

Analysis of Factors Causing Food Insecurity in Probolinggo District

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Abstract— This study aimed to identify the potential of local food in the community, food availability and distribution, and family food consumption (levels of energy and protein consumption) in the food insecurity region; and to analyze the causes of food insecurity in the District of Probolinggo. The research is descriptive qualitative. Data was collected using interview, observation, and documentation. Research conducted in Alas Pandan and Bimo villages (subdistrict of Pakuniran) and Jatisari village (subdistrict of Kuripan). The villages have serious condition in food insecurity. The number of respondents is 45 families. The potential local food are rice, corn, cassava, mango, and banana. The staple food availability in family level is good. Access for gaining food mostly by buying. Food distribution in family and community is good, i.e. 62,2%. The levels of energy and protein consumption are still under nutritional adequacy rate. Causes of food insecurity in the district Probolinggo are: a) the low of family food availability on food source of protein, vitamin, and mineral; b) levels of energy and protein consumption of community is under the RDA; c) the low of income; d) the low of education; and e) lack of community access to technology mainly food processing technology.

Keywords- *availability; distribution; food consumption; food insecurity*

I. INTRODUCTION

the fulfillment of food needs in the context of food security is the pillar for the formation of qualified human resources are needed to improve the nation's competitiveness in the global landscape in Indonesia (Suryana, 2004). To achieve food security required the availability of food in quantity and quality, affordable distributed and safely consumed for every citizen to prop up its activities on a daily basis all the time because the food security system consists of sub-systems, availability, distribution and consumption subsystem (Saliem, et al; 2002).

Increasing population, the narrowness for agriculture and climate change cause of food being one indicator important of welfare a nation. Of food in family containing understanding the food sufficient and available in a number which can meet consumption family. Tercukupinya food needs will not mean if food distribution and consumption food populations still low. Food distribution is not limited in the spreading and fair

distribution food sources in several regions, but they have also reaching up on a level family. Food consumption affected by many factors. The rate of consumption [5]; more determined by quality and quantity of food consumed. Food quality reflect the nutrient substance needed by the body, contained in foods the food reflects the amount of any quantity in a nutrient foods. Food consumption less impact on low nutrition status of people at risk the emergence and malnutrition (malnutrition). Food vulnerability is the condition of not enough food a society. According to the food and agriculture organization (FAO); and act number 7 1996 about food the front lines can be defined that individuals or household people have no access economy (revenue inadequate or food prices, unaffordable) not having access physically to obtain food pretty normal life healthy, and productive good quality and quantity.

Probolinggo is district with wide area 1.696.166,90 ha of his capital kraksaan. There are at least 98 village in sixteen sub-district in thousand probolinggo is categorized front lines. Map food scarcity probolinggo district 2007 issued council food security east java cooperate with university brawijaya calamity find there are two sub-districts being entire villages including front lines. Sub-district it is pakuniran and kuripan. The research activity focused on family in three village with category very prone food, namely village pedestal pandanus and villages bimo (pakuniran subdistrict) and village jatisari (kuripan subdistrict).

Purpose activity this research are 1) identify potentials local food in society, 2) knowing of food level family in the proneness food, 3) dig information about food distribution in family and community, 4) food consumption aware family (levels of consumption of energy and protein consumption levels), and 5) conducting an analysis of the causes of food insecurity based on data availability, distribution and consumption of food. This research is expected to be a guideline or reference for the basic driving force of development and policy makers in the intervention to the community in the area of food insecurity, source literature for students in community nutrition lecture activities, as well as references for further research or development related to community food security.

II. METHOD

The kind of research is descriptive qualitative, by cross sectional design. Determining the location done in purposif, with consideration the region in category very front lines so elected two villages in sub-district pakuniran, namely Alas Pandan village and Bimo village, and one village in sub-district kuripan, namely jatisari village.

