

DECLARATION

I hereby declare that the thesis entitled “**Investigation on floristic diversity, variation in soil properties, and effects of weather on phenophases in Sonai Rupai Wildlife Sanctuary, Assam**” has been submitted to Tezpur University in partial fulfilment for the award of the degree of Doctor of Philosophy in the Department of Environmental Science, Tezpur University. This is a record of the bonafide research work accomplished by me under the supervision of Prof. Ashalata Devi, Department of Environmental Science, Tezpur University.

The obtained results and related interpretations in this thesis are based on my original work. While writing this thesis, the sources (books, research articles, review papers, and website materials) were acknowledged in the appropriate sections of the text. I would like to state that no part of this thesis has been submitted or presented elsewhere for the award of a similar or any other degree.

Date: 12/6/2025

Place: TEZPUR


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Certificate of the Supervisor

This is to certify that the thesis entitled “ **Investigation on floristic diversity, variation in soil properties, and effects of weather on phenophases in Sonai Rupai Wildlife Sanctuary, Assam**” submitted to the School of Sciences Tezpur University in part fulfillment for the award of the degree of Doctor of Philosophy in the Department of Environmental Science is a record of research work carried out by Mr. **Prajnyan Sarma** under my supervision and guidance.

All help received by him from various sources have been duly acknowledged.

No part of this thesis has been submitted elsewhere for award of any other degree.

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LIST OF ABBREVIATIONS

AIC	Akaike information criterion
AICc	corrected Akaike information criterion
BCE	Before common era
CE	Common era
DBH	Diameter at breast height
EC	Electrical conductivity
GLM	Generalized linear model
K	Potassium
LaRC	Langley Research Center
MFA	Multiple factor analysis
MS	Microsoft
N	Nitrogen
NASA	National Aeronautics and Space Administration
P	Phosphorus
PAR	Photosynthetically Active Radiation
POWER	Prediction of Worldwide Energy Resource
RH	Relative Humidity
RMSE	Root means square error
S	Sulphur
SOC	Soil organic carbon

