



# Coastwatchers

*Eurobodalla's environment group*

8 February 2017

## Kayak 4 Earth Paddler, Steve Posselt, Arriving Moruya River 11.30 am Tuesday 14 February. Be There!

The 350 Organisation has asked Coastwatchers to notify our members that they are invited to welcome Steve Posselt at 11.30am at the boat ramp next to Riverside Park in Moruya on Tuesday 14 February. You can join the welcome on land or water.

His trip is centered around the delivery to Parliament of a **"Climate Emergency Petition"**. You can sign the Petition at the Welcome event, or online at

[www.climateemergencydeclaration.org/signandshare](http://www.climateemergencydeclaration.org/signandshare)

Steve Posselt, is a climate activist from the North Coast of NSW, and has been kayaking down the coast from northern NSW to Moruya. He will then head up to Canberra with the 'Climate Emergency Petitions' collected from around Australia.



Steve will be continuing up the Deua Valley mostly on foot from Moruya to Canberra where he will deliver the petitions in a delegation to Parliament

on 28 February 2017. ESC Deputy Mayor, Anthony Mayne will be handing over the petitions to Steve at the welcome.

Steve will be talking at the SAGE Garden, Moruya on Friday 17 February from 6.30pm to 9pm. Bring a picnic and listen to Steve's story of his paddle to Paris in 2015 for the climate talks.

## The Climate Emergency Petition

Dear Australian Parliament,

*We call on you to declare a climate emergency and to make action on global warming our nation's highest priority, here and internationally.*

*Climate scientists say that we face a climate emergency, and that our actions so far have come nowhere near what is required. We have just experienced the hottest year on record. In February, there was an alarming global temperature spike of more than 1.5°C of warming, just months after the Paris Climate talks set an aim of not exceeding that benchmark. The Great Barrier Reef is dying as the oceans heat up, and recent fires burned ancient world-heritage Tasmanian forests. The future of ecosystems, and of human civilisation, now hang in the balance.*

*We call on Parliament to initiate a society-wide mobilisation of a speed and scale not seen since World War II. We must work with other nations to devote all the resources necessary to preserve a liveable planet and protect the vulnerable from the dangerous climate impacts already locked in.*

*Carbon emissions must be reduced to zero*

*within a few years, not several decades, and we must safely draw down the excess carbon dioxide already in the atmosphere. We must rapidly transition from coal, gas and oil to 100% renewable energy, replacing fossil fuel jobs with jobs in renewable energy and energy efficiency.*

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## **Tasmanian Volunteers receive FROGGATT AWARD for removing Sea Spurge Weed**

When bushwalker Jon Marsden-Smedley first started telling people of his plan to rid southwest Tasmania's coast of **Sea Spurge** (*Euphorbia paralius*) an invasive weed—he was told he was dreaming.

Last week the **Sea Spurge Action Teams SPRATS** which was formed in 2007, were awarded a **FROGGATT AWARD** by the Invasive Species Council, for 10 years work eradicating sea spurge from Tasmania's rugged southwest coastline.



During this period more than 150 remote area volunteers removed 14.2 million sea spurge plants from 600 km of coastline contributing 6,000 hours of labour valued at over \$1.4 million.

Now, 99.5% of the treated area is sea spurge free. Areas have also been treated for Marram Grass, and two of the region's only blackberry infestations.

Volunteers undertook trips of between eight days and three weeks, arriving by foot, helicopter, boat or fixed-wing aircraft. Methods used include hand weeding, ground and aerial spraying.

SPRATS is a WildCare group working in partnership with the Tasmanian Parks and Wildlife Service.



Both Sea Spurge and Marram Grass are recognised as threats to the Tasmanian Wilderness World Heritage Area. They can change the shape and structure of dune and beach environments by displacing native plants, they adversely impact on coastal herbfields, grasslands, shrublands, shorebird habitats and marsupial feeding areas.

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## **Sea Spurge Still in the Eurobodalla**

The Eurobodalla Shire Council has nearly completed a project, which maps, using GIS mapping, weeds along the coastal zone of the Shire. From this survey priorities are determined and appropriate management procedures introduced. Sea Spurge is one of the weeds, which has been identified.

The mapping project has not been

completed for beaches south of Glass House rocks. However, the mapping is complete from Durras Lake in the north to Glasshouse Rocks in the south. It is anticipated that the Shire wide mapping project will be completed within two months.

Management options for the infestations include using Landcare volunteers, or professional contractors where the infestation is significant.

Sea Spurge has been found on most beaches in the Shire, and in many cases it is controllable by hand pulling. Members are urged to keep an eye out for this weed and pull it out, and preferably place in a bag for disposal.

