



EFIMED E-NEWSLETTER – December 2008

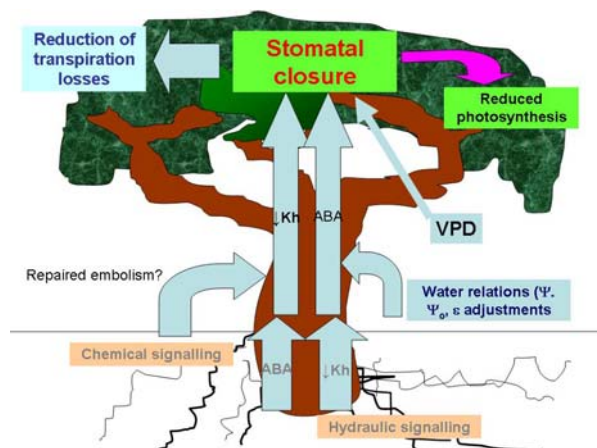
Conclusions from the Conference : WATER and FORESTS: A CONVENIENT TRUTH?

The International Conference on “Water and Forests: a convenient truth?” became a forum in which renowned scientists provided the most updated information on the issue, not only at a global level, but also highlighting the Mediterranean situation.



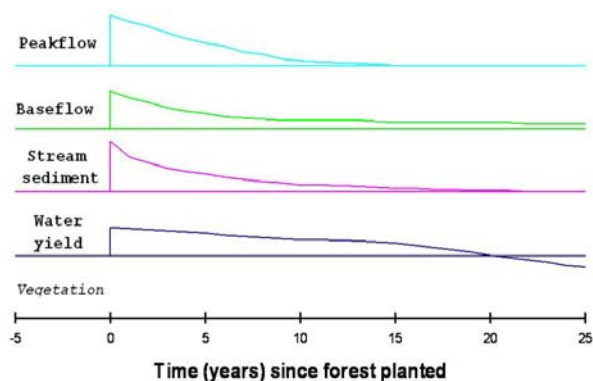
Scientific results evidence that:

* It is clear that **forests are linked to water yield**. Forests use more water than shorter types of vegetation caused by their higher evaporation. In contrast to deciduous trees, evergreen plants transpire all the year long. Mediterranean forests can transpire up to 80-90% of rainfall. Water use efficiency differs between forest species; and soil water availability fluctuates at each stand. Canopies protect the ground from runoff; this also means higher interception. Root systems influence the groundwater recharge. Consequently it is recommended to adjust forest management practices to reach desired impacts on water by using a mix of different tree species and of varying ages, or by designing forest structure and open areas (e.g. from harvesting). Follow up of such measures is required as it is essential to determine the influences of forest management actions in water at each stand.



Plant responses to water stress. How water stress affects water flow, photosynthesis and growth in Mediterranean trees? Source: Medrano, 2008.

* **Forests can mitigate small and local floods** but do not appear to have an effect on either on severe floods or those at the large catchments scale. One possible exception to this is the reduction of downstream flooding by floodplain forest. Litter, dead wood, twigs and tree trunks may cause flow resistance. This hydraulic roughness may slow down and desynchronize flood flows.

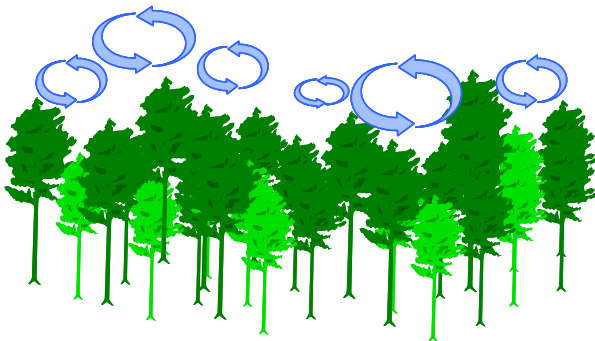


Managed plantation forest – changes over the cycle. Closing gaps between science and public perception. Source: Robinson, 2008.

* **Natural forests** and well-managed plantations are **high-quality drinking-water supplies**. Forests have lower chemical effects on drinking-water supplies compared to agriculture. Forests planted in agricultural and urban areas can reduce pollutants, when located on runoff pathways or in riparian zones. However, trees exposed to high levels of air pollution

capture sulphide and nitrogen and can increase water acidification.

