

Flood mitigation by

The recent floods in the Northern Rivers of NSW. Brisbane and Sydney just highlight the severity of what is likely to continue to happen in the future. People are screaming Climate Change and blaming the burning of fossil fuels, and to a degree, I agree that we are facing Climate Change, but not necessarily from fossil fuels, but more likely from the past 230 odd years that Europeans have been changing the Australian environment.

When the first settlers arrived on these shores it was necessary to clear land for farming and fell trees for building products, and these practices have continued since then. It has since been shown that the old ways of clearing and timber getting have left us with a severely degraded and scarred landscape. This is also the reason we have such devastating floods and droughts.

By allowing these erosion gullies to grow deeper and wider we are allowing the storm waters to run off the ridges and into the gullies that flow at great ferocity into our creeks and rivers that can't hold this much water and cause the major flooding that we are witnessing.

It is my belief that the only way we will reduce the future flooding is with major earth works in the upper catchment areas of our valleys, especially in the bush areas that were once our major timber getting areas and have been left to degenerate further. Contour banks that will direct the excess water away from the gullies and spread it evenly across the landscape will allow the water to run along the banks and filter into the soil profile.

By adopting this method, you will not only reduce the future flood risk but will also help to drought proof the valleys, a win/win situation.

It would not be a cheap operation, but it would be a damn site cheaper than levee banks and major drainage works that probably want help or packing up and moving the towns. If you don't stop the water at its source, the problem of further major flooding is only going to worsen.

In the case of the Richmond River Catchment Area, for an example, we have an area estimated at 6,862 square kilometers, which makes it the sixth largest catchment in New South Wales; and its floodplain has an area of over 1,000 square kilometers.

The river rises at the northern end of the Richmond Range, near its junction with the McPherson Range, on the Queensland/ New South Wales border, west of Mount Lindesay, and flows generally southeast and northeast, joined by twelve tributaries, including the Wilsons River that runs through Lismore, before reaching its mouth at its confluence with the Coral Sea near Ballina: descending 256 meters over its 237 kilometer course.

It is not hard to see that a catchment of this size would develop a huge amount of water that would devastate anything that stood in its way, including towns and cities.

Captain Henry John Rous first identified the mouth of the river in 1828 and sailed about 30 kilometers upriver from its mouth. He subsequently named it Richmond after an English Duke, later that year explorer Allan Cunningham reached the river by land and that was the beginning of European settlement.

The river was a major port from 1840's until well into the 20th century. Soon after the first white settlers arrived, they discovered the abundant supply of Australian Red Cedar in the Richmond Valley and immediately began logging.

The Red Cedar is a large highly valued hardwood tree from the mahogany family and is used for its decorative applications as veneer and paneling. It is not hard to see why the early settlers saw the value in logging these trees to turn a profit while at the same time clearing their land for farming.

Unfortunately, they had no idea of knowing the devastation their actions would cause about 180 years later. The land that was cleared back then has now developed deeper and wider creeks and gullies washing the topsoil downstream to silt up the mainstream, again contributing to the flooding problem.

This is not an easy fix problem, but it has developed over a 180-year period and will take many years to rectify. One of the positives is that it will create employment for many people for years to come