



## Survey River Niger

For the design of river design works in order to turn the lower River Niger into a well navigable channel, an update of the river channels was required through a thalweg / river crossing survey.

Svašek Hydraulics (as part of Royal Haskoning) carried out the bathymetric survey in co-operation with Haskoning Nigeria and with the assistance of NIWA staff. Use was made of NIWA crafts, viz. M.V. Numan as houseboat and four dinghies as survey vessels.

The survey covers the area between Jamata (km 495; Northing 891000 m) and Aboh (km 194; Northing 614000 m), being approximately 300 thalweg kilometres.

The survey has been carried out along crosslines from shore bank to shore bank, covering the full cross-sectional width. The mutual distance of the sounding lines is circa 200 m. At shallow crossings, the resolution has been increased to 100 m. Along the lines the distance between the sounding points varies between 5 and 25 m. For the reduction of the depth data, use was made of the only reliable existing gauges at Lokoja and Onitsha.

For the positioning use was made of the Ashtech Z12RTK GPS receivers. The survey was executed with two digital echosounders: Navisound 210 and Navisound 50. Also, the analogue Raytheon 210Kc was used.

**Client**  
National Inland Waterway  
Authority (NIWA)

**Location**  
Nigeria

**Date**  
Dec 2001 - Jan 2002

**Services**  
bathymetric survey including  
positioning with RTK and  
reduction of water levels to CD