

# Predictive Mapping of Electrical Conductivity and Assessment Salinity Hazard in a western Türkiye Alluvial Plain

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## Supplementary Materials

Figure S1: The study area Climograph (above) and model report(below) produced using jNSM v1.6.0

Figure S2: CORINE datasets for many years of study area (A:1990, B:2000; C:2006; D:2012)

Figure S3: Flowchart of the methodology

Figure S4: Density graph of the EC values of the samples in the training and validation set

Figure S5. Comparison of EC values of soil samples according to land cover classes (Boxplots and "CLCC\_2018" illustrate the distributions and comparisons of means of EC values across land cover class categories. (In parenthesis sample number. Permanently irrigated land class (13), non-irrigated arable land (25), Fruit trees and berry plantations (10), Pastures (2) and Complex cultivation patterns (39)).

Figure S6: Variable importance for each algorithm. A: Random Forest- %IncMSE; B: Random Forest- %IncNodePurity, C: Support Vector Regression

Figure S7: NDVI variable map used in the study

Figure S8: Salinity risk levels a) percent of area, b) field size. RF: Random Forest, SVR: Support Vector Regression.

Table S1: Spearman correlation coefficients among the EC and some physical and chemical soil properties for all soil samples.

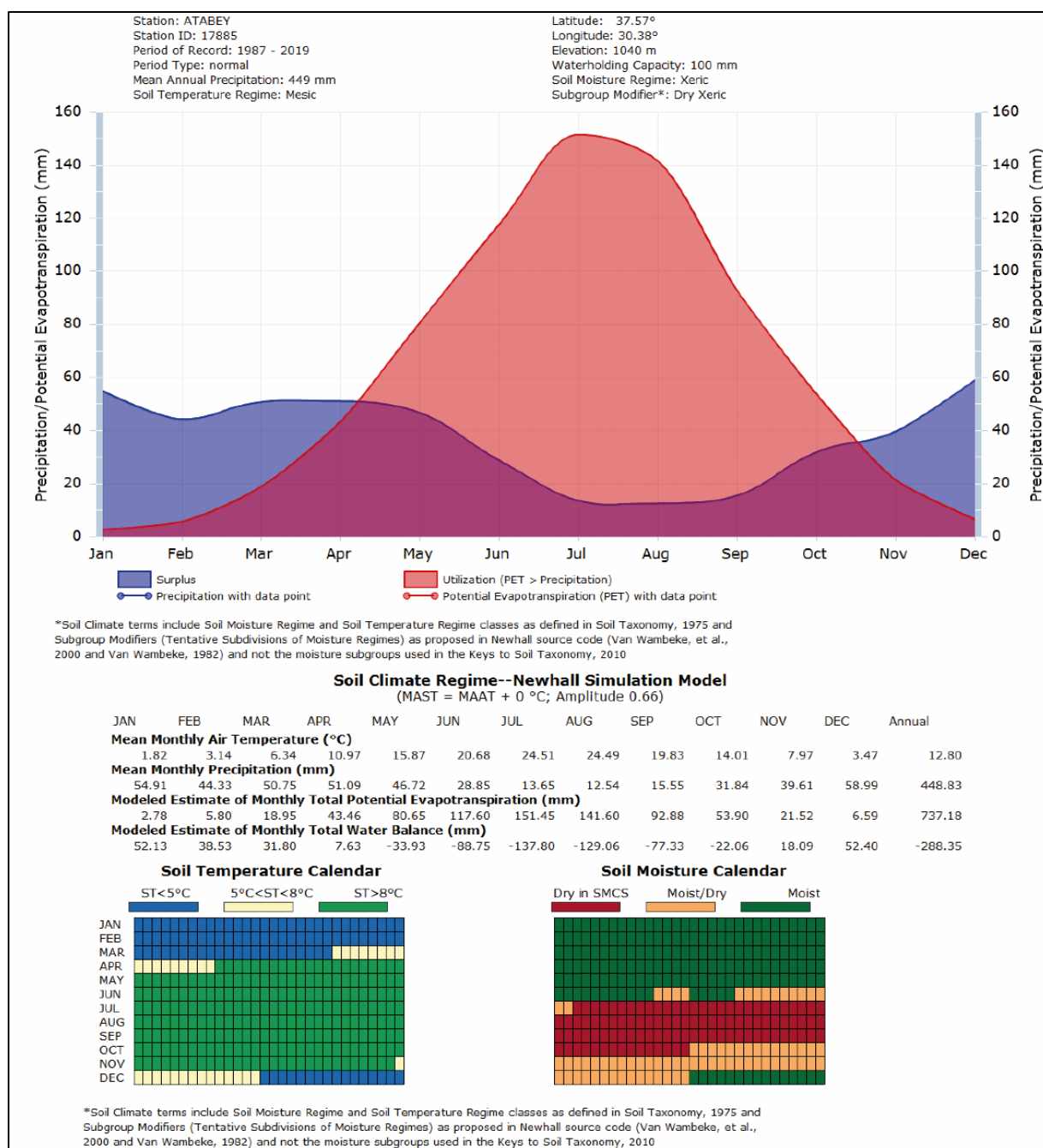


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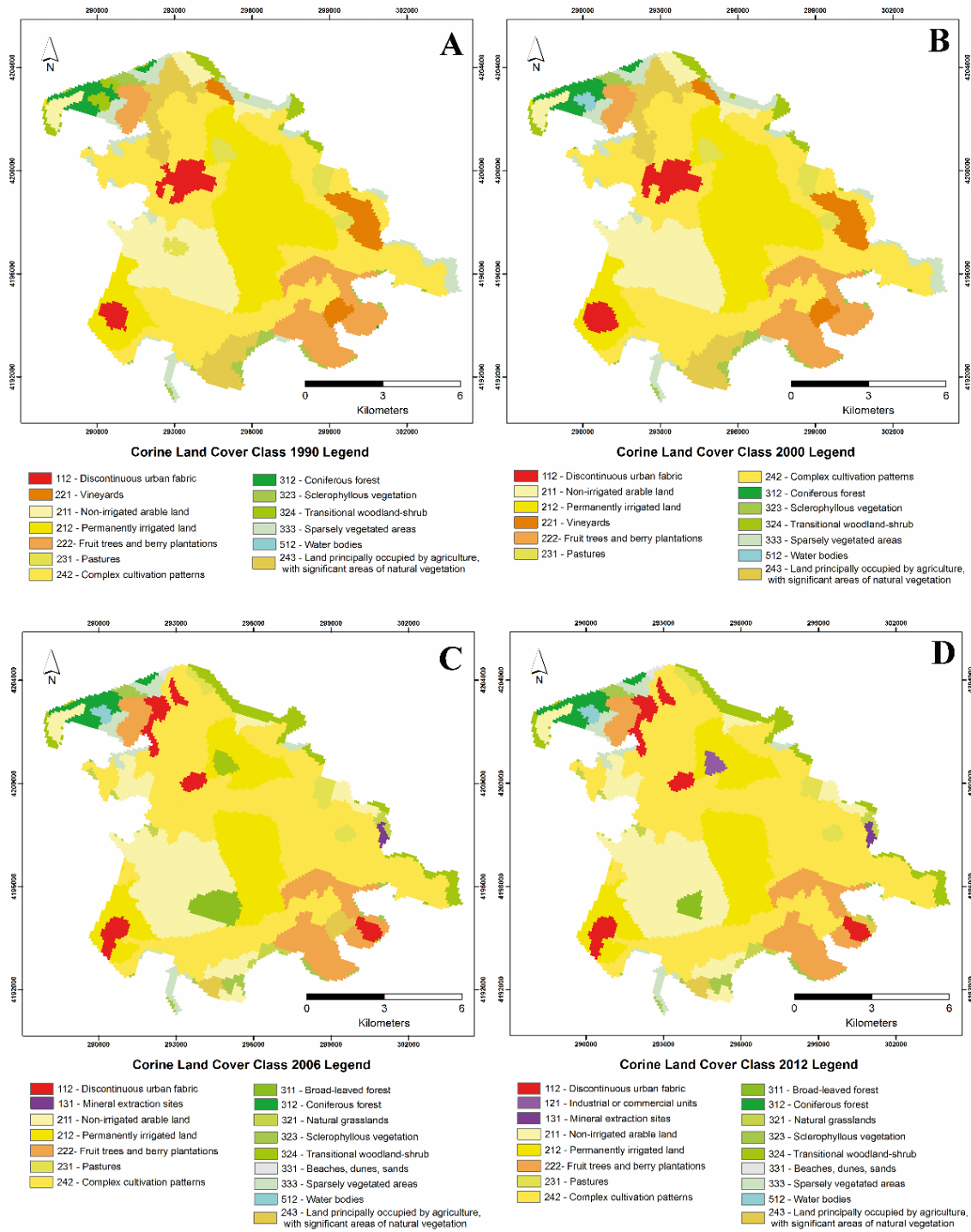


