



CONTENTS

I. FOCUS ON COP 13	3
UN Convention on Biological Diversity (CBD)	3
II. IN THE PRESS	3
Can Radical Transparency Fix Global Supply Chains And Slow Climate Change?	3
Protecting forests is the best way to fight climate change.....	3
Cattle ranchers face heat as efforts to protect forests falter	3
Climate change strategy needs forest biomass.....	3
Climate change strengthens an army of forest-eating insects	3
Dryness cancels climate change warmth that would help boreal forests	4
How pursuit of carbon and fossil fuels harms the vulnerable	4
UAE highlights Climate Change realities to avoid adverse impact on environment and public health	4
Every dollar counts in fight against climate change	4
New EU Wood Energy Rules Threaten Climate, Forests	4
Farmers in Sudan battle climate change and hunger as desert creeps closer	5
Indonesia's forests are key for saving orangutans – and slowing climate change	5
Forest resources and climate change	5
California Forests Failing to Regrow After Intense Wildfires	5
Addressing Climate Change Can Unlock \$23 Trillion-Dollar Investment Opportunities in Emerging Markets	5
Brazilian conservationists develop new tool to cut illegal wood from supply chains.....	5
Seeing the Forest through the Trees: The Business Case for Valuing Natural Capital.....	5
III. EVENTS & MEETINGS	6
Recent events.....	6
<i>OLI to Develop Global Forest Indicators to Support Implementation of the 2030 Agenda and the International Arrangement on Forests (IAF) Strategic Plan.....</i>	<i>6</i>
<i>CBD COP13, Cartagena Protocol on Biosafety COP/MOP8, and Nagoya Protocol on Access and Benefit-Sharing COP/MOP2</i>	<i>6</i>
Upcoming events	6
<i>UNFF Working Group and Special Session</i>	<i>6</i>
<i>Expert Meeting on Climate Change, Land Use and Food Security.....</i>	<i>6</i>
<i>The 16th regular session of the FAO Commission on Genetic Resources for Food and Agriculture (CGRFA)</i>	<i>6</i>
<i>The 5th Plenary session of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.....</i>	<i>6</i>
IV. RESEARCH ARTICLES	7
Calculating carbon changes in peat soils drained for forestry with four different profile-based methods	7
Disturbance intensity and dominant cover type influence rate of boreal soil carbon change: A Canadian multi-regional analysis	7
Relative influence of climate, soils, and disturbance on plant species richness in northern temperate and boreal forests.....	7
Changes in soil organic carbon over 20 years after afforestation in semiarid SE Spain	8
Historical experience (1850-1950 and 1961-2014) of insect species responsible for forest damage in Sweden: Influence of climate and land management changes	8
Effects of compaction by heavy machine traffic on soil fluxes of methane and carbon dioxide in a temperate broadleaved forest	9

Temporal dynamics of carbon and nitrogen in the surface soil and forest floor under different prescribed burning regimes	9
Five years left - how are the EU member states contributing to the 20% target for EU's renewable energy consumption; the role of woody biomass.....	9
The contribution of forest carbon credit projects to addressing the climate change challenge	10
How can the ambitious goals for the EU's future bioeconomy be supported by sustainable and efficient wood sourcing practices?.....	10
Reducing emissions from agriculture to meet the 2 °C target.....	10
Is it getting hot in here? Adjustment of hydraulic parameters in six boreal and temperate tree species after 5 years of warming	11
Adaptation and Indigenous peoples in the United Nations Framework Convention on Climate Change.....	11
Understanding climate adaptation investments for communities living in desert Australia: experiences of indigenous communities	11
Evaluation of the performance of improved biomass cooking stoves with different solid biomass fuel types	12
Estimating potential range and hence climatic adaptability in selected tree species	12
V. PUBLICATIONS, REPORTS AND OTHER MEDIA	13
Helping forests and people adapt to changing times and climes	13
Illegal Logging and Related Timber Trade - Dimensions, Drivers, Impacts and Responses	13
Banking on the Amazon: how the finance sector can do more to avoid tropical deforestation	13
How to achieve the Sustainable Development Goals? Focus on forests	13
National socioeconomic surveys in forestry: Guidance and survey modules for measuring the multiple roles of forests in household welfare and livelihoods	13
VI. JOBS	14
International Consultant: National Forest Monitoring System and REDD+ Reference Levels	14
Assistant Director-General, Forestry Department.....	14
Forestry Officer (FLEGT - Latin America)	14
Forestry Program Officer.....	14
CLIM-FO INFORMATION.....	15

I. FOCUS ON COP 13

UN Convention on Biological Diversity (CBD)

2 - 17 December 2016

Cancun, Quintana Roo, Mexico

The thirteenth meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD COP 13), the eighth meeting of the Conference of the Parties serving as the Meeting of the Parties to the Cartagena Protocol on Biosafety (COP/MOP 8), and the second meeting of the Conference of the Parties serving as the Meeting of the Parties to the Nagoya Protocol on Access and Benefit-sharing (COP/MOP 2) were held concurrently in Cancun, Mexico from 2 to 17 December 2016. A High-Level Segment will take place from 2-3 December.

The Convention on Biological Diversity (CBD) founded in 1992 at the Rio Summit, is the legally binding agreement on the use and conservation of biological diversity.

The Convention provides the framework for 196 Parties to guide efforts to conserve, and sustainably use biological diversity and equitably share the benefits from the use of genetic resources. In October 2010, Parties approved the Strategic Plan for Biodiversity for 2011-2020 including 20 Aichi Targets.

The outcomes of the COP can be found [here](#).

II. IN THE PRESS

3 December 2016

Can Radical Transparency Fix Global Supply Chains And Slow Climate Change?

Kevin Rabinovitch stands straight and speaks in clear, clipped tones - more like a naval officer than a corporate quant - as, on the screen behind him, a daunting mass of threads and whorls illustrates the global flows of Brazilian soybeans from thousands of individual municipalities across Brazil, through specific exporters and importers, to countries around the world. "We buy a lot of soy from Brazil," he says. "But we also buy things that eat soy in Brazil before we buy them," he continues, referring to the chickens and cows that end up in pet food manufactured by food giant Mars Inc, where he's Global Director of Sustainability.

Known for its ubiquitous Mars and Milky Way candy bars, privately-held Mars, Inc also makes Whiskas cat food, Wrigley's chewing gum, and dozens of other products that require tens of thousands of tons of cattle, soy, and palm oil - all of which are packaged in products derived from pulp & paper.