Research subjects is families who have toddlers in the village of Alas Pandan, Bimo and the village of Kuripan Village, each village taken as many as fifteen families so that the number of respondents was 45, elements of the Government that Kecamatan, village of Pakuniran devices and Food Security Agency and Kuripan Regency Probolinggo.

Data collection was carried out through interviews, observation, and documentation. Research instrument used in the form of observation sheet and questionnaire. The Data collected in the form of primary data about the potential for local food, family characteristics, availability (food list or inventory method), distribution and consumption of food (recall 2x24 hours). According to the Department of health RI (1990) level/degree of food consumption is said to be good if & gt; 100 RDA, medium = 80-99, lack of RDA = 70-80 deficit and if RDA & lt; 70 RDA. Secondary Data in the form of a monograph of the village and the result of weighing a toddler from May 2011 until June 2012. The data analysis done on a descriptive qualitative, where data are presented in the form of percentage for exposing and illustrating the observation results obtained.

III. RESULT AND DISCUSSION

The General State Of The Region.

The village has an area of Alas Pandan 197.4 Ha. The base area of Pandan are generally in field area 104.7, tegal 48.7 Ha, and estates area 18 Ha. Villagers Alas Pandan totaled 1,886 people or 746 families. The majority of the inhabitants of livelihood as farmers edged 280 people and peasants, 466 people, as a seller, entrepreneur, civil servants, a builder, driver/taxi, and so on. In terms of educational level, there were 838 people did not finish elementary school, 619 people finished primary school, 207 people finished junior high school, 86 people finished senior high school and 118 people College. Principal agricultural community such as rice, cassava, mango, banana, and teak. From these results, the community has been expanding into several industries such as the manufacture of household to make cassava, Tempe and industry furniture also develops in the village though still in small scales and marketing is, but has medapat intensive training from the related institutions (dept. of industry).

The village is located on the slopes of Bimo Arjuno and includes mountainous terrain or hills to an agrarian agroekologi. Total area 465,5 Ha Bimo Village fields or moor is the widest part (206 Ha) then a forest of teak 136,8 Ha. The main types of Community agriculture rice, cassava, bananas, teak and mango. A mainstay of the range chicken farming village of Bimo results. Villagers Bimo consists of 625 people

men and women, with a total of 534 families as much as 430 families. Percentage inhabitant of largest was adult as many as 759 people (65,71%). Livelihood population main as farmers and farm laborer 375 people (86,81%). Number of resident there are elementary and finished elementary is also high is 108 people (16,05%) and 376 people (55,87%), known only 18 people (2,67%) who until in level university mention the percentage of poor families in village bimo still high (73,5%), this are reflected of condition houses that walled bamboo or wood still dominate, namely as many as 54,9%. Jatisari village is the only village in the Sub-District of Kuripan which includes categories very prone. The village includes a hilly area that is mostly dry land/tegal 737,86 Ha, 483 teak forest and rice field rainwater 4.43 Ha. Village jatisari hamlet, is divided into 65 neighborhood units and 26 neighborhood unit.

The characteristics of the economy of the community at large-eyed livelihood as self-employment (workshop), a builder, pedicabs, farmers, peasants and taxi driver. The Data shows the village of monograph almost 90% of the community includes a poor family. The results of the agricultural community is cassava Besides rice and corn. Forested areas are generally planted with teak trees.

The Potential of Local Food Communities.

Local food community was greatly influenced by the agroecology region. Ecological factors have a very dominant role towards the formation of food consumption patterns [6]. Pakuniran and Kuripan Subdistrict is areas with agricultural region agroecology. Food in the form of rice and tubers, especially yams and cassava, taro dominated the local food community, however rice production has not been able to meet the needs of the whole population so that the availability of rice as a staple food still must be met from other regions. Some regions, especially the village of Bimo also planting corn as a result of his farm. This data in accordance with Arsiniawati [3] which states that all districts/cities in East Java, put rice as the staple food maize, although in the form of rice, maize (a mixture of rice and maize) as well as ampok or aron (corn) are still commonly found in Probolinggo District among others.

