



Positive climate change for tropical science research

Ian Gerard

RESEARCHERS from Queensland's James Cook University studying the effects of climate change on the Great Barrier Reef and Daintree rainforests have been given a \$40 million funding boost to establish a new tropical sciences precinct.

The Marine and Tropical Sciences Research Facility was announced by Prime Minister John Howard in the lead-up to last year's election and is designed to take the place of the soon-to-be-defunct reef and rainforest co-operative research centres.

Research conducted at the new centre will be used to address urgent environment issues facing the World Heritage-listed Great Barrier Reef Marine Park, such as agricultural run-off, global warming and coral bleaching.

Federal Education Minister Brendan Nelson said the funding would also address environmental concerns facing the Daintree rainforest and Torres Strait region.

The Daintree rainforest is home to the largest range of plants and animals in the world. It also contains the highest number of plant and animal species that are rare or threatened with extinction.

JCU vice-chancellor Bernard Moulden said the new centre would cement the university's place as the country's leading

tropical research institute.

"We are already the world leaders in publication and in citations for tropical reef ecology," Professor Moulden said.

Great Barrier Reef CRC chief executive Russell Reichelt said the funding would be used to support programs that investigated not just conservation but sustainability issues.

"It will give us a continuing understanding of the state of the Great Barrier Reef, the health of the reef and the factors affecting that," Professor Reichelt said.

"It's also about the sustainable use of the reef area, particularly the tourism industry."

Professor Reichelt said a key research area would be the gradual decline of inshore reefs, caused by the quality of water running into rivers and out to sea.

"The smoking gun with the reef is declining water quality," he said.

"But the good news is that this is reversible and this new centre will strongly support efforts to clean up the water coming into the reef."

One of the most important aspects to the funding announcement is the guarantee of continued support for the Australian Canopy Crane deep in tropical rainforest near Cape Tribulation.

Professor Moulden said the \$40 million funding announcement would give the industrial crane, which can raise up to three people above the rainforest canopy, a "new lease on life".

Almost 50m tall and part of a global forest canopy network, the crane is a joint venture between JCU, the University of Queensland and Griffith University.

Canopy Crane director Nigel Stork said the rainforest was known as "the last biological frontier" of science and that the crane was the only tool in Australia that allowed researchers to collect samples from all levels of the canopy.

"The Daintree is such an icon and it's important that we know as much as we can about it," he said.

"We don't know what's going on in the canopy and that surface layer where the forest meets the atmosphere is so crucial."

Professor Stork said rainforest research was about 50 years behind marine studies and further investigation would lead to vital information about the country's climate patterns.

"A huge proportion of Australia is forested, so we need to know what's going on," he said.



Biological frontier: Research assistant Kylie Goodall collects Daintree rainforest specimens from the Australian Canopy Crane near Cape Tribulation
Picture: Eddie Safarik