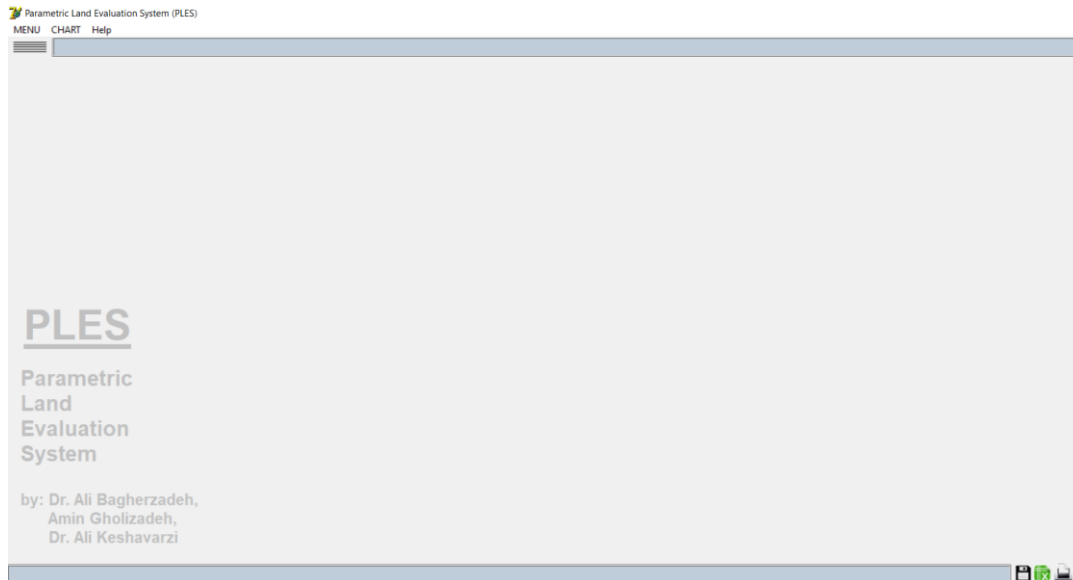


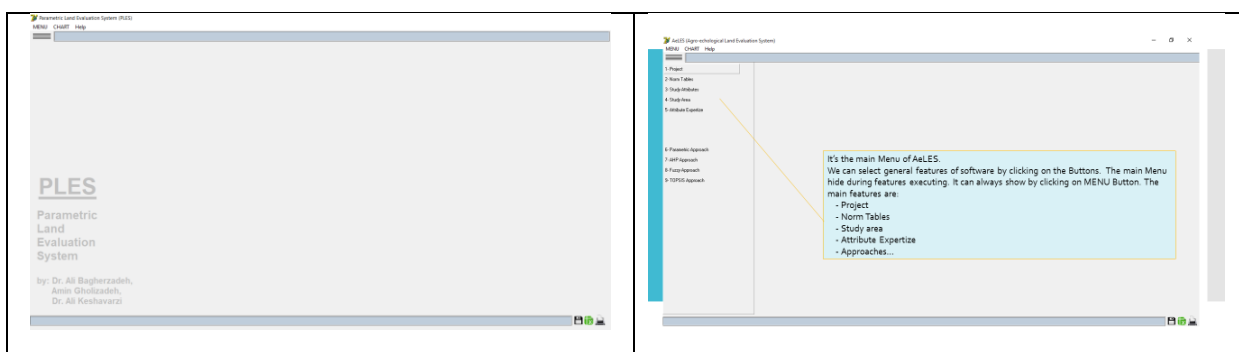
Parametric Land Evaluation System (PLES)