Figure S2: CORINE datasets for many years of study area (A:1990; B:2000; C:2006; D:2012)

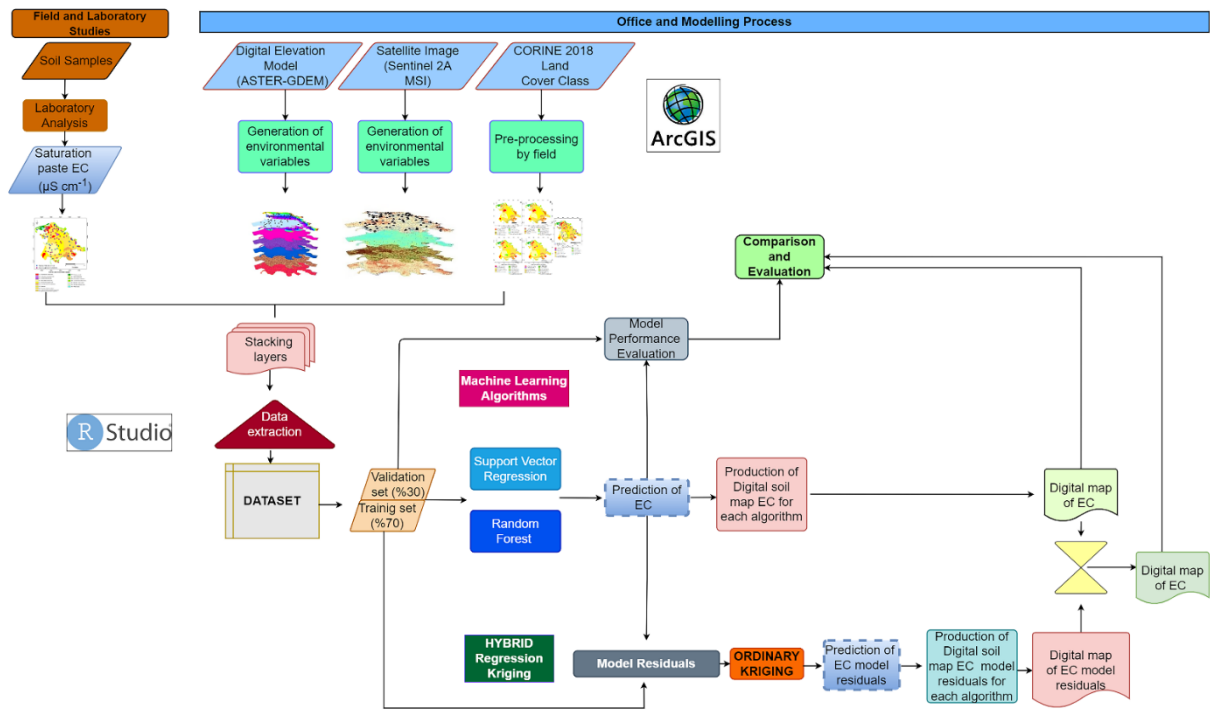


Figure S3: Flowchart of the methodology

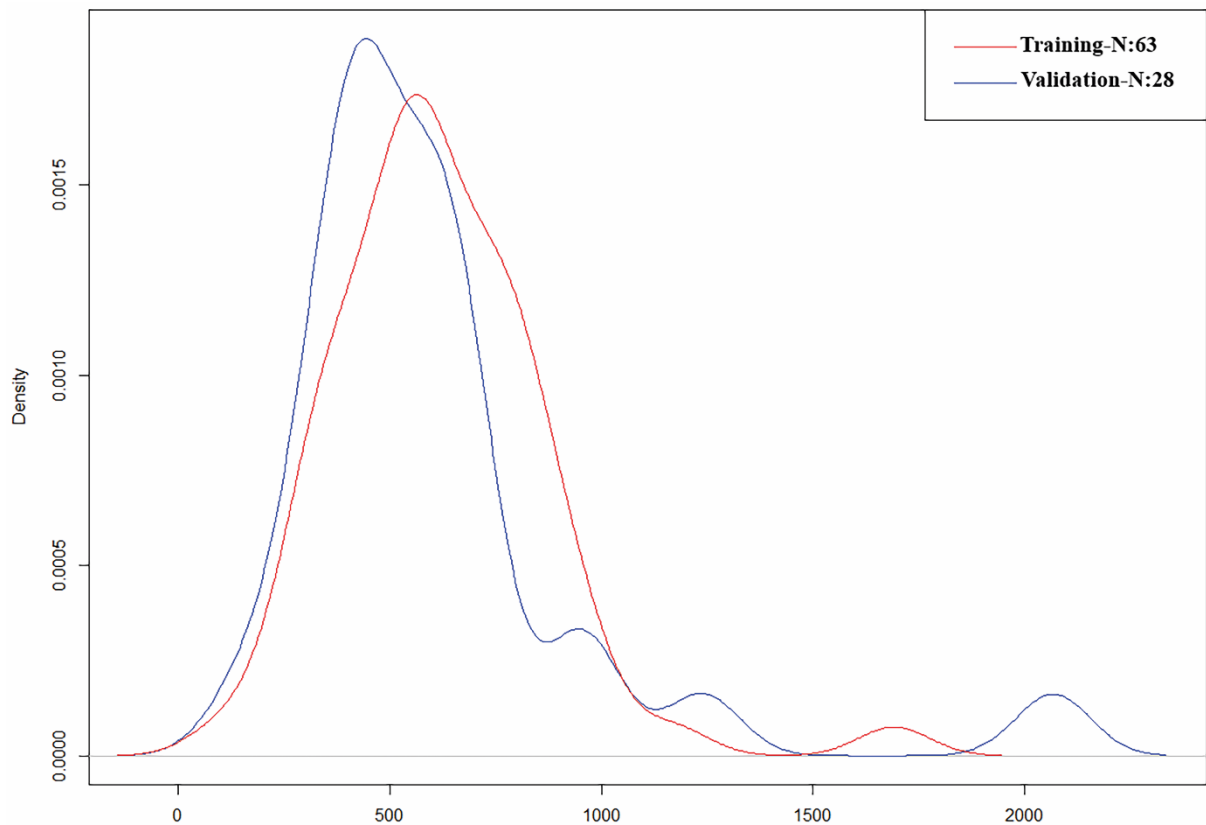


Figure S4: Density graph of the EC values of the samples in the training and validation set