* **Forest** canopies and roots **protect soils and reduce erosion** rates and sediment delivery to rivers. Forestry operations should take into account the loss of sediments and compacting the soil whenever machinery is used in the forestry operations. Planting forest on erosion-prone soils and runoff pathways can reduce and intercept sediment.



CO₂ and H₂O fluxes in forests. *Trade-offs between water use and C fixation in forest ecosystems.* Source: Matteuci, 2008.

* Global **climate** models predict marked **changes** in seasonal *snow- and rainfall* with more *uncertainties* than in temperatures. Notwithstanding, the climate models predict a *significant decrease in rainfall in the Mediterranean* basin and an increase of rainfall during in winters in Central and Northern Europe.

Therefore, when designing large-scale forest plantations for C sequestration, it should be ensured that water shortage will not be accentuated.

Shade provided by riparian forests *may help* reduce thermal stress to *aquatic life* as climate warming intensifies.

Policy aspects

The forum of the Conference would like to pass to decision-makers the following concerns:

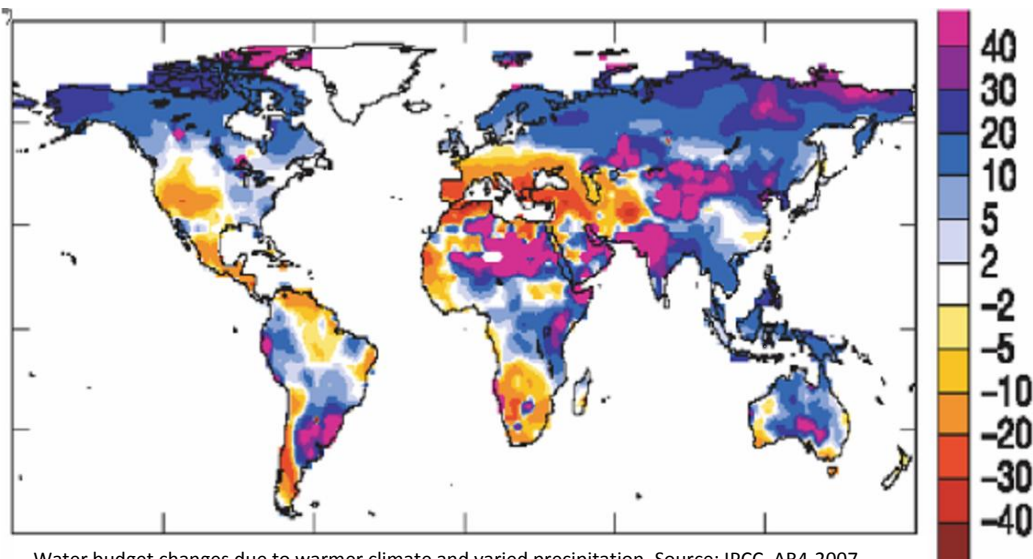
- There is a need to develop institutional mechanisms to enhance **synergies in forests and water administrations**, at national and regional levels.

- **Water policies should incorporate forest hydrology** knowledge. Related uncertainty and, in some cases, confusion persists because of the difficulties in transferring research findings to different countries and regions, varying forest types and species and diverse forest management regimes.

- Complex watershed ecosystems need more holistic **consideration of the interactions** between water, forest, other land uses and socio-economic factors.

- Integral territorial development should count with the **linkages between upstream and downstream** factors.

The Conference “*Water and Forests: a convenient truth?*” was organized by EFIMED, CREAM, CTEC, FAO Forestry, MCPFE Liaison Unit Oslo, IUFRO, University of Barcelona, University of Lleida and Obra Social Caixa Catalunya, and funded by the Catalan Government.



Water budget changes due to warmer climate and varied precipitation. Source: IPCC, AR4-2007

EFIMED represents EFI at the EURO-MEDITERRANEAN UNIVERSITY (EMUNI)

Within the framework of the Union for the Mediterranean and the Barcelona Process, the Euro-Mediterranean University (EMUNI) has been created. Its mission is to promote higher education and research in the Euro-Mediterranean region contributing to the general strengthening of the Barcelona process.

