Bernadette

[Music plays and the CSIRO logo and then text appears: Decadal Forecasting Project, Ocean observations and processes]

[Image changes to show Dr Bernadette Sloyan talking to the camera and then camera zooms in on Bernadette’s face and text appears: Dr Bernadette Sloyan, Chief Research Scientist, CSIRO]

Dr Bernadette Sloyan: Decadal forecasting is important because it breaches the gap between the 7-day weather window and the climate projections that we’re used to seeing out to millenniums.

[Images move through of a rear view of Bernadette in a projector room pointing to and discussing a weather map with her colleagues and then a front view of Bernadette pointing to the screen]

So, if we think about those industries that will use that data, that will help them plan longer term into their 10-year, 5-year planning cycles.

[Images move through to show Bernadette talking to the camera, an aerial view of the ocean, dark clouds moving in the sky and Bernadette and a colleague looking at a weather map on a computer]

In the ocean we’re looking at how signals get into the ocean and get transported around the ocean circulations and then how they readmit themselves back out to the atmosphere through ocean, air, sea interactions. So, a perfect example of some of those is your El Niño cycles.

[Image changes to show Bernadette talking to the camera]

Although we think of them as seasonal cycles and multi-year, the ocean is actually priming the system many years ahead of an emergence of an El Niño.

[Image changes to show an aerial view of the ocean with the sun shining on the water and the camera pans over the water and then the image changes to show Bernadette talking to the camera]

So, the ocean controls basically if we’re going to go into strong seasonal climate cycles in the multi-decadal space.

[Images move through of Bernadette and her colleagues discussing a diagram on a whiteboard, a side view of Bernadette talking and Bernadette and her colleagues looking at a projected weather map]

Our team in this project will be delivering what we have, what is fundamental science to actually understand where predictability at the five to 10-year cycle comes from.

[Image changes to show Bernadette talking to the camera]

And in the ocean, that’s about where do we get signals into the ocean, where is it moved around in the ocean, and how does it interact back with the atmosphere.

[Images move through of Bernadette looking at a weather map on a computer with a colleague, Bernadette’s finger pointing to the map and Bernadette talking to the camera]

These are really tricky questions and because we have very limited data in the ocean and using what data we have smartly and intelligently, we’ll actually be about to produce more reliable forecasts in the future.

[Music plays and the CSIRO logo and text appears: CSIRO, Australia’s innovation catalyst]