

Wind speed declining in Pacific Northwest: study

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Climate change may be taking some of the wind out of nature's sails. A new study led by Simon Fraser University shows evidence of declining wind speeds in areas across the Pacific Northwest.

The findings, published this month in the journal *Geophysical Research Letters*, could have implications for [wind](#) farmers looking for locations with steady winds to set up their businesses.

Resulting air stagnation could also mean that atmospheric pollution would take longer to disperse, potentially giving rise to health concerns.

SFU researchers Brad Griffin, Karen Kohfeld and Andy Cooper analysed maximum and average daily wind speeds from 92 different wind measurement stations between 1950 and 2008. When they separated coastal from inland stations, trends became apparent.

They found the coastal winds to be stronger and followed an eight-to-nine year pattern while inland winds showed a gradual decline over time. Neither could be explained by any obvious climate swings, including such occurrences as El Nino.

Rather, Kohfeld speculates it may be the interaction of two separate climate oscillations that is modifying climate and controlling the speed of wind along the coast.

And while urbanization may have a role in stilling the inland winds,

Kohfeld says there are likely bigger factors. A northerly shift of the Hadley Cell - the global atmospheric circulation system that controls major wind patterns – has been predicted by climate change forecasters.

“That could bring lower pressure differences or extensive high pressure zones and lower [wind speeds](#) to mid-latitudes around the world,” says Kohfeld, who holds a Canada Research Chair in Climate Resources and Global Change.

Another recent study by European researchers has suggested that land-use changes and more extensive vegetation might also be slowing the winds down.

The researchers plan to extend the study to more northern areas and do more detailed comparisons with climate models.

Griffin is currently working with SFU’s Energy Materials and Resources group and is preparing a series of policy briefings on energy and climate for the Pacific Institute for [Climate](#) Solutions (PICS).

Provided by Simon Fraser University

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