



III International Congress  
**FOREST AND  
ITS POTENTIAL  
FOR HEALTH**

*III Congrés Internacional  
sobre el Potencial dels  
Boscos en la Salut*

*III Congreso Internacional  
sobre el Potencial de los  
Bosques en la Salud*

**SELVANS**

**ENG PROGRAMME AND SPEAKERS**

7 -10 October 2019,  
Catalonia (Girona - La Garrotxa)

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    #ForestAndHealth





III International Congress  
**FOREST AND  
ITS POTENTIAL  
FOR HEALTH**

ENG

# Programme

*7 - 10 October 2019*

*Girona - La Garrotxa (Catalonia/Spain)*

The organisation reserves the right to modify the congress programme as appropriate.

## MONDAY 7 Oct: RECEPTION 17:00 a 19:30 (*Auditori de la Mercè - Girona*)

**17:00 - 18:00** Reception, badge and congress materials pick-up

**18:00 - 19:30** Official welcome and opening of the III International Congress on Forest and its Potential for Health

**Albert Bosch.** *Adventurer and entrepreneur*

With the participation of:

**Jaume Hidalgo i Colomé.** President of the Sèlvans NGO

**Marc Vilahur.** President of the Network for the Conservation of Nature

**Joaquim Salvi i Mas.** Rector of the University of Girona

**Lluïsa Mas i Mayor.** Regional subdirector of Public Health of Girona - Ministry of Health, Generalitat de Catalunya (Government of Catalonia)

**Anna Barnadas i López.** Deputy for the Environment of the Girona Provincial Council

**Marta Madrenas.** Mayor of Girona

## TUESDAY 8 Oct: FOREST FIELD TRIP 07:30 a 19:00 (*la Garrotxa*)

The morning will be spent visiting therapeutic and back-to-nature forest pilot schemes, in the Garrotxa Volcanic Area Natural Park (Olot, Les Preses, and Sant Pau) and surroundings (Les Planes d'Hostoles, la Vall d'en Bas and la Vall de Bianya). After lunch all together, there will be a group activity to share the morning's experiences and thus obtain some initial applied findings.

Guided groups of about 20 people will visit several projects (one project per group) and experience a peaceful guided forest bathing session lasting 3-4 hours.



## WEDNESDAY 9 Oct: PRESENTATIONS (*Palau de Congressos of Girona*)

Guiding thread by: **Rosa Maria Galindo Solé**, actress and president of the Fundació Miranda

### MODULE 1 - RESEARCH UPDATE ON FOREST AND ITS POTENTIAL FOR HEALTH

#### MATÍ dimecres 9 d'octubre - Bloc 1.

Presentations by speakers of 15 minutes each, plus 5 minutes wrap-up/questions.

- 8:30            **Opening of doors**
- 9:00 - 9:20    **Opening speech: *Forest and humans***  
**Dr. Martí Boada**. Institute of Environmental Science and Technology of the Autonomous University of Barcelona (ICTA-UAB). Scientific adviser to UNESCO - Catalonia/Spain
- 9:20 - 9:30    **Moderator: *Dra. Roser Maneja Zaragoza***. Environment and Human Health Laboratory (EH2 Lab). Institute of Environmental Science and Technology of the Autonomous University of Barcelona (ICTA-UAB) - Catalonia
- 9:30 - 9:50    ***Cure and healing forests: translation of scientific knowledge into practice***  
**Prof. Dr. med. Karin Kraft**. Department of Complementary Medicine, Universitätsmedizin Rostock - Mecklenburg-Vorpommern - Germany
- 9:50 - 10:10   ***Forest climate as important health facilitator***  
**Gisela Immich, M. Sc** - Public Health and Health Service Research (IBE), Ludwig-Maximilians-Universität München - Germany
- 10:10 - 10:30   ***Weather conditions can determinate the concentration of terpene in the forest atmosphere.***  
**Dr. Domingo Sancho-Knapik**. Forest Resources Unit. Agrifood Research and Technology Centre of Aragón (CITA) - Aragón/Spain
- 10:30 - 10:50   ***Forests and Human Health: an experimental and cross-sectional study in the Montseny Natural Park***  
**Albert Bach**. Environment and Human Health Laboratory (EH2 Lab). Institute of Environmental Science and Technology of the Autonomous University of Barcelona (ICTA-UAB) - Catalonia
- 10:50 - 11:00   **Round table and discussion**
- 11:00 - 11:30   **Coffee break**

#### MATÍ dimecres 9 d'octubre - Bloc 2

Presentations by speakers of 15 minutes each, plus 5 minutes wrap-up/questions.

- 11:30 - 11:40   **Moderator: *Michael Lüttke***. BioCon Valley GmbH. Mecklenburg-Vorpommern - Germany
- 11:40 - 12:00   ***International developments and efforts of standardization in Forest Therapy***  
**Dr. Dieter Kotte**. International Nature and Forest Therapy Alliance (INFETA) - Australia
- 12:00 - 12:20   ***Observation of benefits arising from Forest Medicine, Japanese research***  
**Dr. Hiroko Ochiai**. National Hospital Organization Tokyo Medical Center / International Society of Nature and Forest Medicine (INFOM) - Japan
- 12:20 - 12:40   ***Forest Therapy Research in the Republic of Korea***  
**Dr. Bum-Jin Park**. Chungnam National University - Republic of Korea
- 12:40 - 13:00   ***Psychological wellbeing and stress assessment in communities living near forests***  
**Kevin Lafferty**. Scottish Forestry - Scotland/UK
- 13:00 - 13:20   ***Dendroculture, a new look on the forest***  
**Maribel Lozano Rojas**. Researcher of the Institute of Environmental Science and Technology of the Autonomous University of Barcelona (ICTA-UAB) - Colombia
- 13:20 - 13:30   **Round table and discussion**
- 13:30 - 15:00   **LUNCH**

### TARDA dimecres 9 d'octubre

Presentations by speakers of 15 minutes each, plus 5 minutes wrap-up/questions.

- 15:00 - 15:10 **Moderator: Miquel Rafa.** Fundació Catalunya La Pedrera - Catalonia
- 15:10 - 15:30 ***Present extension of forest therapy in European natural parks***  
**Carles Castell i Puig.** Diputació de Barcelona / EUROPARC Federation - Catalonia
- 15:30 - 15:50 ***Health and well-being in the context of international conservation efforts***  
**Jo Hopkins.** IUCN WCPA Health and Well-being Specialist Group / Parks Victoria - Australia
- 15:50 - 16:10 ***Catalan network of therapeutic forests***  
**Jaume Hidalgo i Colomé.** Sèlvans NGO - Catalonia
- 16:10 - 16:30 ***LET'S GET OUT! 1st children's cure and healing forest as therapeutic environment in the seaside resort of Heringsdorf.***  
**Dr. Karin Lehmann.** Kaiserbäder Usedom - Mecklenburg Vorpommern - Germany
- 16:30 - 16:50 ***Projection of concerted arrangement of services in the public health system***  
**Dr. Frederic Cofan Pujol.** Hospital Clínic de Barcelona - Catalonia  
**Albert Serra.** Old people's residency of Creu de Palau (Girona) - Catalonia
- 16:50 - 17:00 **Round table and discussion**
- 17:00 - 17:30 **Coffee break**
- 17:30 - 17:50 ***A new instrument for rural sustainable development***  
**Pep Berga i Vayreda.** Mayor of Olot  
**Joan Ramon Veciana i Martínez.** Mayor of Sant Hilari Sacalm  
**Cristian López Mondéjar.** Councillor for Education, Sports, Youth and the Environment of the Council of El Bruc.
- 17:50 - 18:10 ***Territorial diagnosis of health potential of forests, and legal framework, in Mecklenburg-Vorpommern***  
**Ulf Tielking.** Affairs of the Supreme Forestry and Hunting Authority. Ministry of Agriculture and the Environment of the State of Mecklenburg-Vorpommern - Germany
- 18:10 - 18:20 **Short break**
- 18:20 - 18:40 **“Proclaim of the III Congress on the value of the most natural forests for societies' health and wellbeing”.**
- 18:40 - 19:00 ***The experience of the German federated state of Mecklenburg-Vorpommern, from a political perspective***  
**Dr. Stefan Rudolph.** State Secretary. Ministry of Economics, Labour and Health  
Mecklenburg-Vorpommern - Germany
- 19:00 - 19:20 ***The constitution of the International Society of Forest Therapy (ISFT) for the advancement of international cooperation on the subject.***  
**Professor Dr. med. Dr. h. c. (mult.) Horst Klinkmann.** Senior Consultant and Ambassador Health Economy of Mecklenburg-Vorpommern - Germany  
**Prof.(FH) Priv.Do. Mag. Dr. Gerhard Tucek.** Institute Therapeutic Sciences of the University of Applied Sciences Krems - Austria
- 19:20 - 20:00 **Official commitments.** Roadmap with the Government of Catalonia and the Provincial Councils.  
  
**Alba Vergés i Bosch.** Minister of Health of the Generalitat de Catalunya (Government of Catalonia)  
**Teresa Jordà i Roura.** Minister of Agriculture, Livestock, Fisheries and Food, of the Generalitat de Catalunya  
**David Mascort i Subiranas.** Secretary General of the Ministry of Agriculture, Livestock, Fisheries and Food of the Generalitat de Catalunya  
**Marta Subirà i Roca.** Secretary of Environment and Sustainability of the Generalitat de Catalunya  
**Arnau Queralt i Bassa.** Director of the Advisory Council for Sustainable Development of the Generalitat de Catalunya  
**Miquel Noguer i Planas.** President of the Girona Provincial Council  
**Josep Tarín i Canales.** Delegated deputy of Mobility, Natural Spaces and Forest Fire Prevention of the Barcelona Provincial Council

## THURSDAY 10 Oct: PRESENTATIONS (*Palau de Congressos of Girona*)

Guiding thread by: **Rosa Maria Galindo Solé**, actress and president of the *Fundació Miranda*

### MODULE 3 - APPLIED HEALTH AND WELLNESS SERVICES IN THE FOREST

#### MORNING Thursday 10 Oct - Block 1

Presentations by speakers of 15 minutes each, plus 5 minutes wrap-up/questions.

