Figure 1: Principal component analysis (PCA) of dissolved organic matter (DOM) composition, included in submitted version of the manuscript. The first four axes (PCA axis 1 & 2: panel a., PCA axis 3 & 4: panel b.) of the PCA explain 73% of the variance. Only those DOM composition variables are shown, which can be interpreted with high confidence Borcard2011. C1 – C4: Fluorescence components 1 to 4 based on parallel factor analysis (see also Table ??); FI: fluorescence index; FreshIndex: freshness index; $E_2 : E_3$: Ratio of absorbance at 250 nm to absorbance at 365 nm; $S_{275-295}$, $S_{350-400}$ & $S_R$: Slope of absorbance at 275-285 nm, 350-400 nm and the ratio (R) of these two slopes; $SUV_A HS$ & $SUV_A bulk$: absorbance at 254 nm, normalised by dissolved organic carbon concentration, for humic substances (HS) and all DOM fractions, respectively; $C : N_{HS}$ & $C : N_{bulk}$: molar carbon to nitrogen ratio for HS and all DOM fractions, respectively; $HS_C$ & $HS_N$, $HMWS_C$ & $HMWS_N$ or $LMWS_C$: carbon (C) and nitrogen (N) in the humic substance (HS), high-molecular weight substance (HMWS) or low-molecular weight substance fraction (LMWS) based on size-exclusion chromatography. No values for $LMWS_N$ exist, because N in LMWS is indistinguishable from N in nitrate. DK = Denmark, UY = Uruguay, extensive = extensive farming, intensive = intensive farming.
Figure 2: Principal component analysis (PCA) of dissolved organic matter (DOM) composition, with revised data transformations (see reply to Referee comment 1, item 2). The details of the figure are explained in the figure caption of Figure 1.