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Distribution of crop patterns in Mekong delta - Application of remote sensing -

Trinh Thi Thanh Duyen[1]*,   [2]
Thanh Duyen Trinh Thi[1]*, Akihiko Kondoh[2]

[1]   , [2]   CEReS
[1]Graduate School of Sciences, Chiba Unive, [2]CEReS, Chiba University

Mekong delta is the most important rice production area in Vietnam. About 35 years, from 1975 to 2009, rice production in Mekong delta increased from 5.141 million ton to 21.2 million ton (412%), while cropland area increased only from 2.039 million ha to 2.340 million ha (115%). Green Revolution and Vietnamese Government Revolution in 1986 were considered as the causes of this growth. In common with apply high-yielding varieties of cereal grains, expansion of irrigation infrastructure, distribution of hybridized seeds, synthetic fertilizers and pesticides to farmers, increasing the number of crops is also important factor for rice product inrease.

Under monsoon climate, Mekong delta has clear rainy season (May to October) and dry season. Until 1976, the haverst was only one in all Mekong delta, naturally, was carried on rainy season. After that, to insurance for food security, Vietnamese Government forced increase the number of crops to 2 or 3 per year and expansion cropland area. Increasing number of crops was thought that made soil become poorer and easy to pestilent insect consequence the quality and quantity of rice become worst. On fact, 2 or 3 crops per year has been carried on untill now and to be seen as right policy of Vietnamese Government. The matter is only how to choose the conformable land for 3 crops.

With development of remote sensing, the distribution of crop land and crop growing period monitoring has many of achievement. In this study, by using MODIS data and application of Normalized Difference Vegetation Index (NDVI), the number of crops in Mekong delta was extracted per year, from 2000 to 2010. From the spatial distribute of number of crops, by using GIS and we analysised the factors of meteorology, soil-land, hydrology and transport in choosing 3-crops-per-year-land. This result will be helpful for administrators to plan cropland in Mekong delta.

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