.

FAO/UNECE, 2012
ISBN 978-92-1-117057-3
ISSN 1020-2269
68 pp.

● **Available in:** English

<http://www.fao.org/3/a-ap405e.pdf>



The forest sector in Bosnia and Herzegovina

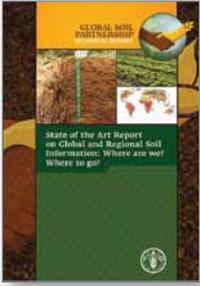
Preparation of IPARD forest and fisheries sector reviews in Bosnia and Herzegovina – 2015

This publication, one of seven sector analyses prepared since 2011 for Bosnia and Herzegovina agricultural authorities, is an input to measures that will be financed under the European Union (EU) Instrument for Pre-accession Assistance for Rural Development. The analyses will also inform the formulation of the country's general policies. In the analysis of the forest sector, forest production, the wood-processing industry and forestry-related value chains are addressed, with a detailed review of forest resources and management, land use and land-use change, the forest-based sector, forest-based value chains and services, forest policy and governance, compliance with EU standards, and education and training. The publication concludes with an overall analysis, leading to a set of recommendations, priorities for action and investment needs.

FAO, Budapest, 2015
153 pp.

● **Available in:** English

<http://www.fao.org/3/a-au015e.pdf>



State of the art report on global and regional soil information

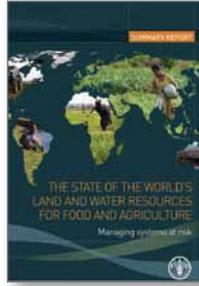
Where are we? Where to go?

Soil is a source of life, and its interactions with other dimensions of life are manifold. Soil's major components combined with other factors and, increasingly, human activities, determine the type of soil at any location in a given landscape. Soil mapping is the process of understanding and predicting the spatial distribution of soils. Soil maps, which illustrate soil's geographic distribution, properties and landscape characteristics, are the process's most widely used end-products. Information on soil is therefore fundamental for informing wise policies and decisions. This publication presents relevant information on existing soil data from around the world and on ongoing soil mapping initiatives. It seeks to raise awareness of soil data and encourage their accurate application. It also aims to document user needs as well as the demands for such information in the context of food security and climate change.

Global Soil Partnership
technical report
FAO, Rome, 2013
ISBN 978-92-5-107449-7
81 pp.

● **Available in:** English

<http://www.fao.org/3/a-i3161e.pdf>



The State of the World's Land and Water Resources for Food and Agriculture

Managing systems at risk

Land and water resources and the way they are used are central to the challenge of improving food security across the world. To meet future demand for food, improvements in agricultural production will have to come from sustainable intensification, with effective use of land and water resources. The *State of the World's Land and Water Resources for Food and Agriculture* deals primarily with the issue of land and water for crops. It examines the kinds of production responses needed to meet demand and also assesses the potential of the world's land and water resources to support these desired increases in output and productivity. The report also includes a summary assessment of the institutional responses at local, national and international levels, with an analysis of lessons for the future, and concludes with advanced policy recommendations.

Summary report
FAO, Rome, 2011
ISBN 978-92-5-106614-0
50 pp.

● **Available in:** English

<http://www.fao.org/docrep/015/i1688e/i1688e00.pdf>



From tree measurement to national forest monitoring systems

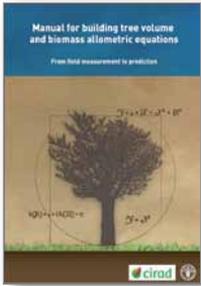
The use of allometric equations to estimate forest resources

Allometric equations are important statistical models used to express the relationships between the different components of a tree in terms of their relative size. They therefore support foresters and countries in quantifying forest resources. The UN-REDD Programme promotes the use of these equations to estimate national carbon stock and carbon stock changes as part of the development of countries' national forest monitoring systems, as required under REDD+. This publication summarizes UN-REDD's support to country-level capacity building in developing allometric equations and defining methodologies for their application, using examples of several countries around the world. This support includes GlobAllome Tree, a major online platform for archiving, sharing and harmonizing global data among stakeholders, transparently and consistently, resulting in more robust and reliable data.

FAO, 2014
16 pp.

