In difference with central volcanoes, for which the location of their craters is known, in the case of volcanic fields it is difficult to forecast where the next eruption will take place. Monogenetic volcanic fields are regions whose geologic settings allow the birth of new volcanoes according to a given periodicity, at the intersection of faults and fractures. At monogenetic volcanic fields, eruptive products cover the traces of faults and fractures. An indirect way to recognize the most active structural features in a region is by using the emissions of CO$_2$ from soils.

Soil CO$_2$ degassing allows insight into deep processes. The possibility that heightened passive CO$_2$ degassing may be a result of elevated magmatic activity and eventually a precursor to eruptive volcanic activity has been limited to its examination in the context of polygenetic volcanoes. Such studies have attempted to more accurately predict the activity of a specific volcano in terms of timing alone, as well as to map the structure of a single edifice and to quantify volcanic contributions to the CO$_2$ budget. To date, monogenetic volcanic fields have been excluded from such study.

This study proposes a method to identify the most tectonically active zones that might be used by ascending magmas, through the distribution patterns of the CO$_2$ emission rates from soils at monogenetic volcanic fields.