

Deirdre Makepeace reports from the 41st IFEAT conference held 29 September – 3 October 2019 in Nusa Dua, Bali



IFEAT 2019 delegates arriving from all over the world to the resort of Nusa Dua on the island of Bali, were greeted with the warm floral scents and rich culture of this Indonesian province. This small island has a population of over 4 million and so the lively and colourful Balinese culture made a tremendous impression. Bali's hazy skyline is pierced with the distinctive profile of volcanic mountains - a reminder that Bali is on the 'ring of fire' and the trade that delegates have come to discuss, has been impacted throughout history by volcanic activity. In 2001 economist Jim O'Neill coined the term BRIC referring to the large and growing economies of Brazil, Russia, India and China but from the outset it was suggested that the acronym should have been BRIIC to include Indonesia. It comprises 17,000 islands and, with a population of over 269 million, it is the world's 4th most populous country. Despite this, it still has vast areas of wilderness, rich natural resources and a thriving agricultural sector, all combining to inspire the conference title 'Naturals of Asia'.

ICATS is well known throughout the essential oils and aroma community

but this major global conference is an opportunity to meet new potential students or their employers and hear the top challenges they face in terms of continuing professional development.

The Bali Conference Co-chairs, Ravi Sanganerier and Stephen Pisano, welcomed delegates to the conference, announcing that, with 1400 delegates, it had the highest attendance ever. There was some poignancy to this long overdue visit to Bali as the last time the conference was scheduled for this location it was cancelled after the tragic resort bombing in 1998. It was pleasing to see that this beautiful region has not only recovered well but has considerable ambitions for tourism and conference growth.

Ravi Sanganerier, MD of Ultra International and conference co-chair introduced the topic of Naturals from Indonesia. The country is both a major global supplier and market for essential oils. It is the world's second most biodiverse country after Brazil and, with a stable democracy and rising GDP, the outlook for Indonesia is positive. Top products include vanilla, clove oils, patchouli, citronella

and nutmeg. 90% of the world's global trade in patchouli originates in Indonesia and the majority is grown by smallholders; 50,000 livelihoods depend on this crop. Production of patchouli has been negatively impacted by drought then heavy rain, disease and growers shifting to alternative crops and the combination of these factors has resulted in price volatility.

The majority of the country's citronella is grown for the domestic market, and Indonesia is close to becoming the world's top producer, beating China to the top spot. 80% of global nutmeg production comes from Indonesia, however, there have been issues with disease and growing was impacted by the 2004 Tsunami. The 2018 earthquakes that blighted parts of this vast country had a negative impact on vanilla production with efforts continuing to increase both the quality and volume of production. Other key crops are turpentine oil, tapped from pinus merkasil, sandalwood and black pepper. Sanganerier then turned to summarising some of the micro and macro challenges that the industry faces and these include natural

Left: Colourful Balinese entertainment at the IFEAT conference

Below: Delegates from across Indonesia on the conference stage, wearing their distinctive batik shirts and sarongs



hazards of tsunami, earthquakes, volcanic activity, cyclones, global warming and the effects of El Nino and La Nina. Many islands could be under water within the next 2 decades and in 2019 the Prime Minister announced plans to move the administrative capital from the climate threatened city of Jakarta to a new site on Borneo. Other country specific issues include population pressures, deforestation resulting from both Illegal and legal logging, exchange rate fluctuations and low production efficiency with as a result of smallholders' lack of access to technology and market information and long and complex supply chains. The island of Sulawesi featured in many of the conference sessions.

Sulawesi is an increasingly significant production area. For example in the essential oils sector, Sulawesi is responsible for 60% of Indonesia's clove production. Labour costs are low and the land is fertile but there are issues around the lack of infrastructure and significant environmental implications. Producers are working closely with corporate sustainability programmes that aim to increase quality and production efficiency as well as

ensuring the welfare of all those in the value chain.