5 December 2016

Protecting forests is the best way to fight climate change

At the 13th meeting of the parties to the Convention on Biological Diversity (CBD CoP13), representatives from more than 190 nations are discussing conservation in Cancun from December 4 to 17. Already on Saturday (03.12.2016), delegates agreed to adopt the Cancun Declaration to ramp up efforts to protect the world's biodiversity. At the conference, indigenous groups' role in protecting biodiversity will be among the topics in the spotlight. Leaders from the Amazon region, Congo and Indonesia, among others, are unifying their voices in demanding greater respect and support for their communities, which they believe to be key actors in the fight to protect our planet.

5 December 2016

Cattle ranchers face heat as efforts to protect forests falter

Clearing space for cattle ranching is the biggest single driver of deforestation globally. Yet only 26% of major beef buyers have any kind of environmental policy and just 16% have specific commitments to protect forests. So reports the Global Canopy Programme in its latest annual Forest 500 index. While corporates are paying more attention to the origins of palm oil, timber and soya, overall engagement falls short of what is needed to save rainforests. "There are signs of improvement among many of the leaders," said Tom Bregman, one of the report authors, "but actually the rate of progress for most companies within our list... are inadequate to meet the high level deforestation targets made in the last few years."

6 December 2016

Climate change strategy needs forest biomass

Citizens and policymakers should be wary whenever science is pointedly but selectively invoked to support a political agenda. A recent example is John Talberth's Nov. 3 guest opinion opposing the "carbon neutrality" of forest biomass energy. His commentary neither clarifies the realities of forest biomass in Oregon nor does it consider the benefits of using forest biomass energy as part of a comprehensive strategy to address both climate change and the health of Oregon's fire-prone forests.

9 December 2016

Climate change strengthens an army of forest-eating insects

A tiny bug, no bigger than a grain of pepper, is wreaking big-time havoc in US forests, and forest managers are scrambling to keep up. Hemlock woolly adelgids aren't native to North America, but droves of them have taken up residence in hemlock forests, from New England to the West Coast, thanks to

CLIM-FO-L, December 2016

increased trade and travel. Nestled under the needles of hemlock trees, the invasive insects cut off nutrients to the tree and can eventually take down trees that have stood for 300 years. If left unchecked, the hemlock woolly adelgid and other pests are projected to put 63 percent of the nation's forests at risk by 2027, according to a study published this year in the journal *Ecological Applications*.

12 December 2016

[Dryness cancels climate change warmth that would help boreal forests](#)

A new study suggests drier weather will likely eliminate any advantage for Canada's boreal forest from higher temperatures caused by climate change. Scientists had predicted that warmer conditions and a higher level of carbon dioxide, which plants breathe in, would promote growth. And Martin Girardin of the Canadian Forest Service said some parts of the vast band of green that stretches across the northern provinces are expanding. But his work published in the *Proceedings of the National Academy of Sciences* has found that enough forest stands are suffering under climate change to cancel out those benefits.

12 December 2016

[How pursuit of carbon and fossil fuels harms the vulnerable](#)

This year is set to be the hottest year on record. Global temperatures are already 1.2°C above pre-industrial levels, and total reductions in emissions, committed by individual countries, far exceed globally agreed targets. This puts us on track for dangerous climate change. At a time when the transition to a low carbon future has never been more urgent, developed countries appear locked into ongoing support for the dirty fossil fuel industries.

In championing fossil fuels, indigenous peoples - First Nations and Aboriginal people - whose lives and territories have been affected by the destructive forces of colonisation, now face the violence of resource extractivism.

13 December 2016

[UAE highlights Climate Change realities to avoid adverse impact on environment and public health](#)

At a panel discussion entitled 'United to Safeguard a Healthy Planet', on Monday at the Global Summit of Women Speakers of Parliament (GSWS 2016), Dr. Thani Ahmad Al Zeyoudi, UAE Minister of Climate Change and Environment, warned that ignoring the realities of climate change would result in serious adverse effects on the environment as well as on public health. He said that countries need to work together to develop, implement, and comply with international environmental treaties. The discussion

reviewed various innovative policies drafted to protect the planet, and focussed on the difference that parliaments can make in this matter, both individually and in mutual collaboration.

16 December 2016

[Every dollar counts in fight against climate change](#)

And so all is well that ends well. Yesterday evening, the largest climate finance meeting to be held in the Pacific, the 15th Global Climate Fund Board meeting, ended with joyous celebration at the T.A.T.T.E Building on Beach Road. Today, the delegates from all over the world who have spent the past few days in rainy Samoa are making their way back home, hopefully with plenty of wonderful memories to share with families, friends and colleagues.....

Last night, we were told that the proposal has been given the green light by the Green Climate Fund (G.C.F). It was apparently one of eight proposals approved by the Board, worth millions of dollars. For Samoa, of three proposals approved related to the Pacific, we are also involved a US\$22million (T\$50.6m) grant for a multi-country renewable energy programme with the Asian Development Bank. What it means is that the meeting in as far as Samoa is concerned has been a very positive one.

19 December 2016

[New EU Wood Energy Rules Threaten Climate, Forests](#)

As American foresters ramp up logging to meet the growing demand for wood pellets by power plants on the other side of the Atlantic Ocean, a new European wood energy proposal would allow the power plants to continue claiming their operations are green for at least 13 more years, despite releasing more heat-trapping pollution than coal. Most of the wood fueling converted coal plants in England, Denmark and other European countries is coming from North American forests. Each month, about 1 million tons of tree trunks and branches from southern U.S. pine plantations and natural forests is being turned into pellets and shipped to European power plants, mostly to Drax power station in the U.K. The growing transatlantic trade is being financed with billions of dollars in European climate subsidies because of a regulatory loophole that allows wood energy to count as if it's as clean as solar or wind energy, when in reality it's often worse for the climate than burning coal. Only the pollution released when wood pellets are produced and transported is counted on climate ledgers. Actual pollution from the smokestack — by far the greatest source of carbon pollution from wood energy — is overlooked.

19 December 2016

Farmers in Sudan battle climate change and hunger as desert creeps closer

In Sudan's eastern state of Gedaref, nicknamed "the granary" for its vast rows of sesame, sorghum and millet, banks of sediment and gravel are popping up as high as hills around the farms - the result of deforestation and erratic rains causing watering holes to overflow..... "Climate change affected the intensity of rainfall. When it is very intense, you have very quick and very high runoffs, and this is what we are seeing now," says El Gamri, a project coordinator at the Sudan Higher Council for Environment and Natural Resources. "They spoil the soil. Now you see they cannot cultivate such land, because it has lost the levelling."

20 December 2016

Indonesia's forests are key for saving orangutans – and slowing climate change

When Edward Tang was a boy, he used to hunt durian fruit in the jungle near his house in western Borneo. On expeditions into the forest, he'd often see orangutans swinging from branch to branch above his head. Tang is 40 now, and as a conservation educator, he still spends a lot of time in the forest. But he almost never sees orangutans anymore. "The impact of forest destruction in Indonesia has been immense," Tang says.