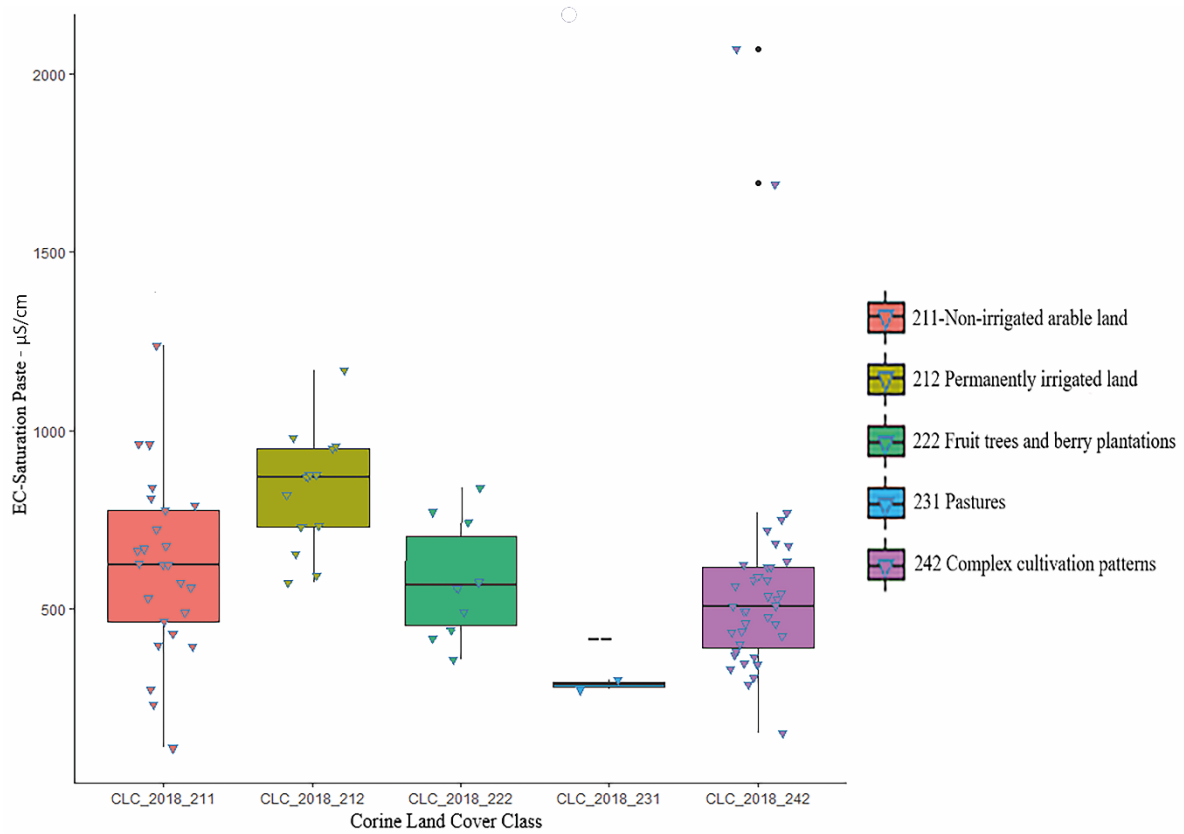


Figure S5. Comparison of EC values of soil samples according to land cover classes (Boxplots and "CLCC\_2018" illustrate the distributions and comparisons of means of EC values across land cover class categories. (In parenthesis sample number. Permanently irrigated land class (13), non-irrigated arable land (25), Fruit trees and berry plantations (10), Pastures (2) and Complex cultivation patterns (39)).