- 8:30            Opening of doors
- 9:00 - 9:20    ***The strategy and network of therapeutic forests in the Republic of Korea***  
**Prof. Dr. Won Sop Shin**. Chungbuk National University - Republic of Korea
- 9:20 - 9:30    Moderator: **Marc Vilahur**. Network for the Conservation of Nature - Catalonia
- 9:30 - 9:50    ***Human health and sustainable forest management***  
**Igor Vizslai**. Ministerial Conference on the Protection of Forests in Europe - Forest Europe. Liaison Unit Bratislava - Slovakia
- 9:50 - 10:10   ***Forest bathing as a tool for the stewardship of high ecological value forests***  
**Silvia Gili i Olmeda / Montserrat Moya i Cardona**. Cooperativa Sèlvans - Catalonia
- 10:10 - 10:30 ***Links between mature forests and spiritual health***  
**Josep Maria Mallarach**. Associació Silene, and member of the IUCN World Commission on Protected Areas - Catalonia
- 10:30 - 10:50 ***Implementation of therapeutic forest itineraries in the network of natural parks of Catalonia. Example of the Poblet Natural Site of National Interest***  
**Xavi Buqueras i Carbonell**. Poblet Natural Site of National Interest. Ministry of Territory and Sustainability, Generalitat de Catalunya (Government of Catalonia)
- 10:50 - 11:00 Round table and discussion
- 11:00 - 11:30 *Coffee break*

#### MORNING Thursday 10 Oct - Block 2

Presentations by speakers of 15 minutes each, plus 5 minutes wrap-up/questions.

- 11:30 - 11:40 Moderator: **Susan V. Joachim**. International Nature and Forest Therapy Alliance (INFTA) - Australia
- 11:40 - 12:00 ***“Forest atmosphere bathing” in the region of Mühlviertel - From theory to practice.***  
**Christian Naderer**. Tourismusverband Mühlviertler Kernland - Austria
- 12:00 - 12:20 ***Ecotourism and wellbeing in the integral forest property of “El Edén de los Rafeles” in Honduras***  
**Moisés Hernández y Argelia López Dubón**. “El Edén de los Rafeles” - Honduras
- 12:20 - 12:40 ***Preservation and restoration of the forest area in Sandié, in Burkina Faso***  
**Eugène Bamouni**. Club CPN « les Amis de la Nature » - Burkina Faso  
**Rosa Duró**. Humus Social (collaborator of the project, who will translate from French)
- 12:40 - 13:00 ***Can Forest Therapy help transform consciousness in response to global climate catastrophe?***  
**Amos Clifford**. Association of Nature and Forest Therapy Guides and Programs (ANFT) - USA
- 13:00 - 13:20 ***Integrating forests into clinical practice: experiences in maternal and child health.***  
**Ferran Campillo i López, MD**. Garrotxa Pediatric Environmental Health Specialty Unit - Catalonia
- 13:20 - 13:30 Round table and discussion
- 13:30 - 15:00 LUNCH

Guiding thread by: **Rosa Maria Galindo Solé**, actress and president of the *Fundació Miranda*

### **AFTERNOON Thursday 10 Oct**

**15:00 - 17:30** Participated and networking session in support of the "Proclaim of the III Congress in favor of the value of natural forests for societies' health and wellbeing". Session conducted by **Rosa Galindo**, with the participation of:

- *Our Old Ones from the water* .

**Gisela Virginia Campos Angeles**. Instituto Tecnológico del Valle de Oaxaca - Mèxic

- *A new resource for forest owners*

**Elisabeth Vila d'Abadal i Castilla**. Forest owner of La Vila de Buscarons (Vidrà)

**Josep Maria Pons i Vilahur**. Forest owner Can Fornaca (Caldes de Malavella)

**Conxita Esteba i Bech de Careda** . Forest owner of Requesens (La Jonquera)

- *Dancing with the trees*

**Heike Freire**. Higher Degree of Green Pedagogy. Florida Universitaria - Valencian Community

- **Representation of Nepal**. Global Climate and Health Alliance Organization, i Human Rights and Environment Improvement Center

- **Missatges d'actors de diversos indrets del món**: Borneo, Brasil, ONG Plant for the Planet

**17:30 - 18:00** *Coffee break*

**18:00 - 18:20** **Outcomes of the III Congress**

**18:20 - 18:30** **See you at the IV International Congress on Forest and its Potential for Health**

**Alex Gesse**. Instituto Banhos de Floresta Portugal - Portugal

**18:30 - 19:30** **Debate and consensus of the Proclaim**





## Albert Bosch

“Live with passion and responsibility”. Albert Bosch has a long track as adventurer, entrepreneur and writer.

Among many other adventures, he has crossed Antarctica unassisted from the coast to the South Pole (1.152Km. -98% Solo); he has completed the '7 Summits' project (Climbing the highest mountain of each continent, finishing at the top of Mt.Everest); he has participated in 9 Dakar Rallies (2 with motor-bike & 7 with car) where in 2015 he became the first pilot in history to drive a non fossil fuel car (100% electric) in the Dakar Rally; he is a regular Ultra Marathons runner, and has done more than 100 races in different extreme sports.

He is an entrepreneur since he was 26 years old, and in 2004 founded INVERGROUP as a platform to manage and promote projects in the field of clean energy and environment.

In both fields he has achieved some remarkable successes, but also has accumulated a

large number of failures which he accepts with pride, because they are also part of his life evolution.

Both in the adventure and entrepreneurship, he always keeps committed to strong values of sustainability.

Renowned speaker and writer about leadership attitudes, with five books published.

He likes challenges, prepares thoroughly to master them, and organizes the project to get the best results both from the sporting challenge, as well as from the professional or personal level, always with a sincere commitment to sustainability and achievement of results. He always aims at spreading awareness and attitudes towards responsible leadership, and respect for the environment.

Albert was born in 1966 in Sant Joan de les Abadesses (Girona-Catalonia-Spain). His biggest adventure: family with 3 kids. He studied Business and M.B.A. in E.S.A.D.E.



## Rosa Galindo

Co-founder and President of the Foundation Miranda, Co-founder of Eòlia Escola Superior of Barcelona's Dramatic Art. Actress and singer, she has worked with directors like Josep Maria Flotats, Mario Gas, Calixto Bieito, Sergi Belbel, Joan Lluís Bozzo and has starred several musicals of Dagoll Dagom.

Teacher associated from Fitzmaurice Voicework © and from Kundalini Yoga. She has approached several therapeutic methodologies such as family and systemic constellations, Bioenergetics and the Somatic Experience (Somatic Experience ©) and studies of philology at the UB. Collaborate as a teacher in the Master of Neuropedagogy of the UB.

She's trained in agriculture and organic farming at the Manresa School of Agriculture, and in cooking and nutrition with Montse Bradford and Bernard Enassat.

Courses and training in dressage and natural communication with horses, and conscious riding. She is currently specialized in transhumance on horseback, guiding the horses of the Foundation through the different pastures of Catalonia, recovering ancient roads and the memory of this ancestral practice.



## Dr. Martí Boada

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Holder of a PhD in Environmental Science and bachelor's degrees in Geography, Sociology and Chemistry. He is incumbent professor and researcher at the Autonomous University of Barcelona's Department of Geography and Institute of Environmental Science and Technology (ICTA). His main research lines are related with global change and biodiversity from the social perspective, focused on urban systems and forests. He is a member of the

UICN's (International Union for Conservation of Nature) Education and Communication Committee, the UNEP's (United Nations Environment Programme) Spanish Committee, and the UNESCO's MaB (Man and the Biosphere) programme. Among the many recognitions he has received, he is a holder of the United Nations' Global 500 Roll of Honour Award (1995) and the Spanish National Environment Award (2003).

## Forest and humans

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Forest is the climax expression of the vast majority of terrestrial landscapes, except some very concrete biomes like sandy deserts, high mountain psychrophile environments, salty coastal systems, and glacial environments in the Arctic and Antarctic. If biophysic inductor forces operate, the resulting system will be forest. Nevertheless, since Neolithic revolution, socio-cultural forces have to be counted into the equation, resulting in the actual landscape, an expression of natural and social history. Human history is the history of humans with the forests, at different levels: existential, trophic, energetic, mythological and healing.

Evolution at planetary scale has left us with a legacy of more than twenty thousand species of wild trees, distributed all around the Biosphere, also as an expression of planetary complexity. A complexity that Margalef defined that, in order to understand a tree and a forest, beyond scientific knowledge, required a poet.

For some cultures, forest has been considered to even be the home of the human soul. Forests have also been essential as a source for energy, wood, fruits, as well as place of mythology, even religion, with the trees as a temple.

Today, in a context of an environmental crisis without precedent, partly an expression of the urban habitat model, an artificial diet, and an extremely contaminating mobility, the forest becomes a place beneficial to achieve a balance that cities take us away. Basically a healing place, which needs to be studied from the perspective of its therapeutic properties which it generates from the macrobiota of the forest habitat, as well as its incidence on the microbiota of the human organism.



## Dra. Roser Maneja Zaragoza

Doctorate in Environmental Sciences (Autonomous University of Barcelona - UAB, 2011) and postdoctoral researcher at the Institute of Environmental Science and Technology of the Autonomous University of Barcelona (ICTA-UAB). Nowadays she's an associated professor at the Department of Geography of the UAB, member of the Research Group of Applied Geography, and visiting professor at the CIGA (Centro de Investigaciones en Geografía Ambiental) in Mexico.

Her specialization covers the following research fields: environmental education, scientific communication and outreach, socioecologic systems, urban biodiversity, forests, global change, health and environment, and natural protected areas (biosphere reserves). She's an active member of the Club of Rome (Spanish Chapter), and nowadays she's the scientific coordinator of the International Centre for the Mediterranean Biosphere Reserves of UNESCO.

She currently coordinates the research group about Conservation, Biodiversity and Global Change of the ICTA-UAB, which has as an objective to analysis the interface between human beings and nature through an integrated research approach, with the aim of contributing to different social areas, incorporating transferability of knowledge and scientific outreach as two main axes.

### Moderator of MODULE 1 - Research update on forest and its potential for health (Bloc 1)



## Prof. Dr. med. Karin Kraft

Doctorate in Human Medicine with a specialization in Internal Medicine. Endowed Professorship for Naturopathy at the University of Rostock. Research fields in experimental research on phytotherapy in breast cancer, pain therapy with phytotherapy and electrotherapy, epidemiological investigations on natural remedies and complementary medicine,

development and research on healing and spa forest. President of the scientific Society for Phytotherapy. She has published 9 books, 30 contributions, and 258 scientific publications.

### Cure and healing forests: translation of scientific knowledge into practice

Since some years, the interest in forest therapy is growing worldwide. Therefore in the German state of Mecklenburg-Vorpommern (MV) a systematic scientific approach was started in order to develop criteria for the structure of healing and spa forests for the preferential treatment of chronically ill patients.

The presentation will give insight into the basic components of the setting of a healing or cure forest such as climate/microclimate, geological aspects and composition of trees and other plants. They in total influence human physiological and psychological regulatory processes. Furthermore, the definitions of healing and spa forests and the classes of appropriate indications, which mainly result from the specific regulatory influences, will be presented.

During the process of the development of the two

types of forests, it became quite clear that chronically ill patients only can profit from the complete potential of these forests if they are guided by qualified therapists. Therefore in a further step of the project an advanced training course for already pre-qualified persons such as physiotherapists was developed. Some initial experiences of the first course, which started in March 2019, will be also given.

Meanwhile more than ten communities in MV have applied for the certification of healing or spa forests. The project is funded by the European Regional Development Fund (ERDF).