21 December 2016

Forest resources and climate change

Forests are complex communities of plants and animals in which trees are the most abundant. Over recent years, human activity has led to the destruction of many of these forests. One of the many effects of forest degradation is climate change, due to an increase in greenhouse gases. We hear the term very often, but what exactly is climate change? Climate change is a global shift in the Earth's average temperatures and weather patterns. This article looks to explain causes of forest degradation, as well as mitigation and adaptation strategies in forest conservation, and perceived effects if these strategies are not carried out.

21 December 2016

California Forests Failing to Regrow After Intense Wildfires

There are warning signs that some forests in the western U.S. may have a hard time recovering from the large and intense wildfires that have become more common as the climate warms. After studying 14 burned areas across 10 national forests in California, scientists from UC Davis and the U.S. Forest Service said recent fires have killed so many mature, seed-producing trees across such large areas that the forests can't re-seed themselves. And because of increasingly warm temperatures, burned

areas are quickly overgrown by shrubs, which can prevent trees from taking root.

22 December 2016

Addressing Climate Change Can Unlock \$23 Trillion-Dollar Investment Opportunities in Emerging Markets

There has never been a better time to invest in climate solutions and not only because of the international agreement on climate but also the current energy landscape. As a result of massive cost reductions, solar photovoltaic (PV) and wind power are now mainstream. Global investment in clean energy last year—nearly \$350 billion—more than doubled the amount invested in coal- and gas-fired power generation. At the same time, farmers are investing in more productive, climate-resilient agricultural practices and the green buildings market has doubled every three years for the past decade. The hundreds of companies in Marrakech at last year's climate talks represent the sea change that is happening: business is finding profit in climate-friendly investments. Investors and businesses need to ask: Where are the best investment opportunities?

22 December 2016

Brazilian conservationists develop new tool to cut illegal wood from supply chains

Companies that want to buy Brazilian timber without contributing to illegal deforestation have a new tool to help them ensure stolen wood does not appear in their supply chains - a digital platform tracing the origins of wood, environmentalists said. The Responsible Timber Exchange created by conservation group BVRio draws on government data and satellite maps to help buyers and sellers check the origins and certifications of wood. "The platform is able to identify risks of illegality across the supply chain," Mauricio de Moura Costa, director of operations for BVRio, told the Thomson Reuters Foundation. We want to create a marketplace that helps buyers purchase legal timber in an easier way ... due diligence is very difficult," he said in a recent interview. Illegal logging is responsible for about 90 percent of the deforestation in Brazil, home to the world's largest tropical forests, according to the country's environmental enforcement agency (IBAMA).

23 December 2016

Seeing the Forest through the Trees: The Business Case for Valuing Natural Capital

For the past year, climate change has returned to the top of the international agenda..... When it comes to climate change, the debate seems to have devolved into a question of "who pays?" I think this is too simplistic. Our natural world has an inherent value that yields benefits to all of us. Understanding and quantifying this value is the first step to protecting it.

CLIM-FO-L, December 2016

III. EVENTS & MEETINGS

Recent events

28-30 November 2016: FAO, Rome, Italy

OLI to Develop Global Forest Indicators to Support Implementation of the 2030 Agenda and the International Arrangement on Forests (IAF) Strategic Plan

This organization-led initiative (OLI), hosted by the FAO, will provide a platform to propose a set of common, concise global indicators for input into negotiations on the UNFF Strategic Plan 2017-2030, to help monitor progress in achieving the forest-related SDGs and relevant goals and targets of other forest-related global processes. It will also provide input on a cycle and format for reporting, and provide guidance on the Global Forests Assessment 2020.

4-17 December 2016: Cancún, Mexico

CBD COP13, Cartagena Protocol on Biosafety COP/MOP8, and Nagoya Protocol on Access and Benefit-Sharing COP/MOP2

The 13th COP to the CBD, the 8th COP serving as the Meeting of the Parties (MOP) to the Cartagena Protocol on Biosafety and the 2nd COP serving as the MOP to the Nagoya Protocol on Access and Benefit-sharing will take place concurrently. The meetings will be preceded by a High Level Segment on 2-3 December.

Upcoming events

16-20 January 2017: UN Headquarters, New York

UNFF Working Group and Special Session

The back-to-back meetings of the UN Forum on Forests (UNFF) Working Group and Special Session are expected to negotiate and endorse the Strategic Plan for 2017-2030 and the 4-year Programme of Work (4POW) for 2017-2020, based on recommendations submitted by the UNFF Ad Hoc Expert Group.

23-25 January 2017: FAO, Rome, Italy

Expert Meeting on Climate Change, Land Use and Food Security

This meeting will be co-hosted by the IPCC and the FAO. Further information will be made available at a later date.

30 January - 3 February 2017: FAO, Rome, Italy

The 16th regular session of the FAO Commission on Genetic Resources for Food and Agriculture (CGRFA)

The meeting is expected to address a series of sectoral and cross-sectoral issues of relevance to genetic resources for food and agriculture, including the report on the state of the world's biodiversity for food and agriculture, and the role of genetic resources for food security.

7-10 March 2017 location: Bonn, Germany

The 5th Plenary session of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

The session will review progress on the work programme, including the methodological assessment regarding the diverse conceptualization of multiple values of nature and its benefits and thematic assessments on invasive alien species and on sustainable use of biodiversity.

IV. RESEARCH ARTICLES

Calculating carbon changes in peat soils drained for forestry with four different profile-based methods

Krüger, Jan Paul; Alewell, Christine; Minkkinen Kari; Szidat, Sönke, Leifeld, Jens

Forest Ecology and Management, Vol 381, 1 December 2016, pp 29-36 <http://dx.doi.org/10.1016/j.foreco.2016.09.006>

Boreal peatlands are an important carbon (C) sink. The effect of drainage for forestry on the soil C balance in those peatlands is a controversial debate. The Lakkasuo peatland, central Finland, comprise a minerotrophic and an ombrotrophic part, both partially drained for forestry. A pair-wise comparison was conducted and four different profile-based methods were applied to calculate the soil C balance. The first two methods used differences in ash content (I) between the upper and lower part of the profile and (II) between the drained and natural site of the peatland, respectively. The third method (III) used radiocarbon dated samples to calculate C accumulation rates at the natural site and compared these to the current C-stocks at the drained sites. The fourth method (IV) used radiocarbon dated samples to define a 1000-year layer in the profiles for comparing the C-stocks above this layer. Stable carbon isotope depth profiles, used for a qualitative assessment of the peatland status, identify both undrained site as undisturbed. All four methods indicate a C loss at the minerotrophic drained site but of different magnitude (0.057-0.272 kg C m⁻² yr⁻¹). At the ombrotrophic drained site both radiocarbon methods (III and IV) indicate a C gain (0.139-0.179 kg C m⁻² yr⁻¹) whereas methods I and II suggest a C loss (0.084-0.270 kg C m⁻² yr⁻¹). Method IV is considered the most stringent and robust one. Yet, the comparison of profile-based methods for C balance assessment suggests them to be applicable depending on site-specific conditions of nutrient status and presence of a natural reference site.

