



## **1. Research activity (max 1.000 words)**

The general objective is to characterize the seismicity induced by hydrocarbon production activities in order to define quantitative geological parameters useful to operate in safety conditions (e.g. “safety pressure” - Doglioni, 2017). The main goal of the project will be developed by the realization of numerical simulations (with specialized ad-hoc software) and by a 3D modelling to analyzed the pressure and volume variations induced by the fluid extraction at local scale according to scientific literature. Studying and analyzing the induced seismicity by the hydrocarbon using the 3D modelling and numerical simulation is an important step for the research community primarily for the outcomes acquired for this very recent scientific topic. In fact, the project surely contributes to increase the knowledge on the subject with a specific focus on field scale. Furthermore, the most important results will be the definition of safety geological parameters that might be, in the future, considered as a standard to operate reducing risk of induced seismicity. This will have an important impact on prevention operations by the point of view of the Civil Protection.

## **2. Research products**

- a) Publications (ISI journals)
- b) Publications (NON ISI journals)
- c) Manuscripts (submitted, in press)
- d) Abstracts