● **Available in:** English

<http://www.fao.org/3/a-i3865e.pdf>



Manual for building tree volume and biomass allometric equations

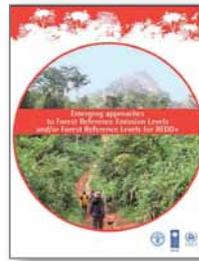
From field measurement to prediction

In the UN Framework Convention on Climate Change, the potential benefits for non-Annex 1 parties will be based on results that can be measured, reported and verified. The degree of precision of these results therefore has a major impact on potential financial compensation. The capacity to measure forest carbon stocks is thus of increasing importance to countries which plan to contribute to climate change mitigation through their forest activities. This manual takes the form of a guide for students, technicians or researchers working to assess forest resources such as volume, biomass and carbon stocks for commercial, bioenergy or climate change mitigation purposes. The methods described apply to most forests and ecological areas, with special emphasis on tropical forests, citing cases from the field and questions that have arisen.

FAO, Rome, 2012
E-ISBN 978-92-5-107347-6
207 pp.

● **Available in:** English, French

<http://www.fao.org/docrep/018/i3058e/i3058e.pdf>



Emerging approaches to forest reference emission levels and/or forest reference levels for REDD+

The UN Framework Convention on Climate Change (UNFCCC) defines forest reference emission levels (FRELs) and/or forest reference levels (FRLs) as benchmarks for assessing a country's performance in implementing REDD+ activities. They are part of the qualifying criteria for country participation in REDD+. This publication document seeks to support countries embarking on the development of REDD+ FREL/FRLs, by providing them with regular updates on the approaches developed under the demonstration activities and submissions to UNFCCC. It presents a range of approaches and methodological options taken to construct REDD+ FREL/FRLs, using examples of emerging approaches to FREL/FRL development, including for countries seeking to take actions to reduce greenhouse gas emissions or enhance their forest carbon stocks.

FAO, Rome, 2014
54 pp.

● **Available in:** English

<http://www.un-redd.org/FRELPublication/tabid/794487/Default.aspx>



National forest monitoring systems:

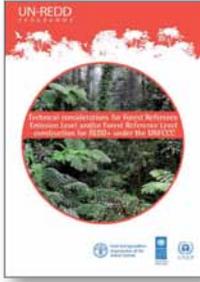
monitoring and measurement, reporting and verification in the context of REDD+ activities

This publication builds on a paper presented at the 7th Meeting of the UN-REDD Programme Policy Board in 2011 in Germany, which laid out ways to consider REDD+ monitoring and information provision needs at the implementation level, within the broader context of national development and environmental strategies. It describes the elements in national forest monitoring systems as they relate to REDD+ under the UN Framework Convention on Climate Change (UNFCCC) as well as the UN-REDD Programme approach to monitoring and measurement, reporting and verification requirements. Presented as a series of sections discussing the various elements of relevant texts of the UNFCCC and the methodological recommendations of the Intergovernmental Panel on Climate Change, the paper allows the end-user to consider the implications of the implementation of REDD+ activities in distinct national contexts and the various steps involved.

FAO, Rome, 2013
ISBN 978-92-5-107962-1 (print)
E-ISBN 978-92-5-107962-1 (PDF)
34 pp.

● **Available in:** English

<http://www.un-redd.org/PublicationsResources/tabid/587/Default.aspx>



Technical considerations for forest reference emission level and/or forest reference level construction for REDD+ under the UNFCCC

This publication provides a structural overview of the United Nations Framework Convention on Climate Change (UNFCCC) decisions related to REDD+ Forest Reference Emission Level and/or Forest Reference Level (FREL/FRL). It serves to support countries seeking to develop FREL/FRL, by summarizing the guidance in the UNFCCC decisions as elements that countries should consider when making a submission. It provides descriptions of the various uses of FREL/FRLs as well as a summary of UNFCCC decisions relevant to their construction, submission and technical assessment. It explains data and information submission procedures and presents key procedural and technical aspects to consider when developing a FREL/FRL, including an opinion on possible advantages and risks. The publication can, over time, enable countries to improve their FREL/FRLs by incorporating better data, improved methodologies and, where appropriate, additional pools.

UN-REDD Programme
FAO, Rome, 2015
41 pp.

