

## South-West Coast Scientific Group



### **Submission to Yoorrook Justice Commission**

### **Short Fin Eels and Budj Bim UNESCO World Heritage Site**

We attach our response to the National Offshore Petroleum Safety and Environmental Management Authority's (NOPSEMA) consultation process for the **Otway Basin 3D Multiclient Marine Seismic Survey Environment Plan** to conduct Seismic tests for gas off the coast of South-West Victoria.

You will see that Budj Bim UNESCO World Heritage site is not listed and no mention of the threat to its eel farming is made. We believe that this is an injustice.

#### **Damaging impact of seismic blasting on short fin eels.**

Short fin eels have an immense cultural value to the indigenous peoples of South-West Victoria, forming the basis of a world heritage site at Budj Bim. Their cultural connection to the land and the eels stretches back 40 to 60 thousand years with Australia having global responsibilities to protect.

Eels have a unique life cycle with adults migrating to the ocean in spring and migrating from South-Western Victoria all the way to the Coral Sea to their spawning grounds. Those that survive this long and arduous journey reproduce in the deeper waters and then die - they only reproduce once in their lifetime! This means that reproducing animals don't get a second chance and anything that reduces the number of eels reaching their spawning grounds has a negative impact on the numbers of offspring. The spawned eggs hatch into larvae and these then use the currents to drift back down the Australian east coast and migrate back to the rivers from where their parents came.

Seismic blast surveys kill fish – this is well known. We also know that these surveys change the behaviour of fish: they can disorientate them and they can make them more vulnerable to predators (and other impacts). It is particularly concerning that specific information about seismic blasts relating to short fin eels is absent. However, the effects on other kinds of eel and fish are negative and we have no reason to believe that our eels are any different.

Eels are vulnerable throughout their life cycle. Of even more concern is that fact that adult eels have just one go at successfully reproducing! They are already under enormous pressure from climate change, impacts on the land that pollute their rivers, and water extraction. Larval eels return to South-West Victoria as part of the zooplankton. Studies have shown that seismic blast surveys kill about 64% of zooplankton out to 1.2 km from the sound source and so larval eels are almost certainly killed by these activities. Adding an additional pressure to these already vulnerable animals is irresponsible and a breach of

our duty to protect both world heritage sites and cultural traditions that may be 60,000 years old.

We accept that there are multiple impacts that are harming the number of eels returning to South-West Victoria and these problems are ongoing. As we have every reason to believe that seismic blasts are damaging the eels stocks through interruptions to their migration patterns, we have a social and legal responsibility to protect these vulnerable animals from known damaging activities like seismic blast surveys.

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