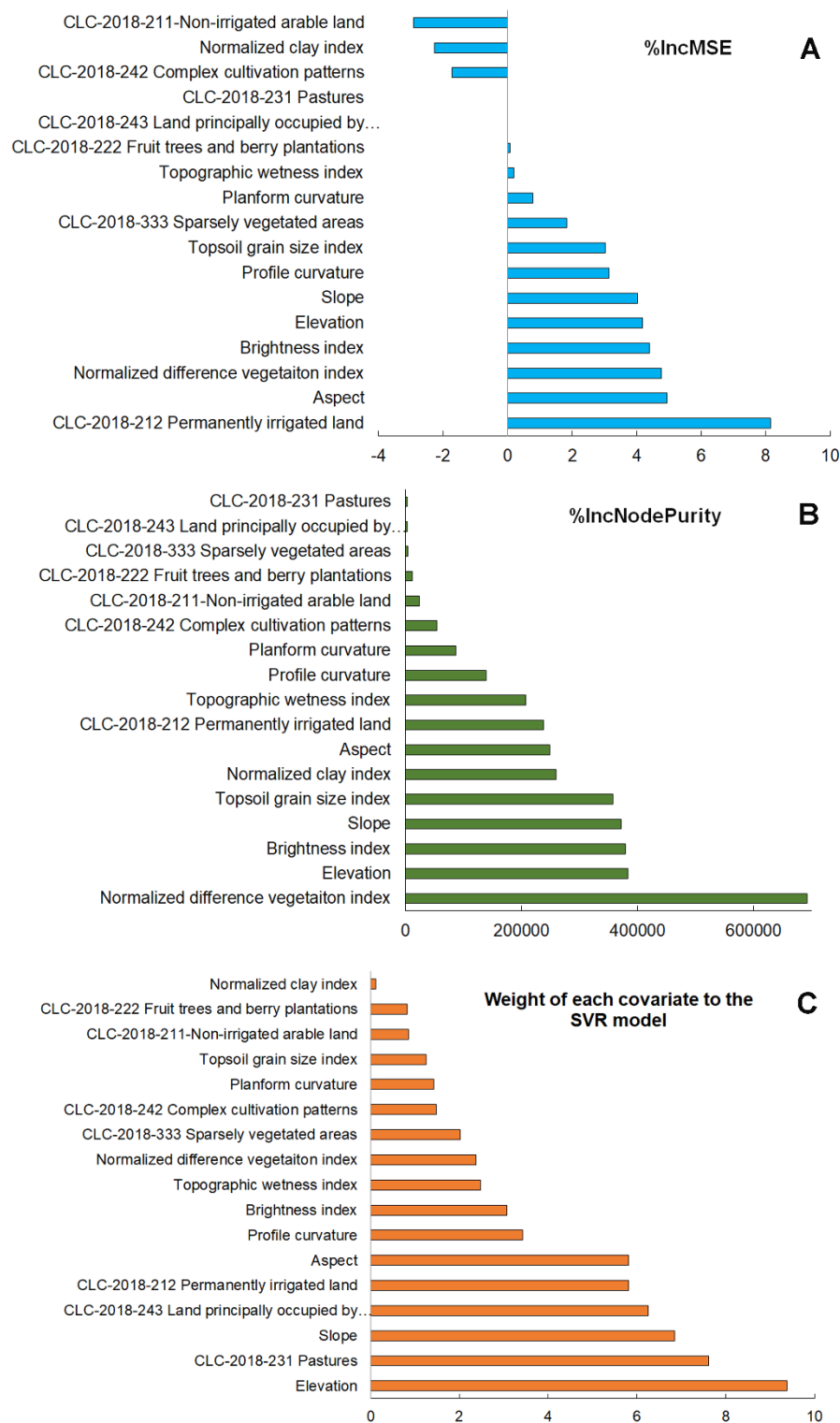


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