

Interactive comment on “Integration of Remote Sense and Geographic Information Systems in Geological Faults Detection in Crete Island, Greece” by Mohamed Elhag et al.

G. Alexandrakis (Referee)

alexandrakis@iacm.forth.gr

Received and published: 30 October 2018

Dear author and Editor,

I have found the method interesting but there are much that is needed to be improved since the findings does not agree with the actual geological frame of the area. More over there some other things that you need to consider. In the abstract you are mentioning the Anatolian fault zone, which is not near the Study area. Even if the Anatolian fault is a large and important fault, has not a significant connection with the Cretan tectonic system which is influenced by the subduction zone of the European and African plate In the study area section (2.1) lines 110-112, I have not understand if you are

refer to the Aegean or the study area. But if you are referring to the study area the geology of the Kolympari area is known. The geological formations in the study area are Cretaceous limestones with some dolomites. There are some Miocene deposits and some alluvial sediments in the North. From the official IGME maps scale 1:50000 (Platanias & Kasteli) there are 5 major faults all in the N-S direction, which have been validated by field work in the past.

But the major issue are the results of this work. I am not making any comments on the method since the results are not close to the real situation. In line 263-264 you are mentioning that the results correspond to field cross checking but there is no reference to support this. Additionally in Mountrakis et al 2013 Neotectonic analysis, active stress field and active faults seismic hazard assessment in Western Crete, Bulletin of the Geological Society of Greece Vol. 47, 2013, there are no indications of those. Even though some of them are some parts of the mapped and validated from field work fault zones, but most of the structures that were identified are parts of the drainage network and karstic formations. More over the majority of the large faults zones in the area where not identified by this method.

For those reasons I have to reject this work.

Yours faithfully George Alexandrakis

Interactive comment on Geosci. Instrum. Method. Data Syst. Discuss.,
<https://doi.org/10.5194/gi-2018-47>, 2018.

[Printer-friendly version](#)[Discussion paper](#)