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# Archipelago Tidal Flats in Korea: Sedimentological and Geoheritage Significance

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Over one thousand islands with rocky shores are distributed and concentrated along the southwestern coast of the Korean Peninsula. Various tidal flats formed along the rocky coasts of the archipelago have been developed due to the relative decrease in accommodation space by slow sea-level rise on broad marginal epicontinental seas during the Holocene. Sedimentation and evolution on these archipelago tidal flats (ATF) show quite distinctive and various tidal flat patterns, depending upon the location and direction of rocky shores which have been constantly influenced by monsoon winds reversely changing with season.

Generally ATF is characterized by surrounding wave-dominated sand flats along the outside of the archipelago and by broad tide-dominated mud flats in its central part with spring tidal range reaching up to 6 meters. The open-coast outside sand flats and inner mud flats are completely different in terms of sedimentation and the evolution of sedimentary sequences. The former has been deposited by the transgressive sedimentation with strongly destructive and weakly constructive wave/tide processes, forming relative thin and younger (ca. 3,000 yrs BP) remnant storm-dominated sandflat units. The latter has been deposited by continuous transgressive settling with constructive tidal processes during Holocene, forming relative thick and older (from ca. 7,000 yrs BP) mud-flat units.

Geomorphological features and the geological evolution of the ATF (Shinan archipelago and Yoobudo islands in Seocheon) display a quite distinctive pattern of ongoing geological processes from the Wadden Sea tidal flats which was already inscribed as World Natural Heritage. Therefore, the Outstanding Universal Values of the Korean ITF for criteria (vii) and (viii) should provide a strong support for the additional World Natural Heritage Site.