Disturbance intensity and dominant cover type influence rate of boreal soil carbon change: A Canadian multi-regional analysis

Kishchuk, B.E.; Morris, D.M.; Lorente, M.; Keddy, T.; Sidders, D.; Quideau, S.; Thiffault, E.; Kwiaton, M.; Maynard, D.

Forest Ecology and Management, Vol 381, 1 December 2016, pp 48-62 <http://dx.doi.org/10.1016/j.foreco.2016.09.002>

The circumpolar boreal forest biome contains a significant portion of the global forest carbon (C) stocks, and is generally considered to be a sink for atmospheric C. However, there is a concern that disturbances occurring concurrently with fibre utilization may cause these boreal forest ecosystems to become net C sources resulting from cumulative effects of natural and anthropogenic disturbances, and altered C cycling processes at stand- and landscape scales. In this study, we have synthesized soil C data (forest floor + upper 20 cm of mineral soil) from six long-term, forest management-based manipulative experiments situated in both the Boreal Plain and Boreal Shield ecozones to examine the collective effects of disturbance type and intensity, and dominant tree cover type on soil C pools. The disturbances of clearcut harvest, burn, burn + salvage logging, harvest + forest floor removal resulted in rapid and significant declines in measured soil C following disturbance. In contrast, partial stand removals (i.e., light and heavy thinning through partial harvest treatments) conducted at the Ecosystem Management Emulating Natural Disturbance (EMEND) trial resulted in slight increases in total measured soil C by year 6, with the exception of conifer dominated stands. The observed declines in total soil C, particularly in the high intensity treatments, were largely a function of declines within the forest floor. In most cases, the rate of change in measured soil C converged over time with baseline levels (clearcut and partial harvests by year 6). In contrast, the data suggests that longer periods of time (>15 years) will be required for the total soil C pool to fully recover to pre-disturbance levels for the higher intensity disturbances. Dominant tree species cover type also influenced the rate of change in total measured soil C. There was a clear difference in the rate of change in the soil C pool between conifer-dominated stands compared to mixed or aspen-dominated stands, going from a positive rate of change (accumulation) under deciduous cover to a negative rate of change under conifers. Our results illustrate that the complex and interactive relationships among species effects, inherent soil and site properties, and management practices should collectively be considered in the development of options related to boreal forest soil C management and climate change mitigation strategies.

Relative influence of climate, soils, and disturbance on plant species richness in northern temperate and boreal forests

Bell, F. Wayne; Lamb, Eric G.; Sharma, Mahadev; Hunt, Shelley; Anand, Madhur; Dacosta, Jennifer; Newmaster, Steven G.

Forest Ecology and Management, Vol 381, 1 December 2016, pp 93-105 <http://dx.doi.org/10.1016/j.foreco.2016.07.016>

In this study we sought answers to two questions (i) What is the relative influence of silvicultural disturbances on species richness in northern temperate and boreal forests? and (ii) In a scenario where emulating natural disturbances is applied, do collinearity and hierarchical structure exist among climate, soils, disturbance of the forest canopy and forest floor, exotic species, and species richness? By capitalizing on the NEBIE plot network, a

large-plot experimental study designed to evaluate the effects of intensification of silviculture on fiber production and biodiversity. We demonstrate that silvicultural disturbances act with contemporary climate, soils, and historic fire regimes to influence plant species richness in northern temperate and boreal forests in Ontario, Canada. Relationships between various factors and plant species richness (total and for each life form: woody, herbaceous, bryophyte, and lichen) were analyzed using general linear (GLM) and structural equation modelling (SEM). Results of GLM indicate that climate accounted for the overwhelming percentage of variation in species richness of each of the plant life form groupings (>50% and often >70%), while soil properties, canopy structure, silvicultural practices, and degree of natural disturbance each accounted for on the order of 10% or less of variation in species richness. Results of fitted SEM suggested strong collinearity and hierarchy among climate, soils, historic fire regimes, and silviculture systems; however, the effect of silvicultural intensity on plant species richness was independent of climate, soils, and historic fire regimes.

Changes in soil organic carbon over 20 years after afforestation in semiarid SE Spain

Segura, C.; Jiménez, M.N.; Nieto, O.; Navarro, F.B.; Fernández-Ondoño, E.

Forest Ecology and Management, Vol 381, 1 December 2016, pp 268-278 <http://dx.doi.org/10.1016/j.foreco.2016.09.035>

This paper analyses the changes on SOC in semiarid abandoned farmland located in SE Spain partially afforested with *Pinus halepensis* Mill. in winter 1995-1996. The study tests the effects that 10 soil-preparation treatments before planting exerted on SOC, evaluates the effects of land-use change on SOC, and simulates SOC dynamics using the RothC model. The land-use changes studied were from cereal crops to abandoned croplands and from cereal crops to afforestation, in comparison to a native forest in equilibrium (maximum SOC reached). The results show that there were no differences in SOC among the soil-preparation treatments applied 20 years ago. An increasing mean SOC was recorded in the afforestation subplots. These increases were not always significant from one sampling period to another and were related to silvicultural practices and climate. SOC in the afforested land was influenced by the soil carbonate content (+), pH (-), and pine density (+). After 20 years, the mean SOC values in the afforested land were higher than in abandoned croplands and cereal crops (12.23 Mg C ha⁻¹, 9.52 Mg C ha⁻¹ and 8.02 Mg C ha⁻¹, respectively) though no statistical differences were registered among these land uses. In all cases SOC differed with respect to the native pine forest, which showed 40.59 Mg C ha⁻¹. Our results indicated that not enough time had elapsed to detect significant cumulative effects in SOC due to slow dynamics of carbon in the soil in the semiarid climate, the low inputs of organic matter to the soil and, probably, the low soil clay content in the study area. At the end of this study, the SOC in the afforested area was 69.9% less than in the native pine forest, indicating a clear potential for SOC sequestration in the following years. The RothC model was able to simulate the measured SOC increases due to the abandonment of agriculture and the afforestation of the cereal crops. In a 20-year model, we found a fit for the time course of SOC in abandoned croplands of RMSE < 10%, and a RMSE = 33% for the afforested area. Although the model in all cases overestimated the SOC measured, our results could be used as general indicators for predictions of the time course of SOC and potential carbon sequestration in semiarid afforested areas.