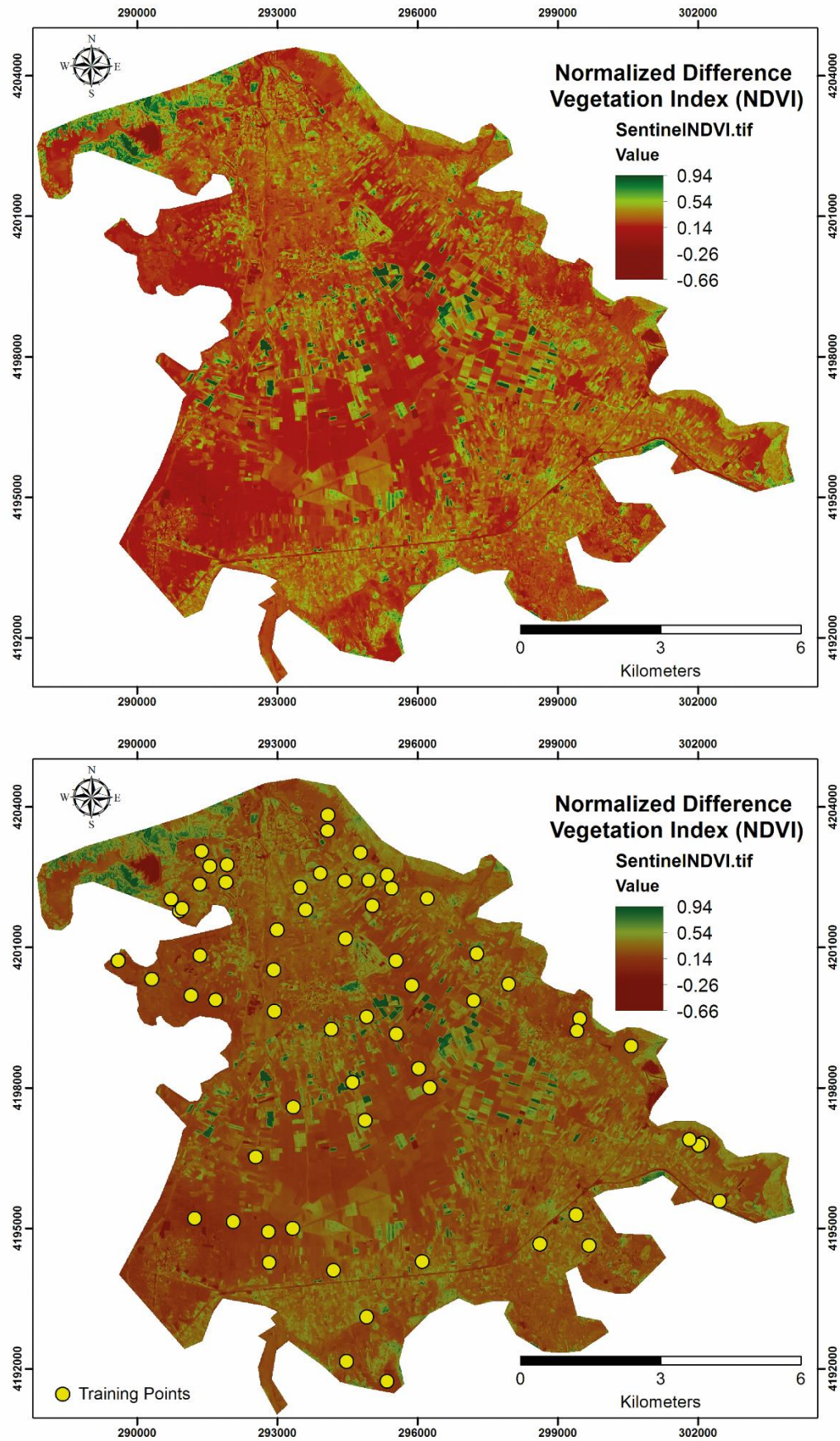