On 26 November 2008, EMUNI's General Assembly convened at its constitutive session in Barcelona, where the university statute was adopted and the institutional bodies were elected. Prof. Joseph Mifsud, from Malta was elected as the president of EMUNI University. The EFI was represented by Robert Mavsar (EFIMED).

EFI is one of the founding members of the University, and Marc Palahí (EFIMED) will represent the organization in the Assembly of the University. The founders of EMUNI are universities, networks of universities, higher-education and research institutions - a total of 113 from 32 countries.

EMUNI has its seat in Piran - Portorož, Slovenia.

EMUNI program in 2009 will focus on academic activities, such as: performing four post-graduate programs (EMUNI label), doctoral research seminars, summer school 2009 - will be performed in five different location of the Euro-Mediterranean region, different short educational programs, publication of international scientific magazine Euro-Mediterranean Studies, organization of scientific conferences and organization of a student conference. EFIMED will promote forestry related topics within the activities of the EMUNI University.

For further information: www.emuni.si

Barcelona process:

http://ec.europa.eu/external_relations/euromed/docs/com08_319_en.pdf

Joint Declaration of Paris Summit for the Mediterranean - 13 July 2008:

http://www.eu2008.fr/webdav/site/PFUE/shared/import/07/0713_declaration_de_paris/Joint_declaration_of_the_Paris_summit_for_the_Mediterranean-EN.pdf

EFIMED PARTICIPATION in FORESTERRANNÉE CONFERENCE

The Chairman of EFIMED Advisory Group, Dr. Yves Birot, represented EFIMED at this Conference held in France on last November 27-28th.

Foresterrannée, organized by the Association "Forêt Méditerranéenne", was entitled: "*An objective to share between practitioners and researchers: the sustainable production of goods and services in Mediterranean forest*", gathered 80 people.

Within this framework Dr. Birot delivered a presentation on the Mediterranean Forest Research Agenda coordinated by EFIMED, getting interesting feedback. He also gave a presentation on "*Research and development: public perception and reality*".

Further information: www.aimf.org
www.foret-mediterrannee.org

EFIMED PARTICIPATION at the conference "The European forest-based sector: bio-responses to address new climate and energy challenges?"

Dr. Birot also attended in Nancy, France, on last 6-7 November a Conference organised under the auspices of the French EU Presidency. 250 participants from a broad range of countries attended this event.

He presented the speech "*Coping with climate and energy challenges, the scientific challenges for the forest-based sector*". Dr. Birot chaired the discussions and introduced the participants the preparation of a Mediterranean Research agenda by EFIMED, highlighting its main research priorities.

Further information: www.gip-ecofor.org/nancy2008/

The MASIFF project starts!

EFIMED will co-ordinate in 2009-2010 the project on “*Development of a methodology for the analysis of the socio-economic impacts of forest fires and the economic efficiency of fire management*”.

The project is funded by the European Commission – Joint Research Center, and will be implemented by the consortium, composed by: ISAF (Italian Academy of Forest Sciences), CTFC (Forest Technology Center of Catalonia, Spain), ISA (Instituto Superior de Agronomia, Portugal), NAGREF (National Agricultural Research Foundation, Greece), the external expert Armando González Caban (USDA Forest Service, USA) and EFIMED.

Contact person: Robert Mavsar, EFIMED.

PUBLICATIONS

EFIMED has the pleasure to announce you the recent publication of the following articles:

González, J. R.; Palahí, M.; Pukkala, T.; Trasobares, A. 2008. **Optimising the management of *Pinus nigra* Arn. stands under endogenous risk of fire in Catalonia.** Investigación Agraria: Sistemas y Recursos Forestales 2008 17(1), 10-17.

Free access here:

www.inia.es/inia/contenidos/publicaciones/index.jsp?intranet=0&idcategoria=2836

Palahi, M.; Pukkala, T.; Kasimiadis, D.; Poirazidis, K.; Papageorgiou, A. 2008. **Modelling site quality and individual-tree growth in pure and mixed *Pinus brutia* stands in north-east Greece.** Annals of Forest Sciences, 65 (2008) 501- DOI: 10.1051/forest:2008022.