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## Things fall apart: why do the ecosystems we depend on collapse?

Professor David Lindenmayer, ANU  
(The Conversation 23/01/2016)



People collapse, buildings collapse, economies collapse and even entire human civilizations collapse. [Collapse is](#)

[also common in the natural world](#) – animal populations and ecosystems collapse. These collapses have the greatest impact on us when they affect resources our industries depend on, leaving ecosystems in tatters and sometimes ruining local economies.

In a [new paper](#), I look at two natural resource industries – fisheries and forestry – that are highly susceptible to collapse.

From the infamous 1980s [collapse of the Canadian cod industry](#) to the apparent imminent collapse of the [Heyfield sawmill in southern Victoria](#), we can see a recurring pattern. And by getting better at predicting this pattern, we might be able to avoid collapse in the future.

### The stages of collapse

In fisheries, collapse follows a familiar pathway, which has up to eight stages. In a 1993 report for the US Marine Mammal Commission on harvesting ocean resources, L.M. Talbot described these stages

fishers discover a new fishery, or a new method of harvesting an existing stock

fishers develop the new resource with little or no regulation

major fishing effort results in over-capitalisation of the equipment used to harvest the resource – the value of the fishery can sometimes even be less than the investment fishers made

fishers develop the capacity to catch more fish than the fishery can sustain

fishery becomes depleted and the number of fish caught begins to decline

fishers intensify their efforts to catch fish

to offset the decline in harvest  
intensive fishing continues as fishers  
attempt to recoup investments in  
over-capitalised equipment

fishery is depleted to such levels that it  
is no longer economic for fishers  
to go fishing. At this stage the  
fishery is fully collapsed.

In some cases, regulators attempt to  
manage the fishery as fishers intensify  
their efforts. Examples include putting  
in place quotas and economic subsidies,  
or reducing the fishing capacity of the  
fleets.

However, these are often belated and  
ineffective. This is particularly so given  
uncertainty about the fishing resource,  
lack of information on the ecology of the  
target species, and the fact that an  
industry with vested interests will lobby  
hard to protect those interests.

Subsidies at these stages – such as tax  
breaks and/or fuel rebates – may mean  
that fishing becomes artificially  
profitable. Fishers may remain in the  
industry and continue to overinvest to  
obtain a greater share of a dwindling  
resource.

Many forestry industries around the  
world show similar stages.

Native forest harvesting in Australia is a  
highly capital-intensive industry. It uses  
heavy machinery that costs a lot to  
purchase, leading to high interest  
repayments. Such efficient harvesting  
may not only employ relatively few  
people, but also outstrip the amount of  
timber that can be sustainably harvested  
(like stage four in fisheries collapse).

Significant amounts of timber and  
pulpwood need to be processed  
continuously to pay the interest and  
other bills for equipment (stage seven).  
Moreover, logging may continue even  
though it is highly uneconomic to do so

(stage eight) and other industries that  
are damaged by logging (such as the  
water and tourism industries) are  
significantly more economically  
lucrative.

### **Why do industries overharvest?**

Fisheries and forestry often allocate  
greater harvest limits than the  
ecosystem can produce without  
declining.

One key reason this happens is that fish  
or timber allocations often don't account  
for losses from natural events.

For example, the mountain ash forests  
of Victoria rely on severe wildfires to  
regenerate. They are also extensively  
logged for paper and timber production.  
Yet the organisation responsible for  
scheduling of logging in these forests  
(VicForests) does not account for losses  
due to fire when calculating how much  
timber can be harvested. Major fires in  
2009 badly damaged more than 52,000  
hectares of this forest. But  
environmental accounting analyses  
indicate there has been relatively little  
change in sustained yield allocation  
since these fires.

Yet, modelling suggests that, over 80  
years, wildfire will damage 45% of the  
forest estate. This amount should  
therefore should not be included as  
timber available for logging.

Another driver of the problem of  
resource over-commitment can be  
gaming, where stock availability and  
direct employment are deliberately  
overstated. This may be to secure the  
status and influence of a given  
institution with government, or for  
other reasons such as leverage in  
negotiations over access to resources.

The autobiography of Julia Gillard, the  
former Australian prime minister,  
suggests this occurred during debates  
over the fate of forests in Tasmania,  
alleging that Forestry Tasmania

overstated forest available for harvest. [Forestry Tasmania denied these allegations.](#)

#### **What can we do?**

Early intervention in fisheries and forestry industries can prevent ecosystem and industry collapse. We also need to better ways to assess resources, including accounting for losses of resources due to natural disturbances.

