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CROPPING PATTERN TRANSFORMATION AND EXPANSION OF PLANTATION CROPS IN DAKSHINA KANNADA AND KODAGU DISTRICTS OF KARNATAKA: A TREND AND SUSTAINABILITY ANALYSIS

Dr. Vasanth Kumar
Yenepoya (Deemed to be University), Mangalore, Karnataka, India

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ABSTRACT----------
Agricultural diversification toward plantation crops has significantly transformed farming systems in several regions of India. This study analyzes cropping pattern changes and the expansion of plantation crops in Dakshina Kannada and Kodagu districts of Karnataka. Secondary data and trend analysis, regression models, benefit–cost ratio analysis, and sustainability indicators were used to evaluate agricultural transformation. Results indicate a significant decline in rice cultivation and expansion of plantation crops such as coffee, coconut, arecanut, rubber, and cashew. Plantation crops demonstrate higher economic returns and improved land productivity. However, sustainability challenges such as soil degradation and climate variability require balanced agricultural planning.
KEYWORDS: *Plantation crops, Cropping pattern change, Agricultural diversification, Coffee, Sustainability*
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1. INTRODUCTION

Agriculture plays an important role in rural livelihoods and economic development in India. The Western Ghats region of Karnataka has experienced significant cropping pattern changes from traditional food crops toward high-value plantation crops.

2. METHODOLOGY

The study is based on secondary data from government agricultural statistics and district reports. Analytical tools such as trend analysis, regression models, benefit–cost ratio analysis, Land Equivalent Ratio (LER), and sustainability index were used.

