TOGETHER

ECOTECH'S MAGAZINE ABOUT ENVIRONMENTAL MONITORING

2017 Issue 2

Ecotech
ACOEM Group

01dB
ACOEM Group

Global Demand for Integrated Noise & Air Quality Pollution Monitoring

Main pic (L to R): Stéphane Bloquet, 01dB Business Unit Director is welcomed to Australia by Nicholas Dal Sasso, ECOTECH Managing Director.

Cover pic (R to L): On 26 April 2017, Nicholas Dal Sasso, ECOTECH Managing Director and Fabien Condemine, ACOEM CEO planted a lemon-scented gum tree (Eucalyptus citriodora) to celebrate the merger of ECOTECH and ACOEM Group.

Clients around the world are demanding simpler, more efficient pollution monitoring solutions that provide insights to make better decisions sooner. 01dB and ECOTECH, brands within the ENVIRONMENT Business Unit of ACOEM Group, have joined forces to provide the first global integrated offering of products and services across noise, vibration, air, dust and water pollution monitoring.

There's an age-old adage, "where there's smoke there's fire". And when it comes to noise, vibration and air pollution, this adage is just as true whether it's traffic inside a major city; operations within a construction site; or transportation and logistics at airports and seaports — where there's noise and vibration pollution, there's almost always air and dust pollution as well.

Despite this coexistence, in the past, clients have needed to employ a variety of suppliers, software and hardware to meet noise, vibration and air pollution standards and regulations.

There has been no one single supplier helping to simplify their monitoring needs. Until now.

Stéphane Bloquet is the Business Unit Director of 01dB (pronounced “zero-one-dee-bee”). 01dB hold contracts for monitoring noise and vibration pollution for cities, airports and construction sites across the world. In recent times, Stéphane has received an increasing number of requests from noise monitoring clients asking whether 01dB can also manage their air and dust monitoring requirements.

“Clients are searching for a single source solution. They don’t want to waste time managing multiple devices, or navigating various software products. They want insights so they can make fast, informed decisions,” said Stéphane.

It’s this demand for a simple solution that has resulted in 01dB and ECOTECH developing a unique global offering to simplify clients’ lives, with all their monitoring needs able

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> “Clients are searching for a single source solution. They don’t want to waste time managing multiple devices, or navigating various software products. They want insights so they can make fast, informed decisions.”

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to be met with one partner, within one product and service ecosystem.

Innovation to make life easier

01dB and ECOTECH have begun to design, build and deliver new solutions together that will be simple and easy to use – merging a combined 70+ years of knowledge and experience across noise, vibration, air and dust pollution monitoring.

"Our immediate focus is on merging the best of our technologies, across both hardware and software. For example, simply being able to see reporting of all pollution types on one dashboard would be a huge advantage to many of our clients," said Stéphane.

Both 01dB and ECOTECH have a track record of innovation that delivers great value to the customer. Stéphane explains, "We share the belief that our goal is to create solutions that simplify our clients' work, to help them be more productive and more effective."

In April, the leadership team of ACOEM, 01dB and ECOTECH gathered in Melbourne to further develop the integrated offering and share expertise across the newly formed global team.

Nicholas Dal Sasso, ECOTECH Managing Director, warmly welcomed the new team members and the opportunity to develop the integrated offering together. "We have forged a shared vision of how we can improve our client's monitoring capability. Together 01dB and ECOTECH will be better placed than ever to help our clients satisfy their regulatory and voluntary environmental monitoring needs."

Global and local expertise

With 01dB headquartered in Europe and ECOTECH based in Australia, India and France, the integrated offering of 01dB and ECOTECH is truly global. Both companies recognise it's the local "on-the-ground" knowledge and strong customer relationships that are critical to delivering great customer experiences.

> "With different but complementary product and service offerings, 01dB and ECOTECH have the opportunity to deliver an integrated single offering to new and established clients."

"We know how important it is to have the right expertise in each of our local regions. In Europe, 01dB will work with ECOTECH to train an air quality monitoring team. This will ensure we can meet the local needs of our clients," said Stéphane.

A shared customer-focussed approach

With announcement of the merger between ACOEM Group and ECOTECH in February 2017, 01dB and ECOTECH also became stablemates in the ENVIRONMENT Business Unit of ACOEM Group. With different but complementary product and service offerings, 01dB and ECOTECH have the opportunity to deliver an integrated single offering to new and established clients.

"Culture is king in any organisation and from the very beginning it became evident that despite operating on different sides of the world, 01dB and ECOTECH had a lot in common when it came to culture. We're both very committed to helping solve our customer's problems, and we're both very proud to be helping our customers improve the environment for communities across the world," said Stéphane.

Meeting client's needs

"Clients want to anticipate problems, to have relevant information which helps them to communicate with publics and other stakeholders, they want to make evidence-based planning decisions. Most of all, they want to be able achieve all of this in a timely fashion and with ease. Together, 01dB and ECOTECH is uniquely placed to help achieve this," summarised Stéphane.

Learn about 01dB at www.01dB.com

Pic top: The FUSION Smart Noise and Vibration Analyser by 01dB. FUSION shares its technology with DUO Smart Noise Monitor and CUBE Smart Noise Monitoring Station; together these 01dB instruments create a complete solution for any noise and vibration monitoring requirement.

Pic above: Clients across the globe can now access a single source solution for all their noise and air quality environmental monitoring needs. The ECOTECH range of Serinus® gas analysers has been designed using ECOTECH experience and knowledge gained from operating large air quality monitoring networks for more than 40 years.

European Distributor Training at ACOEM Global HQ in France

> “[Training gives] participants hands-on experience trouble-shooting simulated activities using ECOTECH gas analysers and software.”