● **Available in:** English

http://www.unredd.net/index.php?option=com_docman&view=list&slug=fri&Itemid=134



Manual for integrated field data collection

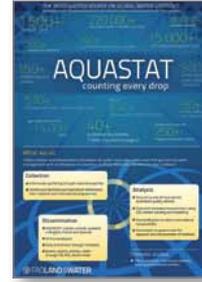
National forest monitoring and assessment

This manual provides guidelines and descriptions of the field data collection methodology and procedures used for inventories and monitoring of forestry and other land use resources, using the approach developed by FAO's Support to national forest resources monitoring and assessment programme. The publication presents methods, assessment variables and tools that can be tailored and adapted to individual country contexts, social and ecological environments, and national information requirements. Some core assessment variables, definitions and options are in line with international standards and have been selected to facilitate country reporting to various international processes and encourage harmonization between data collection initiatives among countries. The field manual is aimed at field data collectors as well as national forest inventory planners, trainers and field inventory supervisors.

National Forest Monitoring and Assessment Working Paper 37
FAO, Rome, 2012 (version 3.0)
188 pp.

● **Available in:** English, French, Russian, Spanish

<http://www.fao.org/docrep/016/ap152e/ap152e.pdf>



AQUASTAT

Counting every drop

The most quoted source on global water statistics is the AQUASTAT brochure. It explains the collection, analysis and dissemination of information on water resources water uses and agricultural water management with an emphasis on countries in Africa, Asia, Latin America and the Caribbean, and summarizes its main products.

Brochure
FAO, Rome, 2014
ISBN - None
3 pp.

● **Available in:** English, Spanish, French

http://www.fao.org/nr/water/docs/aquastat_brochure_en.pdf



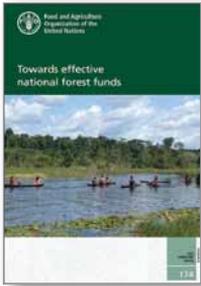
IMPROVING GOVERNANCE *by* BUILDING CAPACITY

Capacities, knowledge and communication

- New era for forestry as a long-term profession and business
- Increasing institutional capacities at all levels
- Using traditional and indigenous knowledge
- Fostering participation and partnerships in sustainable forest management
- Adapting forestry education and research to new realities
- Modernizing extension and training
- Communicating effectively with multiple audiences

Reshaping forest governance architecture

- Bringing forests to the fore in international policy development and negotiations
 - Coordinating policies among the sectors
 - Implementing national forest programmes
 - Securing forest tenure
-



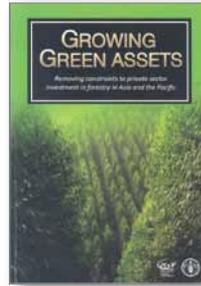
Towards effective national forest funds

While there is increasing recognition of forests' crucial roles in addressing global issues of climate change, food security and poverty alleviation, financing one key area of intervention – sustainable forest management (SFM) – remains a longstanding challenge. Strengthening SFM financing entails more than just raising money for responsibly managed investment, it also requires broadening and diversifying the financial basis for SFM. This publication describes the catalytic role of national forest funds (NFFs) in channelling investment in SFM, arguing that more information is needed on how they work, could best be established and managed, as well as potential approaches and actions to improve their performance. It also shares lessons that emerged during the establishment and management of NFFs, and information that could support their design and operation to meet country-specific needs and circumstances.

FAO Forestry Paper 174
FAO, Rome, 2015
ISBN 978-92-5-108706-0
ISSN 0258-6150
94 pp.

● **Available in:** English

<http://www.fao.org/3/a-i4359e.pdf>



Growing green assets

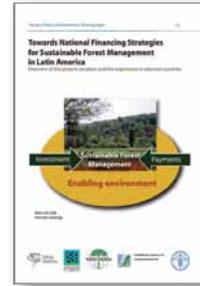
Removing constraints to private sector investment in forestry in Asia and the Pacific

For decades, foresters, environmentalists, policymakers and development officials have sought to increase investment in the forestry sector. However, overall, results have been mixed. In Asia and the Pacific, an extensive list of constraints has impeded the region from fully meeting expectations. *Growing green assets* presents the results of a regional policy study requested by the Asia-Pacific Forestry Commission on how to remove these constraints. The study notes that it is a time of tremendous change in the region, with increasing demands and expectations being placed on forests and forestry, but also one of emerging opportunities for financing sustainable forest management. It is designed to serve all stakeholders' needs, as part of efforts to attract greater investment and realize fully the sustainable environmental and economic potential of the region's forests.

FAO, Bangkok, 2010
ISBN 978-92-5-106723-9
211 pp.

