1. STUDY AREA
Location: North-East of the Iberian Peninsula, Catalonia, Spain
Area: 926 Km²

2. METHODOLOGY
FIELDWORK
Footnightly manual water sampling at 3 sections of the Anoia river basin during the hydrological years 2011-2012 & 2012-2013.
All sampling points have gauging stations, that manage the Catalan Water Authorities.
Thus, flow and water temperature are measured in situ.

LAB ANALYSIS
Specific conductance, total dissolved solids, pH, suspended sediment concentration and NO₃⁻, NO₂⁻, PO₄³⁻ & HCO₃⁻ contents were determined at the Physical Geography Laboratory of the University of Barcelona (UB).
Major cations are derived from analysis by ICP-MS technique by the Scientific-Technical Services of the UB.

3. PRELIMINARY RESULTS
3.1. Specific conductance of the Anoia stream water
Distribution by sampling points during the 2011-12 hydrological year

3.2. Solute concentrations in the Anoia stream water
Distribution by sampling points

3.3. Stream flow / Specific conductance relationships
Correlations between stream flow (Q, m³/s) and specific conductance (µS/cm) have been made to understand how total dissolved solids (TDS) vary according to water level (Walling & Webb, 1983).
Potential regression line in the graphics show the same trends at the sampling points of the main channel, but tributaries don’t follow this pattern.

4. CONCLUSIONS
A first geospatial typification
According to the obtained data, we can distinguish three main areas to characterize the basin: a combined natural (non anthropic)-agricultural zone at the head of the basin; natural areas (basically due to the aquifer) at the southwestern areas; and a mixture of agricultural-industrial-urban lands in the lower course of the catchment.

Further research is needed to find out whether the spatial variability of solutes is kept, or if otherwise, other spatial patterns are discovered.
Once we record more data, we will be able to start considering the temporal behavior of solutes.

REFERENCES

ACKNOWLEDGMENTS
University of Barcelona and GRAM members. The main author also wants to thank the special help of Jordi Rallo.