

A STORY OF LANDSCAPE CHANGE:

EXPLORING TRAJECTORIES OF SHIFTING-CULTIVATION LANDSCAPES THROUGH GAMES: THE CASE OF ASSAM (INDIA)

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CHAPTER II THE SYSTEM

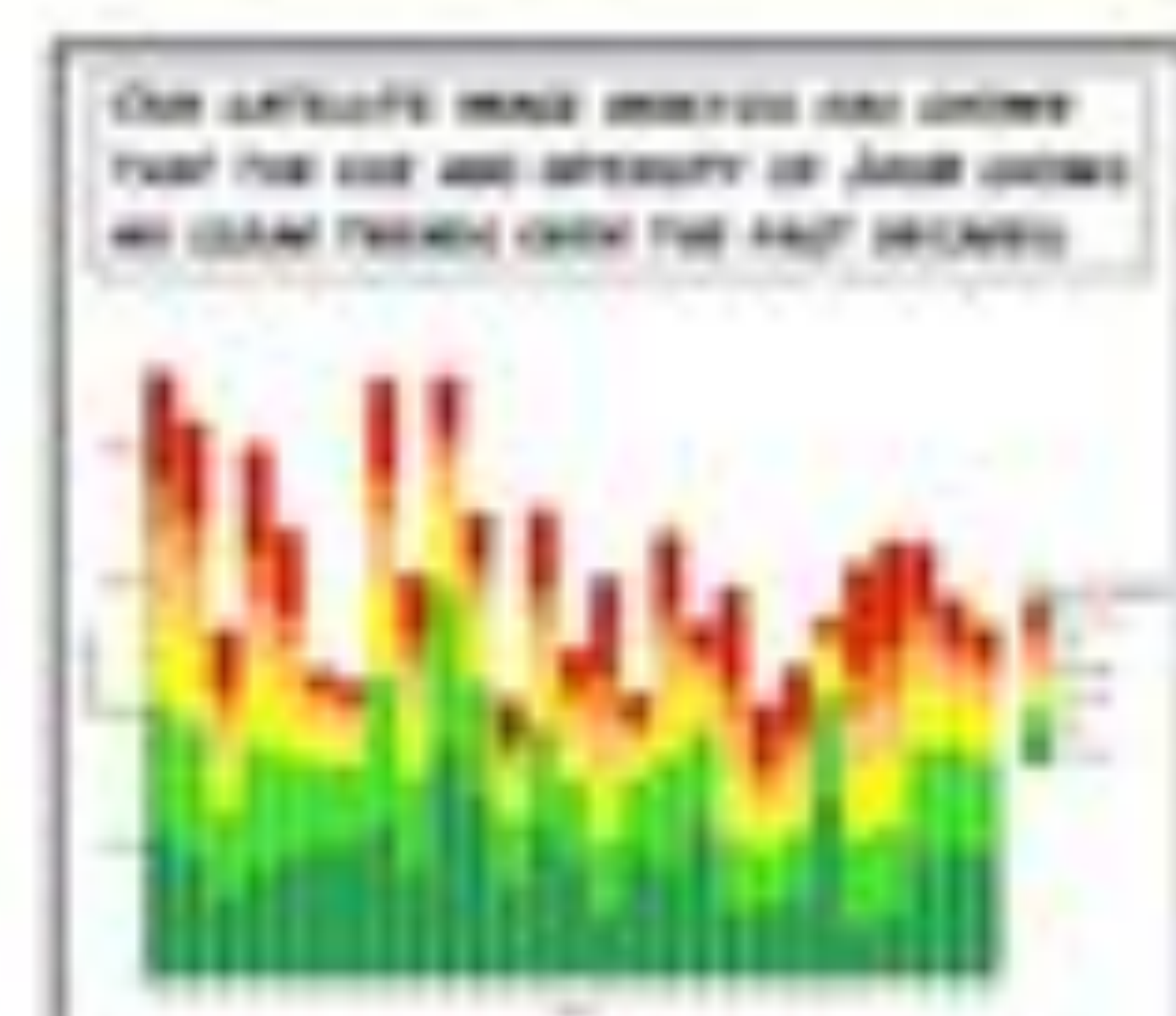
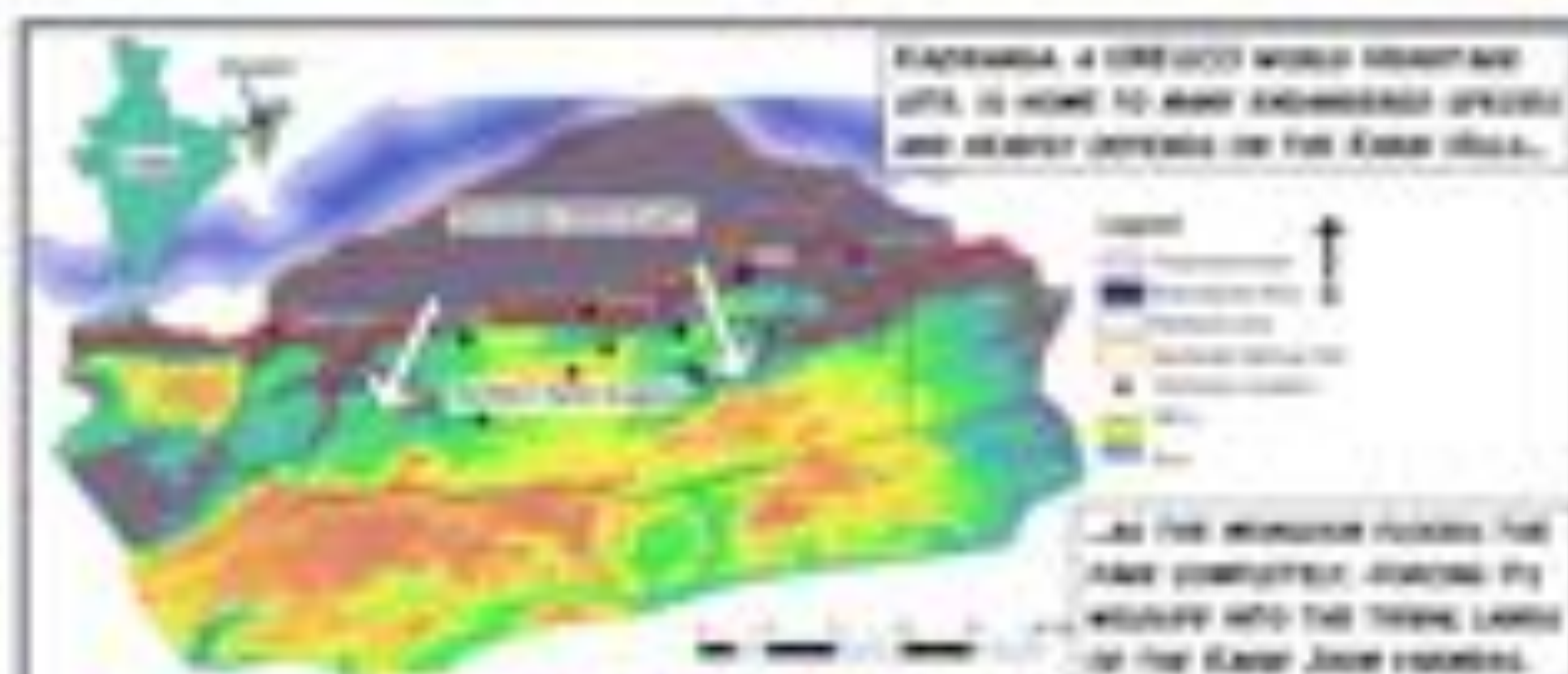
THE EARLY TEA PLANTING SCHEMES WERE INITIATED, USUALLY CALLED "JAMUI FOREST" IN ASSAM, INDIA AND WERE THE EARLIEST AND MOST SUCCESSFUL. EARLY TEA PLANTING SCHEMES WERE INITIATED IN THE 1840S AND 1850S. AFTER ONE OR TWO YEARS, THE FIELDS WERE ABANDONED AND WERE BURNED AND USED AS PASTURE.