## Gisela Immich M.Sc.

Research associate at the Ludwig-Maximilian-University of Munich, Germany. Her research focus are the different health effects of forest visits, structural criteria of cure and healing forests in Bavaria, Germany as well as chronobiology, complementary and alternative medicine. She attended different forest medicine trainings, e.g. forest therapy guide (ANFT)

or forest medicine instruction by INFOM. Development of 1st version of a core curriculum of Forest Therapy Guide (2017) with ANFTA. Course instructor for forest bathing in Germany, Climatotherapist. Alternative practitioner for more than 15 years. Co-author "Forest Therapy" a scientific forest medicine book in German (Fall 2019).

### Forest climate as important health facilitator

Forest medicine deals with different methods to reduce stress and improve health and well-being on a health promotional and preventive, as well as in a therapeutic, setting. Most studies evaluate the psychological, cognitive or physiological effects of forest visits in different settings (forest vs city). Most unknowingly, one important factor itself is the specific forest climate, which demonstrate important unique health benefits. First, the lecture will give a summary of the different physiological health effects

of the forest climate itself for health promotion and well-being. The 2nd part will demonstrate evident, scientifically proven preventive add-on tools to use as an additive health promotional tool during forest bathing or forest therapy walks to increase immunological reactions like hardening or a faster recuperation.



## Dr. Domingo Sancho-Knapik

Holder of a PhD in Forest Engineering from the University of Zaragoza, he is a researcher specialised in forest ecophysiology. Under a DOC INIA-CCAA competitive contract, he has worked on projects with the University of Würzburg, the Stuttgart Natural History Museum, the Institute of Agricultural and Environmental Science in Tartu (Estonia) and

the University of Concepción (Chile). He has taken part in a number of competitive projects and he is the CITA's (Agricultural Research and Technology Centre) delegate on the Aragon Forestry Committee and the CITA's commissioner for the assessment of forestry projects.

### Weather conditions can determinate the concentration of terpene in the forest atmosphere.

The atmosphere that surrounds a forest area is a key factor for forest bathing, as it is in direct contact, through respiration, with practitioners of the activity. In this forest atmosphere, we can find organic volatile compounds that are liberated by plants throughout their metabolic processes. Shining out among these compounds we count the group of terpenes (like the  $\alpha$ -pineno), to which one anti-inflammatory, anti-osteo-arthritis and neuro-protective properties. Given that in template-"NEMORALES" plants can have vegetative downtimes, induced by cold or by dryness, they do not produce their vital functions throughout the year. This brings with possible variations in the level of liberation of terpenes to the atmosphere throughout the different seasons. Therefore, knowing the concentration of volatile

compounds throughout the year, and when they peak, might be very important for the practice of forest bathing that aims to mitigate a particular ailment.

This work presents a study on the variation of concentrations of  $\alpha$ -pineno in two forest masses in the Sierra de Albarracín (Teruel) throughout 2018, and their relation to each season's climate conditions. Differences between the forest masses are analyzed, as both present different dominant species. One mass is dominated by *Pinus sylvestris* (the distribution of which covers most part of the Eurosiberian region), the other by *Pinus pinaster* (almost limited to the western Mediterranean).



## Albert Bach

BSc in Environmental Science from the Autonomous University of Barcelona and MSc in Forest Ecology from the University of Barcelona. His research lines have focused on studying the value of Mediterranean woodland with the goal of improving their management. He is currently working on his doctoral thesis, entitled *Boscos*

*i salut humana: una nova aproximació per a la gestió forestal? ('Forests and Human Health: A New Approach to Forest Management?')*, at the Autonomous University of Barcelona's Environment and Human Health Lab (EH2 Lab).

### Forests and Human Health: an experimental and cross-sectional study in the Montseny Natural Park

More and more the urban society is getting progressively disconnected from nature, starting to present a series of diseases associated to a way of life, which, in the case of cities, highly associated to environmental, physical and mental stress. Lately, alternative solutions have been proposed, which fundament on the contact with forests as health source. Recently these initiatives are gathering strength worldwide, also so in the Mediterranean region, with several activities being presented with similar models. The research group of the EH2 Lab in the Autonomous University of Barcelona (UAB) is currently developing the project "Forests and Human Health" in Catalonia, relying on a transversal scientific approach that counts on the equation Forest – Forest Chemistry and Microbiology – Human health.

In July 2018, an experimental study was developed with 35 people staying during 8 hours in a holm oak forest. During this stay, samples were taken of: blood, in order to analyze the absorption and metabolism of terpenes liberated by trees, saliva, to observe cortisol evolution throughout the exposition the the forest, and oropharynx, to evaluate possible changes in human microbioma. In parallel, samples were taken of the volatile organic compounds present in the air, to characterize its microbiological composition in two different moments.

During the presentation, main results from this experience will be presented.





## Michael Lüdtkke

Head of Communication of BioCon Valley®, the cluster for health economy in Mecklenburg-Vorpommern/Germany. This federal state, located at the Baltic Sea, is home to a vivid health economy. Its natural competitive advantages – ocean, clean air, vast country, mild climate and old forests – made Mecklenburg-Vorpommern a powerhouse for health and gentle tourism.

Michael Lüdtkke coordinated in earlier stages of his professional life the association for Science Marketing [Rostock thinks 365°]. Together with others he created the worldwide unique science soap “Storm of Knowledge”. The 42-year-old studied political science at the University of Rostock. Before, during and after his studies he worked for various media, agencies and for the University of Rostock – especially in

science communication and science journalism. Since 2018 he has been responsible for the International Society of Forest Therapy (ISFT), which has set itself the goal of achieving scientific evidence for the healing effects of forests.

### Moderator of MODULE 1 - Research update on forest and its potential for health (Block 2)



## Dr. Dieter Kotte

Dr. Kotte holds a PhD in International Comparative Research (University of Hamburg). He brings with him a wealth of international experience in education/training, Human Resources Development/Management, Public health, empirical research/statistics, strategic performance enhancement and policy development having worked in many countries,

including The Netherlands, Sweden, UK, Afghanistan, Sri Lanka, Vietnam, China, Australia and Fiji. Dr. Kotte was Associate Professor, Chair of Business Education, Dresden University of Technology before he embarked on a career path in economics and strategic performance enhancement advising international bodies such as the World Bank, Asian Development Bank, German

International Cooperation as well as corporate stakeholders. Dr. Kotte and his team at INFTA developed, evaluated and validated the International Core Curriculum of Forest Therapy (ICCF) at the end of 2017 with the assistance of over 120 experts worldwide. Dr. Kotte is also the Editor-in-chief of the International Handbook of Forest Therapy (IHFT) to be released in 2019.

### International developments and efforts of standardization in Forest Therapy

For the emerging public health practice of Forest Therapy it is critical that the necessary research paradigms, training standards and strategic awareness campaigns are in place. In order to gain public recognition and to set itself distinctly apart as a scientific domain of its own, numerous operational, legal, and methodological steps have to be accomplished. It is prudent to seek a best-practice approach which involves international collaboration of researchers and stakeholders.

This keynote will summarize the most relevant steps which have been undertaken since the last International Congress “Health Potential: Forest” (Krems, Austria), coordinated by the world’s peak body in the area of Forest Therapy, the International Nature and Forest Therapy Alliance (INFTA).

From the international perspective and as INFTA’s Secretary, a first-hand account is given about the most interesting, challenging and promising developments which have taken place and which will, most likely, have an impact on the future path Forest Therapy will take internationally. This account will be rounded by the publication of the International Handbook of Forest Therapy, a collaborative research effort that underpins the need for Forest Therapy as an evidence-based, effective and low-cost Public health practice.



## Dr. Hiroko Ochiai

Chief in Department of Plastic and Reconstructive Surgery and chief in Laboratory of Regenerative Medicine of National Hospital Organization Tokyo Medical Center, Tokyo, Japan. She has been a member of INFOM (International Nature and Forest Medicine) and Medical Specialist of the Forest Therapy® since 2012, and

became a Medical Specialist in Forest Medicine in 2019. She has carried out several experiments about the forest medicine and published the articles so far. In addition, She has been the secretariat of the “ESD and LH for children” event in Japan since 2014, and sent certificated doctors for the forest therapy events of various parts in Japan.

### Observation of benefits arising from Forest Medicine, Japanese research

‘Shinrin-yoku’ (forest bathing) was coined in Japan in 1982 and became the term used to express enjoying the comfort of the forest. Several researchers subsequently began to conduct psychological and physiological evaluations in 2004. Since then, forest therapy® experiments were conducted and 64 locations have been certified as Forest therapy® bases nationwide (from 2004 to 2017). A lot of evidences of the medical effects were published, and the science became positioned as ‘Forest Medicine’, leading to the establishment of The International Society of Nature and Forest Medicine (INFOM) in 2011.

As for Shinanomachi which is representative of the forest therapy® base, about 1,200 people a year visit the base, and more than 170 members of forest therapy® guides are involved in an activity. They offer the original program to let guests use “the five senses” and get “the various awarenesses”. Zen meditation, aromatherapy and so on are included in the contents other than forest therapy. Some companies use these programs for the stress management and the new face training of the employee.

INFOM has two main activities. One is “Walking Forest Therapy Roads® with a doctor” since 2013, and the other is “ESD and LH for children” since 2014. These activities are subsidized by the ‘National Fund for Forest Greenery and Waters’, which is under the auspices of the ‘National Land Afforestation Promotion Organization’.

The researchers belonging to INFOM have been analyzing how shinrin-yoku affects the human body based on data with evidence. INFOM is trying to use forest therapy® for the treatment of the patient other than preventive medicine. It is advantageous, because medical doctors play key roles in INFOM. In addition, INFOM aims for many people becoming able to use forest therapy for their health by becoming the insurance adaptation in the future.



## Dr. Bum-Jin Park

Dr. Bum-Jin Park is a professor at Chungnam National University in Korea. He has been an associate professor of Chiba University. He has a lot of experience in research on the therapeutic effects of forest environment on the human body and mind using physiological

responses of human. His article titled "The physiological effects of Shinrin-yoku (taking in the forest atmosphere or forest bathing): evidence from field experiments in 24 forests across Japan" is cited more than 558 times. His main research interest is a relationship between human

and forest environment. He is researching to measurement and evaluation of the therapeutic environment of forest and design of therapeutic environment of the forest.

### Forest Therapy Research in the Republic of Korea

Recently, artificial urban environments have become a significant source of stress for urban people. This situation poses many threats to both physiological and psychological health. Megacities with high population density tend to generate more stressors because of their high population and advanced degree of urbanization. Seoul which is the capital city of Korea is one of a city especially vulnerable to stress due to the rapid and dynamic urban expansion process. With this backdrop, forest therapy research began in the early 2000s in Korea. The purpose of this presentation is to look at an overview of Korea's forest therapy research and share the results of important research. Research of forest therapy

in Korea can be divided into three main types as follows. 1) Research to identify the healing effects of forest environment on humans from a psychological and physiological standpoint. 2) Measurement and evaluation of the therapeutic environment of forest which are a concentration of phytoncide in the forest air and the thermal comfort of the forest environment. 3) Development of a forest therapy program using the forest environment. In this presentation, I hope to introduce the results of forest therapy research conducted in Korea and suggest future research directions of Korea.





