



## Newsletter n°11: Cork and Ecoconstruction at Vivexpo 2012

A few months after the first World Summit on Sustainable Development, held from 3 to 14 June 1992 in Rio de Janeiro, a small town in the Languedoc Roussillon, Vivès (France), decided to start the adventure of Sustainable Development organizing a meeting entitled VIVEXPO which mobilized the main actors of the cork world. In 1993, a year later, during the first edition of VIVEXPO, the Mediterranean Institute of Cork (IML) was created. On this occasion, the various European representatives of cork producing countries (France, Italy, Portugal and Spain) jointly decided to establish a centre to share knowledge and coordinate the various actions to be carried out in support of cork. Since then, the Mediterranean Institute of Cork has



undertaken many research and development activities on cork products and has regularly organized VIVEXPO every two years to facilitate exchanges and roundtables on the key issues of this sector.

In June 2012, while thousands of experts were attending RIO +20 in Brazil, in Vivès the small community of the cork world, ever striving to promote sustainable development in the Mediterranean regions, celebrated the 20<sup>th</sup> anniversary of VIVEXPO. Following up on past editions focused on "Stopper War" (2008) and "Climate Change and its Impact on Cork Forests" (2010), the theme of VIVEXPO 2012 was "**Cork and Eco-Construction**". **This event, which highlighted the advantages of cork in the context of a green economy, was widely discussed in international debates during Rio +20.**

This edition considered the following activities:

- **A trip to visit the first trials on cork oak planted twenty years ago by the Mediterranean Institute of Cork.** This visit to the first experimental plantings of the Mediterranean Institute of Cork provided the opportunity to present different methods of planting, to better understand the potential of cork oak for recovering abandoned agricultural and/or wineland and confirmed, once more, its potential in the defense of forests against fire.
- **A roundtable of experts followed by a panel discussion on "Cork and Eco-construction".** The conference highlighted the well-recognized qualities of cork in terms of insulation (*both acoustic and thermal*). The architect of the "Sagrada Familia" of Barcelona, Mr. Jordi Bonet I Armengol, has explained why he chose to install a cork floor in the wonderful cathedral of Catalonia.

- **A meeting of the Working Group on Non-Wood Forest Products of the FAO Committee on Mediterranean Forestry Questions - *Silva Mediterranea*.** During this meeting, priority actions of the Working Group on cork oak, stone pine and several other Non-Wood Forest Products (Honey, Mushroom, Wildlife, etc.) were discussed. On this occasion, the Mediterranean Institute of Cork agreed to coordinate actions on cork in the framework of the working group of *Silva Mediterranea* during the period 2012-2016.
- **An exhibition of products and materials made of cork presented by the company from the town of Ceret "À fleur de liège".** This exhibition displayed a selection of products for construction made of cork (*internal insulation, flooring, external insulation, etc.*) and all the environmental qualities of cork products for construction and decoration.

**VIVEXPO 2012 demonstrated how cork can be an excellent product for sustainable development** as it not only provides environmental goods and services at local level (*water quality, beautiful landscape, rich biodiversity, resistance against forest fires, etc.*) but, it also offers, with no special chemical treatments, materials for construction of proven environmental quality. Moreover, cork also adds value to the work of our winemakers and you will certainly agree with me that the cork industry deserves special attention in a world that requires a "greener economy".



Sol en Liège de la Sagrada Família Barcelone  
Jordi Bonet i Armengol

**Jacques ARNAUDIES**  
President of the Institut Méditerranéen du Liège  
Mayor of Vivès – Languedoc Roussillon

### News from *Silva Mediterranea* partners:

The new AIFM Website is now available at the following address : <http://www.aifm.org/>

The FAO Committee *Silva Mediterranea* will organize a side event to be focused on Mediterranean forests on September 27, 2012 during the Committee on Forestry (COFO 2012 - 24 to 28 September 2012).



**The third Mediterranean Forest Week will be held in Algeria at Tlemcen from 17 to 21 March 2013.** For further information: <http://www.fao.org/forestry/65366/fr/>

## An example of green economy in the Mediterranean regions: Cork and Eco-Construction: Main results of the roundtable VIVEXPO 2012 (Vivès June 14 -15, 2012)

While experts from all over the world met in Rio de Janeiro to talk about Green Economy and Sustainable Development (Rio +20), cork industry stakeholders gathered in Vivès (France) to discuss the issue of “Cork & Eco-Construction”.

