



Figure 5 Relative amounts of energy from storms above threshold impacting the nearshore in the Northern Region. Solid line is Grays Harbor, dashed line is the Coquille River. El Niño indices as before.

The relative energy delivered by major storms to the Northern region is shown in Figure 5. The El Niño storm years of 1982 and 1988 produced very high values of incident wave energy, even exceeding the value for 1998 in the South. However, since 1988, the North has had a nearly constant level at about half of the previous peaks and with no discernible El Niño dependence.

In summary, the Southern region of the West Coast experiences greatly increased wave activity during El Niño episodes, both in terms of numbers of major storms and in the cumulative incident energy. The Northern region has a greater number of major storms during non-Niño years, indicating a negative correlation with El Niño occurrences. For incident energy, the result is quite mixed, with high values during the El Niño years 1982 and 1988, and reduced values independent of El Niños in the succeeding years.

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