

Assessing the vulnerability of Indonesian rice-based cropping systems to climate variability

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Since 1960s, national rice production has increased steadily. However, in the last ten years, rate of the increase decreased from 5% to 2% per year. On the other hand, production loss due to extreme climate events also tends to increase. On average, the production loss due to extreme climate events in the last 10 years increased three times compare to the production lost in the previous last 10 years. Rice production loss due to an extreme climate event could go up to 2 million tonnes. This indicates that the national rice production system is becoming more vulnerable to climate variability. Current technologies are not directed to anticipate the climate extreme events, so that as the level of exposure to the events increased from time to time, the loss due to these events also increased from time to time. The production loss of secondary crops planted after rice such as soybean, peanut or maize, due to the extreme climate events also tended to increase recently. Therefore, efforts to anticipate these events through increasing capability in using climate information for crop and water managements are crucial. The paper discusses the sensitivity of the Indonesian Rice-Base Cropping system to climate variability and the benefit of using climate forecast information.

Thursday III (Talk)