AN ANALYSIS OF NUTRITIONAL STATUS OF RURAL HOUSEHOLDS IN THE PHILIPPINES BY GIS

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Background: The geographical and environmental characteristics of the community influence the nutritional condition of a population. A rural community relies mainly on agriculture, whereas an urban community has more diverse economic activities. This study was conducted in order to analyze the nutritional status of rural households in the country and to present the results using the Geographic Information System (GIS).

Objectives: 1) To assess the nutritional status of 0-5 year-old children of rural households by region and present the results through maps using the GIS; 2) To determine the food consumption and nutrient intake of rural households and present such through maps using the GIS; and 3) To determine the relationship between the nutritional status of 0-5 year-old children and the type of agricultural occupation of the household head and other socio-economic characteristics.

Methods: This study was based on the data set collected from the 4th NNS conducted in 1993 by the FNRI-DOST. It assessed the food consumption and nutrient intake and nutritional status of rural households. The results were presented using the GIS.

Results: The study revealed that undernutrition, particularly underweight and underheight, affected a large proportion of 0-5 year-old children in the rural areas. About 3 out of 10 children were either underweight or underheight, and 1 out of 10 children were thin. The study also indicated that the most commonly eaten food in rural households were cereals and cereal products (mean=361g); fish, meat and poultry (mean=133g) and other fruits and vegetables (mean=126g). In terms of adequacy of nutrient intake, only protein (104.9%) met the Recommended Dietary Allowances. Energy and niacin intakes were 88.6% and 86.3% adequate, respectively. Findings also showed that there was a significant association between nutritional status and the type of occupation of household head, and other socio-economic characteristics. Households with seven or more family members have higher prevalence of underweight, underheight and thinness than households having less family members. Meal planners who have no formal schooling have higher prevalence of underweight, underheight and thinness than those who were educated. The prevalence of underweight and thinness was high among households with income earners who were small farm managers/owners, 56.6% and 20.3%, respectively. Rural households in Ilocos, the three regions in Visayas and Northern Mindanao were found to be at-risk in terms of nutritional status of 0-5 year-old children and the per capita food consumption and energy/nutrient adequacy.

Conclusion: The study showed that the analysis of nutritional status of rural households in the country is well appreciated if the results are presented through the GIS.

Recommendations: 1) Use GIS whenever nutritional data are disaggregated in sub-national levels; 2) Institutionalize or strengthen programs for children in the first two years of life; 3) Identify strategies that will enhance the micronutrient content and bio-availability of micronutrient plant-based staple foods in the whole diet of individuals, e.g., alliances between agriculturists and nutritionists; and 4) Given priorities in any socio-economic development programs like the KALAHI program of the National Anti-Poverty
Commission to households in rural areas of Ilocos, the three regions in Visayas, and Northern Mindanao.

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