

SUMMARY

This study with a topic of "Simulation of Land use and Forest Resources Development" tries to analyze and solve problems of rural development in Gunung Kidul Re - gency. The experience showed that a fast growing popula - tion may cause a serious problem to the community and environment. This study which includes a long term simu - lation planning for a 40 year period from 1987 - 2027 deals with three important aspects: The land use changes, the equilibrium between supply and demand for biomass energy and the development of forest resources.

The analytical model used here is the Area Production Model (APM) which has been developed by FAO around the year of nineteen eighthy. this analysis establish two de - velopment scenarios, scenario I is a low alternative and scenario II is a high alternaitve and hopefully that po - licy decision could be between the two alternatives.

The analysis result shows that the demand for land for subsistence food (rice) will decrease during the si - mulation period from 44,000 Ha in 1987 to 30,000 Ha (sce - nario I) and to 25,000 Ha (scenario II) for the year 2027. The demand for land for market food crops increases **from** 45,000 Ha for the year 1987 to 81,000 Ha (scenario I) and 91,000 Ha (scenario II) in the year 2027.

The total demand for land area in agriculture use in the year 2027 is around 111,000 Ha with total land needs of 22,000 Ha for scenario I, for scenario II of

27,000 Ha. The only priority of land that can be transferred to potential agriculture land from other land classes is around 3,000 Ha, since forest land would very restricted and impossible transferred to agriculture land as it is supposed to be in the model. So the total land transfer is insufficient to the demand. The additional land needed could be fulfilled by planting under multi-crop pattern which have been practiced by the people as taugya system or agroforastry.

The forest resources development includes existing forest and new forest plantation. The existing forests should be sustained yield around the year since the volume of exploitation is in balance with increment. Planting of a new forest with fast growing species as one alternative to fulfill using peoples demand for forest products with increasing population.

The biomass energy supply from autoproduction and fuelwood forest in scenario I is in balance with peoples demand/people consumption, while in scenario II is not yet attained in the balance situation. One a way to solve this problem is to try to decrease consumption per capita by using wood saving stoves and by look of possible alternative to supply of energy.

The decision on longterm development policy in Gunung Kidul regency thoughtfully could be taken between scenario I and scenario II.

