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“Filling gaps and removing traps  
for sustainable resource management”

## Water Productivity of Irrigated and Rainfed Rice in Southeast Asian Countries: Indonesia, Myanmar, The Philippines, Thailand, Vietnam

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### Abstract

Rice is one of the staple foods consumed by the world population. The projection of a vastly growing population by 2050 will also increase the demand for food production. Furthermore, the food production balance from irrigation and rainfed farming systems are expected to meet food demand in the future. Since water is highly used as an agricultural input, primarily to produce rice both in irrigated and rainfed environments, its consumption needs to be sustainable. Therefore, the terminology of water productivity will be an indicator of how adequate water is used to produce high rice yield. This study aims to assess the highest water productivity values for irrigated and rainfed rice farming systems in five Southeast Asian countries, which expected to describe how appropriate the water management and policy established in the countries. The methodology to measure irrigated and rainfed rice water productivity is adapted from the water footprint assessment. The results show that Myanmar has the highest level of irrigated rice water productivity whereas Vietnam is the main contributor to the rainfed rice water productivity value. The support of the government in Myanmar for developing and maintaining proper irrigation scheme and water resource management helps Myanmar to use water effectively for producing irrigated rice. Proper control of rainwater used for rainfed rice production with unpredicted rainfall precipitation in Vietnam, help to produce rainfed rice with the most efficient use of water.

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