Every year ECOTECH runs training events for ECOTECH distributors in the Americas, Asia, Europe and the Middle East. In May 2017, ECOTECH held the European training event at the ACOEM Group’s headquarters in Lyon, France.

The three-day training event is tailored to the needs of ECOTECH distributors, customer technicians and field service staff and delivered by ECOTECH’s Senior Technical Specialist Rhys Evans. The training is a combination of theoretical and practical sessions, giving participants hands-on experience trouble-shooting simulated activities using ECOTECH gas analysers and software.

Training attendees included technical and support staff from major ECOTECH European distributors including ECM Austria, ECM Slovakia, ECM Ukraine, Matt Monitors, Sartec, Envilyse, European Tech Serv (ETS) Belgium and Techno Instruments.

Building knowledge, networks and synergies

In addition to ECOTECH instrumentation training, the European participants had the opportunity to also learn about noise and vibration monitoring products from 01dB through an informative presentation by Stéphane Bloquet, 01dB Business Unit Director (pictured far left).

With announcement of the merger between ACOEM Group and ECOTECH in February 2017, ECOTECH and 01dB became stablemates in the newly formed ENVIRONMENT Business Unit of the ACOEM Group. Different but complementary product and service offerings from 01dB and ECOTECH empower each company and their respective distributors to deliver an integrated single offering for noise and environmental monitoring to new and existing clients.

"Working together creates synergies for our products and networks," said Stéphane. "It was fantastic to show that this merger between ECOTECH and ACOEM makes sense. I also had the opportunity to spend time with Rhys and get to know him on both a professional and personal level. Moments like these are important for the future 01dB and ECOTECH we want to build together."

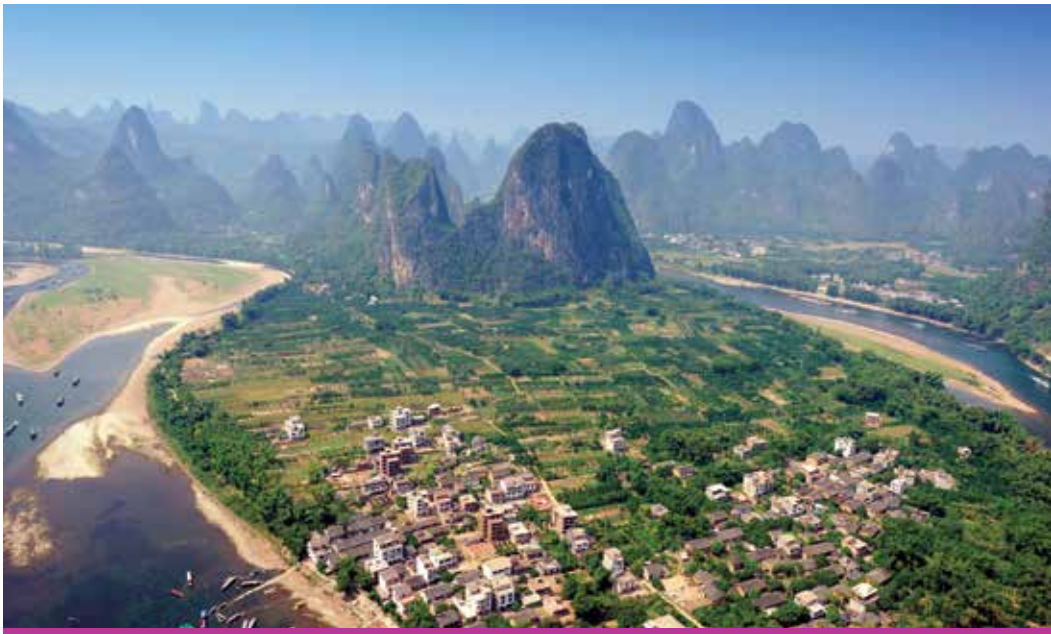
With dozens of instruments to service for their clientele, it's essential that distributors stay up to date with ECOTECH technological changes and product developments. Focussing on core product lines, these training sessions are an invaluable tool for consolidating international relationships and providing ongoing support to ECOTECH's distribution partners in Europe and around the world.

Training participant Steven Lambrecht, Service Engineer from ETS NV, Belgium had this to say after three days training, "Rhys did a great job and now it's time for me to get my hands dirty!"

For more information about ECOTECH training events, please contact Rhys Evans at rhys.evans@ecotech.com

Main pic: Rhys Evans, ECOTECH Senior Technical Specialist (standing third from left) delivered annual training to ECOTECH European distributors at ACOEM's headquarters in Lyon, France in May.

Pic above: ECOTECH distributors were given a combination of theoretical and practical training sessions over three days, providing technicians and support staff hands-on experience trouble-shooting simulated activities using ECOTECH Serinus® gas analysers and software.



Working Together Towards a Clear Future in China

“ECOTECH has played a significant role in ambient air monitoring in China since it went into partnership with Hebei Sailhero.”

ECOTECH’s commitment to working closely with China to provide sustainable solutions for air monitoring extends far beyond its business activities. For Managing Director, Nicholas Dal Sasso, the connection with China is personal. It’s about creating stronger cultural ties and forging a more meaningful, long-term relationship with our neighbour to the north.

There’s an age-old adage, “where there’s smoke there’s fire”. And when it comes to noise, vibration and air pollution, this adage is just as true whether it’s traffic inside a major city; operations within a construction site; or transportation and logistics at airports and seaports – where there’s noise and vibration pollution, there’s almost always air and dust pollution as well.

The next generation: Our China connection

In March 2017, Nicholas’ 11-year-old son (pictured on page 10) took part in an international exchange program in Machong,

a city in the Guangdong Province of southern China. In addition to brushing up on their language, calligraphy and fencing skills, the enthusiastic group from Clifton Hill Primary School, Victoria, Australia had the opportunity to experience the best of the province's renowned hospitality and immerse themselves in the local community.