JAMUI IS AN AREA OF TEA AND AN ECONOMIC CENTER IN ASSAM AND INDIA.



HOWEVER, NOT ONLY THE JAMUI FARMERS BUT OTHERS ALSO WERE THE MAIN DRIVING FORCE BEHIND THE EARLY TEA PLANTING SCHEMES.



THIS COULD BE CHANGING, AS SOME FARMERS WERE STARTING PLANTING TEA PLANTING SCHEMES WITH AN IDEAL OF TEA TO SUPPLEMENT THEIR HOUSEHOLD INCOME.



A MORE WIDE AREA OF SUBSIDIZED TEA AND INTO FOREST PLANTATIONS, COULD HAVE SIGNIFICANT IMPACTS ON BOTH THE FARMER'S LIVELIHOOD AND THE WILDLIFE.

CHAPTER III THE MODEL



TO EXPLORE HYPOTHESIS-DRIVEN STRATEGIES WE DEVELOPED A MODEL TOGETHER WITH THE JAMUI FARMERS.

IN THIS MODEL, IN THE FORM OF A GAME, FARMERS MUST DECIDE HOW AND WHEN TO BEST MANAGE THEIR LAND AND DECIDE THEIR STRATEGIES OF...



THE RESULT IS A DYNAMIC SIMULATION OF...



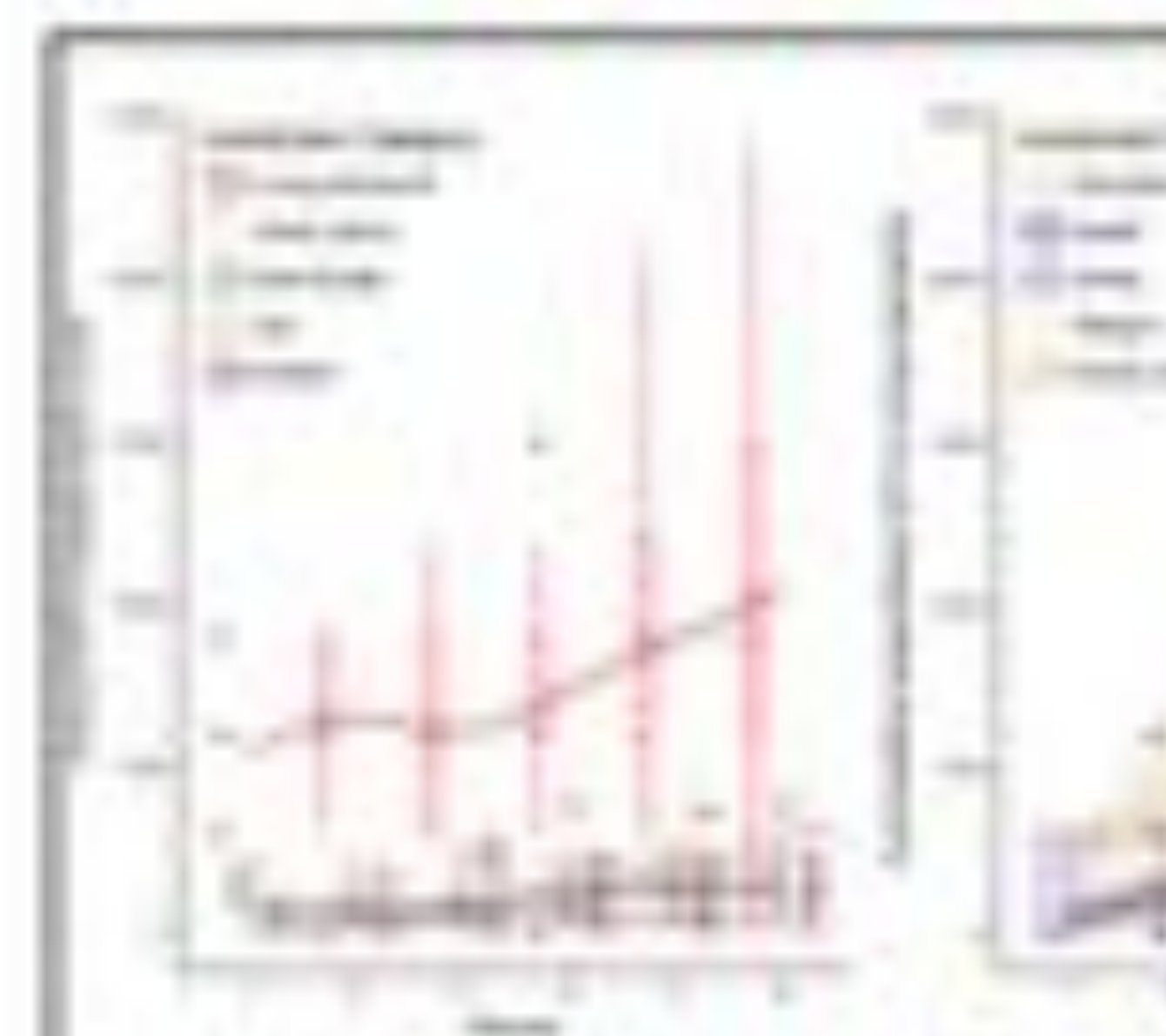
During the simulation, the players learn about the different plant species and the impact of forest management and have the opportunity to experiment with different strategies to manage their tea plantation.

