

Monsoon Climate over South East Asia Region and Impacts on Ecosystem

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The climate of South East Asia Region (SEAR) is characterized by the monsoon cycle and its inter-annual variability. Being one of most well known monsoon systems, Asia Monsoon has been playing a significant role in the agriculture and the livelihood of people in SEAR region as it brings rainfall for the wider Southeast Asian Basin and its neighboring countries. However, if the Asia Monsoon deviates from its normal pattern, it will cause floods and droughts, thus finally resulting in the disruption of agricultural operation, even displacement of inhabitants. In this sense, better understanding and predicting the monsoon onset and its strength are therefore very important.

IOC Sub-Commission for the Western Pacific (WESTPAC) developed, within its framework of South East Asia-Global Ocean Observing System (SEAGOOS), one pilot project entitled "Monsoon Onset Monitoring and its Social & Ecosystem Impacts" (MOMSEI). This pilot project, through enhancing the monsoon onset monitoring capability over SEAR in synergy with the on-going efforts of Indian Ocean Observing System (IndOOS), aims to improve the understanding and forecasting of Asia monsoon and its multi-scale variability.

In addition, this pilot project can also demonstrate the value of ocean observations for the ecosystem conservation by analyzing the possible link between the monsoon onset and coral reef bleaching in the Andaman Sea. It is said the coral reef bleaching in the Andaman Sea has a strong seasonality and tendency to occur during the pre-monsoon onset period when the sea surface temperature (SST) reaches its annual maximum. Hence the monsoon monitoring information, particularly its onset time and strength, will help evaluate the coral bleaching risk.



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