● **Available in:** English

<http://www.fao.org/3/a-i1933e.pdf>



Towards national financing strategies for sustainable forest management in Latin America

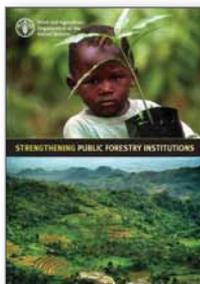
Overview of the present situation and the experience in selected countries

Increasing the competitiveness and appeal to investors of sustainable forest management (SFM) is a major challenge that the forest sector has yet to overcome. A similar challenge is how to broaden and diversify SFM's financial base. This synthesis presents information and experiences obtained from an analysis of Latin America, a region that leads in the development and implementation of innovative SFM forest financing mechanisms. A key message that emerged is the importance of national forest programmes (NFPs) and their financing as a means of achieving more appropriate use of national resources and of linking forests and economic development, particularly in poor rural areas. This study can support capacity-building initiatives in forest financing as well as assist NFPs in promoting dialogue and collaboration between actors and sectors in order to arrive at sustainable solutions.

Forestry Policy and Institutions
Working Paper 21
FAO, Rome, 2009
ISBN 978-90-75789-17-1
131 pp.

● **Available in:** English

<http://www.fao.org/3/a-k3276e.pdf>



Strengthening public forestry institutions

Most countries have made significant efforts to develop, revise and adapt their forest policies, programmes and laws to make them relevant to society's changing needs. However, inadequate institutional structures, management approaches and capacities often make it difficult for those policies and laws to be put into practice. This policy brief describes the changing context within which public forestry administrations operate, and outlines concrete steps they can take to adapt to this changing environment and to strengthen their capacity to fulfil their mandates.

FAO, Rome, 2015
8 pp.

● **Available in:** *English*

<http://www.fao.org/3/a-i4607e.pdf>



Re-inventing forestry agencies

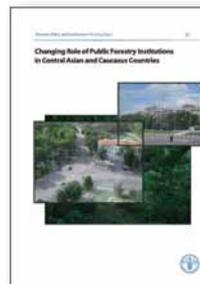
Experiences of institutional restructuring in Asia and the Pacific

In Asia and the Pacific, the roles of forests and those of their stakeholders encompass increasingly broader socioeconomic, environmental and cultural dimensions. In order to respond effectively to changing needs, forest agencies must therefore ask themselves a series of fundamental questions. This publication presents nine case studies of processes of reinvention in countries and institutions in the region. Its analysis reveals some clear factors determining the degree of effectiveness of forestry institutions, and outlines commonalities and differences in the trajectories followed by different countries in responding to calls for change. It further identifies major forest management trends, while recognizing forests' multiple functions and the potential conflicts that can arise between them.

FAO, Bangkok, 2008
ISBN 978-974-06-1218-6

● **Available in:** *Chinese, English*

<http://www.fao.org/docrep/010/ai412e/ai412e00.htm>



Changing role of public forestry institutions in Central Asian and Caucasus countries

The five countries in this study share a common background and similar institutional system characterized by a strong central role of the state. Following independence in 1991, new government structures developed geared more towards decentralized administrations and market-based economies, with new actors and a new vision of forestry. This study reviews the progressive changes in the countries' public forest institutions and assesses the effectiveness of organizational reforms in improving forest management and strengthening institutional capacity. It concludes that institutions will need to integrate forestry more systematically into other sectors. Forest policies will also have to consider issues of transparency, accountability and inclusive participation as part of the strengthening of regulatory frameworks and good governance.

Forestry Policy and Institutions
Working Paper 26
FAO, Rome, 2010
50 pp.

● **Available in:** *English*

<http://www.fao.org/docrep/012/k7623e/k7623e00.pdf>



Les outils pour une gestion durable des forêts

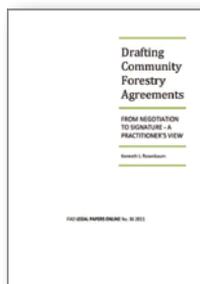
Evolution des cadres législatifs nationaux depuis 1992

Tropical forests are severely affected by deforestation, resulting in economic, social and environmental losses that are often difficult to restore or compensate. Numerous studies point to poor policies as the most important cause of deforestation in the tropics. This publication analyses the evolution of forestry legislation in a number of tropical countries since the 1992 UN Conference on Environment and Development, describing specific legal principles, management tools, institutional arrangements, financial mechanisms and judicial remedies applied in sustainable forest management (SFM). It reviews major developments in the legal frameworks for SFM over the last two decades, providing illustrations from tropical developing countries in Africa, Asia and Latin America.

