Preliminary research proposal

Assessment of socio-economic conditions of rural farm households who integrate local cattle development and forestry system in rural East Java

Eko Nugroho, S.Pt, M.Sc
Faculty of Animal Husbandry, Brawijaya University
Jalan Veteran, Malang East Java 65145 Indonesia
e-mail: eko_nug@yahoo.com

1. Introduction
1.2 Background

Cattle and beef self-sufficiency has recently become an agricultural policy priority in Indonesia. The policy has been introduced to reduce the country’s dependence on live cattle imports to produce beef, with the objective to move to becoming 90 percent self-sufficient by 2014 (Vanzetti, et al., 2011). In recent years, the trade value of live cattle import between northern Australian cattle producers and the Indonesian livestock industry was found over AUD 300 million in 2010 (ACIAR, 2012). In response to such policy, the government gradually attempt to reduce reliance on live cattle and beef imports and at the same time increasing the local production with local breeds (Nugroho, et al., 2013). In addition, several strategies have been implemented to support beef self-sufficiency such as development of beef cattle production centers in the form of village breeding centers (VBC) and better utilization of grass land to increase carrying capacity (Yuwono and Sodiq, 2012). Furthermore, the technical guidance of village breeding center has been issued under the Directorate General of Livestock service regulation No: 07007/HK.030/F/05/2008 (Directorate General of Livestock service, 2008). However, the implementation of village breeding centers varies among regions due to different locations and resources. The study then will investigate the implementation of village breeding center that integrate cattle and forestry system in Indonesia for some reasons. Firstly, small scale cattle farmers mainly have no land that is specifically allocated for forages and they have practically no access to either grown pasture or common grazing land (Nugroho et al, 2013). For this reason, those who live near forest normally use forest for agricultural purposes i.e. growing crops and collecting woods. The integration between cattle and forest might exacerbate deforestation and causes additional pressure on forest exploitation. As consequences, excessive exploitation on natural resources, forest in particular will decline all forest functions and services (Faust, et al. 2013).
By doing so, problems related to farmer’s livelihood in the regency remain subject to improvement. Secondly, with regards to beef cattle sector in Indonesia, small-scaled cattle producers (1-3 cattle) in densely populated Java may have low level of living standard which is indicated by limited capitals (human, physical, social, natural and financial capital). Thirdly, smallholder farmers have to deal with economical drawbacks such as low operational efficiency and a lack of access to market information (Delgado et al., 2003).

1.3. Problem definition and research goals

Village breeding center that integrate cattle and forestry system in Indonesia has not been adequately documented. In addition, scientific research that put attention in investigating the socio-economic conditions of integrated cattle and forestry system particularly in Indonesia have receive little attention. Therefore, the study that delve into the socio-economic and environmental assesment of integrated cattle and forestry systems on rural household livelihoods, particularly in East Java, remains a topic of great interest to those who launch programs to support cattle and beef self-sufficiency without threatening natural resources. The results are expected to contribute to the development of apropriate strategies for village breeding centers that integrate cattle and forestry systems in Indonesia and at the same time support sustainable management of forest reserves. Hence, the policy makers are able to formulate the best strategy to accelerate rural development program that could be adopted and applied by rural households.

1.4. Major research questions

The study is going to address the following major research questions:
1. What are the existing conditions of integrated cattle and forestry system implementation?
2. What are the driving forces for the establishment of integrated cattle and forestry system?
3. What are the problems of the current system in relation to economic, social and environmental issues?
4. How can the socio-economic conditions of the local cattle producers be improved and at the same time also improve forest conservation? What are the barriers to its improvement?
5. What is the appropriate social intervention to be formulated to improve the socio-economic conditions of the local cattle producers and at the same time can conserve the forest? What are the various impacts resulted from its implementation?

1.5. Major research hypothesis
H1: The existing conditions of integrated cattle and forestry system implementation has impact on the livelihoods of small scaled local cattle producers
H2: For smallholders farmers, limited land ownership and no access access to either grown pasture or common grazing land has forced them to exploit forest
H3: Recent forest exploitation practices have decreased the ecological and socioeconomic functions of the forest

1.6. Objectives of the Study
The objectives of the study are:
1. To describe the existing conditions of integrated cattle and forestry system implementation
2. To analyse the driving forces for the establishment of integrated cattle and forestry system
3. To elaborate the problem of the current system in relation to economic, social and environmental issues
4. To analyse some scenarios to improve the socio-economic conditions of the local cattle producers and at the same time also improve forest conservation.
5. To identify the pros and cons of each scenario that might appear in its implementation
6. To formulate appropriate scenario to improve the socio-economic conditions of the local cattle producers and at the same time can conserve the forest

2. Research design and methodology
2.1. Study site
The study will be carried out in Bojonegoro regency particularly in the village Napis Tambakrejo sub-district which is known to be one of the largest domestic cattle producers in East Java. In addition, Bojonegoro has been proposed as conservation region for one of Indonesian native cattle namely Ongole crossbred cattle since 2011. In this regency, the domestic cattle population is mainly operated by rural families integrated with forestry system. Moreover, there were significant degradation of productive forest class during 2002-2011 period (Suriaty, 2008).
2.2. **Study population**

Farm households who keep Ongole crossbred cattle in the village Napis Tambakrejo sub-district.

2.3. **Data collection methods**

The data for this study will be collected through a comprehensive household survey using a structured questionnaire and participant observation to investigate background characteristics such as education, age and socio-economic indicators of the respondents. The indepth interviews with key informants would also be applied to obtain more detailed information concerning the impacts of integrated cattle and forestry system. Moreover, Focus Group Discussion (FGDs) would be held to collect information on common themes such as access to and control of forest, right and obligation of the villagers for forest conservation, and access to inputs and market for cattle production. The population will be stratified randomly sampled based on land and cattle ownership. Secondary data will be compiled from related institutions such as the Directorate General of Livestock Services, Ministry of Agriculture, Indonesia’s Statistic Bureau and FAOSTAT.

2.4. **Data analysis**

Descriptive analysis would be employed to depict the existing social economic conditions of the local cattle producers in the study area, their daily activities related to access to forest. The Statistical Package for the Social Sciences version 17.0 for Windows software (SPSS Inc., Chicago, IL, USA) will be used for the statistical analyses to support the above description. A database of the farm households will be analysed using SPSS version 17.0. In order to obtain a comprehensive understanding about the study area, data will be clustered according to several criteria such as the number of cattle per owner as well as land ownerships within the study area. An independent t-test will be used to compare the farmer’s years of experience, the number of cattle owned and the farmer’s income. A Chi-square test will be applied to compare the relationship between clusters and different variables related to socio-economic backgrounds of the respondents such as the level of education, age, housing condition, and household’s income.
Bibliography