3. RESULTS AND DISCUSSION

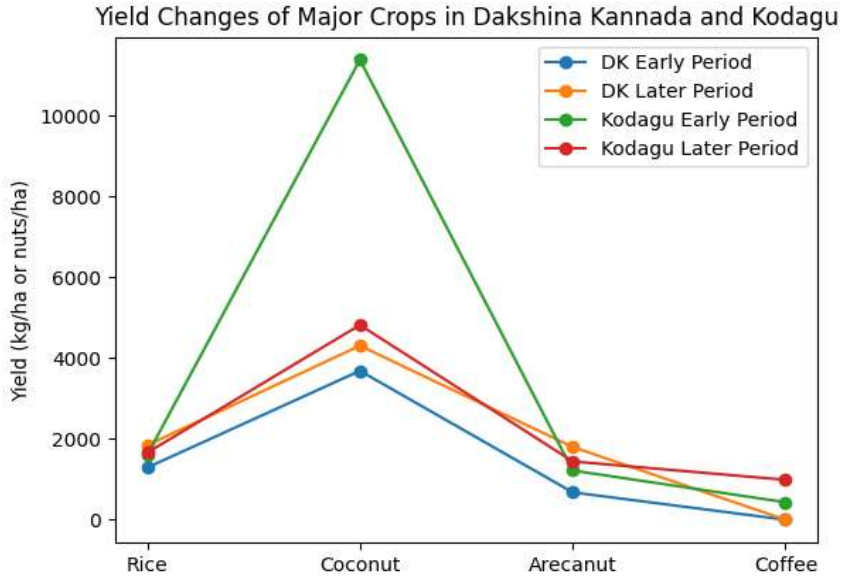


Figure 1: Yield Comparison of Major Crops

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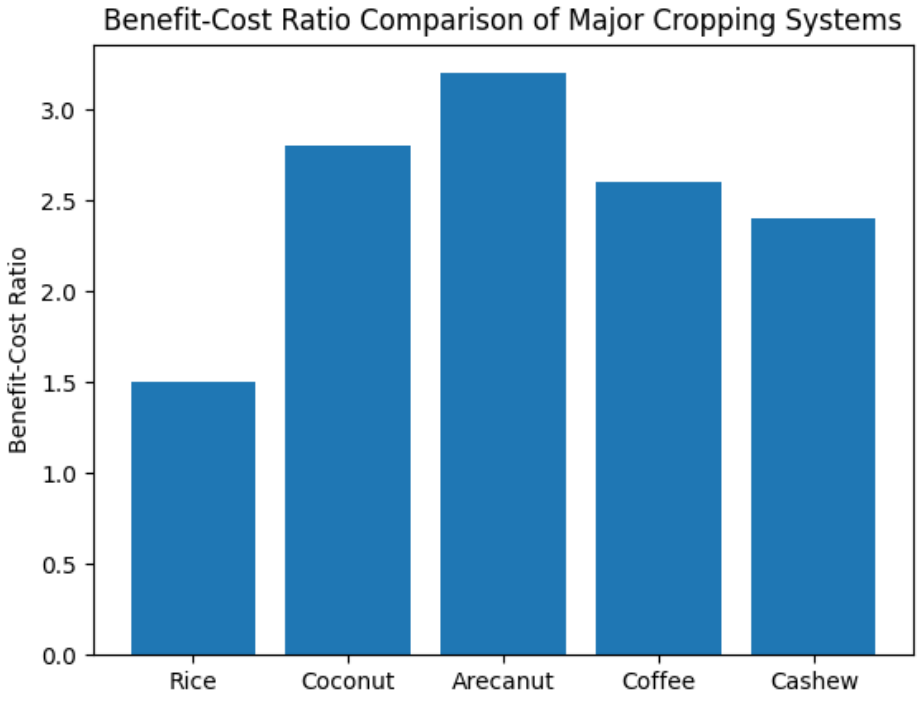