Études juridiques de la FAO en ligne 90
FAO, Rome, 2013
43 pp.

● **Available in:** *French*

http://www.fao.org/fileadmin/user_upload/legal/docs/1_lpo90fr.pdf



Drafting community forestry agreements

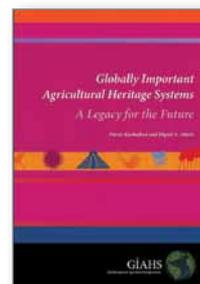
From negotiation to signature – a practitioner's view

This paper is a guide to designing and drafting community forestry agreements. Such agreements underpin community forestry development projects by spelling out the rights and obligations of the community and its partner[s]. As collaboration with communities in the forest sector increases, community forestry agreements are meant to formalize partnerships between local communities on the one hand and government institutions and/or private-sector organizations on the other. The paper covers the following areas: what is a “good” agreement; making the agreement; practical issues addressed in the agreement; drafting the agreement; and professionalism and ethical considerations.

FAO Legal Papers online 86
FAO, Rome, 2011
50 pp.

● **Available in:** *English*

http://www.fao.org/fileadmin/user_upload/legal/docs/lpo86.pdf



Globally Important Agricultural Heritage Systems

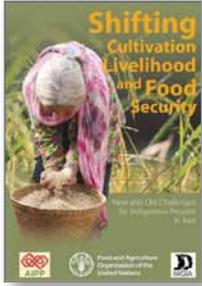
A legacy for the future

For millennia, farmers, herders, fishers and forest people have developed complex, diverse, and locally adapted agricultural systems, which they have managed with time-tested, ingenious combinations of techniques and practices. Used across approximately 5 million ha around the world, these Globally Important Agricultural Heritage Systems (GIAHS) are not only landscapes of outstanding aesthetic beauty but also contribute to the conservation of globally significant agricultural biodiversity, resilient ecosystems and a valuable cultural heritage. Above all, they are a sustainable source of multiple goods and services, food and livelihood security for millions of poor and small farmers. In an overview of GIAHS around the world, this publication warns, however, that they are rapidly shrinking, victims of modernization and unsustainable technological and economic changes, while also being increasingly vulnerable to climate change.

FAO, Rome, 2011
49 pp.

● **Available in:** *English, French, Spanish*

http://www.fao.org/fileadmin/templates/giahs/PDF/GIAHS_Booklet_EN_WEB2011.pdf



Shifting cultivation, livelihood and food security

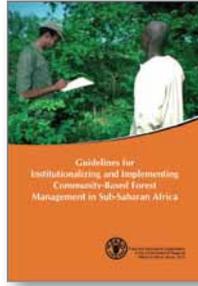
New and old challenges for indigenous peoples in Asia

The important roles of indigenous peoples and their traditional sustainable agricultural practices in socioeconomic development and environmental and biodiversity conservation is gradually receiving greater recognition. This publication, an outcome of a regional consultation held in Thailand in 2013, documents case studies conducted in seven South and Southeast Asian countries. These highlight that shifting cultivation continues to be an important livelihood system for most of the indigenous communities studied. They also illustrate how indigenous communities have adapted their livelihood systems over the past decades through good practices, which include those pertaining to forests and agroforestry, in response to external and internal factors that hinder or facilitate the achievement and sustainability of their livelihoods and food security. Several recommendations propose how these communities could be further supported.

FAO, International Work Group for Indigenous Affairs, Asia Indigenous Peoples Pact, Bangkok, 2015
ISBN 978-92-5-108761-9
434 pp.

● **Available in:** English

<http://www.fao.org/3/a-i4580e.pdf>



Guidelines for institutionalizing and implementing community-based forest management in sub-Saharan Africa

One component of Agenda 21 is the complementary "Forest Principles", which seek to secure the sustainability of the world's forest ecosystems for the benefit of present and future generations. A key provision of the Principles is community engagement in forest management and the promotion of conditions conducive to communities, indigenous peoples and forest dwellers' socioeconomic and cultural engagement with forests as incentives for sustainable forest management. This publication is a response to the 2008 and 2010 requests of the African Forestry and Wildlife Commission to promote viable community involvement in forest and wildlife management in Africa, by implementing pertinent policies and actions. Designed for use by policymakers and forestry practitioners, it proposes key institutional, policy and legislative measures to make community forestry attractive to both governments and target communities.