China's push towards air quality monitoring

With global focus on China's environmental issues, especially in regard to air quality, Guangdong, a region renowned for its fast-paced economic development, is forging a reputation for championing advancements in air pollution monitoring and environmental protection. Through government and industry collaboration, Guangdong and numerous provinces in China have implemented new regulations and introduced monitoring stations, many located near schools and in residential areas.

ECOTECH's partnership is a commitment to China

ECOTECH has played a significant role in ambient air monitoring in China since it went into partnership with Hebei Sailhero Environmental Protection – the first publicly-listed environmental monitoring company in China. ECOTECH's relationship with the Chinese market and Sailhero is unique. Although ECOTECH products are sold through distributors in 80+ countries globally, China is the only market in which ECOTECH branded instruments are licensed and manufactured locally. ECOTECH formed this landmark partnership in 2008 and since then has been working side-by-side with Sailhero, Chinese industry and government authorities to improve air quality through state-of-the-art monitoring systems.

Our work with China's Ministry of Environmental Protection

In 2016, ECOTECH and Sailhero supplied China's Ministry of Environmental Protection (MEP) with more than 100 ECOTECH Serinus® Trace gas analysers for township pollution monitoring in 32 different locations across

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Main pic: The beautiful Karst mountain landscape in Yangshuo, Guilin, China.

Pic above (L to R): James Agius, ECOTECH Head of Global Sales & Marketing signing agreement in 2008 with Hebei Sailhero to manufacture a range of ECOTECH gas analysers under licence in China.

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China. ECOTECH's Trace gas analysers will give officials the ability to monitor at low concentration levels, helping to combat and control rising pollution before it exceeds acceptable levels.

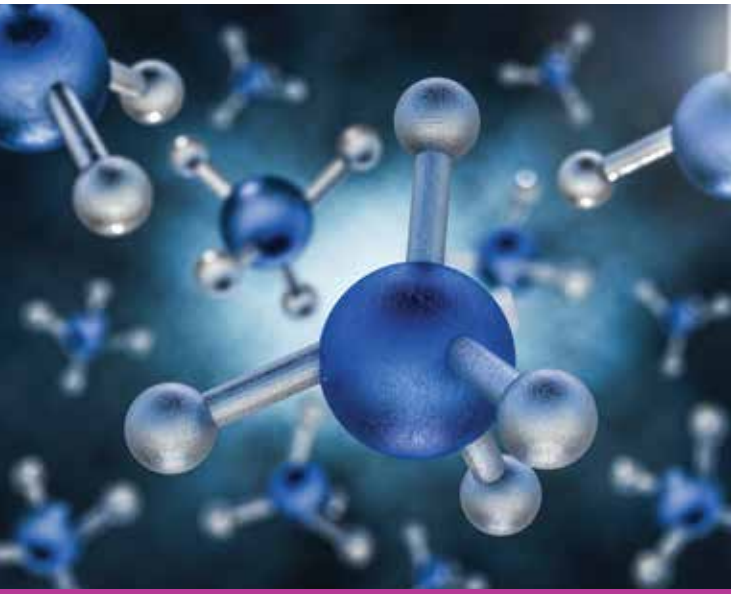
Pic above: The art of calligraphy … building bridges between China and Australia.

ECOTECH's vision towards a greater good

When asked about the importance of ECOTECH's connection with China, Nicholas said, "I can confidently tell my son that my team and I are dedicated to helping improve the lives of the Chinese students and teachers he now calls his friends. Our promise to service the Chinese market through our partnership with Sailhero is a part of ECOTECH's vision of uniting for the common purpose of striving for a greater good." He added, "It is our desire to help local communities and take an active role in working with organisations to enhance health, education and services for a sustainable future."

For more information about ECOTECH's work in Asia, please contact Michael Zeng at michael.zeng@ecotech.com

> "[ECOTECH is] dedicated to helping improve the lives of the Chinese students and teachers [my son] now calls his friends."
>
> **Nicholas Dal Sasso**
> ECOTECH Managing Director



Changing the way Methane Gas can be Detected in the Environment

ECOTECH Managing Director, Nicholas Dal Sasso (pictured right) was part of an expert team of engineers and researchers investigating the effect of a non-explosive methane gas mixture on various ultra-wide band channel coefficients.

Using simplified apparatus and a Vector Network Analyser, the research espoused that a simple sensor could detect the accumulation of methane gas in an environment well before it becomes explosive at around a concentration of 5%. The study suggests that this technique could be used to determine the presence of non-explosive levels of methane for situations where methane builds up gradually in a confined or enclosed area in industrial mining activities.

As a result of the investigation, Nicholas and the international team* wrote a paper titled, "Ultra wideband channel coefficient measurements for detecting methane gas in a multipath environment" which was published in the prestigious Australian Journal of Electrical and Electronics Engineering (Volume 13, 2016 – Issue 3) and online at http://bit.ly/2znJnYJ

** The international team included Ahmed Alshabo, David Stirling, Montserrat Ros and Peter James Vial from the University of Wollongong, Australia, and Beata Joanna Wysocki and Tadeusz Antoni Wysocki from the University of Nebraska-Lincoln, USA.*

ECOTECH is proud to have worked on the collaborative research, which was conducted over a period of three years with the support of the Australian Government Research Training Program Scholarship and the University of Southern Queensland which provided access to gases and scientific equipment.

Tailored Technical Training Programs Deliver Rewards to All

Main pic: The ECOTECH Serinus® range of gas analysers has been designed using our experience and knowledge gained from operating large air quality monitoring networks for over 40 years. The result, instruments that integrate seamlessly into continuous monitoring networks.

By combining high quality tailored support in the use and maintenance of advanced environmental technology, ECOTECH ensures that its distributors and global customers continue to be provided with accurate and reliable data, long after procuring their first ECOTECH instrument.