Figure 2: Benefit–Cost Ratio of Cropping Systems

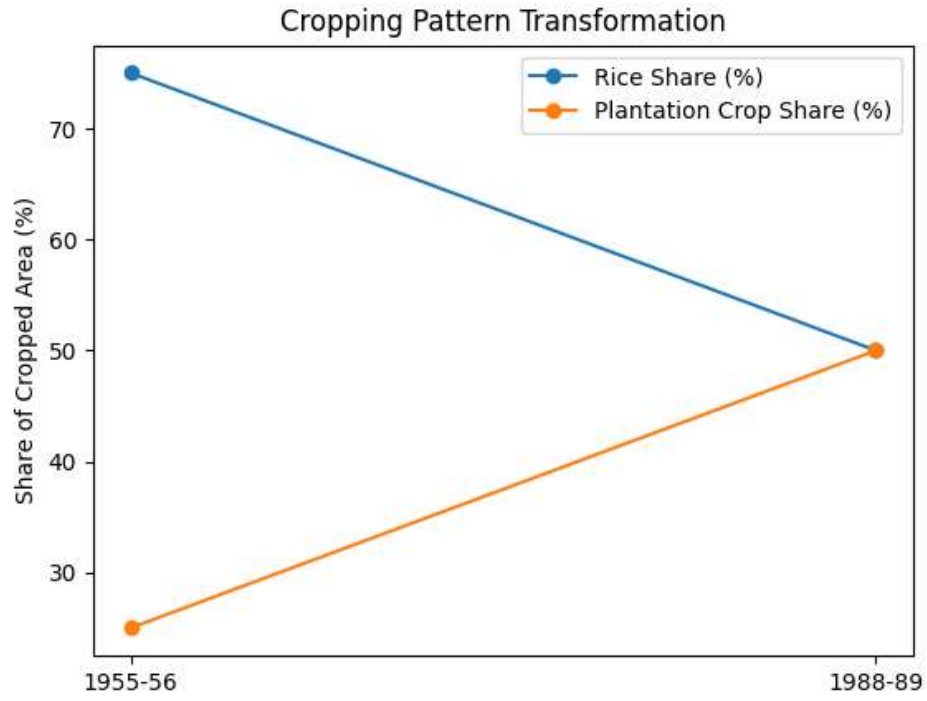


Figure 3: Cropping Pattern Transformation

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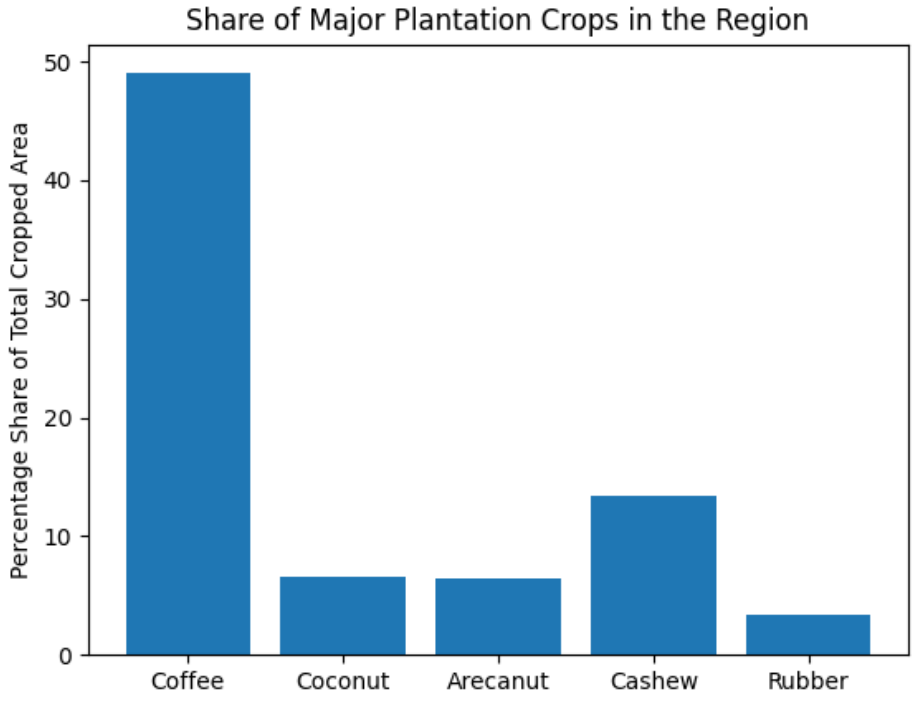