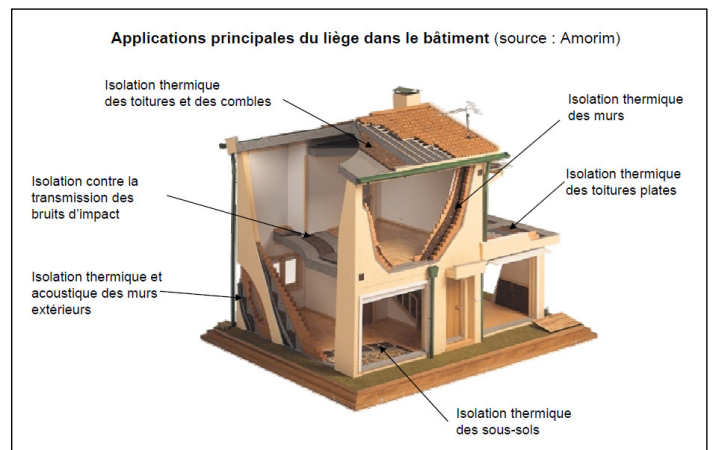


The use of cork in construction was already the subject of discussion during a previous edition of VIVEXPO, in 1996, a time when there was not yet much awareness of environmental issues in the construction sector. However, in recent years, after decades of oblivion, the use of cork in construction, for insulation and/or decoration, is making a comeback. **The renewed attention being paid to this topic is reflected in the increased number of projects on eco-construction, as a consequence of the rising costs of energy and raw materials as well as of environmental awareness in public consciousness and regulations.**

This topic - Cork and Eco-Construction - was the focus of the 20th anniversary of VIVEXPO. **In order to emphasize the importance of the subject, the Organizing Committee of VIVEXPO decided to give the floor to representatives of all trades involved in construction projects: from manufacturers to end users of cork material, including architects.** From the perspective of forest producers, the development of this sector is interesting because it adds value to cork of poor quality not used by the cork industry: male, burned and scrapped cork. However, it is important that its price be competitive for forest owners and farmers.

### Long acknowledged properties

The microscopic structure of cork gives this material its amazing insulating features. Cork consists of a tight web of 30 to 43 million cells per cubic centimeter and about 89.7% of its tissues contain gas. The absence of intercellular space and the presence of a large amount of wax and suberin give cork a remarkable elasticity and compressibility, qualities extremely significant in the stopper industry. The use of cork in construction is not new, it dates back to far earlier than the development of the cork industry. Agostino Pintus, Director of the Research Department for Cork and Sylviculture in Sardinia, has reported that in the nuraghe, stone edifice dating back to the first millennium BC found in Sardinia, cork floor was arranged in the form of raw plates coated with clay to isolate and avoid moisture.



The cork insulation that we know and use today in its industrial form was invented almost by accident in 1891 by American manufacturer, John Smith. He accidentally dropped a buoy topped with cork granules in an oven, realizing later that the heat had caused the granules and pellets to expand naturally: **the black agglomerated cork - called pure expanded - was born.**

### Participants at the round table VIVEXPO 2012 :

- Jordi Bonet – *Sagrada Família* Architect (Es.)
- Agostino Pintus and Pino Angelo Ruiu – AGRIS Sardegna (It.)
- Guillaume Bounoure and Danièle Orliac – CAUE 66 (Fr.)
- Mohamed Lahbib Ben Jamaâ – INRGREF (Tn.)
- Gemma Echevarría and Mauricio O'Brien – Bingo! (Es.)
- Camila Burgos – INCAFUST (Es.)
- Michel Dupuy and Yves Gantier – Écoartisans CAPEB 66 (Fr.)
- Carlos Manuel – Amorim Isolamentos (Pt.)
- Christophe Besacier – *Silva Mediterranea* Committee (Fao)
- Daniel Bourgouin – DDTM of Pyrénées-Orientales (Fr.)
- Maria Carolina Varela – INRB (Pt.)
- Rachid Tarik Bouhraoua – Université de Tlemcen (Dz.)
- Renaud Piazzetta – Institut Méditerranéen du Liège (Fr.)
- Thierry Valero – journalist of the groupe France Télévision (Fr.)