FAO, Accra, 2012
ISBN 978-92-5-107268-4
67 pp.

● **Available in:** English, French

<http://www.fao.org/docrep/016/i2786e/i2786e.pdf>



Assessing forest governance

A practical guide to data collection, analysis and use

Forest governance is a concept that is not always readily understood because of the many laws, rules, policies, actions and interactions that shape forests. However, in the past 20 years, practitioners have come to appreciate that governance is often the weak link in addressing the unsustainable use of forests and trees. This guide is the outcome of a collaborative effort of experts and organizations with various views on governance issues, who united to steer the compilation of a common set of good assessment practices. Using five case studies, it presents a step-by-step approach to planning forest governance assessment and monitoring, data collection and analysis, and making results available to decision-makers and other stakeholders. It also includes references and links to dozens of sources of further information.

FAO and Programme on Forests (PROFOR), Washington DC, 2014
212 pp.

● **Available in:** English

<http://www.fao.org/3/a-i3918e.pdf%20>



Strengthening effective forest governance monitoring practice

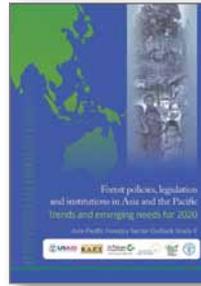
An approach for integrating forest governance into national forest-related monitoring systems

The growing recognition of forest governance's importance in advancing sustainable forest management (SFM) and in reducing deforestation and forest degradation has led to the design of a number of efforts to monitor and report on the performance of forest governance. This collaborative study documents the experience of work in this area to date, including in the context of reducing greenhouse gas emissions, Reducing emissions from deforestation and forest degradation (REDD)+. It suggests that, in order to be relevant, forest governance monitoring (FGM) at the country level should not only connect to national monitoring needs but also fulfil the reporting requirements of international conventions and agreements. The study provides country-derived information on the rationale, principles and key success factors of FGM, and describes its main design features as well as measures to make FGM systems more robust.

Forest Policy and Institutions Working Paper 29
FAO, Rome, 2012
63 pp.

● **Available in:** *English*

<http://www.fao.org/docrep/015/me021e/me021e00.pdf>



Forest policies, legislation and institutions in Asia and the Pacific

Trends and emerging needs for 2020

High rates of deforestation and forest degradation coupled with natural disasters and the threat of climate change are among the factors that have led to increasing awareness among the Asia-Pacific region's politicians and peoples of the need to reconcile tensions between the environment and development. In many countries, progress will depend largely on forestry institutions' capabilities to seize current opportunities to promote long-term goals. This report, a collaborative effort prepared under the umbrella of the second *Asia-Pacific forestry sector outlook study*, reviews the status and trends in forestry policy and institutions. It outlines the extent to which changes in policies, legislation and institutional arrangements aimed at supporting transitions towards sustainable forest management have been effective. Trends in governance and the effectiveness of efforts to tackle illegal logging are also assessed.

FAO, Bangkok, 2010
ISBN 978-92-5-106635-5
62 pp.

● **Available in:** *English*

<http://www.fao.org/docrep/013/i1722e/i1722e00.htm>



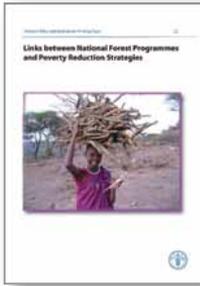
Best practices for improving law compliance in the forest sector

Forest law enforcement is one of the most debated issues in international forestry, with illegal forest production dwarfing legal production in some countries, giving rise to a series of other major problems. While tropical countries have often been the focus of attention, most countries have to address issues of forest law compliance, although they differ in their capacity to address the challenges. This publication has chosen not to cite the complex causes and far-reaching impacts of illegal forestry operations but focuses instead on identifying examples of best practices for improving law compliance. Drawing on case studies carried out in 11 countries around the world, it seeks to publicize measures to deal with forest crime being taken at the national and international levels and to help build capacity through the sharing of experiences.

FAO Forestry Paper 145
FAO/International Tropical Timber Organization, Rome, 2005
ISBN 92-5-105381-2
132 pp.

