

# Integration of Geostatistical and Sentinel-2A Multispectral Satellite Image Analysis for Predicting Soil Fertility Condition in Drylands

Mohamed S. Shokr <sup>1,\*</sup>, Yasser S.A. Mazrou <sup>2,3</sup>, Mostafa A. Abdellatif <sup>4</sup>, Ahmed A. El Baroudy <sup>1</sup>, Esawy K. Mahmoud <sup>1</sup>, Ahmed M. Saleh <sup>4</sup>, Abdelaziz A. Belal <sup>4</sup> and Zheli Ding <sup>5</sup>

<sup>1</sup> Soil and Water Department, Faculty of Agriculture, Tanta University, Tanta 31527, Egypt; drbaroudy@agr.tanta.edu.eg (A.A.E.B.); esawy.rezk@agr.tanta.edu.eg (E.K.M.)

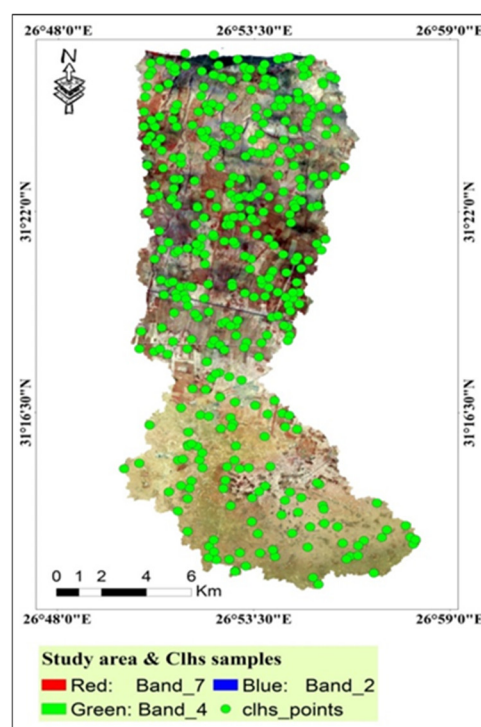
<sup>2</sup> Applied College-Muhyle, King Khalid University, Abha 62587, Saudi Arabia; ymazrou@kku.edu

<sup>3</sup> Department of Agriculture Economic, Faculty of Agriculture, Tanta University, Tanta 31527, Egypt

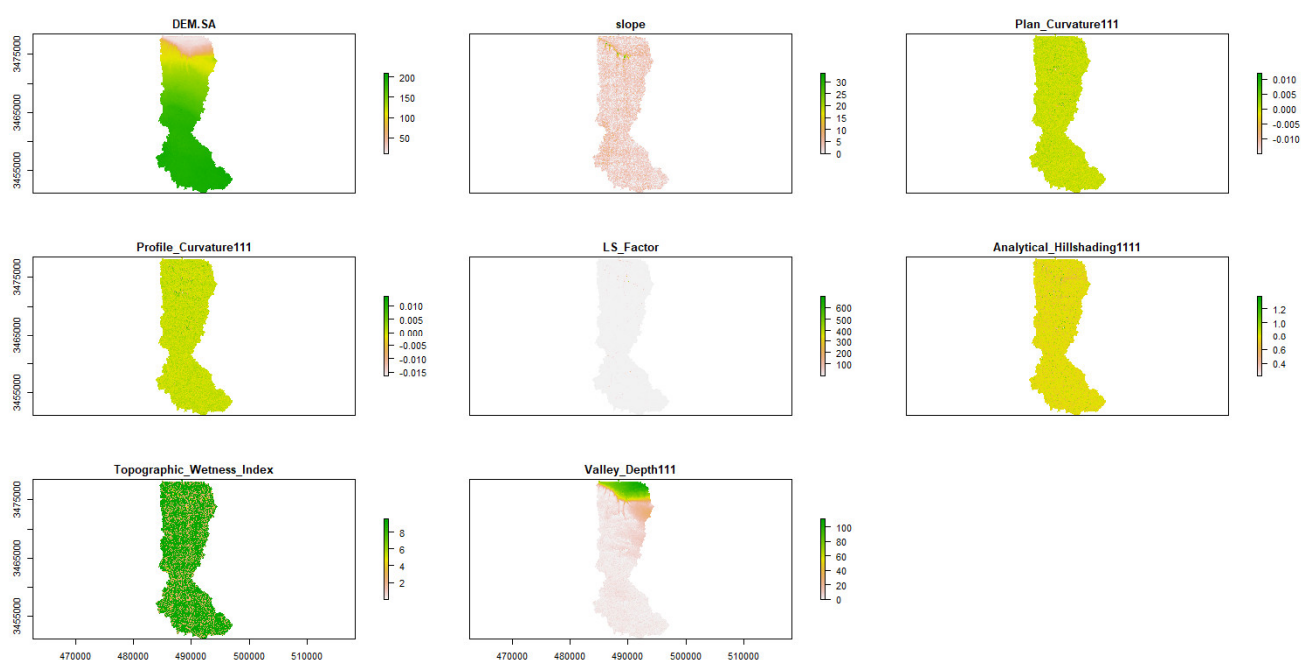
<sup>4</sup> National Authority for Remote Sensing and Space Science (NARSS), Cairo 11843, Egypt; mostafa.abdou@narss.sci.eg (M.A.A.); a.saleh@narss.sci.eg (A.M.S.); abelal@narss.sci.eg (A.A.B.)

<sup>5</sup> Haikou Experimental Station, Chinese Academy of Tropical Agricultural Sciences, Haikou 570000, China; dingzheli@zju.edu.cn

\* Correspondence: mohamed\_shokr@agr.tanta.edu.eg



**Figure S1.** Samples distribution by conditional Latin hypercube (cLHS).



**Figure S2.** Hydrological and metamorphic parameters extracted from R software.

**Table S1.** Weight of final SFC based on GIS model builder.

Classes	Symbol	Weight Range
Very low	F5	0–0.2
low	F4	0.21–0.4
moderate	F3	0.41–0.6
High	F2	0.61–0.8
Very high	F1	0.81–1