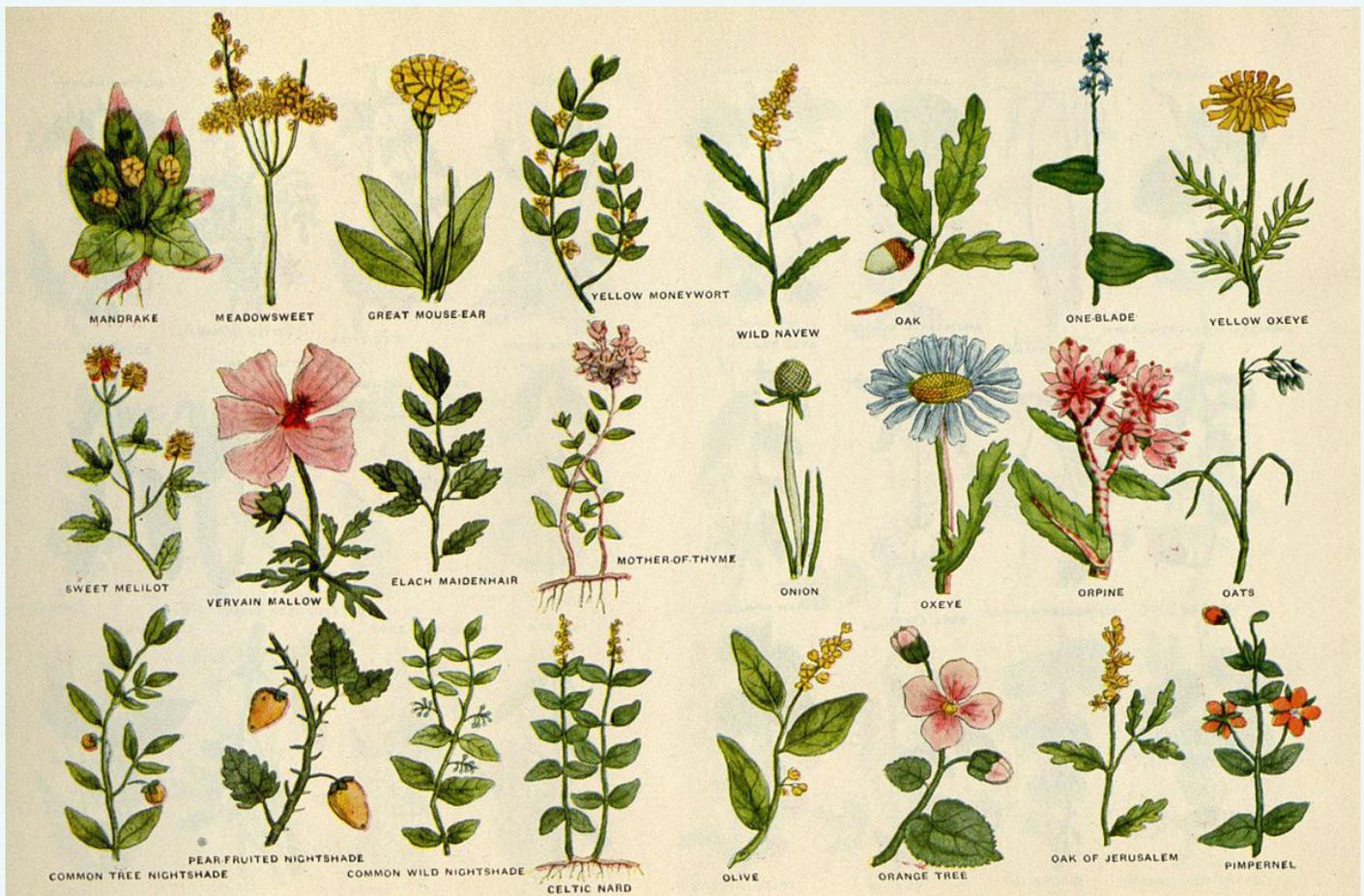
Despite the many challenges, Sanganeria emphasised Indonesia's biodiversity, strong economic growth, political stability, plentiful labour resources and an expanding domestic market; all factors that combine to make it a country that offers many opportunities for the future.