Cork's impermeability to liquids and gases makes it incorruptible, unalterable, and combustion resistant. **It also demonstrates resistance to earthquakes, as in case of a house hit by an earthquake in the Abruzzo region (Italy) in 2009, where according to Agostino Pintus, sections of wall insulated with cork panels remained standing.** The great strength of expanded cork in its insulating panels is its stability over time. For example, Carlos Manuel, director of the Portuguese company Amorim Isolamentos, first worldwide manufacturer of cork insulation, reported the story of a cold storage facility built in 1964 and destroyed in 2009, the cork was then recovered and recycled to make new insulation panels without losing its technical qualities.

Cork is probably the only insulation material that provides both sustainability and recycling features. Because of these characteristics, modern architectural projects often use cork for exteriors, without any protection. **The most outstanding example is the Portugal Pavilion, built for the World Expo in Shanghai (China) in 2010**, which further developed the idea of the pavilion built for the Hannover Expo (Germany, 2000) and which has proven that cork has amazing exterior insulation qualities.



## A takeover by European industry

**Mohamed Lahbib Ben Jamaâ, Director of the Department of Forest resources management and development of the National Institute for Research in Rural Engineering, Water and Forestry of Tunisia, highlighted a problem of economics.** He emphasized that nearly 70% of cork is exported from Tunisia in its raw form, without being processed by Portuguese and Italian companies. He remarks how the monopolisation of local resources by a few groups has the effect of lowering the price of raw material.

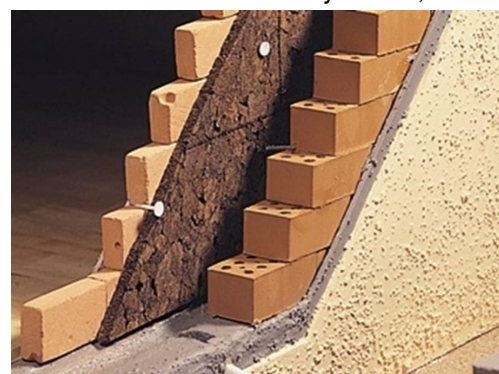
Consequently, despite the many different possible uses of cork, as described in 2008 at the symposium entitled "War Stoppers", today, **the only product that allows economically viable use of cork remains the stopper.** Moreover, it is important to note that for the manufacture of pure expanded cork, it is imperative to use unprocessed raw cork because this process calls for all cork's natural resins, which creates the natural process of agglomeration.

Cork from the stopper industry, which has been boiled, and so cannot be used, is still of a value in agglomerate fields, called "white", intended for wall coverings, flooring, and layers for sound insulation, although it requires the addition of binders in of the manufacturing process. This issue is important for the industry since appreciation of the different qualities of cork oak products is key to their sustainability and continued social, environmental and economic role.

## Bringing people and places to interact

However, eco-construction was not confined only to the use of renewable materials. This is a broader concept connected to a bioclimatic approach and which needs to be taken into account at the beginning of a project. Guillaume Bounoure, consulting architect to the Board of Architecture, Urbanism and Environment of the Eastern Pyrenees, seeks to "bring people and places to interact", meaning considering and deciding upon the best natural conditions taking into account the balance between the function of an area and its surface, or the idea of a hot/cold wall.

Also involved is knowledge of the physical mechanisms that rule the transfer of heat into a building. **In this regard, one of the strong points of cork is that, unlike other insulation materials, it provides insulation in winter and summer, and has uniform thickness.** The main drawback to eco-construction is its overall cost, higher than for conventional builds. This argument can be countered by precise explanation of the costs in question and by highlighting the likely savings.



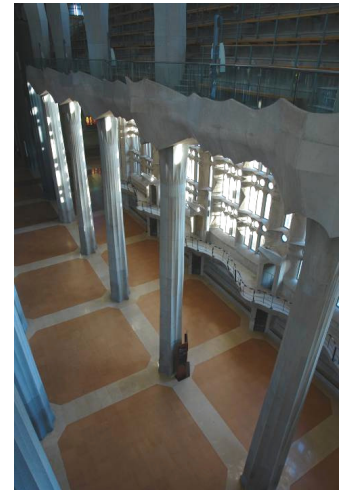
**Eco-construction also involves use of materials available in the place of production.** This was another principle demonstrated by Camila Burgos, Architect of the Catalan Institute of Wood (INCAFUST), in her study on wood exterior coating which confirmed how regions characterized by Mediterranean climate prefer the use of brick and stones, available in abundance locally.