Figure S7: NDVI variable map used in the study



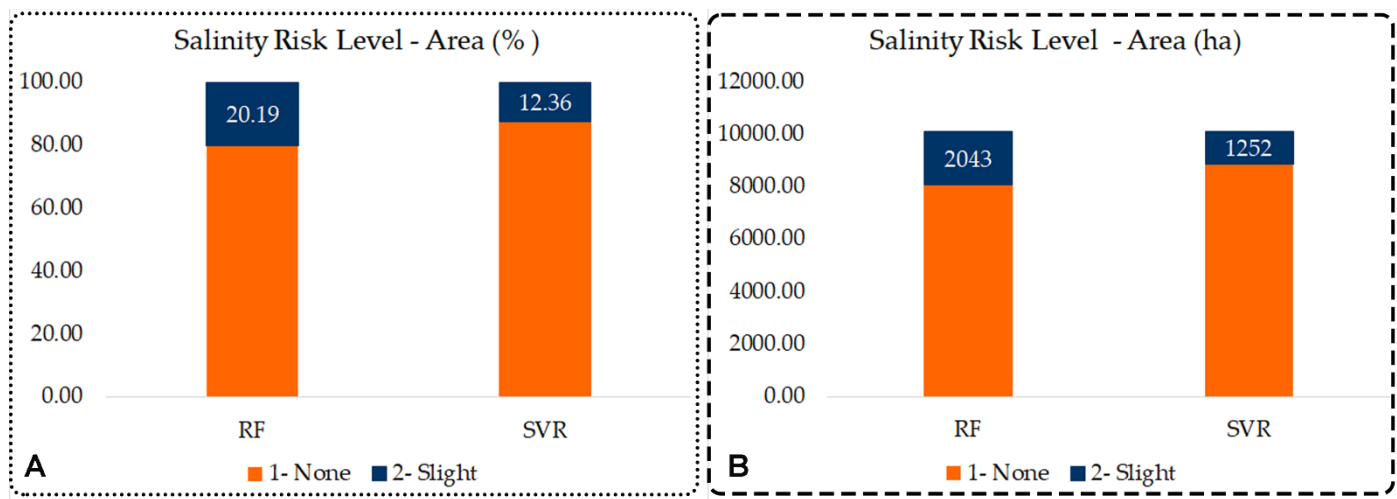


Figure S8: Salinity risk levels a) percent of area, b) field size. RF: Random Forest, SVR: Support Vector Regression.

Table S1: Spearman correlation coefficients among the EC and some physical and chemical soil properties for all soil samples.

	EC	Clay	Sand	Silt	CEC	SSP
EC		0.76*	-0.61*	0.13	0.65*	0.63*
Clay			-0.89*	0.03	0.76*	0.81*
Sand				-0.43*	-0.68*	-0.77*
Silt					0.04	0.09
CEC						0.77*
SSP						

\*  $p < 0.05$ . \* Correlation was significant at the 0.05 level.