Historical experience (1850-1950 and 1961-2014) of insect species responsible for forest damage in Sweden: Influence of climate and land management changes

Tudoran, Mihaela-Mariana; Marquer, Laurent; Jönsson, Anna Maria

Forest Ecology and Management, Vol 381, 1 December 2016, pp 347-359 <http://dx.doi.org/10.1016/j.foreco.2016.09.044>

The ongoing climate change can influence the dynamic of insect populations and therefore the Insect species Responsible for Forest Damage ("insects-RFD" hereafter). The present study aims at identifying the most occurring insects-RFD in Sweden, and exploring the relationships between insects-RFD and climate and land management changes. The recorded insect attacks based on historical reports, literature and databases, were collected for North, Central and South of Sweden, and for two periods at yearly time scales: 1850-1950 and 1961-2014. A series of analyses has been carried out based on this dataset: 1-Estimation of the occurrence of each insects-RFD over years to assess which insect species have caused the major forest damage, 2-Ratios of broadleaved versus conifer host trees to estimate the main types of damaged forests, and 3-Canonical correspondence analyses to evaluate how much climate (winter and summer temperature, winter and summer precipitation, and storms) and land management (land areas for wood production, standing volume for all trees and standing volume for deciduous trees) changes have affected insects-RFD. The results reveal that the most occurring insects-RFD differ between the North and South of Sweden, and between 1850-1950 and 1961-2014. The most occurring insects-RFD since 1850 were *Ips typographus*, *Neodiprion sertifer*, *Tortrix viridana*, *Hylobius abietis* and *Tomicus piniperda*. The occurrences of insects-RFD have been higher in the South of Sweden since at least 1850 than in other regions. The North of Sweden have been mostly affected by insects-RFD between 1911 and 1950. Canonical correspondence analyses show that the spread of insects-RFD might be related to environmental conditions. More particularly, the insects-RFD variation explained are increasing between 1902-1950 and 1961-2007 in all Sweden for temperature (winter and summer) and in Central and South of Sweden for storm damage. However, the evolution of landscape management would participate in influencing insects-RFD, in particular from 1961, when changes in forest management (e.g. increase in land areas for wood production) have been developed, as well as the way to report insect forest damages. This long-term perspective of

CLIM-FO-L, December 2016

how changes in climate and land management have influenced insects-RFD is of great interest for further discussion about climate adaptation strategies in forestry and ecosystem services.

Effects of compaction by heavy machine traffic on soil fluxes of methane and carbon dioxide in a temperate broadleaved forest

Epron, Daniel; Plain, Caroline; Ndiaye, Fatou-Kiné; Bonnaud, Pascal; Pasquier, Catherine; Ranger, Jacques

Forest Ecology and Management, Vol 382, 15 December 2016, pp 1-9 <http://dx.doi.org/10.1016/j.foreco.2016.09.037>

Soil compaction decreases soil aeration and water infiltration, lowering air-filled porosity, which may impact biological processes involved in soil fluxes of carbon dioxide (F_{CO_2}) and methane (F_{CH_4}), and decrease the greenhouse gas emissions mitigation potential offered by the forestry sector. We recorded F_{CO_2} and F_{CH_4} continuously for two years using automated chambers connected to a laser-based gas analyser in an experimental forest site on an acidic ruptic Luvisol that was established to assess the long-term impact of a loaded forwarder. Heavy machine traffic had considerably increased soil surface roughness. Air-filled porosity (AFP) in the first 0.1 m was lower in the trafficked plot - especially in hollows - than in the control almost all year long. The temperature sensitivity of F_{CO_2} was higher for the control plot than for both mounds and hollows in the trafficked plot. Cumulative F_{CO_2} was much higher in the control than in hollows and mounds of the trafficked plot. In contrast, annual F_{CH_4} did not significantly differ between the control plot and either the mounds or the hollows in the trafficked plot, but was significantly higher in mounds than in hollows. F_{CH_4} was negative all year round indicating a net uptake of CH_4 , except during winter when a net emission of CH_4 was occasionally observed in the hollows on the trafficked plot. While seasonal variations of F_{CH_4} were well related to variations in AFP, the potential rate of methane uptake at optimal air-filled porosity was higher in the trafficked plot than in the control.

Temporal dynamics of carbon and nitrogen in the surface soil and forest floor under different prescribed burning regimes

Muqaddas, Bushra; Chen, Chengrong; Lewis, Tom; Wild, Clyde

Forest Ecology and Management, Vol 382, 15 December 2016, pp 110-119 <http://dx.doi.org/10.1016/j.foreco.2016.10.010>

Prescribed burning has been widely used in the management of forests for reducing wildfire risk, and can have significant effects on soil carbon (C) and nitrogen (N) pools and their temporal changes. This study aimed to investigate the impacts of different burning frequency regimes on the temporal dynamics of C and N in the topsoil and forest floors. The experimental site was a 39 year old wet sclerophyll forest prescribed burning trial at Peachester, southeast Queensland, Australia, with treatments of no burning (NB) since 1969, 2 yearly burning (2yrB) and 4 yearly burning (4yrB) since 1972. Each of three burning treatments had four replications and these plots were randomly distributed over an area of the forest with similar vegetation and soil characteristics. Soil (0-10 cm) and forest floors were sampled monthly for 6 months prior to the next scheduled burning for both burning treatments to minimize the effects of fire recency. Prescribed burning significantly ($P < 0.01$) affected most C and N variables in both soils and forest floors. The 2yrB treatment had significantly lower ($P < 0.01$) soil total C, total C:N ratio, microbial biomass C (MBC) and N (MBN), MBC:MBN ratio, dissolved organic C (DOC) and N (DON), NO_3^- -N, inorganic N and L layer total N, DON and NO_3^- -N, compared with the NB and 4yrB treatments. However, there were no overall significant differences in these variables between the NB and 4yrB treatments. Sampling month significantly ($P < 0.01$) affected C and N variable in both soils and forest floors except for soil total C and N and F layer MBC. Temporal dynamics of most of these labile C and N variables were highly related to soil and forest floor moisture content, seven day mean air temperature (MAT) and cumulative rainfall prior to sampling date. However, fire effects were independent of sampling month, as there were no significant interactions between them for most response variables measured. This study has clearly demonstrated that more frequent burning (2 yr burning) had negative impact on soil and forest floor C and nutrient pools. Insignificant differences observed in soil C and N and forest floor N pools between less frequent burning (4yrB) and NB treatments highlighted that the prescribed burning at four year interval gave sufficient time for recovery of these soil and forest floor nutrients to pre-burn levels.

