

How does the meeting of the Pacific and Indian oceans affect our climate?

CSIRO researchers have embarked on a voyage to learn how Australia's climate and weather is shaped by an ocean current known as the Indonesian Throughflow, which connects the Pacific and Indian Oceans through the Indonesian archipelago.



Credit: CSIRO

Team leader Dr Bernadette Sloyan said that the heat and fresh water carried by the Throughflow are known to affect both the Pacific and Indian Oceans, so understanding its physical and chemical make-up is important.

The Throughflow is a focus of global climate as it provides a low-latitude pathway for the Pacific's warm, fresh water to move to the Indian Ocean, playing a part in the global oceanic heat 'conveyor belt'.

On this trip, the [CSIRO researchers](#) will examine data collected by moorings they placed in the Timor Passage and Ombai Strait regions two years ago.

'We know very little about how this ocean current changes across the seasons and this will be the first time we look at data from these moorings,' Dr Sloyan said.

The moorings contain sensors that record temperature, salinity and ocean current.

'The current consists of several different layers that occur at different depths, which weave their way through the complex island network, where there are a variety of landscapes that affect them.'

The research team is on board the vessel [Southern Surveyor](#), which is owned and operated by CSIRO and is available to all Australian scientists.

This research forms part of the Australian Government-funded [Integrated Marine Observing System \(IMOS\)](#), complementing existing IMOS observations being collected from the Northwest Shelf, Great Barrier Reef, and the East Australian Current.

Given its importance to Australia's climate, IMOS intends to undertake long-term monitoring of the Throughflow. Updates on the voyage can be viewed at the [Investigator@CSIRO blog](#).

Source: News@CSIRO

From ECOS online <http://www.ecosmagazine.com/?paper=EC12447>