International expert in environmental monitoring provides valuable ongoing support for global distributors

ECOTECH Technical Support Services (TSS) trainer, Morgan Thomas provided onsite training to ECOTECH's South African distributor SI Analytics and their local customers in February.

ECOTECH TSS helps ECOTECH clients around the world continuously get the best out of ECOTECH instruments because they understand efficient equipment use and regular maintenance leads to:

- A reduction in equipment downtime
- Decreased overheads
- Increased productivity
- Happier customers
- Improved financial and non-financial returns for all parties.

The training and support provided in South Africa was focussed on maintenance and use of the ECOTECH Serinus® gas analyser. Serinus® gas analysers provide accurate, in-the-field data, with a range of models to monitor different types of gases.

The importance of Technical Support Services

ECOTECH has been working with SI Analytics to distribute gas analysers in South Africa for over five years. Together, SI Analytics and ECOTECH have built relationships with clients in industry, government and research.

As part of the week long event in February, SI Analytics and key customers in meteorology and the synthetic fuel industry required training on a suite of ECOTECH Serinus® gas analyser products.

Morgan commented, "This isn't the first time I've delivered specialist training in South Africa. SI Analytics and their local customers proactively arrange formal ECOTECH training sessions on a regular basis. Doing so ensures they're constantly updating their knowledge, improving their skill set and enhancing their reputation as regional experts in their field."

Morgan recognises training is an essential on-going part of ECOTECH's relationship with clients. Why? Because training helps ensure customers have the opportunity to continuously upgrade their skills and optimise the benefit of every ECOTECH product they purchase.

"Training also allows me to highlight often little known features of each ECOTECH instrument and the powerful functionality behind each key feature," said Morgan.

"For example, the Serinus® range of gas analysers offers technicians flexibility of use, troubleshooting diagnostics, as well as easy set-up and operation. Highlighting features

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"Training helps ensure customers have the opportunity to continuously upgrade their skills and optimise the benefit of every ECOTECH product they purchase."

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like these during a training session often leads to important everyday time saving for time-poor field technicians."

A tailored approach to training provision

A tailored approach to training provision is the foundation of ECOTECH's Technical Support Services. For example, since 2012 Morgan has been delivering training in Johannesburg for SI Analytics on behalf of the ECOTECH TSS team.

Morgan's approach to training is hands-on. He works with the instruments that are used by the customer and

"Our goal is to equip our customers with the knowledge they need to properly operate and maintain the ECOTECH instruments they purchase from us themselves."

Pic above: Morgan Thomas, ECOTECH Technical Support Services (TSS) trainer showing technicians from South Africa best practice when it comes to operating and maintaining ECOTECH Serinus® gas analysers.

collaborates with the customer to troubleshoot problem areas, provide training in required use, and explain best-practice maintenance procedures. Doing this helps customers respond to the requirements of each machine, while also helping customers become more self-sufficient when it comes to basic diagnostic, essential maintenance and operational needs.

“ECOTECH trains a wide range of technicians with different levels of knowledge and skill sets every year around the world. Because of this we have to ensure that every training session we deliver is directed at the particular needs of each customer and focuses on the specific equipment they’re using.” explained Rhys Evans, ECOTECH International Senior Technical Specialist.

“Whether we’re providing training support for government agencies, mines, refineries or research teams, our goal is to equip our customers with the knowledge they need to properly operate and maintain the ECOTECH instruments they purchase from us themselves,” continued Rhys.

Ongoing training ensures ECOTECH distributors and ECOTECH customers alike who own and operate ECOTECH instruments can increase efficiency, decrease overheads, and remain at the technological forefront of environmental monitoring equipment.

“Only when instruments are properly maintained, utilised efficiently and operated with expertise will they produce valid and reliable data to a consistent standard. ECOTECH Training Support Services helps our customers achieve this standard,” Rhys concluded.

Contact Rhys Evans to learn more about ECOTECH’s Technical Training Programs at rhys.evans@ecotech.com

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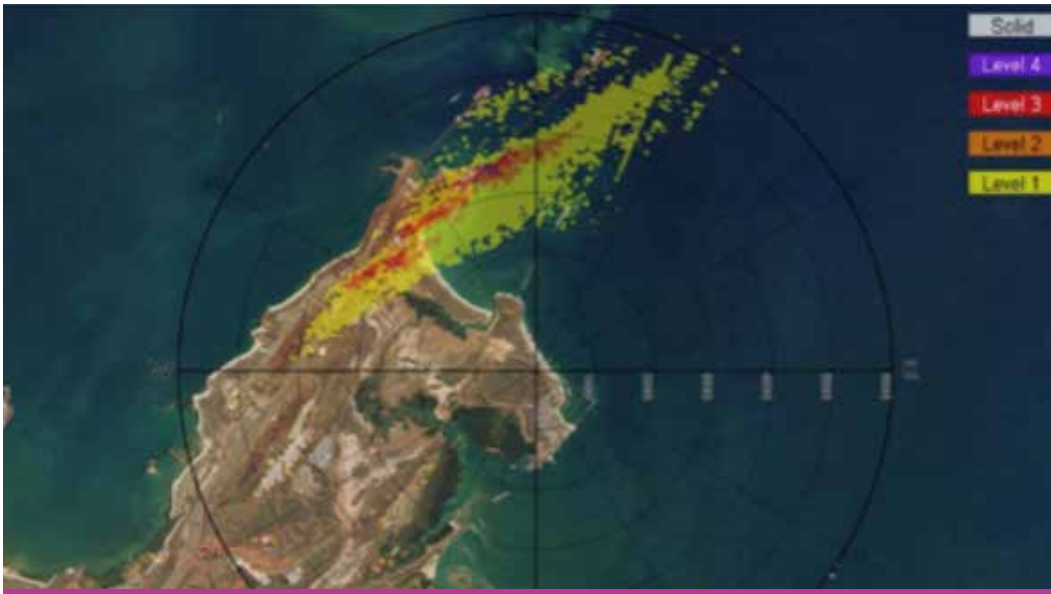
Pic above: Rhys Evans, ECOTECH International Senior Technical Specialist, explains how a tailored approach to training is the foundation of ECOTECH’s Technical Support Services.