Five years left - how are the EU member states contributing to the 20% target for EU's renewable energy consumption; the role of woody biomass

Proskurina, Svetlana; Sikkema, Richard; Heinimö, Jussi; Vakkilainen, Esa

Biomass & Bioenergy Vol 95, December 2016, pp 64-77 <http://dx.doi.org/10.1016/j.biombioe.2016.09.016>

The European Union has set ambitious targets of raising the share of EU energy consumption produced from renewable resources from 20% by 2020 to 27% by 2030. The aim of this paper is to assess the role of woody biomass in renewable energy as gross final energy consumption in the European Union (the EU-28). The paper identifies leading and lagging countries in biomass development by focusing on their current biomass use and forecasts future perspectives. The research compares and evaluates the role of biomass in renewable energy in the EU-28 focusing on countries' potential resources and policy support. The study shows that all countries are making efforts to reach the 20% target in 2020 and exhibit a trend of increasing renewable energy as gross final energy consumption towards the new target of 2030. Solid biomass plays an important role in reaching the EU's renewable energy targets. The majority of the EU-28 (MS) countries are close

to reaching their national renewable energy targets and show a very attractive biomass development. Unless energy consumption decreases however, some member states will face serious problems in reaching their renewable energy target in 2020. Following our analysis, the largest problems occur in those MS having a relative high-energy consumption pattern: France, Germany and the United Kingdom. It is unlikely that they can comply with expected renewable energy demand, unless they mobilize more woody biomass from their available domestic potential (France, Germany) or considerably increase their woody biomass imports (mostly wood pellets) from elsewhere (United Kingdom).

The contribution of forest carbon credit projects to addressing the climate change challenge

van der Gaast, Wytze; Sikkema, Richard; Vohrer, Moriz

Climate Policy pp 1-7 <http://dx.doi.org/10.1080/14693062.2016.1242056>

This article addresses the question of how forestry projects, given the recently improved standards for the accounting of carbon sequestration, can benefit from existing and emerging carbon markets in the world. For a long time, forestry projects have been set up for the purpose of generating carbon credits. They were surrounded by uncertainties about the permanence of carbon sequestration in trees, potential replacement of deforestation due to projects (leakage) and how and what to measure as sequestered carbon. Through experience with Joint Implementation (JI) and Clean Development Mechanism (CDM) forestry projects, albeit limited, and with forestry projects in voluntary markets, considerable improvements have been made with accounting of carbon sequestration in forests, resulting in a more solid basis for carbon credit trading. The scope of selling these credits exists both in compliance markets, although currently with strong limitations, and in voluntary markets for offsetting emissions with carbon credits. Improved carbon accounting methods for forestry investments can also enhance the scope for forestry in the Nationally Determined Contributions (NDCs) that countries must prepare under the Paris Agreement.

How can the ambitious goals for the EU's future bioeconomy be supported by sustainable and efficient wood sourcing practices?

Sikkema, Richard; Dallemand, Jean Francois; Matos, Cristina T.; van der Velde, Marijn; San-Miguel-Ayanz, Jesus

Scandinavian Journal of Forest Research <http://dx.doi.org/10.1080/02827581.2016.1240228>.

Satisfying an increasing wood demand for material and energy in EU's future bioeconomy is a big challenge. Under the spotlight of EU's climate and energy policies, wood is a key contributor to the renewable energy targets. The aim of our paper is to review and discuss how forests and wood can sustainably and efficiently contribute to such intensified goals. EU's existing legal frameworks for legal timber harvesting (EUTR), renewable energy use (EU-RED) and waste treatment give valuable principles for EU's Member States and market sectors. Nevertheless, an efficient wood cascade should first be part of widespread certification, directly at the first intake of harvested logs. One extra issue -guaranteeing efficient use of forest fibers - could be included, to maintain optimum fiber-cascading. This prevents a first intake of high quality wood for energy (pellet-mills) or paper-production (pulp-mills). Second, extra support can be considered for harvested high quality trees, for example via the use of wood in buildings and wood for construction. Third, more attention is needed on an European level for the innovation at the end-of-life, like using post-consumer wood waste for wood-based panels or wood-pellets, pulp waste for new bio economy products and improved efficiency processes for recycling and incineration.

Reducing emissions from agriculture to meet the 2 °C target

Wollenberg, Eva; Richards, Meryl; Smith, Pete; Havlik, Petr; Obersteiner, Michael; Tubiello, Francesco N.; Herold, Martin; Gerber, Pierre; Carter, Sarah; Reisinger, Andrew; van Vuuren, Detlef P.; Dickie, Amy; Neufeldt, Henry; Sander, Björn O.; Wassmann, Reiner; Sommer, Rolf; Amonette, James E.; Falcucci, Alessandra; Herrero, Mario; Opio, Carolyn; Roman-Cuesta, Rosa Maria; Stehfest, Elke; Westhoek, Henk; Ortiz-Monasterio, Ivan; Sapkota, Tek; Rufino, Mariana C.; Thornton, Philip K.; Verchot, Louis; West, Paul C.; Soussana, Jean-François; Baedeker, Tobias; Sadler, Marc; Vermeulen, Sonja; Campbell, Bruce M.

Global Change Biology Vol 22, Issue 12 December 2016 pp 3859-3864 DOI: 10.1111/gcb.13340

More than 100 countries pledged to reduce agricultural greenhouse gas (GHG) emissions in the 2015 Paris Agreement of the United Nations Framework Convention on Climate Change. Yet technical information about how much mitigation is needed in the sector vs. how much is feasible remains poor. We identify a preliminary global target for reducing emissions from agriculture of $\sim 1 \text{ GtCO}_2\text{e yr}^{-1}$ by 2030 to limit warming in 2100 to 2°C above pre-industrial levels. Yet plausible agricultural development pathways with mitigation co-benefits deliver only 21-40% of needed mitigation. The target indicates that more transformative technical and policy options will be needed, such as methane inhibitors and finance for new practices. A more comprehensive target for the 2°C limit should be developed to include soil carbon and agriculture-related mitigation options. Excluding agricultural emissions from mitigation targets and plans will increase the cost of mitigation in other sectors or reduce the feasibility of meeting the 2°C limit.

Is it getting hot in here? Adjustment of hydraulic parameters in six boreal and temperate tree species after 5 years of warming

McCulloh, Katherine A.; Petitmermet, Joshua; Stefanski, Artur; Rice, Karen E.; Rich, Roy L.; Montgomery, Rebecca A.; Reich, Peter B.

