

Studi Provenance Batupasir di Formasi Subang, Kecamatan Tegalwaru, Kabupaten Karawang, Provinsi Jawa Barat = Study on the Provenance of Sandstone in the Subang Formation, Tegalwaru District, Karawang Regency, West Java Province

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Abstrak

Formasi Subang merupakan salah satu formasi dalam Cekungan Bogor (Martodjojo, 1983). Menurut Assa (1980) Formasi Subang tersingkap di 3 daerah, yaitu Karawang, Purwakarta, dan Subang ketebalan dari Formasi Subang akan semakin menebal dengan arah pengendapan ke timur. Provenance menjadi fokus utama dalam penelitian kali ini, pengukuran ketebalan lapisan dan pengambilan sampel dengan ukuran hand specimen dilakukan untuk membantu penelitian. Analisis granulometri turut dilakukan untuk menentukan lingkungan pengendapan dan melakukan analisis butir. Namun, metode analisis utama yang digunakan adalah petrografi dengan komponen Q-F-L, Qp-Lv-Ls, dan Qm-F-L dipublikasikan oleh Dickinson & Suzcek (1979) dan Ingersoll & Suzcek (1979). Berdasarkan hasil analisis provenance utama daerah penelitian masuk ke dalam tipe magmatic arc menggunakan komponen Qp-Lv-Ls (Ingersoll & Suzcek, 1979), untuk sub-provenance masuk ke dalam undissected arc menggunakan komponen Q-F-L (Dickinson & Suzcek, 1979), dan dalam analisis provenance menggunakan komponen Qm-F-L (Dickinson & Suzcek, 1979) Qp-Lv-Ls (Ingersoll & Suzcek, 1979) didapatkan daerah penelitian masuk ke dalam tipe lithic recycled dan arc orogen. Tataan tektonik yang sesuai dengan umur dan karakteristik batupasir daerah penelitian, yaitu Sunda arc (Jawa & Sumatera), Banda arc, Sulawesi, dan Halmahera. Namun, menggunakan analisis kualitatif arus purba merujuk Alam (2012) provenance daerah penelitian berasal dari Sunda arc (Jawa).

.....The Subang Formation is one of the formations within the Bogor Basin (Martodjojo, 1983). According to Assa (1980), the Subang Formation is exposed in three areas, namely Karawang, Purwakarta, and Subang. The thickness of the Subang Formation increases towards the east during deposition. Provenance is the main focus of this research, where thickness measurements of layers and collection of hand specimen-sized samples were conducted to aid the study. Granulometric analysis was also performed to determine the depositional environment and conduct grain analysis. However, the primary analytical method used was petrography with Q-F-L, Qp-Lv-Ls, and Qm-F-L components, as published by Dickinson & Suzcek (1979) and Ingersoll & Suzcek (1979). Based on the analysis results, the main provenance of the research area falls into the magmatic arc type using Qp-Lv-Ls components (Ingersoll & Suzcek, 1979), while the sub-provenance falls into the undissected arc type using Q-F-L components (Dickinson & Suzcek, 1979). In provenance analysis, the Qm-F-L (Dickinson & Suzcek, 1979) and Qp-Lv-Ls (Ingersoll & Suzcek, 1979) components indicate that the research area falls into lithic recycled and arc orogen types. The tectonic setting corresponds to the age and characteristics of the sandstone in the research area, which are the Sunda arc (Java & Sumatra), Banda arc, Sulawesi, and Halmahera. However, using qualitative analysis of ancient currents referring to Alam (2012), the provenance of the research area is believed to originate from the Sunda arc (Java).