## Kevin Lafferty

Kevin is the national policy advisor for Access, Health & Recreation in Scottish Forestry which serves as the forestry directorate of Scottish Government. His remit covers access legislation including rights and responsibilities, outdoor recreation, tourism, conservation and managing the woods for health programme.

He is an expert in health and environment policy and practice developing pathfinder projects with the National Health Service and allied health professionals to promote health & wellbeing through green prescription programmes. This includes setting up the multi award winning Branching Out programme of conservation and

greenspace on referral for adults with mental health problems and Greening the NHS Estate demonstration programme in Scotland.

### Psychological wellbeing and stress assessment in communities living near forests

The *Woods In and Around Towns (WIAT)* is a 5-year research programme developed by the Forestry Commission Scotland (FCS) (nowadays Scottish Forestry) that improves and promotes access to woods that are close to deprived urban communities in Scotland.

The research was carried out by a team primarily from the Universities of Edinburgh and Glasgow and the London School of Hygiene and Tropical Medicine, and was funded by the Public Health Research programme of the National Institute for Health Research. The study pioneered the application of robust methods to the evaluation of green infrastructure interventions looking at 3 intervention and 3 control sites. The study found across the communities as a whole that the WIAT intervention was associated with improved quality of woods, and with undertaking more visits to nature in general, but not with frequency and length of visits to the woods. Physical activity levels increased in the intervention communities.

The study focussed primarily on stress levels and the WIAT intervention did not improve stress levels in the community. There were differential trends in stress levels for those who did, and did not visit the woods, and for those closer and further away from the woods, are strong evidence that the intervention itself did not increase stress in the communities which received it. Yet it was clearly not sufficient to offset or negate the impacts on stress of other events there; urban and housing renewal programmes, noise pollution and similar external influences may be responsible.

In total the cost of the WIAT interventions was £241,667. That equates to an average cost per person in the intervention communities (n=20,472) of £7.68 for the physical intervention and £11.80 for both the physical and social interventions. This is a low cost preventative spend programme for health

and wellbeing and one that can be scaled up nationally with a focus on urban forestry. Perhaps the evaluation although longitudinal, was simply too brief to detect changes in behaviour and health that operate on a longer timescale.

*Branching Out* is a multi-award winning programme developed by Scottish Forestry, in partnership with healthcare agencies, which helps people to have better mental health by reconnecting them with woodland and natural environments through a 12-week programme of woodland activities. It is a holistic, person-centred approach bringing together mental healthcare workers and outdoor staff like countryside rangers to help people recover from long-term mental health problems.

The innovative programme has been running for over 10 years and has been evaluated through two survey-based studies, one for 2011-2012 and one for 2014-2015. The 2011-2012 survey showed benefits in Quality Adjusted Life Years (QALYs), a standard measure used to assess the cost-effectiveness of treatments across the health care sector. It also showed the programme was cost effective when compared with the National Institute and Health Care Excellence (NICE) guidelines.

Improvements in mental health and vitality as a result of the scheme are particularly marked for participants with more severe mental health problems before they entered the programme.

In a healthcare system that urgently needs to find alternatives to expensive drug treatments, with all their potential side effects, 'green prescriptions' are becoming a valuable and powerful tool.



## Maribel Lozano Rojas

Mastership in Sciences and Management of Global Change at the Autonomous University of Barcelona, nowadays Maribel is candidate to a Doctorate at the Institute of Environmental Science and Technology of the Autonomous University of Barcelona (ICTA-UAB). Previously, in 2007, she finalized a postgraduate in Environmental

Management and Disaster Prevention at the Universitat Sergio Arboleda de Bogotá (Colombia).

She's a professional in Finances and Foreign Trade, with an International vision centered on the development of sustainable trades, and the evaluation as to how global tendencies affects business' strategies.

She has experience in research, conception, management and communication of innovative projects regarding bioeconomy, and sustainable tourism.

### Dendroculture, a new look on the forest

Recognizing that the forest and the tree are timeless carriers of cultural assets as old as humankind itself, it is necessary to recover their value, from a historical, cultural and artistic point of view, beyond their importance as energy source, medicine, raw material and fuel, basis for the development of the economy, religion, and culture of all societies of the world.

James George Frazer (1890), in his reference work "The Golden Branch. Magic and religion", goes deeper into the presence of the tree in all cultures throughout history, emphasizing that none of them has shown indifference to the diverse variables of this exceptional living organism, which spans more than 80 thousand wild species all over the world.

Dendroculture refers to those cultural forms of human relation with specific trees, which have led to their protection through time, for varying social reasons, gifting us with monumental or unique forms.

Through this new viewpoint dendroculture wants to recover the value of the sociocultural dimension of remarkable trees and forests, depending on their symbology, and other variables associated with their forms, uses, measures and ages which, traditionally, classic botany, using a taxonomic classifications, has limited to biological and morphological aspects.

A new taxonomic classification for trees and forests will be presented, with the aim of highlighting their natural and cultural values, promoting knowledge of the environment, and inspiring environmental education and sustainable tourism activities.





## Miquel Rafa

Miquel Rafa Fornieles is graduated in Biology, with a specialization on Ecology, by the Autonomous University of Barcelona, with a great interest for community and social services, nature conservation, and land stewardship. It has been 21 years now that he's director of the Catalunya-La Pedrera Foundation section of Territori and Environment. His professional activity is centered on sustainable development,

sustainability, biodiversity, environmental impact assessment, and environmental policies. Throughout his career, he has developed many nature Conservation projects in Catalonia and around the world with organizations like DEPANA or WWF International. At the same time, he is active member of the Council for the Protection of Nature in Catalonia, and of the World Commission of Protected Areas of IUCN.

### Moderator of MODULE 2 - Creating our reconnection with nature



## Carles Castell i Puig

PhD in Biology, MSc in Environmental Management in the Rural World, and MSc in Managerial Function. He works in the Barcelona Provincial Council's Natural Areas Services Management Office, where he develops analysis, planning, management and monitoring programmes for protected

natural areas. He is currently involved in developing external partnership programmes, such as the programme on health and natural areas. He is a member of EUROPARC's (Federation of Nature and National Parks of Europe) Health and Protected Areas working group and coordinator

of EUROPARC-Spain's "Society and Protected Areas" Work Programme.

### Present extension of forest therapy in European natural parks

Scientific evidence that fundament the benefits of contact with nature for the wellbeing and physiological and mental health of people is getting more numerous and diverse. The unstoppable increase in urban population (nowadays approx. 50% and estimated at 70% for 2030), beyond entailing an artificialized environment, generates non-healthy habits, linked to physical inactivity, nutrition and sedentary lifestyles. In this context, human's reconnection with nature, and the promotion of physical activity in natural environments, are two key factors that can contribute to reducing the negative impact of these trends.

Numerous initiatives have arisen from the work teams of natural parks, which seek to incorporate the health vector into the planning and management of these sites, with promising results both for people, as well as also for the conservation of natural capital. One of the pioneering initiatives that have risen in this field has been "Healthy Parks, Healthy People", at

Parks Victoria (Australia), from where, supported by institutions like the IUCN, it has expanded worldwide. The EUROPARC Federation is promoting a Europe-wide programme that seeks to adapt this initiative the territorial and socio-economic European context, also taking into account the numerous and successful ongoing experiences in certain countries. Scotland, England, Finland and Germany, just to mention some, have been deploying programmes to foster this double benefit, for conservation and health purposes, for a long time, with very promising results. Catalonia hosts several projects, both at local and regional level that can make up key elements for the development of a global and stable strategy between the health and natural areas sectors, within the framework of European and International initiatives in this field.

# Jo Hopkins



Manager National and International Engagement at Parks Victoria, Australia and has extensive experience in protected area management. Part of the team that established the Healthy Parks Healthy People approach

to managing parks and has continued that work for over 20 years. Active member of the IUCN's World Commission on Protected Areas and is Chair of their Health and Well-being Specialist Group. She is also Chair of Health Sciences

Advisory Board for Deakin University, Australia and Co-Chair of the World Urban Parks Advocacy Committee.

## Health and well-being in the context of international conservation efforts

Nature is essential to human health and well-being. We are all part of the natural world. This has been known by Indigenous peoples for thousands of years. The growing body of evidence on the connections between nature and human health and well-being calls for our urgent attention. However, as the global population shifts from 54 per cent of people living in cities today to a forecast 70 per cent by 2050, access to and experiences in nature are becoming harder to achieve. Sprawling urbanization coupled with shrinking natural spaces is disconnecting society from the natural world. The loss of biodiversity, green space and the ecosystem services provided by nature has been associated with decline in population health, including the acceleration of non-communicable diseases such as diabetes, depression and cardiovascular diseases. The case for innovative

nature-based healthcare policies and programs is compelling. So too is the need for conservation policies and programs to focus on health outcomes for people and communities. As countries around the world grapple with the challenge of rising demand and funding ever-costlier health care systems, better collaboration between the health and environment sectors can lead to improved public health outcomes and reduced critical healthcare costs. In the context of a changing climate, this session will explore exactly how biodiversity and nature can benefit human health and how leaders in this area, such as the International Union for Conservation of Nature, World Commission on Protected Areas (IUCN/WCPA), are championing new policies, programs and funding across health, environment and urban sectors.



## Dr. Karin Lehmann

Dr. Karin Lehmann, has lived in Heringsdorf/Usedom, in the State of Mecklenburg-Vorpommern (Germany) since 1984. Her fields of activity at the municipal enterprise "Kaiserbäder Insel Usedom" have centered around the fields of work of "Art & Health", and "Health tourism". She

has been initiator of the of the project "1st Cure and Healing Forest in Europe", as well as its successor "Child Health - 1st Children's Cure and Healing Forest by the Sea as Therapeutic Environment". She holds the position of Chairman of the Seaside Resorts/Seaside Sanatoria at the DHV (German

Assoc. of Seaside Sanatoria), and has been member of the European Committee of the European Spas Association (ESPA). She complements all this work with regional association work, and an expertise in thalassotherapy.

## LET'S GET OUT! 1st children's cure and healing forest as therapeutic environment in the seaside resort of Heringsdorf.

Since a few years back there has been a noticeable shift in relation to kid's diseases: overweight, and disorders in relation to sleep, motor skills and concentration, tend to appear at a much younger age. Aware and alarmed about these research results, the municipality of Heringsdorf (in the German State of Mecklenburg-Vorpommern), wants to take action, and thus is implementing the project "LET'S GET OUT! - 1st children's cure and healing

forest as therapeutic environment in the seaside resort of Heringsdorf". It consists of a range of qualified medical services to foster children's health, rehabilitation and health prevention, based on their early-age physical and psychological approach to nature. A conscious set of body and movement practices that seek promote their link to the forest, and widen their understanding on this ecosystem's potential to provide them with health and wellbeing.