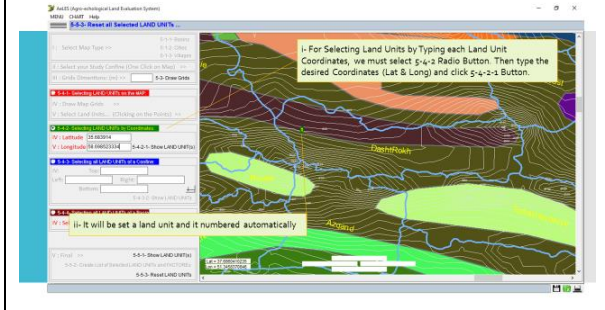
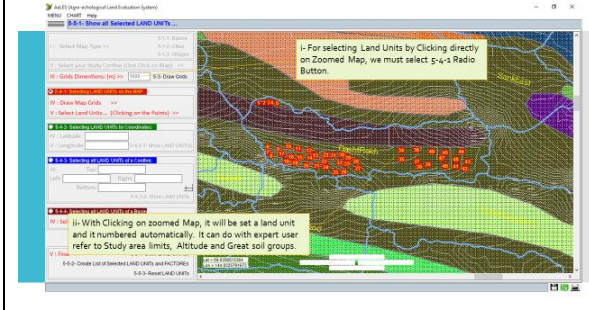
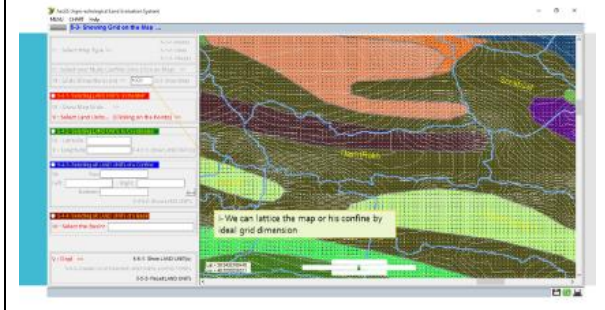
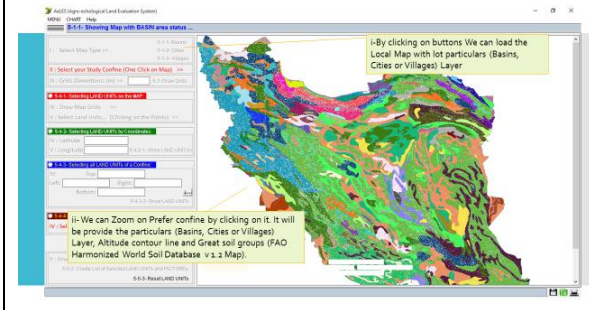
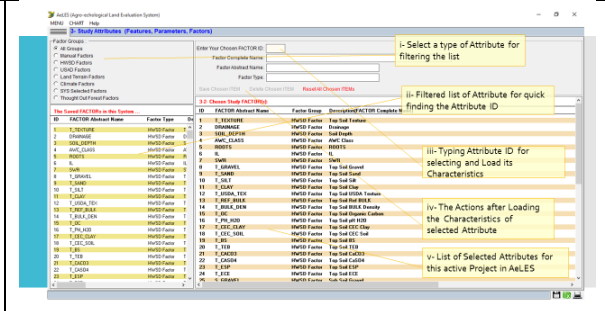
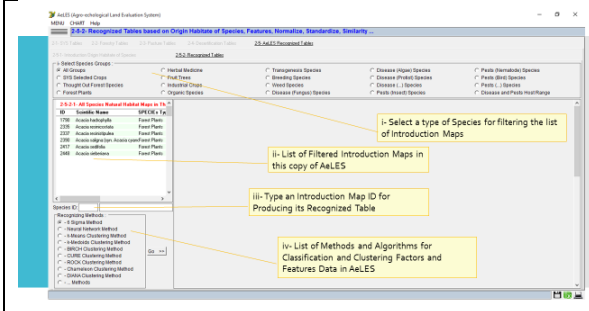
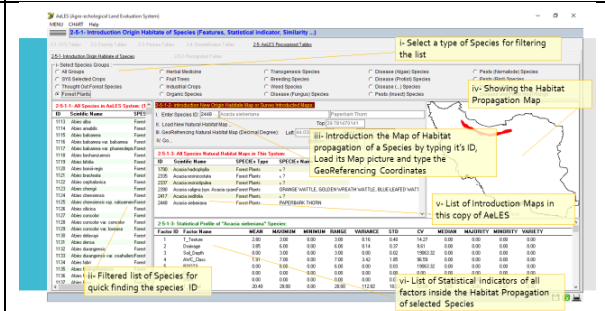
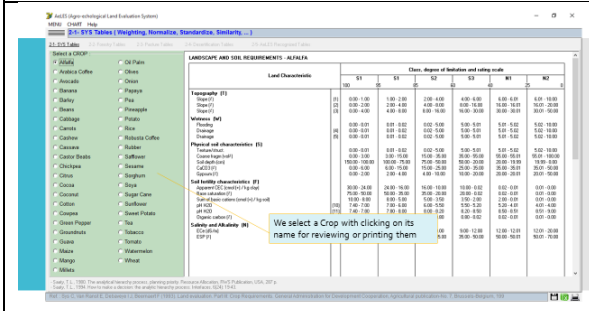
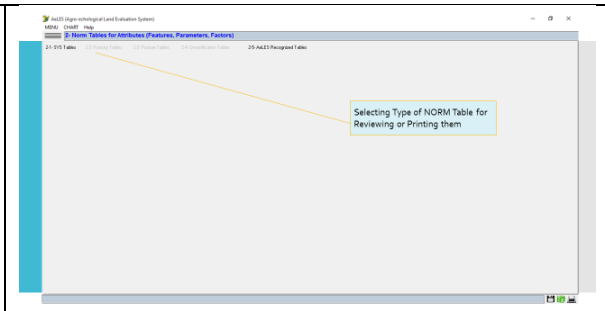
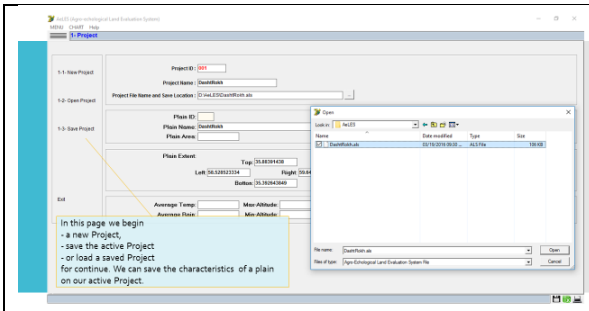