Sanganeria's broad introduction to the Indonesian market place was aptly followed by a specific corporate example of sustainability in vanilla production by Oliver Bernard, owner of Tripper Group who's strapline is 'we add value at origin'. Bernard emphasised the importance of relationships with growers who receive very little government support or training to tackle quality and production issues. Tripper work through a short supply chain, building those relationships and offering security through e.g. price guarantees.

Natalia Pandjaitan, Senior Manager Haldin Natural, focused on a comparison of the traditional uses of citronella oils as a massage oil, muscle/joint ache oil and baby oil, with the very different international uses such as in insect repellents, perfumes

and aroma diffusers. Her research has shown the extent to which the components of oils vary across different growing areas of Indonesia.

Following a welcome from IFEAT President, Alastair Hitchin, Chairman Antonella Corleone presented her review of the year, referring to the continued growth of IFEAT membership, from 43 when the federation founded in 1977 to today's 637 members from 70 countries. These members benefit from the organisation's key areas of activity which include scientific, regulatory and socio-economic issues, education and communication throughout the industry. One example of this activity is the production of socio-economic reports quantifying the impacts of specific naturals including patchouli, citronella and frankincense with others to follow. Details of IFEAT's education activities were presented and this included ICATS student Harlem Sobrino Paredes receiving the IFEAT Best Student Medal, the first such student to follow the flavour pathway through the qualification.



Above: Culpepper's complete Herbal of 1653. Credit: By Culpeper, Nicholas - <https://www.biodiversitylibrary.org/pageimage/4747049>, Public Domain, <https://commons.wikimedia.org/w/index.php?curid=44584567>

Above Right: IFEAT medal-winner Petrus Arifin addresses the conference

Far Right: Scent stations in the IFEAT exhibition. Credit IFEAT

Frank Mara, Senior Vice President of Berje, spoke about 'Frank's World' in a delightfully illustrated history of essential oil starting with their use in reign of Huang Ti, 2,000 BC. In the west, records show that oils were being distilled in 980AD and they featured in Culpeppers 1653 'The Compete Herbal'. Spices and oils became an integral part of the trade carried along the Silk Road and Phoenicians spread trade further around the Mediterranean by boat. In 1928 Frenchman Rene-Maurice Gattefosse coined the phrase 'aroma therapy'.

Mara has personally experienced 46 years of modern day essential oils trade and he invited the audience to consider their presence during the many industry-shaping events during those years: the 2004 tsunami in which many essential oil companies were lost; the Haiti trade embargo of the 1990s; the 1980 eruption of Mount St. Helens in USA and the ash-cloud impact on peppermint production; the fuel crisis of 1973. Industry professionals that had experienced all of these events were recognised for their wisdom and insight – offering incredible value to the industry in a changing world.

Nicky Tran, Marketing Manager of Tech-Vina JSC moved the focus to Vietnam, a country of 96 million people that has exported essential oils since the 1980s. Vietnam's varied regions of coast, mountain and river delta offer good growing conditions for the production of a wide range of essential oils with China as a key market. The top two exports are cassia oil and basil oil. There are two harvesting seasons of the cinnamomum cassia, an evergreen tree with 50% of the oil coming from the bark, the remainder from leaves and twigs. The oil is a popular Chinese medicine where it is said to offer a wide range of health benefits.

Geoffrey Henrotte of Hinoki Lab Co. then took the 'Naturals of Asia' journey to Japan which used to be a major exporter of essential oils but production has shifted more towards chemical production. Henrotte focused on a new product being introduced, Hinoki. The Hinoki cypress, *Chamaecyparis obtuse*, known as 'the tree of the sun' has 'near threatened' status and so sustainable harvesting is key. It has a relaxing fragrance, used in the Japanese concept of 'forest bathing' and



has a number of benefits including antibacterial and anti-inflammatory uses. There are opportunities to build on demand as the awareness of Japanese culture is shared globally through the Japan Olympics in 2020 and the World Expo in 2025.

Dr Prabodh Satyal is the Chief Scientific Officer at Nepal's Aromatic Plant Research Center. Since ancient times the Nepalese have had a culture of using plants for their medicinal properties as well as for cooking and religious rituals. Ayurveda, homeopathy and Chinese and Tibetan medicine have all influenced the cultivation and production of essential oils with more than 100 aromatic medicinal plants grown including Himalayan fir needle, sweet calamus and black cardamom. Ethnopharmacology reveals indigenous populations using plants since ancient times for welfare, healthcare and cooking but it is only since the 1980s that essential oils have been commercially produced.

