James

[Music plays and the CSIRO logo and then text appears: Decadal Forecasting Project, Verifying and applying the decadal forecasts]

[Image changes to show Dr James Risbey talking to the camera and text appears: Dr James Risbey, Principal Research Scientist, CSIRO]

Dr James Risbey: Climate impacts are expressed through the variability in extremes of climate and so what we need to do is to try and forecast that variability, forecast those extremes.

[Image changes to show dark storm clouds and lightning moving through the sky]

So, try and forecast wet, periods of wet years, droughts, things like that and they’re really important because they have big impacts on society.

[Images changes to show dark clouds moving through the sky over an arid landscape and then image changes to show dark clouds moving through the sky and raining on arid plains]

So, the questions we’re addressing in the project are to try and understand the basis for predictability in the climate systems.

[Images move through to show dark clouds moving though the sky, James talking to the camera, James looking at a weather chart on his computer and James pointing at the chart]

So, where is the memory in the climate system and how does that express itself, and then to try to look at the forecast that the climate system is generating and try to verify the skill of those forecasts and where we have useful skill, try to identify that and then perhaps exploit that skill through various applications.

[Image changes to show a side view of James in a dark projector room and then image changes to show James explaining to his colleagues a drawn diagram on a whiteboard]

Forecast skill, be it in a climate or a weather forecast, is the notion that one has more value in the forecast than simply guessing.

[Image changes to show James talking to the camera]

The skill in the multi-year to decadal climate forecasts are assessed primarily by looking at the parts of the climate system that are more predictable.

[The image changes to show dark storm clouds and lightning moving through the sky over red plains]

So, we’re looking initially at features like the ENSO and what kind of skill we have in predicting El Niño, La Niño events and what that means for rainfall and temperature over the land.

[Images move through to show a side view of James and his colleagues standing in a dark projector room, a front view of James talking and pointing to a weather map and James talking to the camera]

This work is important because drought and climate variability is a regular feature and has big impacts on Australian and climate and climate in other regions and so we’d like to be able to better understand those processes, understand what basis there is for predicting them and then try to actually predict to the extent that we can these events and use that as a basis to try to ameliorate their impact.

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