Figure 4: Plantation Crop Share

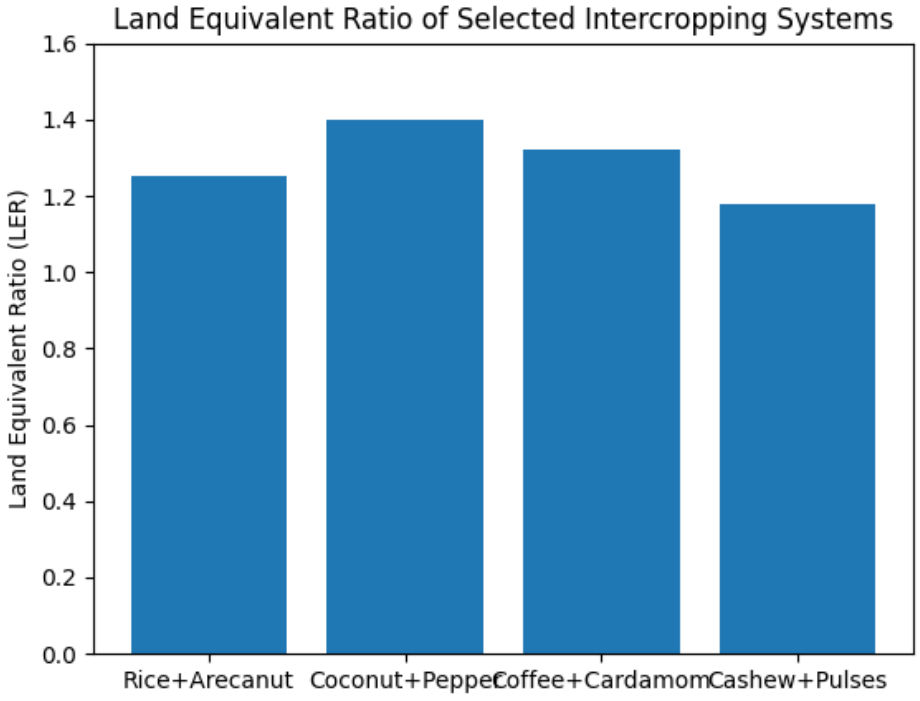


Figure 5: Land Equivalent Ratio of Intercropping Systems

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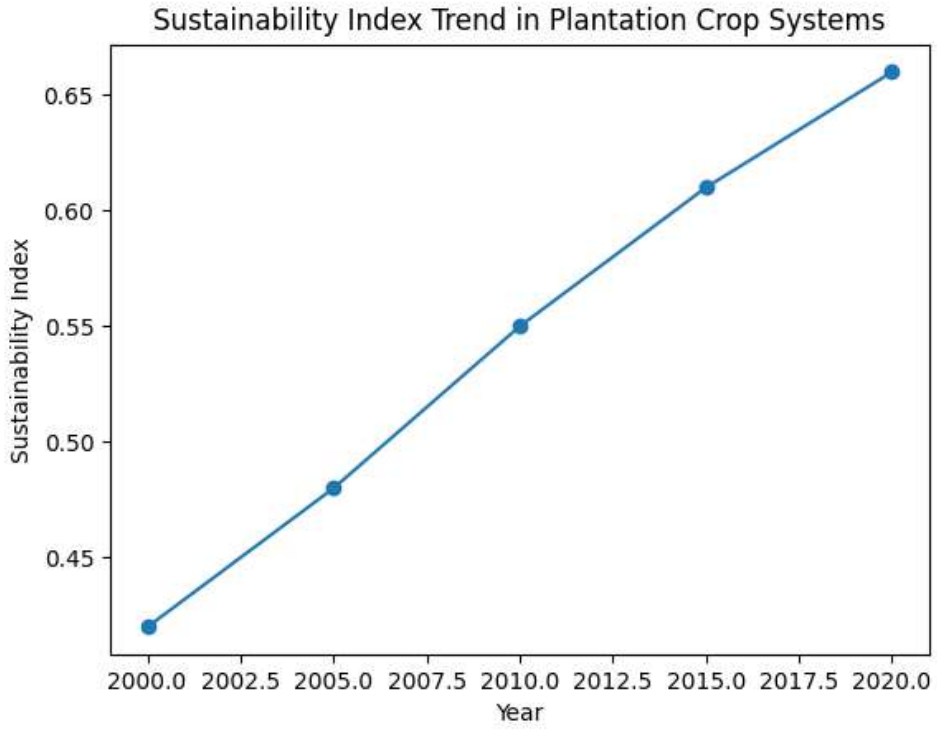


