

“THE CHINESE EFFECT”

The large man-made Pollution Cloud over the seas north of New Guinea is pulling rainfall away from Eastern Australia.

By Kevin Long

(Letter to Goulburn Murray Water – 20.12.2006)



Sea Surface Temperature Anomaly Map
(Bureau of Meteorology - 20 April 2008)

I would like this, my opinion, describing one of the causes of the reducing yield to the Murray Darling Basin and in particular the Campaspe Irrigation System, put on record.

1. During the last 15 years the atmospheric pollution levels emitting from China, India, Indonesia and Japan have been steadily increasing. (Anthropogenic pollution)
2. As a result of this increasing atmospheric pollution the Philippine Sea is being kept warmer than the Coral Sea east of Queensland, for most of the time in recent years. Consequently the atmospheric moisture being emitted from the Pacific equatorial region has been increasingly drawn north to that warmer sea area, reducing the atmospheric moisture flow down through Queensland, NSW and into Victoria. I have called this “THE CHINESE EFFECT”.
3. This is an increasing long-term phenomenon; the impact of this trend has not yet peaked.

This increasing trend has resulted in the Autumn rainfall being reduced by 40% on average, over the last 10 years. A similar reduction to the Winter rain totals is now becoming evident.

The overall effect can be clearly seen in the average inflows to the Murray Darling Basin as a whole, but especially in the Campaspe System. In this area it equates to a **90% loss of yield**.

The greatest impact of, “The Chinese Effect”, is to reduce the overall rain intensity and rain totals during the La-Nina years by approximately 150mm per year, across most catchments.

If this observed phenomenon persists, there will be little runoff apart from during an exceptionally wet year, most likely only one year in eighteen. The next peak wet year, is not due until the year 2012. If we are very lucky we may get a reasonable inflow during that time.

This means Central Victoria will be in non-productive drought conditions most of the time.

This prognosis heralds the end of irrigation as we have known it in the Murray Darling Basin.

Since loss of yield is becoming more pronounced due to influences like, “The Chinese Effect”, The Indian Ocean Dipole Effect and catchment changes, the resultant water shortages are becoming more acute,

I recommend the following changes to the Bulk Water Entitlement (BE): ASAP.

- The primary aim, for the future allocation system,(BE) is to provide an economically and environmentally sustainable irrigation system, under greatly reduced water inflows only 30% of the previous long term average
- This new allocation system needs to be based on using only half of the stored reserve plus half of the current season’s inflows. (“Use Half - Save Half” principle).
- Next year’s operation losses, stock and domestic and residential supplies, (at stage 3 restriction levels), must take precedence over this season’s irrigation allocations.
- Future allocations must anticipate minimum to zero inflows for periods of 2-3 years or maybe longer.
- Future allocations must be varied, as reserves are run up or down.
Variable allocation, reservoir level based, not past average inflow based.
- Irrigator’s allocations should be allowed to be carried over, less reservoir losses, to the following season, when not required in the current season.

Conservation of water must be practiced religiously and written into the Bulk Water Entitlement rules.