Regarding cork end users, at the VIVEXPO they were represented by the Confédération de l'Artisanat et des Petites Entreprises du Bâtiment des Pyrénées-Orientales (CAPEB), whose its president, Michel Dupuy, as well as Yves Gantier, both craftsmen in the region of Perpignan (France), attended the meeting. **In response to the growing demand for the use of environment friendly materials, CAPEB has introduced the Éco Artisan label, for construction professionals wishing to use innovative techniques in the field of eco-construction.** They also acknowledged the possible concerns about the initial costs of a "green" insulation materials compared to conventional materials, but they eulogized the easy use of cork insulation and the importance of energy savings in the long term.

Innovative uses: a new article that is sometimes seen as a lack of innovation. Cork is now used to support ambitious projects in the field of design, as in the case of the workshop Corklab established by the Higher School of Design and Engineering of Barcelona (ELISAVA) in partnership with RETECORK (Network Territories cork), presented by Gemma Echevarría and Mauricio O'Brien of the communication agency of Barcelona Bingo! The objective of this workshop was not only to get students to use cork, but to make them understand that this material has a history closely linked to the territory of the Mediterranean basin. Seventeen students of all nationalities worked on various projects of contemporary furniture and met industry stakeholders involved in the Catalonia cork sector (Consorci Forestal de Catalunya, Catalan Institute of Cork, Cork Museum of Palafrugell) to visit a cork oak area during the harvest for industrial cork.

## The choice of cork: the Expiatori Temple of the Sagrada Familia in Barcelona

The event caused a shock in the world of cork: in 2010, the Sagrada Familia in Barcelona, the famous work - still unfinished - of Antoni Gaudi, one of the most visited monuments in Spain (2.7 million visitors in 2008), was decorated with over 2000 square meters of cork flooring. Why this choice? Jordi Bonet, architect project manager, explained. During his long career, which began in 1949, Jordi Bonet had encountered the incredible capacity of cork for sound insulation in several architectural projects, including a concert hall damaged during the Spanish Civil War. In November 2010, when the church was about to be consecrated by Pope Benedict XVI, the team of architects had to contend with problems in the supply of marble and had to look for an alternative solution. On the strength of his past experiences, Jordi Bonet chose cork because it was immediately available and simple to use, although he had a hard time convincing his colleagues who questioned the durability of the material. In addition to its availability, the cork had another amazing point in its favor: while it is often considered an expensive material to buy for individuals, in this case, it was an economical alternative to marble, with acoustic features particularly important for busy places. This idea was so successful that he decided to use cork also in the areas of the church still under construction.



### Renaud PIAZZETTA

Director of the Mediterranean Institute of Cork  
Coordinator of Cork Oak issues for the *Silva Mediterranea*  
Working Group on Non Wood Forest Products

## Principales décisions prises lors de la première réunion du groupe de travail de Silva Mediterranea sur les Produits Forestiers Non Ligneux (PFNL) – Vivès – 15 Juin 2012

Lors de la 21<sup>ème</sup> session du Comité sur les Questions Forestières Méditerranéennes-*Silva Mediterranea*, organisée à Antalya (Turquie) les 2/3 février 2012, les Etats membres ont demandé au Secrétariat d'élargir le mandat du groupe de travail initialement focalisé sur le "chêne liège" (GT2) à l'ensemble des Produits Forestiers Non Ligneux Méditerranéens (PFNL) afin de renforcer la participation active de tous les pays intéressés et, par conséquent, de mettre à jour le plan d'action de ce groupe de travail pour la période 2012-2013. Cette décision impliquait de réunir rapidement ce groupe de travail initialement focalisé sur le chêne liège, piloté jusqu'à présent par le Portugal (Maria Carolina Varela), afin d'informer ses membres de cette volonté d'élargissement et d'étudier les modalités pratiques de cette évolution du mandat à l'ensemble des Produits Forestiers Non Ligneux présents dans les forêts du pourtour de la Méditerranée. C'est dans cette perspective que le Secrétariat de *Silva Mediterranea*, l'Institut Méditerranéen du Liège (IML) et la coordination portugaise de ce groupe de travail ont réuni les principaux membres du groupe de travail à Vivès à l'occasion de la biennale du liège VIVEXPO 2012.