## Jaume Hidalgo i Colomé

Passionate about, and natural-born protector, of the oldest forests. Forest engineer by the Universidad Politécnica de Madrid - UPM, with a specialization in sustainable silvopasciculture. He has carried out many studies and projects regarding forest planning and management, both in public and private estates. In the years 1999-2001 he gives an impulse to the Forest Office of the "ADF Mig Pallars", in the Catalan

Pyrenees, and leads the LIFE project "Living Pyrenees", to demonstrate the value of the most singular forest heritage. In 2002 he helps ICRAF in a project to promote sustainable agroforestry techniques in North Vietnam. From 2003 to 2011 he coordinates the Area for Environment and Territory of the Girona Provincial Council, where in 2005 he gives impulse to the Sèlvans programme, which promotes forest stewardship

for the oldest and most mature forests. Afterwards, he carries on the project through the Environmental Institute of the University of Girona, the Natura Foundation, and, nowadays, the NGO Sèlvans, of which he is promoter and general coordinator. Sèlvans works for the valorisation of ecosystem services of forests, also and especially in relation to their benefits on human health and well-being.

### Catalan network of therapeutical forests

Sèlvans has as its main purpose the preservation and valorisation of a network of forests of high ecological value, with the aim that it covers at least a 10% of the Mediterranean forest fabric. The therapeutic functionality, as one of the main ecosystem services generated by the forest, turns into a highly efficient ally when trying to win complicities in at least a part of this essential matrix.

The particularities of our territory offer several advantages, like the diversity of forest ecosystems, and a very interesting option to deseasonalize health and welfare services. However, we also count with remarkable limitations, as are a complicated orography, precarious and vulnerable ecosystems, and an insufficient and inadequate protection of our most majestic forests.

In this context, the quality standard of the Sèlvans method is based on pillars and characteristics that provide well-suited conditions and guarantees, and enables its replication in other geographical areas. The pillars are: the accessibility and peace of the enclave, a certain maturity of the forest, a stewardship agreement in accordance with the

property, and nearby logistics. Also, a specialized guidance that facilitates and coordinates the activity, and makes sure the loading capacity of the natural surroundings is respected. Furthermore, the dynamization and concertation of the activity takes well into account the added value of local actors, both from the sanitary branch, as well as the ecotourism sector. Finally yet importantly, the development of biomedical research is essential in order to demonstrate the psychological and physiological benefits of walking in forests.

The progressive structuring of the network of forest itineraries feeds, mainly, from the collaboration with the local administrations and managing bodies of natural spaces, from the initiative of the forest property, and from the projects developed by the guides that are trained through Sèlvans.

At present Sèlvans operates 11 cure forests, thanks to the impulse given also by the Girona Provincial Council and its Tourism Board, the Environmental Institute of the University of Girona, the Government of Catalonia, and the local municipalities where the forests are located.





## Dr. Frederic Cofan Pujol

Doctor in Medicine with a specialization in Nephrology. Associated Medical Professor by the University of Barcelona (UB). He exercises as counsellor at the Nephrology Service of the Hospital Clinic of Barcelona. Author to more than 120 articles published in national

and international journals. He teaches at a Master (UB) and Postgraduate (Escola Universitària Gimbernat-UAB) university studies. Teacher in the course to become a Sèlvans Forest Bathing guide. He collaborates with the Primary Health Care Centre in Castellar

del Vallés regarding medical counselling in relation to forest bathing activities.

### Projection of concerted arrangement of services in the public health system

Contact with the forest environment has demonstrated beneficial effects on human health, a reinforcement of the immunological system, a reduction of stress, and an improvement of the emotional status.

In countries like Japan, Forest Therapy is a common prescription within the health sector. In Catalonia, there exist occasional experiences within the scope of public healthcare, where one prescribes forest therapy within a wider scope of social prescription assets, as beneficial for health. However, forest therapy has still to be developed further.

On the other side, in Catalonia there exists an official legislative base for health promotion, and for the impulse of nature conservation, which both can help develop forest therapy: (a) the Interdepartmental and Intersectorial plan of Public Health (PINSAP) for the promotion of health by all areas of governmental action, (b) the Strategy for the Natural Heritage and Biodiversity of the Generalitat de Catalunya

(Government of Catalonia), and (c) the Catalanian 2030 Agenda for the achievement of the Sustainable Development Goals. In 2019, we see the formulation of the Declaration on Health and Nature of Catalonia, establishing the basis to favour the interaction between society's health, and nature, in Catalonia. One of its main lines of action is the deployment of "nature prescription" for society.

Catalonia's short term challenges for the development of forest therapy are: (1) the deployment of a network of cure and healing forests which benefit health, and their inclusion into the Catalan public health system; (2) the impulse of nature prescription by the Primary Health Care Centres, in combination with social prescription tools which benefit health; (3) the development of the "Healthy Parks, healthy people" programme (EUROPARC), in order to approach nature also to urban population, and (4) continuous improvement to training programme to become forest bathing guides.



## Albert Serra

Socio-cultural group dynamizer at the residence for elderly people of "Creu de Palau" in Girona, with more than 10 years of experience. Founder and promoter of several sociocultural entertainment activities, also artistic and musical, nature- and environmental- related and based, with more than 20 years of experience in different

companies. With a focused training and experience in sociocultural dynamization, music, nature guidance, forest bathing (Sèlvans-Udg), artisan production and processing of aromatic and medicinal plants (Centre Tecnològic forestal de Catalunya- Herbartis), in apiculture (Forest School of Santa Coloma de Farners

and Agrarian School of Manresa), and apitherapy (with a diversity of international renown professionals like Dr. Andrés Castillo (Ecuador), Dr. Stefan Stangaciu (Romania) and naturopath Miguel Abad (Valencia/Spain), among others. Beekeeper and passionate about bees.

### The experience at the residence for elderly people of "Creu de Palau" in Girona

In the second part of the presentation, Albert will briefly present the practical experience of the elderly people residence, and its programme "(S) avis que cuiden plantes, plantes que cuiden (S) avis": "(Wise) Elderly people taking care of plants, plants taking care of (wise) elderly people", which is addressed to residents of the residence, families, local organizations, professionals, volunteers, and the scientific community linked to this residence affiliated to the Government of Catalonia. The programme makes use of natural (or naturalized)

resources and environments, especially the Sèlvans cure forest of Palau Sacosta, as a driver of communal, intergenerational and scientific synergies, promoting well-being and health processes defined as bio-psico-socially equilibrating and repairing to all participants. The programme promotes a cohesive therapeutical leisure linked to reconnection with nature, adapted to people with a diversity of cognitive affectations or reduced mobility, moving the whole community to participate.

## A new instrument for rural sustainable development



### Pep Berga

Major of Olot (La Garrotxa)

Right between the limit of the capital of la Garrotxa and the municipality of Les Preses, we find the cure forest of Salvador Grau. An itinerary that gently winds its way through an old volcànic wash, in company of oak, ash and beech trees. Along its way one can appreciate old architectural elements typical to the area, as a stone hut, or stone walls.

Sèlvans and the municipality of Olot hold a collaboration agreement for the itinerary of Salvador Grau, in order to give the space a social usage, as well as to work with the Olot County Hospital to promote its healthcare usage.



### Joan Ramon Veciana i Martínez

Major of Sant Hilari Sacalm (Les Guilleries)

In the municipal perimeter of Sant Hilari Sacalm one can find the cure forest of Serra d'Heuras. Its track winds its way through a typical mid-high mountain forest, in presence of big and old beech and oak trees.

The forest, even though in private ownership, holds a threefold agreement between the municipality, Sèlvans, and the owner. The main focus of the itinerary is touristic, even though in long term the aim is to give it also a more social dimension.

The interesting itinerary, summed up with other activities offered by the Guilleries area, generate a huge ecotourism attraction, with a wide and diverse spectrum of possibilities.



### Cristian López Mondéjar

Councillor for Education, Sports, Youth and the Environment of the Council of El Bruc (Anoia)

Right at the feet of the Natural Park of the Mountain of Montserrat, we find the cure forest of "la Vinya Nova". The track gently winds its way through a forest dominated by holm oak and aleppo pine, in an exceptional surrounding typical of the Mediterranean.

Sèlvans and the municipality of el Bruc hold a collaboration agreement to foster the social use of the itinerary, with positive impact on specific local groups. The el Bruc forests, as well as the Montserrat Mountain in general, hold a tremendous potential in terms of activities related to forest and health, both from a touristic point of view, as well as a more continuous and profound work with special groups like children and elderly people.

In regards to children, this course will see the start of a pilot project with Nursery and Primary School, consisting of a monthly excursion with a group of children through the cure forest, located near the village. Pupils will work in small groups to approach the forest and engage the therapeutical methodology, with the aim to generate a global conscience about the naturalness of the surrounding area.

This pilot trial will have a continuous and final assessment, in order to obtain scientific results to be checked against the projects aims.



## Ulf Tielking

Ulf Tielking, Head of Forestry Policy Department; matters of the Supreme Forestry and Hunting Authority; promotion of forestry, forest structural development in the Ministry for Agriculture and Environment. Studied forestry in Göttingen/ Lower Saxony. Since 1991

working in Mecklenburg-Vorpommern. There first in the National Park Müritz, later in the State Office for Forests and Large Protected Areas (now the State Forestry Office Mecklenburg-Vorpommern), then 4 years in the State Representation of Mecklenburg-

Vorpommern in Brussels and finally in the Ministry for Agriculture and th Environment.

### **Territorial diagnosis of health potential of forests, and legal framework, in Mecklenburg-Vorpommern**

The value of the forest for health is scientifically proven and generally accepted today. In Mecklenburg-Vorpommern the possibility exists since 2011 to designate the protection categories cure forest and healing forest according to the state forest law Mecklenburg-Vorpommern.

On September 13th, 2017 the legal authorisation according to the Mecklenburg-Vorpommern Forest Act was used for the first time in Mecklenburg-Vorpommern for the Heringsdorf cure and healing forest. In Mecklenburg-Vorpommern there is no certification of cure and healing forests, but a legal designation on the basis of the state forest law. The aim is to strengthen the unique selling point of the "cure and healing forest" for health tourism. All those involved in the democratic process - forest owners, local authorities, the health industry and the local population - will be comprehensively involved. At the end of this process, a protected forest area is created which is supported by all those involved.

The possibility of dedicating a forest area to health-oriented priority use as a cure or healing forest is

unique in Germany. It is met with great interest from a wide variety of sectors. The Ministry of Agriculture and Environment was involved from the very beginning. Also the state forest office Mecklenburg-Vorpommern as well as the other partners Spas Association of Mecklenburg-Vorpommern (Bäderverband) and BioCon Valley. And finally even the Protection community German Forests (Schutzgemeinschaft Deutscher Wald), which trains the forest therapists.

