



# 2015 Aquatic Sciences Meeting

Aquatic Sciences: Global And Regional Perspectives — North Meets South

22-27 February 2015 — Granada, Spain

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## ABSTRACT

### SEDIMENT AND CARBON DYNAMICS IN A TROPICAL RIVER-FLOODPLAIN SYSTEM DURING HIGH-DISCHARGE CONDITIONS (TANA RIVER, KENYA)

We analysed the fluxes of suspended sediment and different riverine carbon pools and their stable isotope composition, at two sites along the lower Tana River (Kenya). Between both sites (385 km), extensive floodplains are located, without permanent tributaries. Daily water samples were taken during three wet seasons (Oct-Nov 2012 – May-June 2013 – April-May 2014); two of these included several distinct discharge peaks but experienced no considerable flooding, while one campaign was characterized by widespread overbank flooding. During high discharge periods without flooding, concentrations of particulate organic carbon (POC) and dissolved inorganic carbon (DIC) increased with discharge, but no distinct pattern was found for dissolved organic carbon (DOC). DIC concentrations were significantly higher downstream. When extensive flooding occurred, however, DOC and DIC concentrations were significantly higher downstream of the flooded areas, indicating substantial inputs of DIC and DOC from those areas. In contrast, POC concentrations were extremely low in both stations. While annual budgets show the region to represent a strong sink of suspended sediments, floodplains appear to act as important DIC and DOC sources to the mainstream during periods of inundation.

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## DETAILS

Oral presentation

Session #:023

Date: 2/25/2015

Time: 17:15

Location: Andalucia 2 (Floor 1)

Presentation is given by student: Yes



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