

## Media Release

### Chiefs of Staff, News Directors

Friday 21 August 2015

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**EMBARGOED UNTIL NOON TODAY**

## How to deal with the seals – IMAS students explore ways to minimise trawl fishing bycatch

Students from the University of Tasmania's Institute for Marine and Antarctic Studies (IMAS) have demonstrated they have the training and ability to potentially solve one of the biggest problems linked to trawl fishing – the incidental capture of non-target species such as seals.

In a competition organised by the Australian Fisheries Management Authority (AFMA) and the South East Trawl Fishing Industry Association (SETFIA), four IMAS students have developed feasible concept plans for seal bycatch mitigation devices and will today be rewarded for their innovative thinking.

Parliamentary Secretary to the Minister for Agriculture Senator Richard Colbeck will present cheques of \$500, \$350 and \$150 on behalf of the government and industry bodies to the top three placegetters in the competition at **IMAS Launceston at 12 noon today**.

A fourth student will receive an honourable mention for an exciting concept worthy of further development.

#### **The competition winners are:**

**1<sup>st</sup> Place:** THE NAGGING SIREN by Tommy Cheo (Cheo Seng Kong), who is enrolled in the Master of Applied Science (Marine Environment) with Honours - A siren powered by water that generates sound as it is towed with the trawl. Recent behavioural studies of harbour seals revealed that the sound pressure level that causes discomfort to seals is 200db and a siren emitting sound at this level may cause the seals to avoid this "discomfort zone", which would be positioned in the area around the mouth of the trawl.

**2<sup>nd</sup> Place:** THE SEALYA LATER SYSTEM by Ben uit den Bogaard, who is studying Bachelor of Applied Science (Marine Environment) - Uses mild DC electric currents travelling through a flexible conductor woven into the trawl net to deter seals from entering the net. At the mouth of the net the flexible wire could be sewn into the top and bottom of the net to form vertical lines that look like a grid. They are spaced sufficiently far apart to allow fish to be caught. However seals trying to feed on the fish would come in to contact with the mild electric field and swim away.

**3<sup>rd</sup> Place:** THE ILLUMINATOR by Tana McCarthy, who is enrolled in the Associate Degree in Applied Science (Marine Environment) – Uses battery-operated lights which emit a dull light in the centre of the mouth of the trawl to act as a reference point for the seals to find an exit

from the net. This would be combined with a bright flashing light in the trailing end of the net that would influence the seals to move towards the escape openings. Reflective tape would be attached to areas of the trawl net to show an escape route.

**Honourable mention:** THE SEAL MASK SYSTEM by Jack Hauser, who is studying the Bachelor of Applied Science (Marine Environment) - Uses a combination of non-harmful, water soluble materials such as bicarbonate soda, olive oil, citric acid and scented oils compressed in a block. These ingredients are designed to suppress and confuse a seal's senses so that it does not enter, or remain within the vicinity of the trawl net. It would also act to reduce the natural mammalian dive reflex which seals use to hold their breath for extended periods of time and so limit the ability to dive down into deeper water. The Seal Mask blocks could be hand-thrown or released through a remotely-operated canister attached to the trawl net.

Although the competition was part of coursework for third year fisheries management and marine engineering students, it was also open to all students studying at the Australian Maritime College (AMC) and IMAS.

IMAS Launceston fisheries lecturer Nick Rawlinson thanked AFMA and SETFIA for their support of the competition.

“With many of the students who entered nearing graduation, the competition provided a valuable opportunity to work with the fishing industry and the Commonwealth fisheries manager to develop potential solutions that could one day be used to reduce bycatch in trawl fisheries,” he said.

“Students have become very aware of the complexity of this issue. However, after thorough research and careful consideration of the problem they have been able to produce some innovative ideas.”

The Institute for Marine and Antarctic Studies (IMAS) pursues multidisciplinary and interdisciplinary work to advance understanding of temperate marine, Southern Ocean, and Antarctic environments.

### **MEDIA OPPORTUNITY**

**WHAT:** Cheque presentation to winners of the AFMA/SETFIA seal mitigation device competition.

**WHERE:** IMAS Launceston Science building (S) via University Way and Brooks Rd (turn right at the University Mowbray Sports Club and look for the white block building with the University of Tasmania sign).

**WHEN:** 12 noon, TODAY, August 21, 2015.

**WHO:** Senator Richard Colbeck, Wayne Cheers (SETFIA), Brodie Macdonald (AFMA bycatch manager), Associate Professor John Purser (IMAS Launceston Fisheries & Aquaculture Centre deputy head), James Haddy (IMAS Launceston course coordinator), IMAS Launceston students and competition winners and their lecturer Nick Rawlinson.

**CONTACT:** **For more information or to organise interviews please contact IMAS media and communications officer Lana Best on 0417 978 025 or [Lana.Best@utas.edu.au](mailto:Lana.Best@utas.edu.au)**

*Following the presentations to students Senator Colbeck will tour the IMAS Launceston facilities and the media is welcome to attend and get extra footage/photos.*

**Information released by:**

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