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**28 January 2004**

Sue Chate  
Executive Officer  
NSW Scientific Committee  
PO Box 1967  
Hurstville, NSW 2220

**ATT: Sue Chate**

RP001-04

Dear Sue,

**Re: Submission on the proposed listing for littoral rainforest on the NSW Coast as an endangered ecological community**

Thank you for providing Sydney Coastal Councils Group<sup>1</sup> (SCCG) an opportunity to comment on the proposed listing for coastal saltmarsh as an endangered ecological community on the NSW Coast.

## 1. INTRODUCTION

Littoral Rainforest communities on NSW Coasts and bioregions are currently protected by NSW State Environmental Planning Policy (SEPP) 26. Where SEPP 26 does not apply it is the opinion of SCCG that areas of littoral rainforest along the NSW coast and bioregions are under constant threat from human and natural pressures including land clearing and development. Ongoing investigations in to littoral rainforest communities have continued to report the pressures they face from increasing coastal urbanisation and agricultural practices as well as natural causes (Mills, 1996, Mills & Jakeman 1995; Keith & Bedward 1999, NPWS 2002).

Therefore, the SCCG supports in full the intentions of the NSW Scientific Committee to protect littoral rainforests on NSW Coasts and bioregions.

Listed below is a summary of key issues and specific comments SCCG have in relation to the importance of littoral rainforest communities.

### 1.1 Summary of Key Issues

- The SCCG supports the aims of the NSW Scientific Committee.
- Littoral rainforest communities are a vital habitat.
- Littoral rainforest area and extent continues to decline in NSW.
- Flora and Fauna species diversity is vital to Littoral rainforest communities.
- Littoral rainforest communities continue to come under increasing pressure from development and natural phenomena.
- Littoral rainforests within the SCCG region.

## 2. SPECIFIC COMMENTS

## 2.1 Support For Scientific Community

As outlined in Section 1 of this submission, SCCG recognise the importance of littoral rainforest communities and supports in full, the proposal by the NSW Scientific Community for this community to be listed as an endangered ecological community on the NSW Coast and bioregions.

## 2.2 Littoral Rainforest Communities Are A Vital Habitat

Coastal Littoral Rainforests provide habitat for flora and fauna that provides ecological connectivity within and among species populations i.e. habitats, breeding grounds, pollination and seed dispersal. Without the diversity and of species assemblage and structure that littoral rainforests provide, ecological connectivity of flora and fauna species is at risk, resulting in fragmentation of populations.

## 2.3 Littoral Rainforest Area

Littoral Rainforest occurs in numerous but often small stands and in total comprises less than 1 per cent of the total area of rainforest in NSW. The largest known stand occurs in Iluka Nature Reserve, which is approximately 136 hectares. Many, but not all, stands of Littoral Rainforest have been included in mapping for State Environmental Planning Policy 26 Littoral Rainforest, but degradation of the ecological community is still occurring.

It is estimated the total area of coastal littoral rainforest in NSW is approximately? hectares distributed in fragmented patches mostly less than 100 hectares. Since this estimate, further reduction and fragmentation have occurred for reasons attributed to both man-made (e.g. they are infilled to accommodate parklands or road or aerodrome corridors) and natural causes, such as mangrove invasion.

It is important therefore that the current area of saltmarsh communities be preserved to accommodate the needs for terrestrial and marine flora and fauna species as outlined above and the proposal put forward by the NSW Scientific Community would ensure this.

## 2.4 Species Diversity

Terrestrial flora within a saltmarsh community is unique. It is unique because unlike other terrestrial flora communities it has evolved and adapted to grow in areas where most other plant communities would not survive, including inland saltmarsh communities. For example in soils that are poorly aerated, completely waterlogged, acidic and often have elevated levels of salt. Furthermore, there is little variation in species composition and diversity across a gradient (Mitchell and Adam 1989). Species at lower levels of a saltmarsh e.g. *Sarcocornia quinqueflora* is typically 5cm – 9cm in height, while species in the mid saltmarsh e.g. *Sporobolus virginicus* range between 17cm to 20cm in height, while species in the upper saltmarsh like *Juncus kraussii* and *Baumea juncea* are typically up to 1m in height (Phillips 2001).

The diversity of species also varies geographically. For example extensive stands of *Sporobolus virginicus* are found in northern NSW, while on the south coast more extensive stands of *Sarcocornia quinqueflora* are found. Coastal Saltmarsh in southern NSW is generally more species diverse than further north, with *Austrostipa stipoides*, *Gahnia filum*, *Limonium australe* and *Sclerostegia arbuscula* forming a characteristic southern suite of species. Furthermore a number of vulnerable and endangered species such as *Wilsonia backhousei* and *Wilsonia rotundifolia* respectively are to be found in the south coast saltmarsh.

Saltmarsh species are also known to be phytoremediators, a unique adaptation that assists in controlling water quality within wetlands and coastal water bodies (refer to Section 6.0. within this submission for more information). Therefore it is imperative that species such as these and others already listed as either vulnerable or endangered are given the highest protection from pressures such as the affects of development at a catchment scale, coastal urbanisation and coastal agricultural practices. The proposal to list saltmarsh communities as an endangered ecological community will assist in conserving an established asset and aid in protecting them from development pressures.

## 2.5 Pressures on Littoral Rainforest Communities

The pressures on saltmarsh communities are both natural and human orientated. Natural causes such as sea level and climate change, to a lesser extent fire and more recently, the invasion of saltmarsh by mangrove

species (Saintilan and Williams 1999) alters the uniqueness of the saltmarsh species diversity and composition as well as limits the availability to migratory bird species (Saintilan 2003). Human pressures apart from those already outlined in Section 4.0 include the alteration of natural tidal flows within saltmarsh areas as a result of structures including weirs, bridges, roads and access paths, rubbish dumping, the implementation of sewer and stormwater drains/pipes, cattle grazing, mowing and trampling.

The release of stormwater into saltmarsh and wetland areas has a net result of severely altering salinity regimes and increases nutrient loads that eventually introduce unwanted exotic weed species that are often detrimental to saltmarsh communities. Other human disturbances include recreational activities such as trail bike riding that sometimes occur within designated SEPP 14 wetlands (Phillips 2001) results in the compaction of soil and fragmentation of species.

The proposed listing of saltmarsh species as an endangered ecological community would help to ensure that human pressures would be minimised and also be linked to local planning instruments. This action would result in preserving the current area and composition of saltmarsh and assist scientific research in determining the affects of natural pressures such as those outlined above.

### 3.0 Conclusion

It is the opinion of the Sydney Coastal Councils Group that without adequate protection of coastal littoral rainforest the uniqueness of the coastal landscape in its aesthetics, flora and fauna composition and diversity is at risk.

Despite the listing of NSW SEPP 26, littoral rainforest communities continue to decline in number, extent and area. The Sydney Coastal Councils Group therefore supports the NSW Scientific Community in its proposal to list coastal saltmarsh in the NSW North Coast, Sydney Basin and South East Corner bioregions as an endangered ecological community so as to ensure that saltmarsh communities, their extent and associated ecological biodiversity are adequately protected and the risk of extinction to nature is reduced.

I trust that these comments and recommendations will receive appropriate attention when finalising the submission for the proposed listing for saltmarsh as an endangered ecological community. If you wish to clarify any matter in the submission or require further information, please contact the Group's Coastal Projects Officer, Richard Phillips on 9399 0675 or email on the following address, [richard@sydneycoastalcouncils.com.au](mailto:richard@sydneycoastalcouncils.com.au)

Yours Sincerely,



**Patricia Harvey OAM**