Les principaux objectifs de cette réunion du groupe de travail étaient :

- D'informer les membres du groupe de travail des principales décisions prises lors de la 21<sup>ème</sup> session du Comité sur les Questions Forestières Méditerranéennes-*Silva Mediterranea* ;
- De réfléchir collectivement aux modalités pratiques de l'élargissement de ce groupe de travail à l'ensemble des Produits Forestiers Non Ligneux en prenant en compte les enjeux suivants :
- Conserver au chêne liège une place de choix dans ce groupe de travail sur les PFNL de la Méditerranée ;
- Intégrer dans les priorités du Plan d'Action 2012-2013 une autre filière emblématique : le Pignon ;
- Analyser l'intérêt d'une action régionale pour différents Produits Forestiers Non Ligneux (Miel, Champignons, Faune Sauvage...) afin de ne pas disperser les ressources (humaines/financières) ;
- Identifier des partenaires susceptibles de jouer un rôle d'animation pour les PFNL et/ou priorités retenus.



Cette réunion du groupe de travail "Chêne Liège" élargi à tous les autres Produits Forestiers Non Ligneux (PFNL) a été particulièrement riche et a permis d'élaborer un Plan d'Action 2012 – 2013 susceptible de satisfaire l'ensemble des acteurs régionaux. Plusieurs décisions importantes ont été prises à Vivès et des partenaires potentiels ont été identifiés pour "animer" / "coordonner" les actions prioritaires retenues pour la période 2012-2013. La Coordinatrice, Mme Maria Carolina VARELA, a également présenté les priorités discutées au niveau national avec les acteurs portugais.



De ces débats il ressort les décisions suivantes :

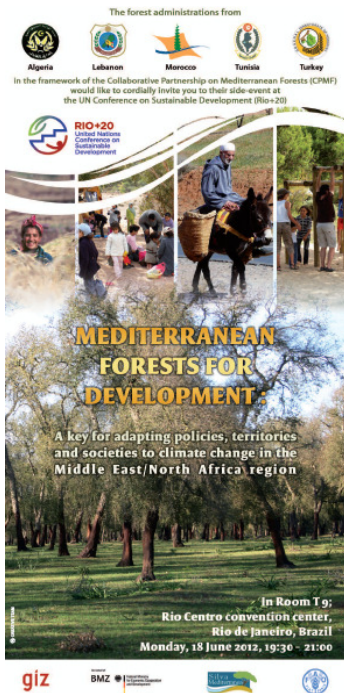
- Le Portugal reste responsable de la coordination de ce nouveau groupe de travail sur les **Produits Forestier Non Ligneux** du pourtour de la Méditerranée. Maria Carolina Varela assurera donc cette coordination d'ensemble avec le soutien du Secrétariat du Comité sur les questions Forestières Méditerranéennes-*Silva Mediterranea*.
- **Le liège reste un Produit Forestier Non Ligneux emblématique du pourtour de la Méditerranée.** A ce titre il doit faire l'objet d'une attention particulière des membres du nouveau groupe de travail PFNL et les échanges d'expériences doivent se poursuivre entre pays producteurs et acteurs de la filière liège. **L'Institut Méditerranéen du Liège (IML) est mandaté officiellement pour poursuivre le travail de coordination qu'il assume déjà en organisant régulièrement VIVEXPO tous les deux ans et d'autres événements favorisant les synergies entre acteurs/partenaires/scientifiques du monde du liège.** Pour lui permettre d'assurer pleinement cette tâche le Secrétariat du Comité des Questions Forestières Méditerranéennes-*Silva Mediterranea* accompagnera l'IML dans la recherche de financement dès le second semestre 2012.
- **Le Pignon a été considéré comme un second Produit Forestier Non Ligneux emblématique de la région méditerranéenne.** Pour cette filière particulière deux axes prioritaires de travail devront être privilégiés avec : (i) le soutien à la création et à la promotion d'un label de qualité "Pignons Méditerranéens" pour permettre de valoriser pleinement les spécificités (*qualitatives, gustatives et territoriales*) de l'espèce *Pinus Pinea* et (ii) le soutien à quelques actions techniques d'intérêts régionales en terme de pratiques sylvicoles. Le Centre des Techniques Forestières de Catalogne (CTFC) assurera la coordination de ce travail sur le Pin Pignon. Une priorité sera donnée avant fin 2012 au lancement rapide d'une étude de faisabilité pour la mise en place d'un label "Pignons Méditerranéens". Une première note de concept pour l'étude de faisabilité sur la création d'un label "Pignons Méditerranéens" sera préparée par le Secrétariat du Comité sur les Questions Forestières Méditerranéennes-*Silva Mediterranea* et soumise aux acteurs intéressés par ce sujet stratégique au sein du groupe de travail avant la fin de l'année 2012.
- **Les nombreux autres Produits Forestiers Non Ligneux (*Miel, Champignons, Faune Sauvage, Plantes Aromatiques et/ou Médicinales....*) présents dans les écosystèmes forestiers méditerranéens ont fait l'objet d'une longue discussion au sein du groupe de travail.** Etant donnée la grande diversité de ces PFNL du pourtour de la Méditerranée, les risques de dispersions des ressources (humaines et financières) ont largement été évoqués. La question de l'intérêt d'une implication d'un groupe de travail régional sur certaines productions très locales a également fait l'objet de longs débats. Au terme de ces discussions deux priorités d'actions sont clairement apparues pour le groupe de travail :
  - ✓ **Une étude régionale sur l'importance économique des nombreux PFNL Méditerranéens serait extrêmement utile pour clarifier les priorités d'actions de ce groupe de travail hors filières chêne liège et pin pignons.** Cette étude devrait également permettre de capitaliser tous les résultats de projets en cours pilotés par l'association des propriétaires forestiers méditerranéens (ArcMed), le CTFC et EFIMED.
  - ✓ **Un travail spécifique pourrait être entrepris immédiatement sur le miel pour répondre à une préoccupations nouvelles des apiculteurs.** Dans des espaces méditerranéens très antropisés (*pollution urbaine, insecticides sur les cultures...*) les producteurs de miel sont à la recherche d'espaces naturels propices aux abeilles. On voit apparaître de plus en plus souvent des accords entre apiculteurs et propriétaires forestiers pour installer des ruches dans les espaces boisés. Ces transactions font souvent l'objet de rémunération en nature du forestier par l'apiculteur qui s'apparente en quelque sorte à une forme de rémunération d'un service environnemental par l'apiculteur au forestier.