EFIMED Annual Meeting 2009

29 April – 1 May 2009

Marrakech, Morocco



Arrangements for the upcoming meeting in Marrakech-2009 are under way.

The EFIMED progress meeting will be accompanied by a high level Scientific Seminar on “**Mediterranean forests in the context of integrated management of land resources: Soil, Water and Fodder**” with the best Mediterranean experts on these topics. You can find the preliminary programme on the event website:

www.efi.int/portal/about_efi/organisation/regional_offices/efimed/networking/efimed_annual_meetings/efimed_am_2009_marrakech/

Open call for **free communications** and **posters**.

The Scientific Committee will select the most outstanding abstracts for oral communications and provide the possibility for a poster session. The deadline for submitting is **31 January 2009**.

Instructions:

www.efi.int/portal/about_efi/organisation/regional_offices/efimed/information_and_dissemination/scientific_seminars/sci_sem_2009_soil_water_fodder/call_for_free_communications/

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The organisers are looking for options for publishing papers based on the presentations in a peer-reviewed publication.



DEFENDED THESIS

EFIMED has the pleasure to announce that our Syrian participant of Summer School, **Dr. Ali Thabeet**, from the Mediterranean Institute of Ecology and Paleoecology – University P.Cezanne, has successfully defended his thesis.

He worked on

Response of Scots pine (*Pinus. sylvestris L.*) to recent climate change in French Mediterranean region, quantification and spatialisation by: remote sensing and dendrochronology.

Abstract

The remote sensing allowed an assessment of the relative importance of local attributes, e.g. elevation, aspect and relative moisture index in the population decline observed due to a decrease of water availability as a result of a succession of dry years. Measures of shoot growth and the expression of sexuality of *P. sylvestris* showed that the climate from years 2003 to 2005 was unfavourable to both growth and cone (female) production but was promoted the production of flowers (male). Radial growth has decreased at all sites, independent of local conditions. This analysis showed that year 2003 was not an isolated exceptional year, but forms a set of years with unfavourable climatic conditions, which began in 2000.

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Connecting Mediterranean foresters!

Send us your suggestions and announcements!

We are open to receive the references of your new publications, event announcements, jobs and grant offers, main results from recently concluded projects, relevant forestry national or regional news or call for partners for specific project proposals.

EFIMED Newsletter is meant to be a networking tool within EFIMED Members. Strengthening our Network needs from you proactive initiatives!

Please contact Ms. Elena Górriz for further information: Elena.gorriz(at)efi.int



UPCOMING THESIS

The Università di Padova, Italy, would like to present the preliminary work of **Daria Maso**. This PhD student, working on TESAF Department, will defend the thesis on February-March on:

Networks and PES schemes as innovative tools for the development of forest economy in Italy

Provisional summary:

In Italy the income from timber is on the whole decreasing thus making unprofitable such a traditional forest production. Other forest products (i.e. fuel wood and non-wood forest products) contribute in a highly variable measure to forest owners revenues. Due to the need of increasing the revenues from forests, the commercialization of new forest-based goods (tourist and recreational services and environmental services, ES) is being explored. A suitable structure for the commercialization of ES is proposed and discussed through the analysis of two case studies: the “Agility Forest adventure park”, a SME network based on a NFWS (the adventure park); and the “Road of Borgotaro mushroom”, a network based on a NWFP and a NWFS (the Borgotaro Boletus and the mushroom picking activity). The purpose is to verify if the difficulties that usually manifest themselves while implementing PES schemes can be overcome through the insertion in consolidated network structures. SWOT and A’WOT analysis have been conducted after assuming the insertion of some ES among the forest-based goods commercialized by the two network cases. The results of the application of such a “SME network based PES scheme” indicate that Opportunities would increase while Threats and Weaknesses would variably decrease. Furthermore, partially different reactions emerge between the two case studies due to differences in network evolutionary level characterizing them. It can be concluded that, at least on a theoretical level, the development of “SME network based PES scheme” seems to have positive results for what concerns the final main purpose of improve forest-based economy through ES commercialization.

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