



**Note from the Chair:** Over the last few months the E&P Sound & Marine Life Joint Industry Programme (JIP) has been busy promoting our research. We have been active at key events, with trade press and on social channels. The JIP has launched on Twitter and managed to secure some important opinion editorials in the trade press which hopefully provide a new approach to sharing our information which reaches new audience. At the same time, the JIP has continued to engage with the academic community. Our sponsorship of this year's Effects of Noise on Aquatic Life Conference in Dublin is one of the most important forums to promote the JIP's most recent research findings.

*Paul Shone, Chair of the E&P Sound & Marine Life JIP*



In June 2016, Oilfield Technology published an [opinion editorial](#) from the International Association of Geophysical Contractors (IAGC) and the JIP's Gail Adams-Jackson. The article provides the latest findings from JIP research into the hearing capabilities of sea turtles, dolphin hearing and tagging development.

Earlier this year, Scandinavian Oil and Gas published an [article](#) from the Chair of the JIP, Paul Shone. This was the JIP's first opinion editorial and so introduced the JIP and the key findings from JIP research into: the behavioural responses of fish to seismic sources, hearing and arctic seals, and airgun measurements.

Other SML related articles: This month Coastal Review published an opinion editorial from IAGC President Nikki Martin. The article argues that seismic activities and marine life can successfully coexist. The editorial also discusses JIP research investment and includes a referral to the JIP Sound and Marine Life website. Meanwhile, Gail Adams-Jackson, through her role on the IAGC, was quoted in the Post and Courier in March 2016.

## INFORMING THE DEBATE

### Media coverage

The JIP aims to promote the work and research efforts it supports to the widest audience possible. We are happy to share recent media coverage that provides a useful summary of the recent findings from JIP research which is of interest to both the industry and regulators.

## Twitter account

We are very happy to announce that the JIP is now using Twitter.

We will be using our Twitter account to announce the publication of new research, factsheets or data, and share events at which the JIP is either attending or speaking. Our Twitter account is the simplest way to keep abreast of JIP activities.



Follow us at [@soundandmarine](https://twitter.com/soundandmarine)

## ONGOING INDEPENDENT RESEARCH

### *New BRAHSS research*

The JIP has been working on the Behavioural Response of Australian Humpback whales to Seismic Surveys (BRAHSS) since 2010. Together with the U.S. Bureau of Ocean Energy Management (BOEM), we have been pioneering research into humpback whales' behavioural and vocal responses to seismic sources. Prior to the BRAHSS study there were no data on hearing sensitivity or the behavioural responses of large whales to seismic sources.

In April 2016, the following papers on BRAHSS were published:

- A report that explores the response of humpback whales to ramp-up of a small experimental source array. The report found that humpback whales are likely to move away from a source during a ramp-up sequence. Starting at a higher initial level was no better at triggering whales to move away, and using a ramp-up procedure would limit acoustic exposure while close to the source. The full publication can be found [here](#).
- A report into the behavioural response of humpback whales to a 20 cubic inch air gun. The results suggested that humpback whales responded to seismic sources by decreasing both dive time and speed of migratory southwards movement. However, there was no evidence of orientation of the groups towards, or away from, the source vessel towing the acoustic source. The full publication can be viewed [here](#).

This research is helping to improve scientific understanding of potential impact of conventional seismic source arrays on humpback whales and also helping to assess the effectiveness of soft-start or ramp-up as a mitigation measure in seismic surveys.

### *Single airgun data*

The E&P Sound & Marine Life Joint Industry Programme is committed to transparency regarding the scientific research it supports. Final reports are made available in the [library section](#) of our website as well as a list of [peer-reviewed publications](#). We also publish data that can be used for future

research and are to the benefit of the industry and academics.



For example, the “Svein Vaage Broadband Airgun” data are now available to help improve the functionality of source modelling softwares. This study collected measurements of single acoustic source and acoustic source cluster signatures up to 50 kHz. The data were acquired in the near-field, mid-field and far-field using numerous hydrophones and 1 accelerometer. Seventy-three source combinations were measured include G-, Bolt-, GI-, and sleeve sources and were measured at variable depths and pressures.

To request a copy of the Svein Vaage Broadband Airgun data, please download the Data Request Form [here](#).

## PROMOTING THE SCIENCE

### *Effects of noise on aquatic life conference*

The JIP was pleased to sponsor the Fourth International Conference on ‘The Effects of Noise on Aquatic Life’ which took place in Dublin, Ireland on 10-16 July. This prestigious conference, which takes place every three years, is one of the leading forums

for industry and academics to come together and present new research.

The JIP presented two posters at the conference: one which outlined some key findings from JIP research and the other discussed how research results are used in the risk assessment process. The JIP also had an exhibition stand where attendees were able to talk with members and collect factsheets about our research.



### **ASA 171st meeting**

In May 2016, the JIP presented at the Spring Meeting of the Acoustical Society of America in Salt Lake City, Utah. The SML JIP presented an update on its research and some recent findings on auditory masking in marine mammals, 3D source characterization and the new Population Consequences of Disturbance model.

The ASA meeting was well attended and the JIP’s oral presentation on recent JIP research findings was well received with a productive Q&A session. The JIP also handed out a number of useful factsheets on key JIP funded research.