Zieger Lin Zhigang of the Xiamen Doincom Chemical Company took delegates away from the 'naturals' theme to explore chemical production trends. China's aroma chemical

sector has experienced significant growth in the last two decades. There are many chemical aromas for which China has more than 20% of the global market and this includes a number for which the market share is more than 50%: Gum turpentine, Salicylic acid, Benzaldehyde, dimethyl malonate, furfural, acrylic acid, pyrocatechol, brassylic acid, acrolein, OTBP/PTBP and salicylaldehyde. 20 years ago the country was a follower in manufacturing but it is now considered to be an innovator in production technologies, following increasingly stringent environmental protection measures. The capital cost of solutions has changed the business model and 'cheap is no longer the key driver for doing business in China'.

The final conference presentations looked at products and markets in Australia and New Zealand. Dorene Petersen, President of the American College of Healthcare Sciences, started her presentation with the rise of 'superbugs'; bugs that are increasingly multi-drug resistant. Research was quoted stating that by 2050, deaths from antimicrobial resistant infections will exceed deaths from cancer. Petersen proposed that

the solution could lie with protective cocktails of antibiotics and essential oils with a number of oils having been identified as having biological potential including Blue cypress, tea tree and Rosalina oil.

Ashley Dowell, Technical Secretary of the Essential Oil Producers Association of Australia, presented some highlights from the many academic papers published by researchers over the decades, providing a foundation of robust data to support the best methods of cultivation, harvesting and production for a range of oils including sandalwood but also 'boutique' crops such as Australian Rosewood oil, which produces guaiazulene with a rich sapphire blue colour, and Huon Pine Oil.

Andrew Brown, Head of Research & Development and Regulatory, Quintis Australia described use of *Santalum album*, a small tropical hemi-parasitic tree, depending partially on the roots of other trees to thrive. As a vulnerable species (CITES), production growth is dependent on plantations where the trees are grown in alternate rows with host species in a complex and technical host relationship. There are



Top: exhibitors from Asia and beyond meet delegates. *Credit IFEAT*

Top Right: Marianne Martin leading the IFEAT fragrance workshop

Above: ICATS Sharon Shand with winning student Harlem Paredes Sobrina and IFEAT president Alistair Hitchin

Above Right: delegates visiting the ICATS stand. *Credit IFEAT*

15,000 ha. of plantations in Northern Australia – 5.1million trees and it is the aromatic heartwood of the tree that is harvested to make sandalwood oil. Sandalwood has been used for 4,000 years with fans through history including Cleopatra and Queen Elizabeth I. Quintis, recognising the wild tree’s ‘vulnerable’ status, runs a Trustmark programme to ensure provenance as well as quality.

The sandalwood theme continued with a fascinating presentation from Ron Mulder, Manager of Dutjahn Sandalwood Oils which represents a union of the traditional indigenous custodians with new age production methods. Australia’s ancient forests produce the best quality oil in the world and the country’s indigenous people have used sandalwood for medicinal healing, anti-inflammatory properties and fragrant smoking. *Santalum spicatum* is a very drought-

tolerant wild species that requires no irrigation and the Dutjahn Company (Dutjahn being the Aborigine name for the Sandalwood tree) now harvest from a combination of wild trees and plantations 6 million trees. The company has won numerous awards for sustainability, collaboration, export and innovation and in 2019 was a winner of the United Nations Development Programme’s Equator Prize. By embracing sustainable harvesting, valorizing traditional knowledge and cultural practices, and ensuring socioeconomic independence for the Kutkabubba aboriginal community, Dutjahn is providing a powerful new economic model for sustainable development.

As in previous years, ICATS supported the delivery of the Fragrance Workshop hosted by Marianne Martin, offering delegates a hands-on fragrance creation course.

IFEAT has recently announced that the next conference, in Berlin, has been rescheduled to 2021.