Global Change Biology Vol 22, Issue 12 December 2016 pp 4124-4133 DOI: 10.1111/gcb.13323

Global temperatures (T) are rising, and for many plant species, their physiological response to this change has not been well characterized. In particular, how hydraulic parameters may change has only been examined experimentally for a few species. To address this, we measured characteristics of the hydraulic architecture of six species growing in ambient T and ambient +3.4°C T plots in two experimentally warmed forest sites in Minnesota. These sites are at the temperate-boreal ecotone, and we measured three species from each forest type. We hypothesized that relative to boreal species, temperate species near their northern range border would increase xylem conduit diameters when grown under elevated T. We also predicted a continuum of responses among wood types, with conduit diameter increases correlating with increases in the complexity of wood structure. Finally, we predicted that increases in conduit diameter and specific hydraulic conductivity would positively affect photosynthetic rates and growth. Our results generally supported our hypotheses, and conduit diameter increased under elevated T across all species, although this pattern was driven predominantly by three species. Two of these species were temperate angiosperms, but one was a boreal conifer, contrary to predictions. We observed positive relationships between the change in specific hydraulic conductivity and both photosynthetic rate ($P = 0.080$) and growth ($P = 0.012$). Our results indicate that species differ in their ability to adjust hydraulically to increases in T. Specifically, species with more complex xylem anatomy, particularly those individuals growing near the cooler edge of their range, appeared to be better able to increase conduit diameters and specific hydraulic conductivity, which permitted increases in photosynthesis and growth. Our data support results that indicate individual's ability to physiologically adjust is related to their location within their species range, and highlight that some wood types may adjust more easily than others.

Adaptation and Indigenous peoples in the United Nations Framework Convention on Climate Change

Ford, James; Maillet, Michelle; Pouliot, Vincent; Meredith, Thomas; Cavanaugh, Alicia; IHACC Research Team

Climatic Change Vol 139 Issue 3 December 2016 pp 429-443 DOI: 10.1007/s10584-016-1820-0

Indigenous peoples are uniquely sensitive to climate change impacts yet have been overlooked in climate policy, including within the United Nations Framework Convention on Climate Change (UNFCCC). We identify and characterize the discourse around adaptation in the UNFCCC, examining implications for Indigenous peoples based on a critical discourse analysis of the original Convention and decision texts from subsequent Conference of the Parties (CP). CP16 in Cancun (2010) was a critical juncture after which adaptation emerged as a central component of climate policy in the Convention, with a shift from a purely scientific approach to adaptation to one where local, Indigenous, and traditional knowledge are also valued. Since CP16, the discursive space for incorporating the voices, needs, and priorities of Indigenous peoples around adaptation has expanded, reflected in decision texts and engagement with Indigenous issues in the work streams of relevant bodies. We outline opportunities for greater engagement of Indigenous issues in the UNFCCC post-Paris Agreement, noting the underlying State-centric nature of the Convention limits what can ultimately be achieved.

Understanding climate adaptation investments for communities living in desert Australia: experiences of indigenous communities

Race, Digby; Mathew, Supriya; Campbell, Matthew; Hampton, Karl

Climatic Change Vol 139 Issue 3 December 2016 pp 461-475 DOI: 10.1007/s10584-016-1800-4

Climate change is predicted to lead to warmer temperatures and more intense storms within the century in central and northern Australia. The ensuing impacts are anticipated to present immense challenges for remote communities, in terms of maintaining housing comfort, family health and wellbeing, engagement in education and employment, and community services and businesses. About 50% of the Australian landmass is considered remote and it is home to a highly dispersed population of about half a million people (with 30% being Indigenous people). Much of the population in remote Australia is considered highly vulnerable to the effects of climate change as they are highly exposed and sensitive to the impacts, with many having a low adaptive capacity. The lives of Aboriginal Australians living in remote communities are strongly influenced and governed by traditional customs, knowledge and practices. Even when living in large towns, people who are strongly connected to their country are able to blend knowledge from traditional and modern sources to adapt to the current climate. This article explores the extent of adaptive capacity of people to climate change in a small remote community and large service town in the Northern Territory of Australia and provides insights about their capacities and vulnerabilities. Results indicate that the social and cultural capital are of greater importance than commonly assessed and provide scope to enhance effective community-based climate adaptation.

Evaluation of the performance of improved biomass cooking stoves with different solid biomass fuel types

Suresh, R.; Singh, V.K.; Malik, J.K.; Datta, A.; Pal, R.C.

Biomass and Bioenergy Vol 95, pp 27-34 <http://dx.doi.org/10.1016/j.biombioe.2016.08.002>

We have studied the performance of different types of improved solid biomass cook stoves (Two natural draft and one forced draft) in comparison to the traditional cook stove (control) while preparing a particular meal with a variety of solid biomass fuels (e.g. fuel wood, dung cake and crop residue). Five replicates of each type of cook stove and fuel were maintained. The study was conducted in an Indian rural kitchen. There was no significant difference in the indoor concentrations of $PM_{2.5}$ and CO when natural draft and traditional cook stoves were used with any type of solid fuel. However, significantly lower concentrations of $PM_{2.5}$ and CO were recorded with forced draft stoves compared to others. While cooking with different types of solid biomass fuels, the concentrations of $PM_{2.5}$ and CO in the indoor environment were decreased by 21-57% and 30-74% respectively with the forced draft cook stove in comparison to the traditional cook stove. The fuel consumption, cooking duration and thermal efficiency of a particular stove to prepare a particular amount of food also differ depending on the type of the solid fuel used for the cooking purpose. The thermal efficiency of traditional, natural draft and FD cook stoves were in the range of 15-17%, 16-27% and 30-35% respectively for different types of solid biomass fuels. However, further studies on the performance of stoves are required based on the size and type of fuel wood or crop residues.

Estimating potential range and hence climatic adaptability in selected tree species

Booth, T.H.

Forest Ecology and Management Vol 366, 15 April 2016, pp 175-183 <http://dx.doi.org/10.1016/j.foreco.2016.02.009>

Many climate change analyses of tree species may be somewhat misleading, as they are based only on conventional species distribution modelling (SDM) analyses of natural distributions. In some cases estimating climatic conditions within the potential range of particular species may be useful, as it can assist evaluating their ability to tolerate climate change. Potential range was analysed using a BIOCLIM analysis in relation to three climatic variables: a growth index, the mean minimum temperature of the coldest period (week) and a moisture index. Three eucalypt species were analysed to demonstrate some of the strengths and weaknesses of the method. These included a well-known commercially important species (*Eucalyptus globulus*), a lesser-known species (*E. botryoides*) and a rare species (*E. kruseana*). To provide a simple assessment of climatic adaptability the highest values of mean annual temperature were determined from within the potential ranges of the three species. It is concluded that, if they are available, analysing conditions at eucalypt plantings outside their natural distributions may be most useful for determining how species may cope with changing climates. However, if such data are not available, for example for lesser-known or rare species, then the analysis of the potential range may provide some tentative indication of species likely climatic adaptability.

