



## Notice for the PhD Viva Voce Examination

Ms Gayatri Kunte (Registration Number: 1930001), PhD Scholar at the School of Social Sciences, CHRIST (Deemed to be University), Bangalore Central Campus will defend her PhD thesis at the public viva-voce examination on Wednesday, 16 April 2025 at 11.00 am in Room No. 044, Ground Floor, R & D Block, CHRIST (Deemed to be University), Bengaluru - 560029, Karnataka, India.

**Title of the Thesis** : **Deforestation and the Sustainability of Agriculture: A Regional Perspective of the Western Ghats**

**Discipline** : **Economics**

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The members of the Research Advisory Committee of the Scholar, the faculty members of the Department and the School, interested experts and research scholars of all the branches of research are cordially invited to attend this open viva-voce examination.

**Place:** Bengaluru

**Date:** 02 April 2025

  
**Registrar (Academics)**

## ABSTRACT

Deforestation that drives ecological alterations and climatic variations often triggers losses in crop output and productivity. Despite the negative externality, agricultural production still remains highly dependent on deforested land area. The Western Ghats, have witnessed widespread agriculture-driven deforestation, triggering temperature rises and rainfall reduction.

The study examines the impact of deforestation on agricultural productivity and income, along with an estimation of an agricultural vulnerability index within the Western Ghats. The study also estimates the impact of deforestation on the agricultural vulnerability index. In conclusion, the study assesses policies that aim at the reconciliation of forest protection with agricultural development. Panel data regression models were adopted to assess the impact of deforestation on agricultural productivity, agricultural income and vulnerability. The vulnerability index in the region was developed through the selection of 16 indicators classified under biophysical and socio-economic domains. Qualitative field analysis was conducted through open-ended interviews and close-ended questioning. The policy-assessment was carried out through an analysis of national and state-policies that align with global policy-frameworks.

Results depict a fall in agricultural productivity for food crops, non-food crops and for the aggregation of food and non-food crops due to deforestation. On the other hand, findings depict a rise in agricultural income due to deforestation. The highest growth rates in agricultural vulnerability were witnessed for districts characterized by high climatic exposure and low adaptive capacity. Findings also reveal increases in short-run agricultural vulnerability driven by deforestation, with long-run agricultural vulnerability reduction. Field work findings depict declines in agricultural output and income and rises in agricultural expenditure and debt due to climate change. Policy-findings reveal that the devolution of local resource-rights, decentralized government control, investments in land improvement and adaptive capacity support the reconciliation of forest protection and agricultural development.

In conclusion, the study supports a framework that integrates ecological preservation and food security within the region in order to balance both environmental and economic interests. The study accommodates geo-physical and socio-economic analysis in order to render the assessment exhaustive.

**Keywords:** *Deforestation, agricultural productivity, agricultural income, agricultural output, agricultural vulnerability, adaptive capacity*

### **Publications:**

1. **Kunte, G., & Bhat, V. (2024).** Deforestation, climate change and the sustainability of agriculture: A review. *Journal of Resources and Ecology*, 15(1), 140-150.
2. **Kunte, G., Nambiar, V., & Bhat, V. (2024).** Protection of intellectual property and human rights during health emergencies: an assessment of the patent waiver proposal. *International Journal of Human Rights in Healthcare*, 17(4), 436-448.

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1. **Gayatri Kunte, Varadurga Bhat,** 'Reconciling Conflicting Interests in Land-use for Forests and Agriculture in the Western Ghats Biodiversity Hotspot of India: A Policy Perspective', Received on 10/12/2020 from the copyright office, Government of India, Registration number: L-97450/2020