Animal food sources that are generated in the form of a lot of chicken, beef and goat the next. Animal food in the form of a chicken or the egg that is consumed is the result of society's own livestock, while cows are more used to help cultivate their farmland. None of the results generated by the fisheries community land and the sea. Most of community more consume fish be processed salted fish). Type of vegetable that is often found in water convolvulus, cassava leaves, mustard greens, spinach, and so on. In Pakuniran Subdistrict, mango and banana into a fairly promising local commodities. Some mango plantations are found, but still limited consumed/sold the community in the form of fresh, they haven't been able to develop it into a product that is worth the economic high. Unlike the case with banana, Pakuniran subdistrict community has been able to develop the

entrepreneurial banana (banana to make) that can sustain their household economy.

The Availability of Food Family.

The availability of food family is considered the family of the ability to fulfill the needs of a group of cereal grains, pangannya the tubers, panga animal, oils and fats, fruit /seeds fatty, nuts, sugar, and fruits and vegetables. The availability of food family be judged from availability of foodstuffs in the period one week. Such as rice grains become main society, staple food partly (about 46.6%) the family also provides of corn for processed into nasi corn as an alternative to substitute rice. Cassava is sort of the most numerous consumed, but more often used as food an interlude and entrepreneurial (cassava chip).

A kind of food animal that is widely available is a chicken and eggs, next fish. The availability of fish in the family rarely in form of fresh fish but preserved, in the form as of salted fish. Some fresh fish that is often found here was a fish fresh-water or river, which is a lele or mujair fish. Food products other animal is milk, who is also available but limited only on 17,7 % of the family.

TABLE 1. Food availability in family per week

| Kind of Food | (% Food Availability per week | | |
|----------------------|-------------------------------|----------|---------|
| | <3 days | 3-5 days | >5 days |
| Paddy/rice | 0 | 0 | 100 |
| Corn | 53,3 | 2,2 | 44,4 |
| Cassava | 73,3 | 17,8 | 8,9 |
| Noodle | 97,8 | 2,2 | 0 |
| Chicken | 77,8 | 15,6 | 6,7 |
| Beef | 100 | 0 | 0 |
| Fish | 40,0 | 11,1 | 48,9 |
| Egg | 42,2 | 26,7 | 31,1 |
| Vegetable oil | 6,7 | 2,2 | 91,1 |
| Coconut/coconut milk | 91,1 | 4,4 | 4,4 |
| Peanut | 91,1 | 2,2 | 6,7 |
| Soybean curd | 17,8 | 8,9 | 73,3 |
| Tempe | 40,0 | 8,9 | 51,1 |
| Sugar | 6,7 | 4,4 | 88,9 |
| Watercress | 77,8 | 13,3 | 8,9 |
| Cassava leaf | 66,7 | 15,6 | 17,8 |
| Lettuce | 97,8 | 0 | 2,2 |
| Spinach | 84,4 | 6,7 | 8,9 |
| Banana | 100 | 0 | 0 |
| Papaya | 100 | 0 | 0 |

Data shows that the whole family having good availability of rice, soybean curd, sugar and oil for frying. While little food available in family is beef, chicken, noodles, coconut/coconut milk, soybean curd, lettuce, spinach, bananas and papayas. And virtually food source of protein (either animal or vegetable) and food source of vitamins and minerals (vegetable and fruit) is food group should be increased its availability.

Food distribution family.

Food distribution family one of them is determined from access family obtain food. Family access to food in sub-district pakuniran kuripan and carried out largely by purchasing family so that ability to obtain food closely related to purchasing power or family income so family with high income be easy obtain food compared with the family lower-income.

