Software: App “Method. D.U.Q”

1. Cover image and application loading.
2. Interactive world map.

In this interface the user will be able to observe and select the fire(s) in real time for which he/she wishes to view information and apply the DUQ method. A set of satellite parameters can be observed with respect to the selected fire.

3. Selection of initial date for the calculation

At this stage, the application will ask the user to enter an initial date from which it will start comparing data regarding the conditions of the selected fire with other historical data of similar characteristics, making a group of those found from the selected initial date to the current fire.
This is possible thanks to the use of neural networks, thus allowing the automatic learning of the system to improve the accuracy when identifying similar fires and filtering the relevant characteristics.

4. Results counting interface.

This interface shows the number of results found to calculate new averages based on historical satellite and national/regional database parameters.
In this step, it should be taken into account that the method increases in reliability when working with a larger number of fires or decision making situations, since it increases the probability that the information is not useful or beneficial for the purpose.
Thus, the reliability of the DUQ method is indicated to the user for the amount of data taken for the new average.
On the recognition of similar fires is where the neural network system will act in order to improve more and more this recognition and avoid as much as possible false positives or false negatives at the time of fire grouping. Finally, the user is given the option to continue or not with the method based on the reliability obtained. In case he/she presses no, he/she will return to the initial screen.

5. Results interface and detail interfaces.

Here the user will be shown the results of the DUQ method for the selected fire and analysis start date. Additional information about the methodology is incorporated, indicating undesirable values of the DUQ coefficients, in the Methodology sector.
In addition, details on the status of the coefficients obtained and whether they present any or several indicator parameters that are negatively influencing the DUQ are presented. In this way, it indicates to the user that he may have to rethink the use of the selected satellite information he is using to make a decision on his current case, or, on the contrary, it reaffirms to the user that the information he is about to use will be beneficial for his decision-making process.