



Hajiji (fourth right) receiving the Sabah flag that had been flown in Antarctica by Prof Dr Justin Sentian, witnessed by Prof Dr Mohammad Saffree (fifth from left) and Abd Shukor (fourth from left) at Menara Kinabalu on Tuesday.

Sabahan conducts longest winter research expedition in Antarctica

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KOTA KINABALU: Ranau-born Professor Dr Justin Sentian has become the first Malaysian to conduct the longest winter research expedition in Antarctica.

Chief Minister Datuk Seri Panglima Hajiji Noor said Sabah is very proud of the achievements of Dr Justin from Universiti Malaysia Sabah (UMS) who also raised the Sabah state flag and the national flag during the seven months of research.

"I congratulate Dr Justin because he is the first Malaysian scientist to carry out the research in Antarctica. This achievement makes us very proud.

"Even more special is that the Sabah flag is also flown in Antarctica," he said while

receiving a courtesy visit from Dr Justin with UMS Assistant Vice Chancellor (Strategic), Prof Dr Mohammad Saffree Jeffree and Chief Executive Officer, Sultan Mizan Antarctic Research Foundation, Abd Shukor Jamaluddin at Menara Kinabalu on Tuesday.

Dr Justin returned the Sabah flag that had been flown in Antarctica to Hajiji as a symbol of successfully completing the Winter Research Expedition in Antarctica.

The same Sabah flag was given by Hajiji during the courtesy visit of Dr Justin in March 2023, before he left for Antarctica.

Dr Justin from the UMS Faculty of Science and Natural Resources conducted a research

expedition under extreme cold weather in Antarctica for seven months, between March 21 to October 27, 2023, making him the Malaysian serving longest in the world's coldest continent.

During his time in Antarctica, he had lived and done research at Professor Julio Escudero's station belonging to the Chilean state located on King George Island, Antarctica.

The expedition, which was held for the first time, was organised by the Sultan Mizan Antarctic Research Foundation (YPASM) in collaboration with the Chilean Antarctic Research Institute (Instituto Antártico Chileno (INACH)).

Dr Justin received a special research grant worth

RM150,000 from YPASM for related projects climate change entitled 'Tropospheric Ozone and Halocarbon Variations in the Antarctic Peninsula Under Extreme Weather Conditions'.

This three-year study conducted in collaboration with INACH and the University of Santiago examines the role of halogenated reactive halocarbons in surface ozone chemistry and meteorological conditions under extreme winter conditions.

Halocarbons are greenhouse gases that can contribute to climate change, and they are also responsible for the loss of stratospheric ozone in recent decades.

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Expedition: Dr Justin faced many challenges

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Dr Justin has obtained data that records variations in the concentration of surface ozone and several hydrocarbon gas species such as isoprene over the course of the Antarctic winter.

He also managed to take 197 gas samples from air, snow, sea ice and sea water to study the content of halocarbon species such as bromocarbon and so on.

Throughout the winter expedition in Antarctica, he faced many challenges, especially in terms of mental and physical to face very extreme weather conditions.

"There were times when the

temperature reached -44 degrees Celsius and the wind speed with a snow storm reached a speed of 120 km/h.

The results of this study are expected to have a significant impact on understanding the variation of ozone and hydrocarbon and halocarbon species in extreme weather conditions in winter.

"In addition, it can contribute to the generation of new knowledge not only among atmospheric chemical scientists, but also to the entire local and global community to better understand the complex relationship with current issues such as climate change and ozone depletion in Antarctica," he said, when sharing his experience doing research in Antarctica.