Figure 6: Sustainability Index Trend

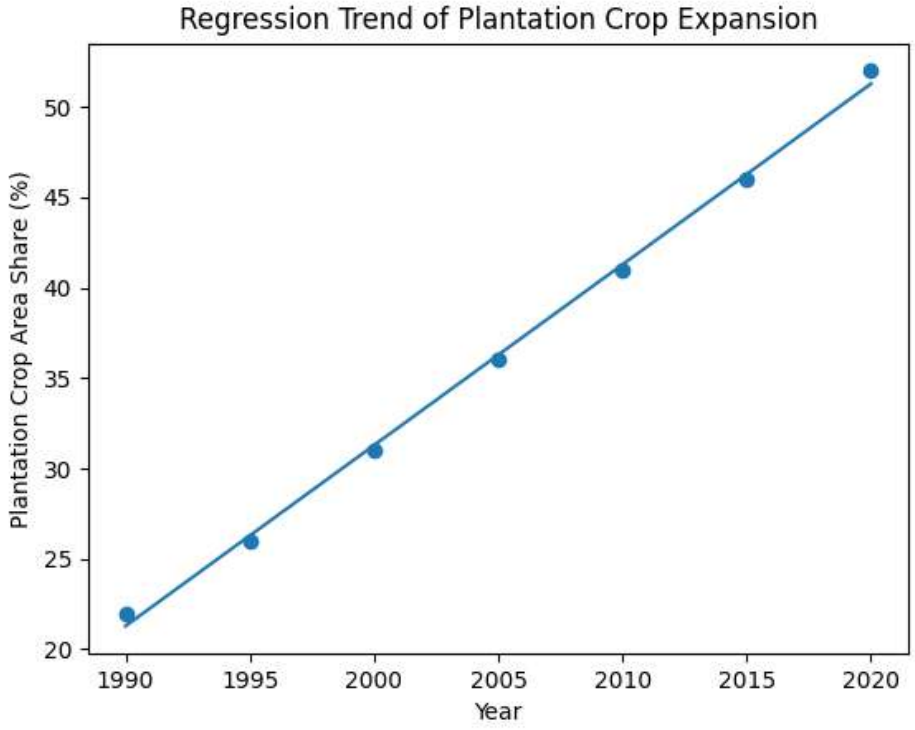


Figure 7: Regression Trend of Plantation Crop Expansion

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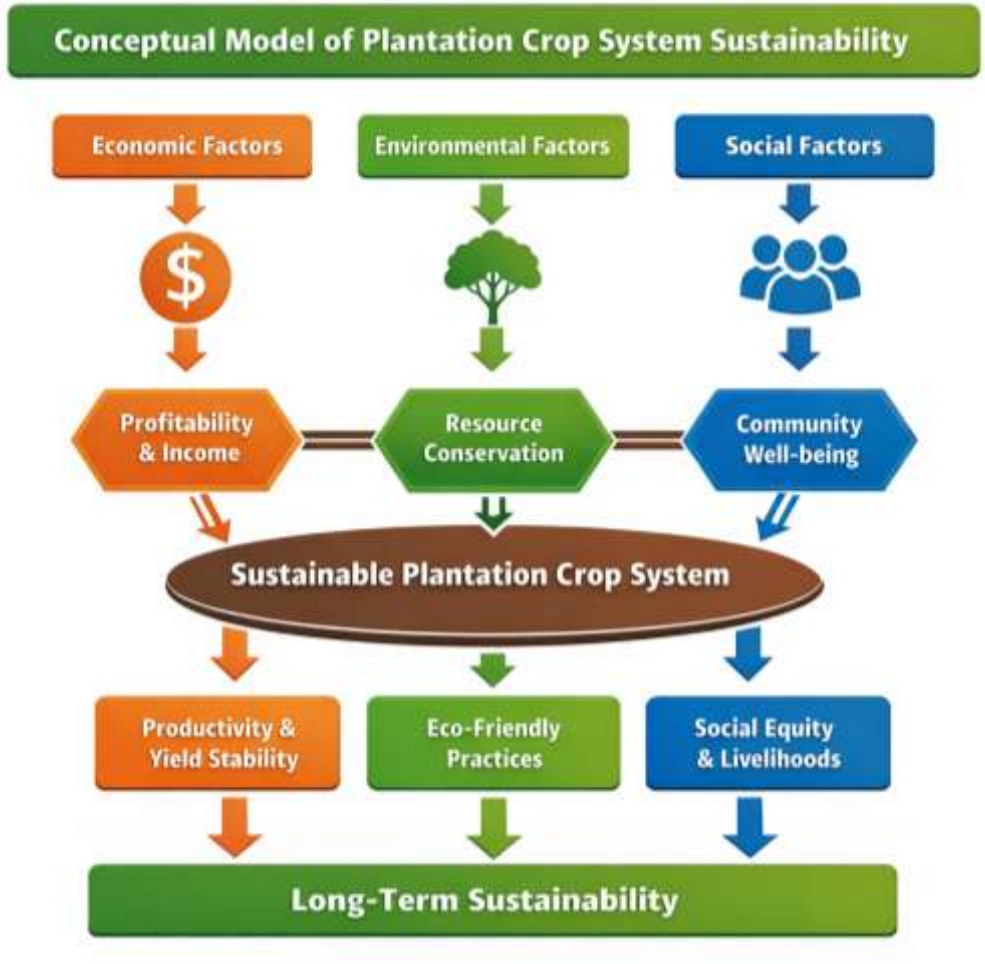


Figure 8: Conceptual Model of Plantation Crop System Sustainability

4. CONCLUSION

The study confirms that plantation crops have become dominant in the agricultural systems of Dakshina Kannada and Kodagu districts. Expansion of crops such as coffee, coconut, and arecanut reflects economic advantages and market demand. Sustainable management practices are necessary to ensure long-term agricultural stability.

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