The game was played with 48 farmers, located in different locations in Assam, India, allowing us to explore the diversity and impact of the farmer's decision-making processes together with the landscape and associated levels.

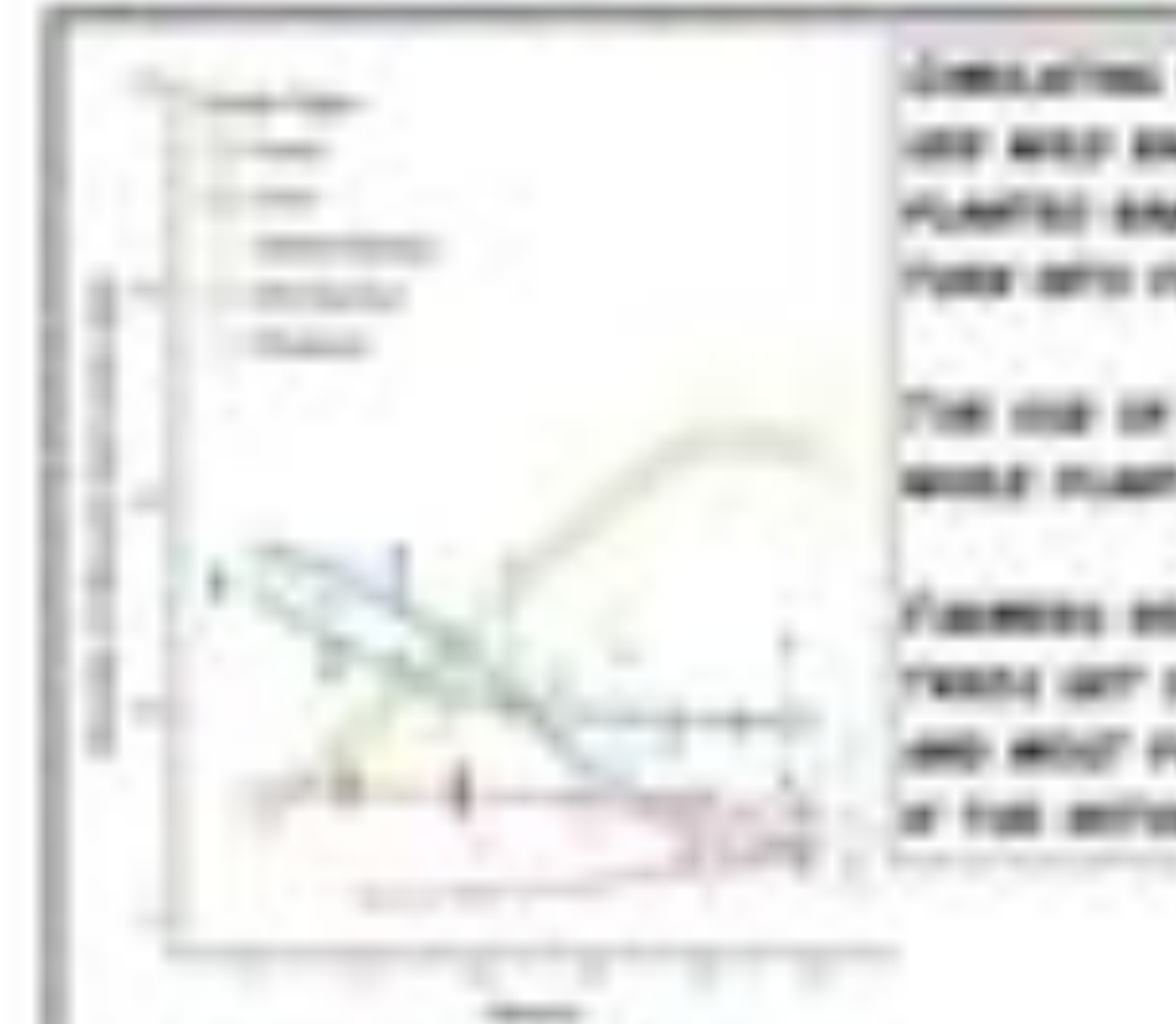
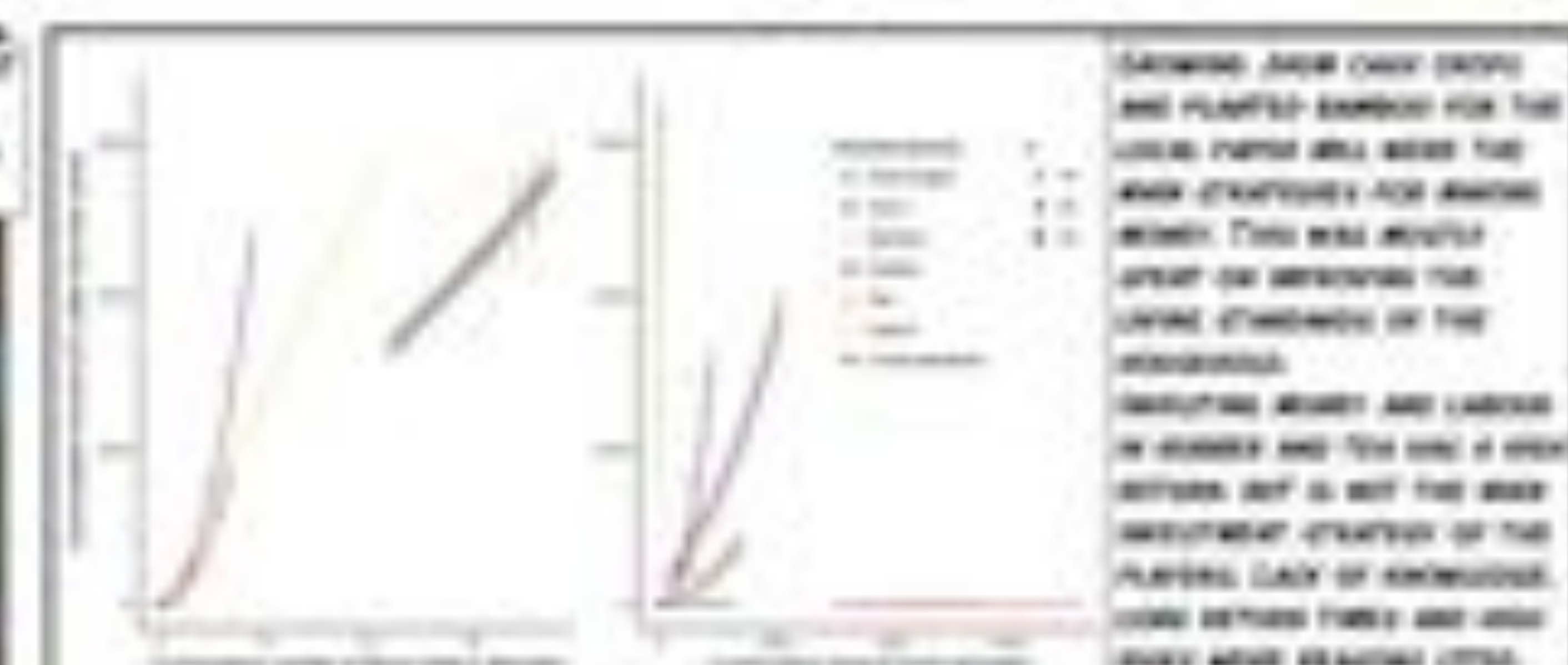
CHAPTER III THE RESULTS



During the game, the players learn about the different plant species and the impact of forest management and have the opportunity to experiment with different strategies to manage their tea plantation.



THE FARMERS WERE NOT ONLY INTERESTED IN TEA PLANTING BUT ALSO IN FOREST PLANTING.



IN CONCLUSION

IN ORDER TO BETTER UNDERSTAND FARMER DECISION STRATEGIES, WE HAD TO DESIGN A DYNAMIC AND INTERACTIVE MODEL IN WHICH FARMERS CAN BE PUT IN CONTACT WITH EACH OTHER. OUR MODELING APPROACH AND SIMULATION ALLOWED US TO EXPLORE THE STRATEGIES BEHIND THE STRATEGIES DEVELOPED IN THE GAME, BY INCLUDING WITH THE GAME RESULTS, JAMUI FARMERS AND NOT ONLY AGING, BUT ALSO TEA PLANTING AND FOREST PLANTING. THEY USE THEIR OWNERSHIP TO MANAGE THE LAND AND THE IMPROVEMENT OPPORTUNITIES.

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