In order to preserve the goals and expectations, it was necessary to make the cure and healing forests clearly visible to the public and the users in words and pictures and to delimit them. The state of Mecklenburg-Vorpommern has therefore had a trademark registered throughout Europe. To the picture mark the respective stroke protection, recreation, cure and/or healing forest joins. The logo now applies uniformly to all protected areas designated under forestry law of Mecklenburg-Vorpommern.





## Dr. Stefan Rudolph

Trained and specialized in citizenship and pedagogy, in 1990 he entered the Government of Mecklenburg-Vorpommern (M-V), at first through the police academy Polizeischule Neustrelitz/Landespolizeischule Mecklenburg-Vorpommern, where he became deputy of the chief representative of the police academy of

M-V. From 1994 to 1995 he was office manager to the Minister of the Interior. In 1995 he became Director of the university of applied sciences of public administration, police and law enforcement, and in 2004 vicepresident of the M-V State Accounting Office. In 2006 he was named State Secretary at the Ministry of

Economics, Labour and Health of Mecklenburg-Vorpommern, position that he is holding since then.

**The experience and commitment of the German federated state of Mecklenburg-Vorpommern, from a political perspective**

**The constitution of the International Society of Forest Therapy (ISFT) for the advancement of international cooperation in the subject.**



## Professor Dr. med. Dr. h. c. (mult.) Horst Klinkmann

Senior Consultant and Ambassador for Health Economy for the Federal State of Mecklenburg-Vorpommern as well as Honorary President of the Curatorium Health Economy by appointment of the Government of the Federal State of Mecklenburg-Vorpommern. He also serves as Dean of the International Faculty for Artificial Organs in

Bologna, Italy, an association of 16 universities from around the world.

Professor Klinkmann established one of the first interdisciplinary research centres of artificial organs worldwide. 14 universities awarded him an Honorary Doctorate or Honorary Professorship.

In 2001, he co-founded BioCon Valley e. V., an association

of more than 160 scientific institutes and companies in the field of biotechnology and biomedicine. Being the pioneer of medical based Forest Therapy since it has started as a new branch of science, he supports international cooperation and the development of medical approaches concerning the topic.



## Prof.(FH) Priv.Do. Mag. Dr. Gerhard Tucek

Completed his studies in „cultural sciences“, „action research“ and „social- & cultural anthropology“ at the Universities of Klagenfurt & Vienna. He did his Habilitation in the field of Cultural- & Social-Anthropology at the University of Vienna.

Gerhard Tucek is Professor at the Health Department of the IMC University of Applied

Sciences Krems / Austria. Until 2016 he was Programme-Director for Music-Therapy (Bac / Master).

Since 2016 he is the head of the "Institute for Therapeutic Sciences" and Director of the "Josef Ressel Center - Horizons of personalized music therapy" at the IMC University of Applied Sciences Krems.

According to Austrian Federal Law he is a registered music therapist.

His main clinical working fields are Intensiv Care Unit, Neurological and Cardiological rehabilitation and Cancer treatment.



## Prof. Dr. Won Sop Shin

Dr. Won Sop Shin is a professor at Chungbuk National University in Korea. He has lots of experience in research and conducting projects on forest and human health for about 30 years. His main research interest is psychological benefits from forest and nature experiences. During the years of 2013-2017, he also served as Minister of Korea Forest Service (KFS). During his term, KFS developed many new forest policies relating to using forest for human health and welfare. He is now a Head of

Graduate Department of Forest Therapy at Chungbuk National University enrolling about 150 students in masters' and Ph.D. programs.

### The strategy and network of therapeutic forests in the Republic of Korea

Like many other countries, in Korea, lifestyles have drastically changed because of rapid urbanization and advances in technology. This has led to numerous lifestyle-related health problems in modern society. Despite advances in medical technology, the prevalence of chronic or untreatable diseases continues to increase. Further, the rising cost and side effects of medical treatments lead people to look for alternative ways to cope with their health problems.

The Korea Forest Service (KFS) facilitated "Forest Healing" to utilize forests for enhancing health and quality of life. The KFS has legalized the concept of forest healing and launched a forest healing instructor system to develop and manage forest healing programs.

To expand the scope of forest healing, the KFS plans to establish 34 national and public healing forests and 3 national forest healing centers by 2017. The KFS plans to train over 500 forest healing instructors to provide specialized healing services to the public. Along with these aims, the KFS continues to perform research on forest medicine, such as comprehensive medical research on forest healing through interdisciplinary approaches.

As public interest in wellbeing has been rising in recent years, the KFS has been promoting the policy of "From cradle to grave: Life with forests." The Law on Forest Welfare Promotion was enacted in March 2015 by the National Assembly. It provides comprehensive forest welfare services customized by life stage from cradle to grave. This Act is thus a timely and appropriate move towards the establishment of an institutional base for promoting systematic forest welfare services. It is worth noting that the term "forest welfare" refers to socioeconomic and emotional support for public welfare promotion by offering cultural, recreational, educational, and therapeutic services through forest kindergartens, camping, healing forests, tree burial, and so on.



## Marc Vilahur

Graduate in Environmental Sciences and Master in Environmental Studies by the Autonomous University of Barcelona (UAB), with complementary training in direction, management and administration of NGOs and social enterprises (ESADE Business School and IESE Business School of Navarra). His professional life has been closely linked to the conservation of our natural heritage, and the

management of non profit organizations. In this way, he centers his activity in environmental education, the impulse of a green economy with a strong social value, the private or citizen conservation of biodiversity, and land stewardship. He is director of Fundació Emys where, among other activities, he works the education and conservation project of the European pond turtle, as well as the project of

“Can Moragues”, of production and marketing of ecological products linked to land stewardship.

At present, he is also president of the Network for the Conservation of Nature.

### Moderator of MODULE 3 - Applied health and wellness services in the forest.



## Igor Vizslai

Igor Vizslai is a policy advisor at FOREST EUROPE - Ministerial Conference on the Protection of Forests in Europe, focused on developing common forest policies in Europe. He is responsible, among other areas, for communication and outreach. He holds his master's degree in forest engineering and did his PhD. in forest economy. Previously he was working at

Technical University in Zvolen, Faculty of Forestry in Slovakia. He also hosted as visiting scientist at Joint Research Centre of European Commission in Ispra, Italy, where he was dealing with topic of Payments for Forest Ecosystem Services.

### Human health and sustainable forest management

Health and well-being benefits and other social functions of forests, such as recreation, tourism, forest education, aesthetic appreciation or spiritual experience, are today an increasingly important part of the values people derive from forests. These multitudinous societal and ecological demands and expectations put new pressures on forest resources. This requires forest managers and forest owners to search for trade-offs between maintaining timber production and the provision of other ecosystem services, such as those promoting human health and well-being. On the other hand, these might bring new opportunities to the forest sector enabling diversification, creation of new green jobs, new types of services, new value chains, new profitable investments enhancing the competitiveness of the forest sector in the coming decades.

The presentation will be focused on the summarizing the outcomes of the FOREST EUROPE Study “Human

Health and Sustainable Forest Management” which was prepared by the team of authors led by the FOREST EUROPE Expert Group on Human Health and Well-being established in the framework of the FOREST EUROPE Work Programme 2016–2020. Summing up current knowledge on health benefits of forests and integration of social aspects of forests such as recreation, tourism, human health and well-being into sustainable forest management is a main focus of the study. The study also aims to integrate human health aspects and other social values into forest management and to enhance their acknowledgement and implementation within the forest sector



## Silvia Gili i Olmeda

Holder of a degree in Biology, she also has a MA in International Cooperation Project Management, a MA in Public Engagement and Sustainable Development, and MSc degrees in Naturopathy and Alternative Medicine and in Diet and Nutrition. She has worked as coordinator for the

Hàbitats Association-Rivers Project and as Conservation Projects manager for the Natura Foundation. She currently works as a consultant in natural heritage conservation, public engagement, ecotourism and sustainability, and as public use and education coordinator for the Sèlvans network of

therapeutic forests. She is also coordinator of the postgraduate diploma in Therapeutic Forest Guiding (FUDG, University of Girona Foundation), founder member of the Sèlvans Association and co-founder of the Sèlvans Cooperative.



## Montserrat Moya i Cardona

BA in Geography and History from the University of Barcelona. She has worked for many years in the field of environmental education at Les Guilleries Environmental Education Association and as an advisor for the Catalan Ministry of Territory and Sustainability's Green Schools Programme in the province of Girona. Affiliated with the Sèlvans Association

since its creation, she has worked in involving schools in woodland conservation with the EscolaSèlvans project, and she is currently working on the dissemination and marketing of different therapeutic itineraries through the Sèlvans Cooperative. She is the lead guide for the Serra d'Heures itinerary in Sant Hilari Sacalm.

### Forest bathing as a tool for the stewardship of high ecological value forests

Forest bathing is a work methodology that becomes an essential tool for the conservation and dynamization of the territori, at the same time that it provides us with health and wellbeing at all levels. Thanks to a professional guidance throughout a network of high natural value forests, one can develop forest bathing activities from an ecotourism point of view, as well as in a long work time vision, and for certain collectives. A professionalized and trained sector becomes central on the road to

weaving these health and forest services.

In this regard, a new framework of work is presented, which, as a collaboration between an association and a work cooperative, aims to protect forests through stewardship formula with their ownership, as well as coordinately work with different local stakeholders thus promoting a local and sustainable local economy.





## Josep Maria Mallarach

He holds a PhD on Biology, a MS on Environmental Sciences and a BA on Geology. He is an independent consultant, based in Catalonia, Spain, working for several public agencies and NGOs, at international, national, and local levels. His fields of expertise include nature conservation policies, protected areas planning, management and evaluation, landscape, ecological connectivity, and strategic impact assessment. In all these areas he uses holistic approaches including natural, cultural and spiritual values.

Since 2004 he has been member of the IUCN World

Commission of Protected Areas, member of the IUCN Steering Committee of the Specialist Group on Cultural and Spiritual Values of Protected Areas, and has been joint co-ordinator of its Delos Initiative with Thymio Papayannis.

Since 2010 he has been representing the IUCN World Heritage Programme in the UNESCO Initiative of World Heritage Sites of Religious Significance, participating in several projects, conferences and workshops in Europe.

Josep-Maria is the coordinator of the Catalonia-based non-

for-profit Silene Association devoted to promoting the integration of the cultural and spiritual values into nature conservation practices ([www.silene.ngo](http://www.silene.ngo)).

He is a frequent lecturer in five universities, and is leading a Postgraduate Course on Spiritual Values and Meanings of Nature at the University of Girona since 2014. Josep-Maria authored or edited 18 books, including one on the challenges for conserving mature forests in Catalonia, and has published over two hundred articles on the topics above in international national and local media.

### Links between mature forests and spiritual health

Since 2005, the WHO has incorporated an inclusive concept about health, as a key factor that determines our quality of life, which spans the mental and spiritual health of individuals. From 2016 on the IUCN has been encouraging using protected natural areas to improve cultural and spiritual well-being, and social connection.