LIDAR Technology Innovation Heralds Transformation in Real-time Dust Monitoring Over Long Distances

Main pic: The Integro™ LIDAR Network continuously scans an area and accurately measures dust concentration and radial wind speed/wind direction to identify dust emission sources and dust dispersion trajectories.

The "Integro™ LIDAR Network" by ECOTECH is a tried and tested technology for the real-time measurement and monitoring of aerosols and dust particulates, giving its users better use of its dust suppression systems.

Light Detection and Ranging (LIDAR) technology is a remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the earth. Originally developed by Leosphere, a French company that specialises in atmospheric remote observations, the technology is most commonly used as a meteorological tool for weather applications.

Partnership leads to innovation, filling a gap in the market

In 2013, Mark Brooks, ECOTECH's Business Manager for Australia and New Zealand approached Leosphere with the idea of merging the two companies' technologies to create a solution for open path monitoring for aerosols

and particulate emissions over long distances (up to 12 km in radius).

ECOTECH had received numerous requests from local government authorities and mining companies it serviced to develop a system that would allow customers to effectively measure and monitor dust movement over larger areas well beyond the fence line of a facility.

Fast-forward to 2017 and ECOTECH has successfully designed, installed and operates the Integro™ LIDAR Network, the only technology in the world that can effectively monitor and measure movement and concentrations (µg/m^3) of dust emissions over large areas, providing real-time data accessible online by industry and the public using ECOTECH Airodis™ software.

"This new and innovative application of LIDAR technology by ECOTECH has revolutionised the way government authorities and industry can monitor dust dispersal with a range of up to 12 kilometres from the measurement point, allowing for accurate coverage over a full 24 kilometre diameter range," said Mark.

"Dust can have a major impact on not only the health of the workforce, but the local communities, waterways and their flora and fauna. With its precise measuring and monitoring, the Integro™ LIDAR Network equips communities, government and industry alike with a powerful tool to advise and help protect people in their natural environment," he added.

Working with the mining industry and government to safeguard the environment

ECOTECH's Integro™ LIDAR Network has been used by the Australian mining industry and government bodies, including the Western Australia Department of Water & Environmental Regulation (DWER).

Following extensive trials of the technology by industry and its regulators since 2014, the DWER commissioned its own campaign in the Town of Port Hedland in 2017. A public website displaying real-time data captured by the Integro™ LIDAR Network was established by ECOTECH, giving the

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> **"Tried and tested... the Integro™ LIDAR Network [is] the only technology in the world that can effectively monitor and measure movement and concentrations (µg/m^3) of dust emissions over large areas."**

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DWER and the town's residents the ability to monitor dust emissions in the port area.

Using the Integro™ LIDAR Network, ECOTECH can pinpoint the exact source of emissions. This level of data granularity means for the first time government authorities can identify the emission sources, whether that is an individual shiploader, conveyor belt, or stockpile.

The Integro™ LIDAR Network in the news

In early 2017, the Town of Port Hedland received media attention for its use of ECOTECH's Integro™ LIDAR Network, amid plans of the potential expansion of the Port operations. At the time, the expansion application had been temporarily suspended pending an enquiry by the Environmental Protection Authority (EPA) which seeks to further investigate dust levels generated by iron ore exporters in Port Hedland.

The data collected by the Integro™ LIDAR Network for the Western Australia Department of Water & Environmental Regulation (DWER) will play a role in any future decisions regarding expansion at the port. The data will also assist mining companies operating at the port to review their dust management and control measures whilst increasing their efficiencies.

Taking the Integro™ LIDAR Network global

With the Integro™ LIDAR Network, ECOTECH is pioneering the way government and industries around the world can monitor and track dust emissions. It is also paving the way for preventative outcomes that improve air quality.

Following the success of the Integro™ LIDAR campaign by the Western Australian DWER, they have now committed to investing in their own Integro™ Network for similar projects throughout the state in the years to come. ECOTECH is expanding the use of LIDAR technology for dust measurement and control internationally, with a number of

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“This level of data granularity means for the first time government authorities can identify the emission sources, whether that is an individual shiploader, conveyor belt, or stockpile.”

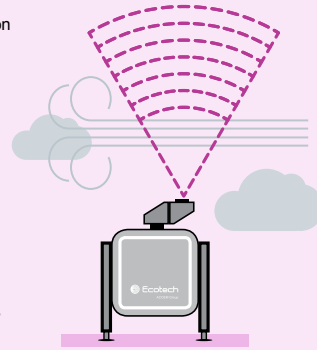
The Integro™ LIDAR Network

A complete dust measurement and monitoring system.

The Integro™ LIDAR Network is a turnkey solution with the powerful potential to monitor, display in real-time and provide feedback to on-site dust suppression systems.

DUST AND METEOROLOGICAL MONITORING STATIONS

These stations measure dust concentration to regulatory standards along with wind speed and direction. The Integro™ LIDAR Network also uses these measurements to correlate the scanned data.



LIDAR TECHNOLOGY

LIDAR technology, developed by Leosphere, is used to continuously scan an area and accurately measure dust concentration and radial wind speed/wind direction to identify dust emission sources and dust dispersion trajectories.

