

# **Mapping of geological accidents using Landsat ETM<sup>+</sup>, RadarSat and DTM (SRTM) remote sensing imagery and analysis of the fractures network of the Precambrian basement of the northwest sector of Côte d'Ivoire, West Africa**

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The aim of this work is to map the fractures network in the northwest sector of Côte d'Ivoire. To achieve the desired objective, Landsat-7 ETM<sup>+</sup>, RadarSat and DTM (SRTM) remote sensing images are processed to extract the fractures network. This network is then broadly characterized by structural data collected in the field. All the results obtained show five main families of fractures. It is about:

- 1- fractures of Sassandra, Séguéla, Mankono-Tortiya and Ferké of sub-meridian direction;
- 2- the Tafiré, Katiola, Kani and Bako fractures zones of direction NW-SE;
- 3- fractures of Korhogo, Dikodougou, Dianra and Tieningboué, with E-W direction;
- 4- Séguéla and GFB (Greenville-Ferkessédougou-Bobo Dioulasso) fractures of NNE-SSW direction;
- 5- and finally fractures of Borotou, Worofla and Marabadiassa, with NE-SW direction.

This work may help to understand the context of the establishment of the Séguéla and Tortiya diamond dykes.

**Keywords:** Landsat ETM<sup>+</sup> imagery, RadarSat and DTM (SRTM), Geological accidents mapping, Fractures, northwest, Côte d'Ivoire, West Africa.