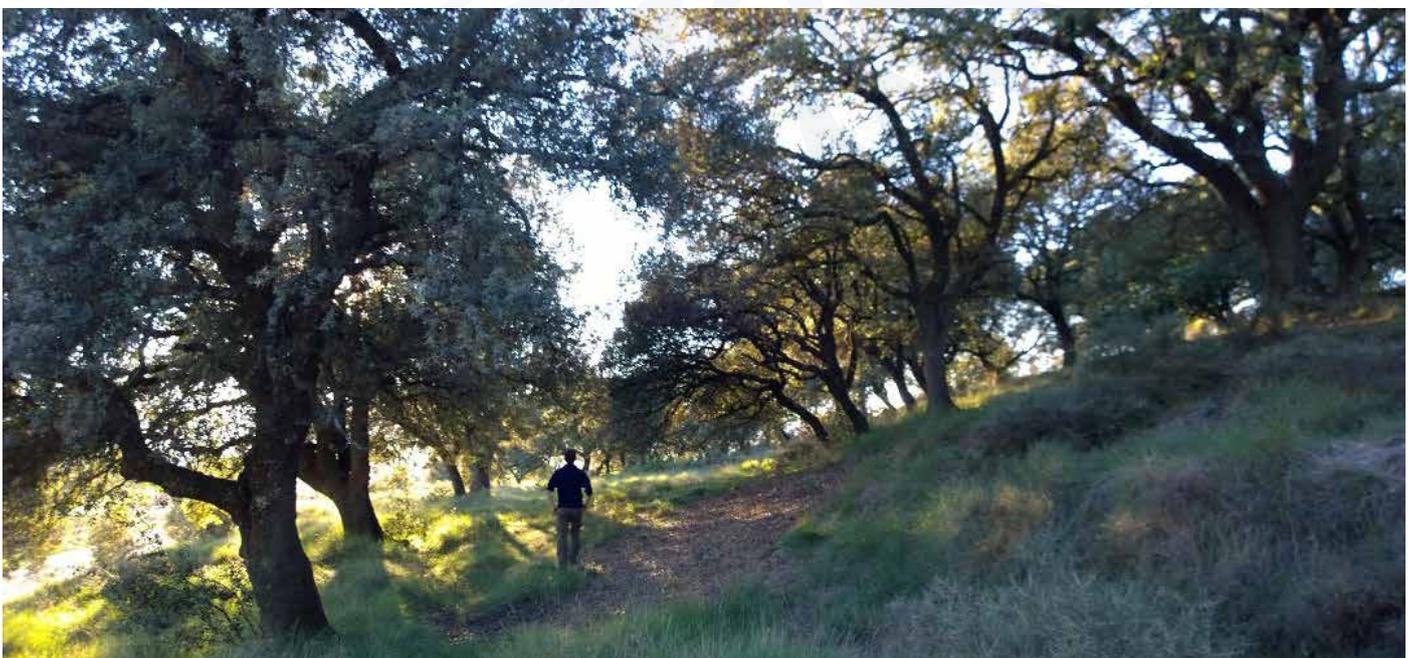
Spiritual health has returned as an important aspect to Western countries (where it had been marginalized some time by technocracy), and has become the center of scientific studies, with more than 5.000 published articles in medical reviews, many of which examine the link with nature's own health.

Spiritual health is a fundamental dimension to a comprehensive state of health and well-being, as it affects and integrates all other dimensions in life. It has been defined as a dynamic state of the human being which leaves its reflection in the quality of the relation we have in the four spheres of spiritual health: personal, communital, environmental, and

transcendental. People with a good spiritual health are happy, enjoy helping others, and have as a main life driver helping shape a better world, all reasons why we feel comfortable around them.

Since long long ago, mature and old-growth forests have been considered, by our own ancestors as well as by diverse contemporary cultures, as spaces of the utmost value, inspiration... sacred places, which whom mankind has woven an enormous diversity in cultural and spiritual links, embodied through traditional arts in countless forms.

This presentation advocates that our need to preserve old growth forests is not only legal, but also ethical and moral, because we depend on them not only for our physical health, but also psychical. It also emphasizes that an immersion in old growth forests can help maintain and recover spiritual health, if adequate attitudes are adopted.





## Xavi Buqueras

A qualified forestry engineer, his work has always been related with the holistic, integrative management and conservation of natural areas and forests. He has been involved in developing and implementing management and communication projects and measures in natural areas, specifically in species and habitat conservation, forest

management and planning, multifunctional and adaptive forestry, forest fire prevention, environmental education, land stewardship, exotic invasive plant control and ecological recovery of river habitats. He is the promoter of the Catalan catalogue of unique forests.

### Implementation of therapeutic forest itineraries in the network of natural parks of Catalonia. Example of the Poblet Natural Site of National Interest

The Catalan Network of Natural Parks is progressively implementing a line of action established in the "Natural Heritage and Biodiversity Strategy of Catalonia 2030": the promotion of the environmental service of physical, mental and spiritual health offered by natural areas, in particular, by forests.

Several initiatives are already in place in the Volcanic Zone of la Garrotxa, the High Pyrenees, the Ports and Poblet areas, among others. The implementation of therapeutic forest tracks has been included in activity planning, often in combination with Health Services located near these itineraries.

In the case of Poblet, 2016 saw the design of a therapeutic forest track with the aim of putting into practice forest bathing as a new resource for the natural area. The track follows different structures

and types of forest, from oak, to majestic pine forests, passing through holm oaks and open spaces, with the option of a short (1km) and a long (3km) track. The inclusion of resting places, together with more diffuse stretches, has signified a differential fact compared to other tracks, very valued by users.

Currently there is work in progress in terms of establishing synergies with regional public health services, in order to take advantage of this resource for health promotion.





## Susan V. Joachim

Mrs. Joachim is Australian citizen, born in Sri Lanka and a Chartered Secretary as well as an Associate, Institute of Chartered Secretaries and Administrators (ICSA) in London/UK.. She commands international professional experience in education/training, Human Resources Development/Management, Public health and policy development having worked in various capacities for ministries,

USAid, German International Cooperation as well as corporate stakeholders (e.g., Alcatel, Causal Impact, AIPC).

Mrs. Joachim is a Founding Member and the elected President of the International Nature and Forest Therapy Alliance (INFTA). She is an INFTA-Certified and Accredited Forest Therapy Guide, Mentor and Life Coach and advocate for the women's empowerment. Mrs. Joachim is managing one

of the most popular global Forest Therapy programs for urban populations at the Royal Botanic Gardens in Melbourne.

### Moderator of MODULE 4 - Applied health and wellness services in the forest



## Christian Naderer

From 1989 to 1991 he exercised as press officer at the Salzburg Federal State Parliament, combining work with studies in Archeology & Ancient History (1986-1996) at the University of Salzburg. From 1991 until 2004 he was creative in several advertising agencies, after which he started his own agency „Naderer Communication“, spanning South Tyrol and Upper

Austria. At the same time, since 2014 he is chairman to the Tourism Association Mühlviertler Kernland, since 2016 member of the Upper Austrian Strategy Board of Tourism, and since 2019 president of the Austrian Economic Chamber – Region of Freistadt.

### “Forest atmosphere bathing” in the region of Mühlviertel - From theory to practice.

The north of Upper Austria was covered with woods until the medieval age. Today, the region around Freistadt remembers this valuable resource and values it for a gentle and sustainable tourism. The project is called “Waldluftbaden” – “forest atmosphere bathing”. The basis is the scientific study of Doctor Martin Spinka. Twenty persons for one year spent four hours a week in the forests in the region. Improvements to the heart, the vegetative nervous system and sleeping behavior are documented. Twelve local communities in the region

were surveyed and certified as “forest atmosphere bathing communities.” A qualification program was started with about 50 graduates. These so-called “Waldluftbademeister” give guests an individual access to the forest. This September, a circular route of 170 kilometers through the twelve communities was opened and another 33 short local trails were marked. Marketing and advertising activities were launched in leading media in Austria and neighboring countries.



## Moisés Hernández

He lives in New York but his heart is in the forest where he grew up, in Honduras. Moisés, his parents and 14 siblings have protected a forest on the banks of the Tinto Negro river for the last 4 decades. They are currently developing a model estate, called the Rafaelés

Eden, based on their parents' vision and environmental values. To minimise environmental impact on their territory, they are implementing environment-friendly agroforestry, silvo-pastoral, bio-construction and permaculture practices. They also plan to create a holistic

centre and an eco-school. Their intention is to share their knowledge of the forest to contribute to the planet's wellbeing.

### Ecotourism and wellbeing in the integral forest property of "El Edén de los Rafaelés" in Honduras

In the Mayan Cosmo vision, Ceiba is the most sacred tree, representing life. The tree is the link between the visible and invisible. Its branches caress the heart of the sky, and its roots the heart of the earth. This knowledge is what inspired love, strength and vision to the Hernandez Lope to care and preserve 450 hectares of forest for over four decades, in Honduras.

Nowadays the aim of the family is to create a platform that enables: preserve the original forest, reforest the rest of the land that makes out approximately 600 ha, create a holistic center, and build green lodges for ecotourism (using bioconstruction methods). Also, establish an education center that helps create a consciousness of harmony between humans and nature. In order to achieve this, different plots are being established, for permaculture, both silvopastoral as well as based on agroforestry, as ecosystem-friendly approaches.

Holistic services will be offered, that aim to contribute to the development of the human self. There will be different alternatives for wellbeing as meditation, yoga, forest walks, recognition and teachings about medicinal plants, and ecological food. Also, the celebration of the ancestral ceremonies of cacao, fire, or temazcal, in order to motivate visitors to live a healthier life, to find oneself, and grow love towards mother Earth.

Forest is a source of life that helps us equilibrate our being in harmony, balance and peace. Preserving still standing forests is our responsibility both to create wellbeing nowadays, as well as for future generations.



## Eugène Bamouni

Eugène Bamouni was born in Réo, within one of the families of the "gurunsi" ethnicity which inhabits this central region of Burkina Faso, where he exercises as teacher and director of public schools since 1984. He is an environmental activist and broadcaster.

He promotes adult training (women, people with blindness,

teenagers, etc.). In 1983 he starts the association "Club des amis de la Nature", to promote environmental awareness raising and outreach, and starts to collaborate with the NGO Défi Belgique Afrique, putting in motion the first "Tree Celebration" in the country. He has organized workshops about development cooperation and

awareness raising on nature in public schools in France, Belgium, Germany and Andorra, in collaboration with the NGO "Dalmates sense Fronteres".

## Preservation and restoration of the forest area in Sandié, in Burkina Faso

In African culture, there exists a traditional and ancestral link between human communities, and the trees of the forest, which has been transmitted from generation to generation.

Each town has lived the conservation of forests as a "must", motivated by multiple virtues, which have managed to regenerate different species, useful both for nutrition as well as for general health.