AIRODIS™ SOFTWARE

Data from the LIDAR instrument and the monitoring stations is correlated to determine the mass concentration ($\mu g/m^3$) levels of dust dispersion every 5-10 minutes. Reports are displayed on a web page in graphical format, including live video visualising the aerosol plumes recorded by the LIDAR technology.

AIRODIS™ CONTROL SYSTEM INTERFACE

Interface software provides automated feedback to the site's PLC to trigger dust suppression equipment.

DUST MANAGEMENT MEASURES

Operation managers use the data to immediately implement targeted dust management measures.

Pic above: The LIDAR instrument is mounted at a height that allows a clear line of sight over the scanning area.

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Pics above: ECOTECH has developed interface software that allows Airodis™ to provide automated feedback from the Integro™ LIDAR Network to the facility's Programmable Logic Controller (PLC) to automatically trigger dust suppression equipment around the facility.

Pic right: The Leosphere Windcube is a LIDAR instrument. It is a vital part of the Integro™ LIDAR Network as it accurately measures dust emission sources and dust movement over a scanned area.

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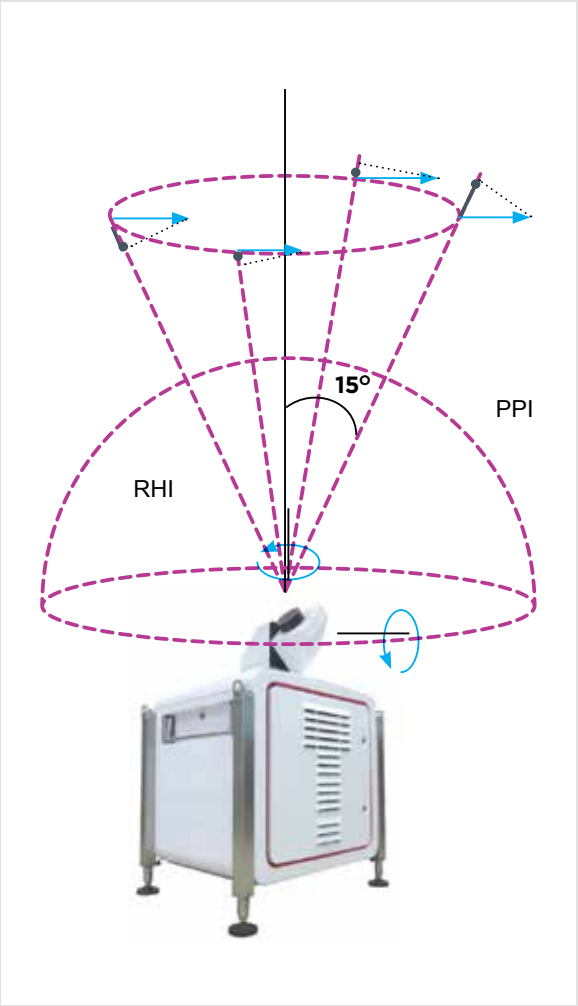
government authorities and mining companies evaluating and investing in this technology in China, Taiwan and the United States.

To learn more about the Integro™ LIDAR Network please contact Mark Brooks on +61 8 9434 7803 or mark.brooks@ecotech.com



Amity University Enters Scientific Cooperation MoU with ECOTECH to Monitor Aerosols in India

Extending its ongoing relationship with Amity University, India's leading research and innovation driven private university, ECOTECH has entered a Memorandum of Understanding (MoU) with the university's Gurgaon campus, located in Manesar, Haryana.

The MoU establishes a collaborative relationship to facilitate ongoing scientific research in aerosol monitoring. The formal alliance focuses on research projects that will characterise particulate matter under different weather and environmental conditions using the ECOTECH Aurora™ 4000 Polar Integrating Multispectral Nephelometer.

The ECOTECH instrument has been installed at the university to monitor air quality in and around the 110 acre campus.

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Main pic: Amity University Gurgaon is spread over 110 acres of lush green campus amidst Aravali Hills in Gurgaon (Manesar), the Millennium City of India. (Source: www.amity.edu/gurgaon)

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ECOTECH Aurora™ 4000 Polar Integrating Multispectral Nephelometer

The Aurora™ 4000 (pictured below) is the world's only commercially available polar integrating nephelometer.

ECOTECH's exclusive design uses three wavelength technology and automatically measures scattering in different angular sectors by varying its backscatter shutter's position. It provides more specific light scattering measurements with up to 17 different angles per measurement.

Using an innovative LED light source, the Aurora™ 4000 simultaneously measures at 525 nm (green), 450 nm (blue) and 635 nm (red) to enable wide and in-depth analysis of the interaction between light and aerosols. These added capabilities provide easy automatic calibration and comprehensive data allowing a greater characterisation of aerosol scattering than basic backscatter measurement.

Pic above: ECOTECH's Aurora™ 4000 Polar Integrating Multispectral Nephelometer.

"The formal alliance focuses on research projects that will characterise particulate matter under different weather and environmental conditions using the ECOTECH Aurora™ 4000 Polar Integrating Multispectral Nephelometer."

Pic left: Robert Dal Sasso, ECOTECH founder and Global Sales and Technical Advisor, presents Dr Devera of Amity University with ECOTECH's 40 year commemorative book, TOGETHER.

Prof. Dr. Panuganti CS Devara, FAARA (Asia); FIETE; FMASc; FAPAS; FSES is a Fellow of Royal Meteorological Society (FRMetS), UK; President, Indian Aerosol Science and Technology Association (IASTA); Senior Professor, Head, Amity Centre for Ocean-Atmospheric Science and Technology (ACOAST); and Head, Amity Centre for Environmental Science and Health (ACESH).

Amity University will receive ongoing technical advice from ECOTECH and the nephelometer will be serviced and supported locally through ECOTECH's scientific research equipment distributor, Tesscorn in Bengaluru (Bangalore).

