

Project title: Coordination of Support to the Angolan Water Resources Institute [INARH]

Summary: Norconsult-WRA is providing technical assistance to INARH [Angolan Water Resources Institute] on behalf of NVE [Norwegian Water Resources & Energy Directorate].

<b>Client</b> : Norwegian Water Resources and Energy Directorate (NVE), Oslo	Financed by: Norwegian Aid
Period of assignment: Oct 2013 – Dec 2015	Location: Angola
1         1         1         1           1         Sump         Sump	<b>Background</b> INARH was formed in 2010, and the Norwegian government has for many years supported Angola in the area of hydrology. INARH is currently expanding its size up to 130 persons by 2018, and reinstating its hydrometric network which was largely abandoned during the civil war. Norconsult-WRA is providing technical assistance [TA] with support from NVE in the field of hydrometry and training.
12 13 14 14 15 16 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 18 18 18 18 18 18 18 18 18 18	<ul> <li>Activities</li> <li>The TA programme focuses on four areas:</li> <li>Re-instatement of the hydrometric network</li> <li>Hydstra hydrological database system</li> <li>Developing consistency in river basin planning</li> <li>Hydrometric services training</li> <li>The TA programme of work set up the new hydrological database system on a new hardware platform in new offices in Luanda, by migration of the old Hydata 4.2 database and ongoing data collection.</li> </ul>
The Norconsult-WRA team, INARH Director and his staff	During the course of the 2-year programme, a structured course in hydrometry has been delivered in portuguese, with the preparation of training manuals and fieldwork. River basin planning methodology has been reviewed, and consistency applied to the production of terms of reference for consultancy contracts. Guidance and overview was given for a staged reinstatement of river gauging stations, liaising with portuguese contractors and Ott hydrometry in the first and second phases of construction, and the supply of equipment.
Reinstated hydrometric station at Bom Jesus, R Cuanza	Fortran reformatting program was written to convert the old Hydata database in batch mode for transfer to the new database. Use of Hydstra will facilitate exchange of data with neighbouring SADC countries. At the end of the programe, Angola will have a network of 189 river gauging stations and 247 rainfall stations some with telemetry, and the next project will aim to have live web-based reporting systems for public use.

Project Number 000486

**Partners** Frank A K Farquharson Paul A C Holmes Dr A Nick Mandeville Ronald E Manley

Dr Harvey J E Rodda Dr Andrew J Wade Professor Paul G Whitehead Head Office: PO Box 838 Wallingford Oxon OX10 9XA

Tel: +44 (0) 1491 838190 E-mail: info@watres.com

LLP Registered in England No OC379769. Registered Office: 25 Hart Street, Henley-on-Thames, Oxon. RG9 2AR