However, in some cases resources have been so heavily over-committed that industry collapse is virtually inevitable. For example, environmental accounting work in the wet forests of the Central Highlands of Victoria suggests [very little sawlog resource is left](#) as a result of many decades of overcutting and associated wildfire. Clearfell logging makes these forests [more prone to particularly severe fires.](#)

The collapse of the sawlog industry is highly likely, even if there is no fire. This is clear from the pleas from sawmills for [access to further forest resources](#) – even when such extra resources basically do not exist.

Now the industry needs to transition to plantations for paper production and for timber (82% of all sawn timber already comes from plantations in the state).

[Alternative industries](#) like tourism that employ far more people and contribute more to the economy must be fostered. [There are many examples to draw on](#) – New Zealand is one of many.

When governments know in advance about likely industry collapse, then it is incumbent upon them to intervene earlier and help foster transitions to new (and often more lucrative) industries. This ensures that workers can find jobs in new sectors, and the transition is less painful for the community and less costly for taxpayers. Failure to do this is unethical.

The [closure of the Hazelwood power station](#) in Victoria is a classic example of a lack of planning for industry transition. The need to close Hazelwood was discussed in formal reports by the former State Electricity Commission more than 25 years ago.

The need to transition the native forest industry to plantations is equally clear and must be done as a matter of urgency.

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## **Update from NASA's Newsletter CO2 reaches 405ppm**

As you are all aware atmospheric CO2 concentrations are rising at an exponential rate, reaching 405.25 in December 2016.

Last Saturday the 'Friends of the Botanic Gardens' had a world expert, Tony Haymet, address their meeting. Not only was it alarming to hear what he had to say about CO2 but he also addressed Ocean Warming, a subject which is little flagged.

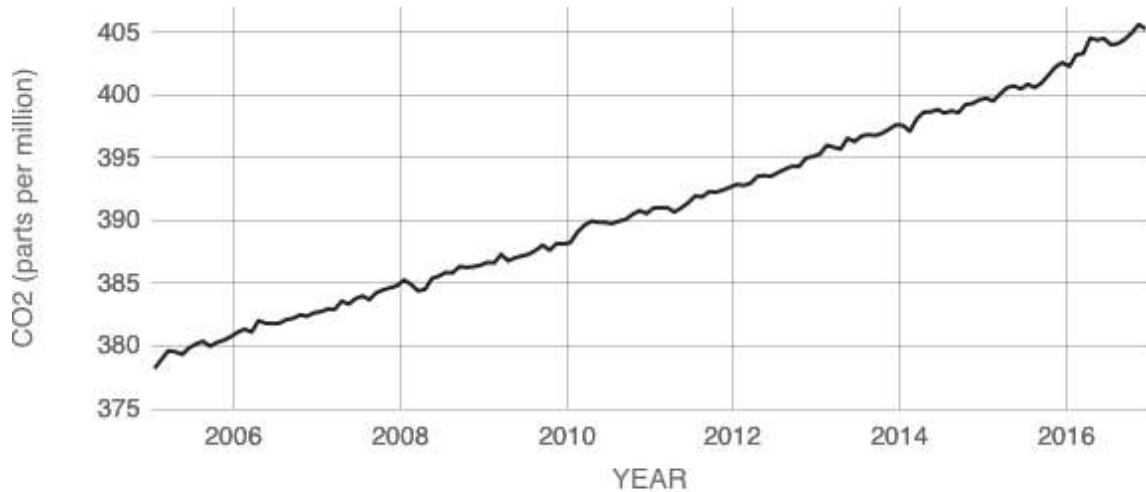
The contents of the speech were alarming, and most departing guests said "I will be dead" but "I fear for my future grand children". **Later in the year Tony will address a Coastwatchers meeting on this topic.**

Two charts are presented. They need no explanations. The Ocean Warming chart will be presented in a future Newsletter.

The first NASA chart shows atmospheric CO2 levels in recent years, with the average seasonal cycle removed. The second NASA chart shows CO2 levels during the last three glacial cycles, as reconstructed from ice cores.

## DIRECT CARBON DIOXIDE ATMOSPHERIC MEASUREMENTS 2005-PRESENT

Data Source: Monthly measurements (average seasonal cycle removed. Credit NOAA)



Source: climate.nasa.gov

(Note: The 350.org movement considers the atmospheric concentration 350ppm of CO<sub>2</sub> as a safe upper limit.)

## PROXY (INDIRECT) CARBON DIOXIDE ATMOSPHERIC MEASUREMENTS

Data Source: Reconstruction from ice cores. Credit NOAA