In addition to the nephelometer, the MoU between ECOTECH and Amity University also outlines how both parties will share information regarding academic opportunities in India and abroad, as well as relevant technological and scientific advancements.

ECOTECH's global commitment to innovation and progress

The MoU and growing relationship with Amity University enhances ECOTECH's commitment to work closely with academic and research facilities to improve environmental conditions around the world.

ECOTECH's physical presence in India and its extensive understanding of the local business and regulatory landscape puts ECOTECH at the forefront of environmental monitoring in that country.

Learn more about the Aurora™ 4000 at http://bit.ly/2x9iDWG

Air Quality Monitoring System Training in India for Telangana State Pollution Control Board

Main pic: Abdhesh Pratap (Production Supervisor, ECOTECH Industries), Paresh Gandhi, (Operations Manager, ECOTECH Industries), and (far right) Anuj Bhargava (Operations Manager, ECOTECH Monitoring Solutions) with staff from the Telangana State Pollution Control Board at ECOTECH's Indore facility.

In June, ECOTECH Industries welcomed staff from the Telangana State Pollution Control Board (TSPCB) to its facility in Indore, India, for an in-depth two-day training program.

The TSPCB is the statutory authority that implements environmental laws and regulations within the jurisdiction of the State of Telangana, in south-central India. It is one of a large number of statutory authorities that ECOTECH works closely with to help monitor and protect the environment in India.

TSPCB recently purchased and installed an ECOTECH Air Quality Monitoring Station (AQMS) and six TSPCB scientific officers and analysts took part in a series of sessions designed to familiarise them with the AQMS, its operation, working principles of each gas analyser, as well as servicing and basic maintenance of the equipment.

Training was provided on the world-class range of ECOTECH Serinus® gas analysers, including the Serinus® 10 ozone (O_3) analyser, Serinus® 30 carbon monoxide (CO) analyser, Serinus® 40 oxides of nitrogen (NO_x) analyser, Serinus® 50 sulfur dioxide (SO_2) analyser, Serinus® Gas Calibrator, data logger and Airodis™ software. The training gave the TSPCB participants a chance to interact with each instrument and understand the functionality of the fully integrated system.

The training was conducted by ECOTECH Industries' Operations Manager Paresh Gandhi; Production Supervisor, Abdhesh Pratap Singh; and ECOTECH Monitoring Solutions' Operations Manager, Anuj Bhargava, all of whom will play a role in ongoing customer support to the TSPCB.

"Providing training of this calibre is a major component of what we do to ensure that ECOTECH customers have intrinsic knowledge of our systems," said Paresh.

Pic above: TSPCB staff getting hands-on instruction about the ECOTECH AQMS.

ECOTECH operates and maintains over 80 Continuous Ambient Air Quality Monitoring Stations (CAAQMS) across India. Systems are supported and maintained by an expert team of over 65 technicians that form ECOTECH Monitoring Solutions, based in Hyderabad.

Learn more about ECOTECH's presence in India: www.ecotech.com/india

> "Training of this caliber is a major component of what we do to ensure that ECOTECH customers have intrinsic knowledge of our systems."

Bring the Lab to the Field Without Compromising Data Quality

Main pic: The Microportable Gas Analyser (µGA), developed by Los Gatos Research and exclusively distributed in Australia and New Zealand by ECOTECH, accurately and rapidly measures methane, carbon dioxide and water vapour simultaneously in a crushproof, briefcase-sized package.

The new Microportable Gas Analyser (µGA), distributed exclusively in Australia and New Zealand by ECOTECH, accurately and rapidly measures methane, carbon dioxide and water vapour simultaneously in a crush-proof, briefcase-sized package to accurately record data anywhere, anytime.

The lightweight instrument developed by Los Gatos Research (LGR) adheres to aircraft on-board luggage requirements, weighs less than six kilograms, comes with an in-built four-hour battery and is ideally suited for portability and rapid field deployment in applications such as gas leak detection.

Conduct field-based research like never before

The µGA offers its users:

- Truly portable sensitive gas detection
- The ability to identify gas leaks, even while walking or driving

- Wide measurement range (ppb to %)
- Extremely fast response, continuous measurement.

Wherever methane, carbon dioxide and water vapour measurements are needed quickly and with sensitivity, the µGA provides simple-to-use technology that can be used for a variety of in-field studies, compliance monitoring, air quality studies and soil flux studies as well as emissions monitoring.

The µGA offers a range of options for accurate methane measurements at levels up to 1% mole fraction (without dilution) without reducing precision and sensitivity at ambient levels – a unique capability. It also boasts reliable guaranteed measurements at mole fractions greater than 10,000 times ambient levels.

The heightened precision of measurement data is due to the µGA's continual self-calibration, helping mitigate any variations in temperature or vibrations in the field and stabilizing itself against the everyday effects of the real world. With such reliable data straight from the source, the µGA means you can bring the lab into the field like never before with unparalleled results.

Higher performance at a lower cost

The benefits of the µGA aren't just limited to its portability and reliable data collection. The monitoring system will also provide significant cost savings without compromising the quality of data thanks to its rugged design and user-friendly maintenance.

"A mobile monitoring solution can be set up anywhere, anytime and at a fraction of the cost of what was previously possible," said Con Argiratos, Sales Executive at ECOTECH.

The system can be serviced by the user under field conditions, saving valuable time and money.

"The self-maintenance by the user is just another major advantage of the Microportable Gas Analyser," Con explains. "It means you can clean the instrument optics as needed in the field, enabling the instrument to always operate to specifications."

(Continues on page 28)

> "Wherever methane, carbon dioxide and water vapour measurements are needed quickly and with sensitivity, the µGA provides simple-to-use technology that can be used."