● **Available in:** *English, French, Russian, Spanish*

<http://www.fao.org/docrep/008/a0146e/a0146e00.htm>



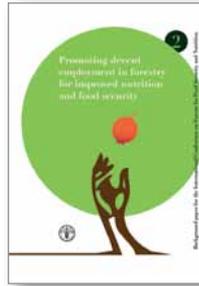
Links between national forest programmes and poverty reduction strategies

This paper presents the main findings of an FAO study conducted in 10 African countries between 2005 and 2007. It examines the links between national forest programmes (NFPs) and poverty reduction strategies so as to better understand why the forest sector is often marginalized in efforts to improve livelihoods. The results reveal a significant lack of data on forestry's contributions to poverty reduction and economic development, inadequate coordination across sectors on natural resources management in general and weak stakeholder participation in forest management in many countries. Through literature searches and interviews, the study identifies key factors which promote or hinder closer linkages between forestry and poverty reduction strategies and makes several recommendations for increasing the presence and influence of the sector in central decision-making.

Forest Policy and Institutions
Working Paper 22
FAO, Rome, 2008
57 pp.

● **Available in:** *English, French*

<ftp://ftp.fao.org/docrep/fao/011/k3730e/k3730e.pdf>



Promoting decent employment in forestry for improved nutrition and food security

Background paper for the International Conference on Forests for Food Security and Nutrition

Improving income and job opportunities through decent employment and entrepreneurial development in forestry can make a significant contribution to the well-being and food security and nutrition (FSN) of millions of people who rely on forests for their livelihoods, including some of the world's poorest people. This background paper for the 2013 International Conference on Forests for Food Security and Nutrition suggests that a sustainable approach should look not only at creating more quality jobs in forestry but also at upgrading existing ones, and lists several key areas of action to promote decent employment in forestry to improve FSN. More and better jobs can ensure increased employment opportunities, higher incomes and productivity, and safer and more stable working conditions. This, in turn, will contribute to improving the availability of and securing stable access to adequate and nutritious food.

FAO, Rome, 2013
18 pp.

● **Available in:** *English, French, Spanish*

<http://www.fao.org/forestry/37072-0fead0729740853a8e0e2410ffde85d8e.pdf>



FAO promoting decent employment opportunities for rural youth

News from the web

Approximately 1.2 billion youths live in the world today, comprising over 14 percent of the global population. Almost 88 percent of these young people live in developing countries – a figure that is expected to increase over the coming decades. The majority of these youths live and work in rural areas. Lacking access to productive resources, many rely on their own labour to earn a living. In 2012, the global youth unemployment rate was 12.4 percent, almost three times higher than the corresponding rate for adults. Young people account for 23.5 percent of the world's working poor, with the incidence of decent work deficits and poverty being particularly high among young rural women. This publication highlights the challenges faced by youth in finding decent employment as well as the opportunities that exist. It describes the link between youth employment, poverty reduction and food security and the nature of FAO's support to rural youth.

FAO, Rome, 2013
4 pp.

● **Available in:** *English*

<http://www.fao.org/docrep/018/i2976e/i2976e.pdf>

inFO news

A newsletter from **FAO Forestry**



Editorial - celebrating and safeguarding the Spirit of the Earth

by Mrs Martha Isabel 'Pati' Ruiz Corzo



For 27 years, Mrs Martha Ruiz Corzo, winner of the 2014 Collaborative Partnership on Forests Wangari Maathai Award, has worked to conserve the biodiversity of the Sierra Gorda Biosphere Reserve in Mexico. Together with the Grupo Ecológico Sierra Gorda she has strived to maintain the integrity of the Reserve's biodiversity and ecosystems and to provide local people with the means to rise out of poverty through the sustainable use of the Reserve's resources. In her editorial, Ms Ruiz Corzo describes why this work is so important and why at the global level we need a similar loving commitment if we are to save the planet and maintain the legacy of Wangari Maathai. [Read more](#)

Mrs Wangari Maathai

In 2004, the late Ms. Wangari Maathai, Kenyan environmentalist and champion of forest issues around the world, received the Nobel Peace Prize. The following year FAO had the honour to welcome her as a keynote speaker at its high-level meeting on forests. In 2012, following Ms Maathai's demise, the Collaborative Partnership on Forests established an award in her memory to pay tribute to her outstanding achievements.



FAO Forestry news

In memoriam: David Harcharik



It is with great sadness that we announce the passing away on the morning of 3 December of Mr David Harcharik. Mr Harcharik, a US national, was a former FAO Forestry Officer and subsequently FAO Forestry Advisor.