Description

The algorithms of software for estimating the Land suitability Index is based on the equations developed by Bagherzadeh (Bagherzadeh and Paymard, 2015). The program has been written in Delphi Programming language. The input data are given from the SoilsGrid.com shapefiles and other shapefile sources which has been defined for Iran as a default. It is possible to introduce the soil, climate and terrain shapefiles from other regions to the software. It is also possible to input the data of study points manually to the software either by adding the geographical coordination of study points, or by clicking on the map directly, or by adding the visible extent of the study area on the map, or by selecting the name of the plain in a popup menu. Also, the study crop and the list of effective parameters can be introduced to software.

The output results can also be demonstrated in Ms-Excel format. The software has been designed quite user friendly and conducts the user correctly through the calculations step by step and don't allow the user to make a mistake. It is compatible with 32 and 64-bit windows operating system types. The screenshots of the software have been shown below:





i- Selecting Land Units by Typing Area coordinates, we must select 5-4-3 Radio Button. Type the Area coordinates, click the marker button and then click the 5-4-3 Button.

ii- It will be set all land units with desired Resolution into the Area coordinates Limits.

i- For Selecting all Land Units in a selecting Basin, City or Village , we must select 5-4-4 Radio Button.

ii- With Double Clicking on the desired item in Basin, City or Village Item Box.

i- The Name and ID of Selected Basin, City or Village appears in text box.

ii- We can access to all of the information of our selected and set Land Units by clicking on 5-5-3 Button. They appear on the next page.

iii- All Land Units appear on the map in the desired Limits directly.

In this page we can introduce Origin Habitat of a Species and product Recognized Tables. This feature is the first step of above said hypothesis.

i- The String grid in this feature contained the information about our selected and set Land Units in the before steps.

- The Columns are all of the factors in Step 3.
- The Rows are all Set Land Units in Step 5.
- The Columns 1, 2 and 3 contain Land Unit Numbers, Latitudes and Longitudes of each Land Unit.
- The First Row Contain the Names of factors.

ii- We can Export the String Grid Data to Microsoft Excel by clicking on its Common Button.

i- It is the exported data in MS Excel. After clicking on common Button the Sheet will be produced and load and open in active version of MS Excel on the computer automatically. These data workbook can save and be used directly in many different suggest field in GIS and RS Applications, SPSS, SAS, WEKA and etc.

i- The Parametric approach is the basic method for Land Evaluation in many different fields. In this feature we can get the results of our study by Parametric Model as The concepts and principles of land evaluation as well as the various definitions associated with land evaluation are presented in the Food and Agriculture Organization (FAO, 1976).

i- In this category only SY5 Selected Crop Group is active and this group of crop appears in follow List Box are selectable.

ii- After typing the Crop ID appear name and other generals of it in SY5 Studies.

iii- By clicking on "In.GO..." Button we go to next page for choosing local Climatic parameters.

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