Los Gatos Research
A MEMBER OF THE ABB GROUP

About LGR: Since 1994, Los Gatos Research, a member of the ABB Group, has been developing innovative laser-based measurement strategies for non-destructive analyses of gases and liquids.

In October 2013, LGR was acquired by ABB to add a new line of high-performance gas analysers to ABB's leading measurement business. LGR now operates in ABB's global Measurement & Analytics business unit within the Industrial Automation division.

(Continued from page 27)

It's a far cry from other instruments which must be returned to the factory for comparable service work – at significant financial cost and loss of valuable research time.

Go global with patented monitoring technology

The µGA is equipped with an internal computer (Linux OS) that can store data practically indefinitely on a hard disk drive and send real-time data to an iPhone, iPad, Android tablet, or other WiFi device. By connecting the µGA to a GPS system the user can also record their position and ultimately publish their data to Google Earth.

Opening up a new world of possibilities

Con is adamant the µGA's portability and unparalleled monitoring will make it a must-have in laboratories across Australia.

Pic above: The µGA monitoring system provides significant cost savings without compromising the quality of data thanks to its rugged design and user-friendly maintenance.

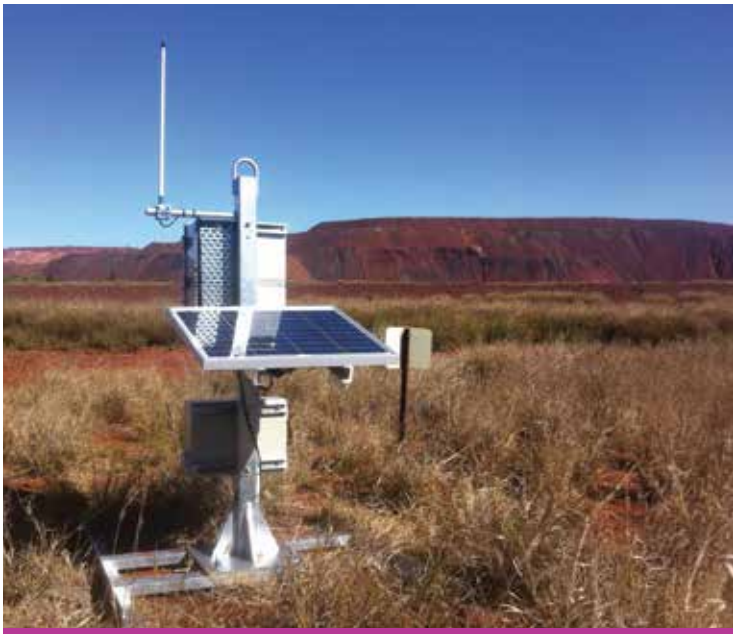
"This technology is taking us into a new area of research that wasn't previously possible," Con explains. "You used to have to modify a vehicle almost beyond recognition – it was easy to spend upwards of $100,000 to create essentially a moving lab that was built around your gas analyser equipment.

Now, this is a solution that potentially costs a fraction of the price you would previously have been spending on this kind of project, and all you have to do is place it in the backseat."

Con is also confident the µGA is ideal for unmanned aerial data collection. "Taking this technology to the skies is absolutely the next step – using drones will add another dimension to our clients' research."

To learn more about how the µGA can reduce your costs and improve performance, contact Con Argiratos at con.argiratos@ecotech.com

"[The µGA can be] serviced by the user under field conditions, saving valuable time and money."



Pic above: ECOTECH's Chris White is a Certified Air Quality Professional (CAQP). The CAQP certification scheme is the first of its kind in Australasia, and one of the first of its kind in the world.

Main pic: Solar-powered monitoring station in Australia's Northern Territory. ECOTECH is a provider of customised, turn-key environmental monitoring solutions, from design, manufacture, supply, operation and maintenance, to accredited environmental data reporting services.

Certified Air Quality Professional

Chris White, Northern Branch Manager for ECOTECH, has become a Certified Air Quality Professional (CAQP), joining only a handful of accredited professionals in Australia.

Championed by industry peak-body the Clean Air Society of Australia & New Zealand (CASANZ), CAQP accreditation formally recognises Chris as a leader in the field of Air Quality. Accreditation as a CASANZ CAQP member also recognises his expertise, professional achievements, integrity, and a commitment to excellence in maintaining and developing knowledge and skills as an air quality specialist through continuing professional development.

The recognition for Chris (pictured left) comes after an involved nomination process, requiring CAQP candidates at a minimum to have an Air Quality Science related degree plus several years' field experience. Chris says becoming a CAQP provides ECOTECH's existing and potential clients, professional bodies and government organisations extra peace of mind knowing they are working with an organisation that understands the value of continuous professional development and the importance of independent certification by respected institutions. Visit http://bit.ly/2xRaObL for more info about the CAQP program.

Social Responsibility Starts Close to Home

Making a positive difference to the environment is what ECOTECH strives to do, both in business and in the voluntary pursuits of the ECOTECH team.

ECOTECH actively promotes a work culture that encourages team members to give back to the community and the environment. ECOTECH's Volunteer Leave Policy supports employees to engage in community projects by providing paid leave per financial year to undertake voluntary work.

As a champion of the ECOTECH volunteer program, Nicholas Dal Sasso, ECOTECH Managing Director participated in the La Trobe University (Bundoora, Melbourne campus) Eco Corridor Project to reduce its environmental footprint, organised by Conservation Volunteers in June 2017.

Volunteers like Nicholas, don high-visibility vests and venture out to the moat area in Bundoora to take part in activities like weeding, weed control, rubbish removal, indigenous planting and vegetation maintenance.

Main pic: Leading by example through the ECOTECH volunteer program, ECOTECH Managing Director Nicholas Dal Sasso said, "Being able to give back to my local community and do something that will make a difference to future generations is important to me and to ECOTECH."

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