The ability of the family to provide for and obtain food won ' t be effective if not supported by the distribution of good food to all family members. The distribution of good does not mean the food must be consumed in equal amounts to all the family but food to be distributed properly in every time (as breakfast, lunch and dinner), a kind of food divided evenly to all the family members as well as a quantity of food consumed adjust by nutrition needs family members. Based on the answers given the family about food distribution, then known there are 62,2% family having good food distribution; 31,1% having fair food distribution and 6.7% family with food distribution less well.

Food consumption.

Major indicators from family food consumption seen from energy consumption level and protein consumption level. Composition and kosumsi food someone influenced knowledge nutritional and health [6]. The results of a survey conducted by the food consumption of Probolinggo district at 2010 known that the energy consumption population with an agricultural region is 1944,8 cal/capita/day while data recall the overall population of energy consumption in Pakuniran and Kuripan sub-district is 1979,17 cal/capita/day. Although this figure look higher than energy consumption inhabitant of Probolinggo district but compared Recommended Dietary Allowances (RDA) 2005 that energy consumption level inhabitant of Indonesia actually 2150 cal/capita/day, so the rate is still low.

Consumption protein population known 53,82 grams /capita/day. While the survey food consumption in Probolinggo district 2010 with agricultural region is 56.3 grams /capita/day and RDA protein consumption according to 2005 55 grams/capita/day. It is describe in general protein consumption population in pakuniran and kuripan sub-district should participate for lack of consumption protein in long time caused a lot of nutrition problems mainly in infants and toddlers.

Majority of respondents having medium level of protein consumption (37.8%). If connected with the

availability of food family especially on source of protein in general only available less than three days in a week so that data describes food source of protein availability having a significant relation between the level of protein consumption society.

The Cause of Food Insecurity in Probolinggo District.

Realization of food security produced some element the subsystem interact: food availability, food distribution and food consumption [1]. The approach taken to build third subsystems was coordination and community empowerment in participatory. The identification challenged the cause of insecurity in pakuniran and kuripan sub-district, Probolinggo based on the data has been obtained is:

- 1) a lack of food availability as a source of protein (beef, chicken, fish and tempe) as well as a source of vitamins and minerals (coconut/coconut milk, watercress, lettuce, spinach, bananas and papayas).
- 2) the level of energy consumption and protein majority people are still under the criteria adequate nutrition.
- 3) the low income people and it difficult to fulfill their food nutrition for family
- 4) low education society so that knowledge and awareness about the importance of food or nutritive also less, and the difficulty they get jobs adopted.
- 5) lack of public access for technology especially the processing producing stuff.

Identification by way of referring to the problem effort or an alternative solution that can be done is an educational program nutritional and health care for the community. A form of activity can include counseling, training and the development of a device formal education that integrated in school curriculum. The program not only aim is to raise public awareness about food and nourishment so that implicates to improve the quality of food consumption, but also a manner to eliminate the problem of malnutrition in toddlers and poor preventive measures the onset of food scarcity and give the impact of food sustainability.

CONCLUTIONS AND RECOMENDATIONS

Conclutions. 1) Potential local food is rice, corn, cassava as staple food, banana and mango for fruit and chicken and eggs on animal food, 2) the availability of food at the level of the family including good is rice, oil, soybean curd and sugar. While the food is sold as cow, a little available chicken, noodles, coconut/coconut milk, watercress, sawi, spinach, bananas and papayas, 3) access get food carried by buying and food distribution, including good family and community 4) Energy consumption level the overall population is 1979,17 cal /capita/day and rate of consumption protein average 53,82 grams/capita/day or still below the adequate nutrition, and 5) the cause of food insecurity in probolinggo district are lack of food availability families at source of protein vitamins and minerals, the level of energy consumption and protein people who are below criteria, the low income and community education, and lack of public access for technology

Recommendation. 1) The need for coordinated with education dept. district probolinggo and social institutions related to increase knowledge society on nutrition and socialization through different lines health and education. 2) Designing and devices promotion and education on food security through various education.

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