Some products and medicines come from centuries-old medicinal trees and plants related to the forest of the region of Sanguié (*Parkia biglobosa*, Baobab, *Vitellaria paradoxa*, la Kaya senegalensis, and others). They are trees and bushes which contain substances to heal, and heal specific diseases like diarrhoea, malaria, anaemia, calcium shortage, etc.

The forest degraded due to, between other motives, an excessive cutting of green firewood (starting in the 1980's), bushfires, a shortage of rainfall, adverse effects of climate change, and the reduction (and even loss) of

certain habitats due to human pressures on specific species. With this project, one tries to create the space to (re-)link the forest and the people, through medicinal trees, bushes, and plants.

An 80% of the community relies more on traditional medicine, than on modern approaches. This is why this important percentage of the population prefers to primarily consult professionals of traditional healthcare, than attend a more modern health centre. With the project, medicinal plants will be planted in a protected area of 11 hectare, with the aim to recreate a big natural pharmacy.

In addition to the regulation of the harvest, one promotes the growing of medicinal plants, trying to guarantee the availability and quality of raw prime materials. Always taking it as a priority to train the different stakeholders in areas of traditional pharmacopoeia.



## Amos Clifford

Amos Clifford is the founder of the Association of Nature and Forest Therapy Guides and Programs and author of the best selling *Your Guide to Forest Bathing* (Conari Press 2018). He began his career as a wilderness guide in 1973. A student of Buddhist philosophy for over 20 years, Amos founded Sky Creek Dharma Center in Chico, California, where he emphasized the importance of meditation

practice in wild places. Amos is also widely known for his work in restorative justice. He is founder of the Center for Restorative Process, where he has led the inquiry into how the principles of restorative justice can inform ways to heal the broken relationships between humans and the more-than-human world of nature. Amos holds a BS in Organization Development and an MA in Counseling from

the University of San Francisco. Amos has been the primary developer of ANFT's acclaimed training programs.

### Can Forest Therapy help transform consciousness in response to global climate catastrophe?

While most forest therapy programs are focused on public health benefits for humans, with a minority also concerned with health of forests, ANFT has developed an approach aimed at transformation of consciousness to enable humans to remember and reestablish our inherent relationships with other-than-human beings, while also benefitting from personal and public health effects. Forest environments are an ideal place to accomplish this. To a casual observer, the ANFT approach to forest therapy looks procedurally much like other approaches. But there are distinct differences that arise from their understanding of the interaction of forest sentience with human sentience. This presentation will review the history of ANFT and its growth globally, driven by an urgent concern for planetary well-being in the face of global, human-caused crisis. It will summarize

the theoretical influences incorporated into the ANFT "standard sequence" of guided forest therapy walks. It will discuss the roles of images and archetypes encountered on forest therapy walks and embodied in the guide and participants and explore how these archetypes support experiencing of modes of consciousness inherently available to human beings but largely ignored or suppressed. The presentation will conclude with the proposal that forest therapy may have a critically important role in guiding humanity through the coming decades.





## Ferran Campillo i López, MD

Dr. Ferran Campillo i López, MD is a pediatrician specialized in pediatric environmental health. He graduated in Medicine at the Rovira i Virgili University (2011), and he obtained the title of specialist in Pediatrics via MIR at the La Paz University Hospital in Madrid (2016). He specialized in environmental pediatrics after a training program at the Pediatric Environmental Health Specialty Unit of the Virgen de

la Arrixaca University Clinical Hospital in Murcia, the only unit of these characteristics in the European continent until the launch of the Garrotxa Pediatric Environmental Health Specialty (PEHSU Garrotxa) in 2016, within the Garrotxa Region Pediatric Team of the Hospital d'Olot and Comarcal de la Garrotxa (Catalonia). He currently combines his work at PEHSU Garrotxa with primary care

pediatrics at CAP Garrotxa, Olot. He is a founding member of the Environmental Health Committee of the Spanish Association of Pediatrics. He has published several articles and communications in national and international journals and conferences related to different aspects of pediatric environmental health.

### Integrating forests into clinical practice: experiences in maternal and child health.

In the last decades the importance of the environment where we live in human and planetary well-being has become clear. The integration of the environment into clinical practice is especially necessary for maternal and child health, given the vulnerability to the different environmental exposures during pregnancy, childhood and adolescence and their consequences in pathologies and quality of life during adulthood. At the beginning of the 21st century, children and adolescents spend most of their time indoors, they usually travel by car or motorcycle to go to school or high school and show an increasingly intense exposure to screens and electronic devices. In a context of sedentary lifestyle and an overweight and obesity epidemic that affects one in three children in our continent, the interest

in studying the impact of nature contact (and lack of) on pediatric health has increased progressively. Although the evidence on the benefits in different aspects of children's health is still limited, there are different initiatives that have sought not only to study but also to stimulate and promote nature contact in these stages, and more particularly in forests. The environmental screening of pregnancy ("Green Page"), forests for health or healthy forest itineraries in hospital settings are some of the experiences and proposals to integrate the forest into the health of children and adolescents again.





## Gisela Virginia Campos Angeles

She is an agronomist specialized in phytotechniques, and holds a master in agricultural productivity sciences by the Instituto Tecnológico Agropecuario of Oaxaca. She obtained her Doctorate in Forest Sciences at the Colegio Posgraduado de Montecillo, in Mexico. She is head professor

and researcher of the Studies and Posgraduate Division at the Instituto Tecnológico del Valle de Oaxaca. She leads the academic body of "Holistic Study of Natural Resources", where she researches around sustainable use of vegetable resources, emphasizing their ecophysiological behaviour in

the face of climate change. She has directed many graduate and posgraduate thesis. She is former president of the National Academy of Environmental Sciences of Mexico, and member of the Mexican National System of Researchers level I.

### Our Old Ones from the water

In Mexico, the *Taxodium mucronatum*, the national tree, grows at the river margins, from north to south of Central America. It is known as the "Sabino" or "Ahuehuete" which, reflecting on its name origin in the náhuatl language, means "old one of the water". It characterizes for a slow growth rate, and or being a ceremonial tree for pre-hispanic cultures. Historically there has been a link between it, culture, and important historical events. Despite this fact, there is only one of them of which one holds historical references. In the town of Santa María El Tule in Oaxaca, Mexico, one can find an ahuehuete (*Taxodium mucronatum* Ten.), known as "tree of the Tule". For its age and dimensions, this is a truly unique tree in the world. It holds the greatest circumference registered in the world, included in the World Guinness records for its dimensions. It measures approximately 42 metres in height, has a circumference of 64,77 metres, and a diameter of 16 metres approximately. The natural lifespan of the species (more than 1.000 years) brings with it

that ahuehuetes are exposed to drastic changes in their habitat, during their life cycle. This particular circumstance is present with the Tule tree. It is common that the modification of the environment modifies the tree's physiological processes, be it as adaptive mechanisms to the new conditions imposed by the environment, to be more efficient in the use of resources, or to counteract the unfavourable factors that may have accentuated. The physiological processes of the Tule tree are the result of more than 1.000 years of interaction with its environment, during which it withstood different periods and levels of stress. Because of this interaction process, the tree may have modified its growth pattern and development, modulating the length, speed and magnitude of its vegetative growth periods. The study of the tree is enabling having an integral vision of its physical condition, and so be able to detect any loss in vigour which may pose a threat to its life and stay on site, as well as the adaptive mechanisms in terms of physiology it may be generating to deal with climate change.



## Heike Freire

Teacher, counsellor and international speaker, Heike has been giving courses, conferences and workshops around the world for 25 years. She has authored two books: "Educar en verde. Ideas para acercar a niños y niñas a la naturaleza" (Graó, 2011) ("Educating in green. Ideas to approach boys and girls to nature), translated into six

languages, and ¡Estate quieto y atiende!: Ambientes más saludables para prevenir los trastornos infantiles" ("Sit still and listen! Healthy environments to prevent child disorders) (Herder, 2017). Nowadays she is about to present a new title: "Patios vivos para renaturalizar la escuela" ("Living playgrounds to renaturalize school" (Octaedro). In collaboration

with Florida Universitaria – University of Valencia, she leads the Superior Grade on Green Pedagogy, a postgraduate that trains professionals for human development, in close contact with nature.

### Dancing with the trees

Since the beginning of times, children that live a healthy life, love to climb on trees. Even though many adults see this wanting just as an opportunity to do exercise and develop their motor skills, what is happening there goes way beyond that.

A tree is a living space, ever changing, mysterious, inhabited by a diversity of beings, which attracts all their attention, wakes up their emotions, and challenges their capacity to get along with other species. Sometimes, this relation materializes in a sort of meditative dance that, through trance, seems to link them with that original and innate affinity between the human being and the forest: the activity of an archaic memory that binds us, inevitably, to those silent masters.

## A new resource for forest owners

### Elisabeth Vila d'Abadal i Castilla



#### Owner of the forest estate of La Villa de Buscarons (Vidrà, Osona)

The estate of la Villa de Buscarons is located next to the Curull mountain ridge near the Puigsacalm mountain, dominated by a mountain vegetation of beech and ash. The Torrenteres river gives name to a therapeutical forest track with a very light slope, where the presence of the element water gives it a distinctive and valuable asset.

The estate is away from big urbanizations, which helps enormously that silence and atmosphere become perfect for forest bathing. Also because of these circumstances, the main focus of this itinerari is turistic. This forest area has the special circumstance that it's totally fenced, which presents us a very exclusive and private, ideal for guided forest bathing activities.

### Josep Maria Pons i Vilahur



#### Co-owner of the forest estate of Can Fornaca (Caldes de Malavella, Selva)

This estate is situated in the outskirts of Caldes de Malavella, a town characterized for its spa activity, and archeological sites of great interest. The itinerary with therapeutical functionality of Can Fornaca characterizes for its perfect accessibility in a completely flat terrain, as well

as a tree composition typical of the la Selva countryside, dominated by pubescent oak, cork oak, stone pine and evergreen oak.

The ownership and Sèlvans have an active stewardship agreement which reinforces the preservation of the most interesting areas of the estate, at the same time giving life to activities realted to forest and

health. Its proximity and good connection with the Barcelona metropolitan area gives it a mainly touristic vocation, although also a social and sanitary.

### Conxita Esteba i Bech de Careda



#### Owner of the forest estate of Requesens (La Jonquera, Alt Empordà)

The estate, wich spans more tan 2.300 hectare, is located inside the Paraje Natural de Interés Nacional de la Albera (Natural site of National Interest of the Albera), hosts the therapeutical forest track of Requesens. It winds around the majestic castle which gives name to the estate, and consists of a circular route with good accessibility, passing through

typical Mediterranean forests of pubescent oak, cork oak and evergreen oak.

The ownership and Sèlvans have an active stewardship agreement which enables this activity, in total concordance with other activities in the area like: extensive cattle ranching, rural accomodation, guided visits to the castle, etc.

The possibilities of the area, its tranquility, and its closeness to France, gives this track a completely ecotouristic orientation.









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