V. PUBLICATIONS, REPORTS AND OTHER MEDIA

[Helping forests and people adapt to changing times and climates](#)

IUFRO Spotlight #43 / 2 pages

This brief presents IUFRO's Forest Adaptation and Restoration under Global Change Task Force. The Task Force aims to compile and improve globally available scientific and technical knowledge and experiences on how to achieve optimal adaptation of forests and forest landscapes in the face of global change

[Illegal Logging and Related Timber Trade - Dimensions, Drivers, Impacts and Responses](#)

Daniela Kleinschmit, Stephanie Mansourian, Christoph Wildburger, Andre Purret (eds.) / 145 pages

This report entitled "Illegal Logging and Related Timber Trade - Dimensions, Drivers, Impacts and Responses" presents the results of the fifth global scientific assessment undertaken by the GFEP initiative. The report set out to gain deeper understanding of the meaning of illegal logging and related timber trade, its scale, drivers and consequences. It provides a structured synthesis of available scientific and expert knowledge on illegal logging and associated timber trade while adding to existing studies and reports by sharing new insights, including a criminology perspective and new information about timber and timber product trade flows as well as exploring future policy options and governance responses.

[Banking on the Amazon: how the finance sector can do more to avoid tropical deforestation](#)

WWF / 32 pages

This WWF report shows how global banks can contribute to the fight against deforestation in the Amazon. By putting in place strong social, environmental and governance standards, banks can ensure they avoid lending to companies whose practices are driving deforestation and instead promote sustainable business practices. The research found that sectors including agriculture, cattle ranching, and extractive industries including oil and gas exploration, mining and logging, are known to be driving deforestation in many cases. The investment community can therefore play a role in promoting good practice. As part of this research, WWF analysed the environmental and social policies of ten leading financial institutions. It found that although many of these global banks are making strides in improving their policies, they have opportunities to put in place stronger safeguards to avoid lending to companies that drive the loss of forest habitat in fragile regions, such as the Amazon.

[How to achieve the Sustainable Development Goals? Focus on forests](#)

FERN / 4 pages

In September 2015, world governments adopted an Agenda for Sustainable Development with 17 universal Sustainable Development Goals (SDGs) to be achieved by 2030. The aims are noble and daunting - end all forms of poverty, fight inequality, address climate change, and ensure that no one is left behind. This leaflet explains why these goals cannot be met without changes to EU forest policy. It is not enough to see forests as an 'environment-only' issue. Protecting forests and the communities that defend them is just as much about poverty eradication, food security, climate change, social justice and sustainable consumption and production patterns. Any EU response to the SDGs must therefore include the protection of forests and the recognition and promotion of the rights of those who live in them.

[National socioeconomic surveys in forestry: Guidance and survey modules for measuring the multiple roles of forests in household welfare and livelihoods](#)

FAO / 172 pages

This sourcebook is intended to help improve data collection on aspects of forests relating to household welfare and livelihoods. It offers practical guidance and measurement tools that can be included in existing social or socioeconomic surveys undertaken by a country's national statistical office, or in independent national surveys.

VI. JOBS

International Consultant: National Forest Monitoring System and REDD+ Reference Levels

FAO (Duty Station - Ulaanbaatar, Mongolia) - Application deadline 31 December 2016

The UN-REDD Programme is seeking an international consultant to support the implementation of the programme in Mongolia.

Assistant Director-General, Forestry Department

FAO (Duty Station - Rome) - Application deadline 16 January 2017

The Forestry Department aspires to be a global centre of excellence in providing policy relevant information and analysis in support of the achievement of FAO's goals of ending hunger and rural poverty, while making agriculture and food systems inclusive and sustainable and rural livelihoods resilient.

As head of the Department, the ADG provides intellectual, managerial and technical leadership, and strategic guidance, to ensure full delivery on all results within its mandate at headquarters and at decentralized levels. As part of the senior Management team, the ADG ensures coherence and quality of FAO policies, messages and work on Forestry across the Organization, as well as, consistency with corporate goals and programs. He/she sets an example for a positive, innovative and productive work culture within the Department and the Organization. The ADG serves on corporate teams to advance the Organization's objectives and facilitates strategic partnerships with external stakeholders.

Forestry Officer (FLEGT - Latin America)

FAO (Duty Station - Panama City) - Application deadline 18 January 2017

The EU FAO FLEGT Programme is recruiting a Forestry Officer to identify, manage and implement initiatives that support increased stakeholder participation in strengthening forest governance and other FLEGT-related actions in countries eligible for the programme within Latin America.

Forestry Program Officer

Winrock International - Application deadline, until suitable applicant is found

The Forestry Program Officer is an important technical role within the American Carbon Registry (ACR), providing support to the Director of Forestry, and other members of ACR staff on all aspects of registry management, including, but not limited to reviewing project listing applications, data reporting and verification documents; formulating responses to technical questions raised by project developers and verification bodies; supporting business development and outreach activities; and helping to coordinate the development and/or approval of new quantification methodologies.

CLIM-FO INFORMATION

The **objective** of CLIM-FO-L is to compile and distribute recent information about climate change and forestry. CLIM-FO-L is issued each month.

Past issues of CLIM-FO-L are available on the website of **FAO Forest and Climate Change**:

<http://www.fao.org/forestry/climatechange/en/>

For technical help or questions contact CLIM-FO-Owner@fao.org

The Newsletter is prepared by:

Editor-in-chief: Simmone Rose

We appreciate any comments or feedback.

How to subscribe/unsubscribe

- To join the list, please send an e-mail to listserv@listserv.fao.org containing the message "Subscribe CLIM-FO-L followed by your first and second names". Leave the subject line blank.
- To unsubscribe, please send an e-mail to listserv@listserv.fao.org, leaving the subject line blank and containing the following message: Unsubscribe CLIM-FO-L followed by your name

Your information is secure - we will never sell, give or distribute your address or subscription information to any third party.

How to contribute

We welcome subscribers' contributions of news, articles, publications and announcements of events. Once on the list, to make a contribution please contact the following address: CLIM-FO-Owner@fao.org

We thank everyone for their contribution.

Disclaimer

The author does not guarantee the accuracy or quality of the content of the compiled information.

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The mention or omission of specific companies, their products or brand names does not imply any endorsement or judgement by the Food and Agriculture Organization of the United Nations.