

Research Sasar Climate Change Impacts

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Indonesia Prima Depart expedition to the Indian Ocean

team of researchers Indonesia and the United States, Monday (20/2), the Indian Ocean wading dispatched from Jakarta to Aceh with the research vessel Baruna Jaya VIII. The expedition aims to understand the dynamics of the atmosphere and ocean waters more dynamic with climate change.

This expedition cooperation Meteorology, Climatology and Geophysics (BMKG) with the Research Center for Oceanography (P2O) Indonesian Institute of Sciences (LIPI) and the National Oceanic and Atmospheric Administration USA (NOAA). The team was joined in Indonesia Initiative Program on Maritime Observation and Analysis (Indonesia Prima).

"Cruise Indonesia Prima is so one attempt BMKG support continuous availability of marine observation. The data can be used to support improved understanding and weather and oceanographic information," said Head of BMKG Andi Eka Sakya when removing a team, yesterday. "Ocean observation data will play an important role in improving the accuracy of weather prediction and marine climate," he added.

Deputy for Human Resources, Science, and Culture Ministry Maritime Maritime Coordinator Safri Burhanuddin said, this activity is a followup to the signing of the cooperation between the Government of Indonesia and the US related to science and marine technology. This cooperation has lasted three years.

Accuracy marine weather and climate predictions, said Safri, is expected to support all the activities in Indonesian waters in order to achieve the potential utilization of marine resources are maximized.

Research activities

Andi added, the climate in the region of Indonesia strongly influenced the dynamics of El Nino and Southern Oscillation (ENSO) phenomenon in the Pacific Ocean and the Indian Ocean Dipole (IOD) in the Indian Ocean. The last few decades, a wave of tropical atmosphere, known as the Madden-Julian Oscillation (MJO), which propagates from the Indian Ocean to the Pacific Ocean in a cycle of 3090 days, also had a great influence.

"The ability to observe these two phenomena will be very helpful in understanding the behavior and changes in weather and climate Indonesia. Ultimately, this could support economic activities related to land and sea, for example, to regulate planting, seeding and transportation," said Andi.

Throughout the expedition, according to Andi, the researchers will also conduct maintenance ocean buoy which is part of research RAMA (Research moored Array for AfricanAsianAustralian Monsoon Analysis and Prediction), as was done in the previous year. These activities are multinational in order to establish baseline data for monitoring and prediction of marine monsoon system, climate variability, and the interaction between the ocean and the global atmosphere.

"The thing that sets on a cruise this year is BMKG and LIPI research team will also perform observations of the atmosphere and the ocean in order to get the data insitu to assess the weather phenomenon and the Indian Ocean," said Andi.

Chief Researcher BMKG on Leg 1 Indonesia Prima Indian Ocean, Siswanto, said the research is expected to get information on the impact of the rate of heating of land and sea in the waters around Indonesia observed region following the global trend of rising temperatures.

As known, global temperature rise has currently reached 1.1 degrees Celsius compared to the 1900s.

Andi added, the researchers BMKG will also release air balloon meteorological sensor on this expedition to get a profile of the atmosphere from the surface up to an altitude of tens of kilometers. "The weather and updates every hour throughout the cruise line will also be recorded, including air quality and atmospheric carbon dioxide concentrations at some point over the Indian Ocean," he said.

In addition, researchers from LIPI P2O will investigate the composition and physical properties of the ocean from the surface to a depth of 7,000 meters. "All the data generated from this activity is expected to be used in assessing the interaction between the ocean and the atmosphere in the Indian Ocean, how it relates to the phenomenon of MJO and other phenomena," he said.

Mapping the seabed

addition to weather and marine dynamics, Andi, the team this time also involves a team of geophysicists from BMKG and LIPI. They will investigate gravity and mapping the seabed, especially to learn new faults were revealed during the earthquake in Pidie Jaya, Aceh, December 7, 2016.

Siswanto added, this expedition will take the route JakartaSunda Strait and the Indian OceanSabang SabangsPidieJakarta Malacca Strait. "In addition to collecting data, this activity is also equipped with open ship and miniworkshops that can be visited by the general public when the ship docked at Sabang," he said. (AIK)

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