

## Geodynamic evolution of Eburnean rocks in southern Côte d'Ivoire

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To understand the geodynamic evolution of the Eburnean, our investigations focused on the volcano-sedimentary rocks, as well as the granitoids of the Comoé Basin and its surrounding. Geochemical analysis revealed tholeiitic volcanic rocks, sedimentary rocks from the erosion of a granitoid-migmatitic basement, and granitoids containing crustal and mantle components. Four deformation events (D<sub>1</sub>-D<sub>4</sub>) can be distinguished in southern Côte d'Ivoire. Crustal thickening, which occurs during phase D<sub>1</sub>, led to the emplacement of syntectonic plutons. D<sub>2</sub> is also accompanied by a significant contribution of granites and granodiorites rich in biotite and sometimes amphibole. D<sub>3</sub> and D<sub>4</sub> are late stages and responsible for crenulation cleavage and dolerite dykes, respectively. Regional greenschist to lower amphibolite facies metamorphism, locally contact metamorphism and intense folding characterize Eburnean deformation phases. The data synthesis indicates steep lineations promote diapiric and vertical tectonic movement. Sagduction is the major tectonic mechanism that is more consistent with the granitoids of the study area in particular and with Archean and Proterozoic formations. The tectonic structures observed in the region are related to the convergence between two thermally different lithospheres, a weak and warm juvenile crust and an Archean craton.

**Keywords:** Côte d'Ivoire, Comoé Basin, Eburnean orogeny, sagduction, convergence