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**P r e s e n t a t i o n : P o s t e r**

**Brackish Water Deposits with Acid Soils in Bangkok Plain**

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The Bangkok plain forms the major part of the central valley of Thailand. The area is confined that most of brackish water deposits are acid sulphate soils with a thick black to very grey A-horizon. The soils are very clayey texture with jarosite layer from the plain of Bangkok have been analysed. The different extracts have a high content of H<sub>2</sub>O extractable ions, but especially salt-extractable ions. These different extracts contain mostly SO<sub>4</sub><sup>2-</sup> as anion, and Al<sup>3+</sup>, Mg<sup>2+</sup>, Ca<sup>2+</sup>, Na<sup>+</sup>, and K<sup>+</sup> as cations. Some have small amount of free H<sub>2</sub>SO<sub>4</sub>. It is clear that a great part of the actual acidity (pH) and of the buffering acidity is due either to free or “exchangeable” Al<sup>3+</sup>; the free H<sub>2</sub>SO<sub>4</sub> formed during the oxidation of ferrosulfides attacks immediately the lattice of silicates, the H<sup>+</sup> is fixed by the open -SiO-groups to form -SiOH, and the other composing elements are released as hydrated cations.

*Key words: Bangkok plain, brackish water deposits, acid soils, extractable ions, acidity.*

## Accumulation Rate and Consolidation Properties of Tephric Fine-grained Soils

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Massive brown tephric fine-grained soils, sometimes called “volcanic ash soils,” overlie various geomorphic surfaces in Japan. It has become clear that those parent materials are derived from the reworked tephra and the eolian dust. This paper aims at elucidating the accumulation rate of the tephric fine-grained soils, considering the change of the thickness resulted from the self-weight consolidation after the deposition of the soils, in the case of the northwestern part of the Northeast Japan. Many soil tests show that the soils are overconsolidated, and the total thickness is consequently considered to have changed according to the following equation:

$$\sum \Delta h = \frac{1}{1+E} \int_0^a (E-e) dz \approx \frac{1}{1+E} \left( \frac{E-E'}{2} \right) a \leq \frac{1}{1+E} (E-E') a$$

where  $e$ ,  $E$ , and  $E'$  are general, initial, and basal void ratios respectively, and  $a$  is present total thickness. In the study area, the tephric fine-grained soils layer has a maximum thickness of 6.45 m on the highest terrace surface (*ca.* 0.35 Ma), and the consolidation amount is computed at about 0.8-1.0 % (less than 2 %). Accordingly, the accumulation rate of the soils is estimated to be  $1.2 \times 10^{-2}$  mm/yr during the Late Pleistocene in this area, on the basis of the stratigraphy of interbedded marker-tephra layers in the soils.

*Key words:* tephric fine-grained soils, consolidation, overconsolidation, accumulation rate