

Figure S1 – Variations of total alkalinity (TA in µmol kg<sup>-1</sup>) as a function of Ca<sup>2+</sup>, Mg<sup>2+</sup>, K<sup>+</sup> and Na<sup>+</sup> (all in µmol kg<sup>-1</sup>) in the freshwaters (salinity 0) of the three branches of the Mekong delta (My Tho, Ham Luong and Co Chien), in December 2003, April 2004 and October 2004.  $\alpha$  indicates the slope of the linear regression line (dotted line).

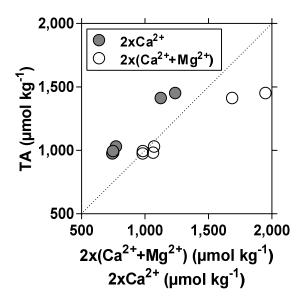


Fig. S2 - Variations of total alkalinity (TA in µmol kg<sup>-1</sup>) as a function of 2 x Ca<sup>2+</sup> and 2 x (Ca<sup>2+</sup> + Mg<sup>2+</sup>) (both in µmol kg<sup>-1</sup>) in the freshwaters (salinity 0) of the three branches of the Mekong delta (My Tho, Ham Luong and Co Chien), in December 2003, April 2004 and October 2004. Dotted line indicates the 1:1 line. If TA was due exclusively to weathering of calcite CaCO<sub>3</sub> the data points would fall on the 1:1 line. Deviation from the 1:1 line indicate a contribution of weathering of dolomite (MgCa(CO<sub>3</sub>)<sub>2</sub>) to TA.

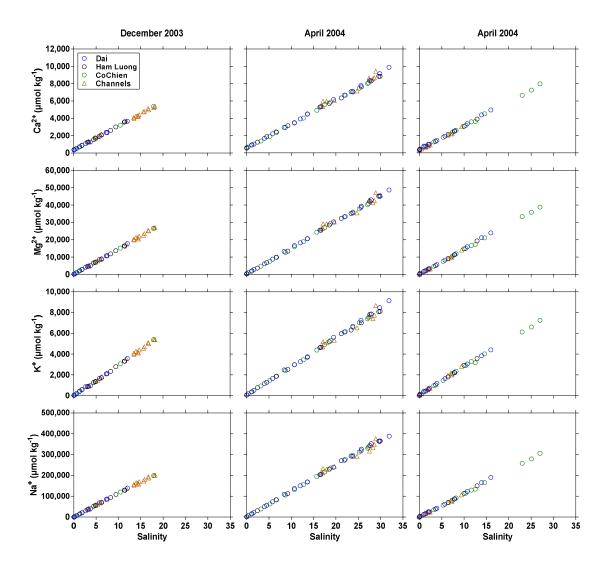


Fig. S3 - Distribution as a function of salinity of  $Ca^{2+}$ ,  $Mg^{2+}$ ,  $K^{+}$  and  $Na^{+}$  in the three branches of the Mekong delta (My Tho, Ham Luong and Co Chien) and side channels, in December 2003, April 2004 and October 2004.