

CHAPTER V. CONCLUSION

A. Conclusion

Based on this research, the following conclusions can be drawn:

1. *Nagari Paninggahan* has experienced yearly inundations at least once each rainy season. These events frequently result in crop failure due to prolonged precipitation. Most farmers in *Nagari Paninggahan* face complete field submergence, while some encounter only partial damage. Based on the findings, the total estimated economic loss resulting from flood-related damage amounts to Rp 769,805,040, affecting 28.55 hectares of rice fields cultivated by 30 respondent farmers. This translates to Rp 26,963,398 loss per hectare; underscoring the substantial financial burden that seasonal flooding imposes on local agricultural livelihoods.
2. Both land area (X_1) and average monthly rainfall (X_2) significantly influence the paddy's production (Y) in *Nagari Paninggahan*. Land area has a positive and significant effect on paddy production, where each additional hectare increases output by approximately 6.525 tons. Conversely, an increase in precipitation measured logarithmically is associated with a reduction of about 5.588 tons in production, confirming that excessive rainfall negatively impacts agricultural yields in the studied area.

B. Suggestion

1. Local government support is essential to help farmers manage these impacts through compensation schemes tailored to the extent of production loss. The compensation amount should at a minimum, match the economic losses incurred by the farmers.
2. Future researchers should incorporate precise data, including spatial data, to achieve reliable outcomes.