

**INTRA-HOUSEHOLD EFFECTS OF ENSO RELATED DROUGHT IN  
LOWLAND FARM HOUSEHOLDS IN CENTRAL SULAWESI, INDONESIA**

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**ABSTRACT**

The principal aim of the present study is to define the intra-household impact of El Niño 2002 on time and food allocation. Moreover, to determine how the roles of men and women were affected. This study focused at the intra – household level, since the effect of El Niño 2002 on the household was previously determined by Keil (2004). Thereby, the study contributes to achieve a more detail understanding of El Niño impact in the year 2002. The realization of the study was within the focus of the IMPENSO project (Impact of El Niño-Southern Oscillation). The study is composed of two parts. The first part refers to the quantitative study, and the second part to the qualitative study. As Keil (2004) concluded, the highest impact of El Niño 2002 was localized in three lowland villages in Central Sulawesi, Indonesia. Therefore, the quantitative study was based on a random sample of 96 household, used by Keil (2004). Meanwhile, the qualitative study was based on 3 different research methods. The number of respondents of each one corresponds to: 18 in-depth interviews, 3 focus groups and 9 key informants' semi-structure interviews. Therefore, by applying qualitative and quantitative methods it was approached the same phenomenon from different analysis. Thus, the results and explanations obtained from the analyses, led us to stronger conclusions than if it would be applied a single method. In order to analyse the data, the study was sub-divided in two parts. Firstly, the quantitative analysis consists of the time allocation analysis and the food allocation analysis. Secondly, the qualitative analysis was divided into in-depth interviews analysis, focus groups analysis and key informants' analysis. Both parts derive and conclude about the same issues. These issues are the differentiated effect of El Niño 2002 on men and women, on the age of the household members and on the wealth strata of the household members. In order to identify the possible impact of El Niño in the year 2002, it was compared to the non-El Niño year nearest to the year when the present research was done. The activities and food selected were based on the results from Keil (2004). Thereby, the analyses are concentrated on the most affected

activities. These activities were the rice production, temporary employment, maize production, cocoa production and other activities.

These 'other activities' comprised several activities, which were not as important as the above mentioned, regarding the amount of time allocated and the quantity of household members engaged. However, these did have importance due to they represent the diversity of activities in the research area. Furthermore, they represent the differentiated effect of El Niño 2002 on time allocation. The food allocation analysis consists of the change on consumption of rice, maize, rice mixed with rice, cassava, vegetables, banana, fish, chicken and beef. The effect of El Niño 2002 on food allocation depended on the kind of food. Therefore, there were foods consumed in more quantity during El Niño 2002 than 2004, such as rice mixed with maize and cassava. On the other hand, other foods were consumed in less quantity during El Niño 2002 than 2004, such as fish and rice. Furthermore, the qualitative research found that women were in charge of allocating the food within the household. Therefore, the wife gave priority on food allocation to other members to consume the staple foods like rice. For instance, in some situations during El Niño 2002, the wife reduced the amount consumed of some foods like rice, chicken or beef. On its place she increased the amount of other foods like banana (instead of rice), more quantity of vegetables. Thereby, that fact caused during El Niño 2002 a detrimental food allocation towards women. The time allocation impact of El Niño 2002 depended on the kind of activity. Therefore, in temporary employment, maize production, construction worker, fishing and the collection of rattan more hours have been worked during El Niño 2002 than in 2004. On the other hand, crops as rice, banana and chilli production perceived a reduction of hours worked during El Niño 2002. Furthermore, El Niño 2002 reduced the time that women were outside the house. Additionally, a minimum change in men's participation in the daily tasks has been observed. On the other hand, men's principal obligation sometimes implied the mobilization to other places, a fact that was accepted in the society; meanwhile women had less spatial mobility. Moreover, new and more diverse activities were fulfilled during El Niño 2002. Furthermore, the effect of El Niño 2002 pushed for the incremental participation of women in self-employment outside the agriculture. Therefore future local decisions should take into account the new alternatives activities developed since El Niño 2002. In which the participation of women has been incremented. Moreover, there were differences between villages regarding the effect of El Niño 2002 on the intra-household allocation of time and food. The analysed effects of El Niño 2002 on time and food allocation among the

household members are strongly recommended to be included in future decisions in development projects within the research area. This has the aim to

focus the attention on the household members that were most affected, especially on the activities and foods that the present study addresses. Furthermore, special attention must be given to women, the poorest and poor household members.