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Secrétariat de *Silva Mediterranea* (FAO)

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## Side event on Mediterranean Forests at Rio de Janeiro: Mediterranean countries reaffirm their commitment to work together for the sustainable management of wooded ecosystem



The forest administrations of **Algeria, Lebanon, Morocco, Tunisia and Turkey**, in the framework of the Collaborative Partnership on Mediterranean Forests (CPMF), organized a side-event at the United Nations Conference on Sustainable Development (Rio+20). This side-event entitled “**Mediterranean Forests for Development : A key for adapting policies, territories and societies to climate change in the Middle East/North Africa region**” took place in Rio Centro convention center, **Rio de Janeiro, Brazil** on Monday, **18 June 2012**, and was attended by about 60 participants from all over the world

This event was organized with the support of the German Development Cooperation (GIZ), acting on behalf of the German Federal Ministry of Economic Cooperation and Development and the network *Silva Mediterranea*/FAO, and put particular emphasis on:

- The contribution of **Mediterranean forests to Adaptation to Climate Change** and to a **Green Economy** in Middle Eastern and North African (MENA) countries;
- The **south-south cooperation** between forest administrations involved in *Silva Mediterranea* and the **Collaborative Partnership on Mediterranean Forests**;
- The important benefits resulting from sustainable forest resource management in MENA countries, particularly in terms of attaining the objectives of the three **Rio conventions UNFCCC, UNCCD and CBD**;
- The **contribution of the MENA forest sector to the Rio+20 outcomes and recommendations**.

Keynote speakers were : Mr Fayçal Benchekroun (HCEFLCD, Morocco); Mr Mohamed Seghir Noual (Directeur Général des ForêtsF, Algeria); Mr Garabed Haroutunian (Ministry of Environment, Lebanon); Mrs Kiymet Keles (OGM Turkey); Mr Reinhard Alexander Kastl (GIZ); Mr Eduardo Rojas-Briales (ADG FAO) and Mr René Castro-Salazar (Minister of Environment and Energy, Costa-Rica).



The Rio+20 conference also provided an opportunity to strengthen contacts between the forest administrations of the CPMF and Costa-Rica as already foreseen during a meeting of the Forest Directors of the six CPMF-countries in Beirut on 11/12 June 2012. In view of a potential south-south cooperation aiming at exchanging knowledge and good practices in particular on the valorization of forest goods and services, a meeting was held between the High Commissioner for Water, Forestry and Combating Desertification of Morocco, Mr Abdeladim LHAFI, and the Minister of Environment and Energy of Costa-Rica, Mr. René CASTRO-SALAZAR.

**Ludwig LIAGRE (GIZ)**

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