No. 24

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Food and Agriculture Organization
of the United Nations

OUR PRIORITIES

The FAO Strategic Objectives

Achieving FAO's goals to end hunger and poverty is a challenging and complex task. Today, thanks to major changes in how we do business, FAO is a fitter, flatter and more flexible organization, whose activities are driven by five strategic objectives. The new and improved FAO has a real chance to win the battle against hunger, malnutrition and rural poverty.



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We contribute to the eradication of hunger by facilitating policies and political commitments to support food security and by making sure that up-to-date information about hunger and nutrition challenges and solutions is available and accessible.



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We promote evidence-based policies and practices to support highly productive agricultural sectors (crops, livestock, forestry and fisheries), while ensuring that the natural resource base does not suffer in the process.



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We help the rural poor gain access to the resources and services they need – including rural employment and social protection – to forge a path out of poverty.



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We help to build safe and efficient food systems that support smallholder agriculture and reduce poverty and hunger in rural areas.



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We help countries to prepare for natural and human-caused disasters by reducing their risk and enhancing the resilience of their food and agricultural systems.



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- Boosting forest income to improve food security and nutrition
- Organizing people and communities for greater local control in forestry
- Involving women and youth in sustainable forest management
- Forests and trees as drivers of socioeconomic development
- Managing forest-related conflicts
- Wildlife in local livelihood development

ACKNOWLEDGING FORESTS' CULTURAL AND RECREATIONAL ROLES

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- Public perceptions of forests
- Archaeology, anthropology and forests
- Art and forests

ACCOUNTING FOR THE MULTIPLE BENEFITS OF FORESTS

- Forests in national economic measures
- Forests and the bioeconomy
- Forest environmental services

BUILDING RESILIENCE WITH FORESTS

FORESTS AS BUFFERS AGAINST ENVIRONMENTAL CHANGE

- Forests and climate change
 - Enhancing adaptation to, and the mitigation of, climate change
 - The future of REDD+
- Forests and water
- The conservation of forest biodiversity

INCREASING FOREST RESILIENCE TO NATURAL DISASTERS AND SHOCKS

- Restoring the resilience of forests in drylands
- Pests, diseases, fire and floods

INTEGRATING FORESTS AND OTHER LAND USES

THE ROLE OF FORESTS IN SUSTAINING LANDSCAPES

- Addressing the drivers of deforestation and forest degradation
- Forests and landscape restoration
- Planted forests versus forest plantations – a new era of forest management

INTEGRATING APPROACHES TO LANDSCAPE MANAGEMENT

- Finding synergies between forestry, agriculture, water and energy
- Agroforestry and trees outside forests
- The role of urban forests in fuelling and feeding cities and providing environmental and social services

ENCOURAGING PRODUCT INNOVATION AND SUSTAINABLE TRADE

INCREASING THE RANGE OF PRODUCTS FROM SUSTAINABLY MANAGED FORESTS

- Energy: formalizing the woodfuel supply
- Innovative wood-based products:
 - The use of wood in infrastructure and building
 - Biomaterials and nanomaterials
- Innovative non-wood forest products
- Shaping the dialogue on biotechnology

TOWARDS SUSTAINABLE TRADE

- Domestic, regional and international trade
- Linking producers to markets
- Improving trade transparency
- The impacts of certification

MONITORING FORESTS FOR BETTER DECISION-MAKING

WHAT THE DATA TELLS US

- The state of forests and forestry
- Information gaps

PROGRESS IN FOREST MONITORING

- Developments in national forest monitoring systems
- Information on forest policies and governance
- Innovative technologies for data collection and sharing
 - Remote sensing
 - Open-source applications
- Smallholder access to technologies and data
- Information needs on forests and other land uses for the United Nations Framework Convention on Climate Change

IMPROVING GOVERNANCE BY BUILDING CAPACITY

CAPACITIES, KNOWLEDGE AND COMMUNICATION

- New era for forestry as a long-term profession and business
- Increasing institutional capacities at all levels
- Using traditional and indigenous knowledge
- Fostering participation and partnerships in sustainable forest management
- Adapting forestry education and research to new realities
- Modernizing extension and training
- Communicating effectively with multiple audiences

RESHAPING FOREST GOVERNANCE ARCHITECTURE

- Bringing forests to the fore in international policy development and negotiations
- Coordinating policies among the sectors
- Implementing national forest programmes
- Securing forest tenure

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