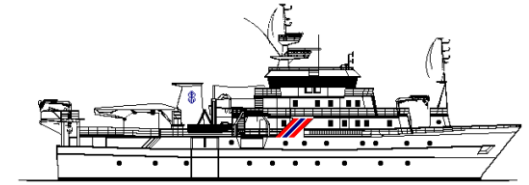


Survey No Title	Start/End dates (No of days)	Countries	Partners	Survey objectives
<b>2014401</b>  <b>Surveys of the fish resources of Angola</b>	03 February – 05 March (30)	Angola	<ul style="list-style-type: none"> <li>• Institute of Marine Research Bergen, Norway</li> <li>• Instituto Nacional de Investigação Pesqueira INIP, Luanda, Angola</li> </ul>	<ul style="list-style-type: none"> <li>• To estimate the abundance and map the distribution of the main commercially important pelagic and semi-pelagic fish species in Angolan waters, including the two sardinella species <i>Sardinella aurita</i> and <i>Sardinella maderensis</i>, the Cunene horse mackerel <i>Trachurus trecae</i> and the Cape horse mackerel <i>Trachurus capensis</i>.</li> <li>• To collect depth-stratified samples of zoo- and phytoplankton in order to continue the studies on feeding biology including relating stomach content to estimated zooplankton composition and observed density.</li> <li>• To map the general meteorological and hydrographical conditions in the survey area by means of continuous recordings of weather data, CTD-casts (Temperature, Salinity and Oxygen) and ADCP measurements (Acoustic Doppler Current Profiler) along acoustical and hydrographical transect lines.</li> <li>• To observe and record sea birds and mammals in the surveyed area.</li> <li>• On-the-job training of cruise participants on the main survey routines, including using the Nansis database and scrutinizing acoustical data using IMR the post-processing system, the Large Scale Survey System (LSSS).</li> </ul>
<b>2014402</b>	7 March – 6 April (30)	Angola	INIP, Angola, IMR, Norway	<ul style="list-style-type: none"> <li>• To survey, map and describe the distribution, composition and abundance of the main demersal species, with special emphasis</li> </ul>





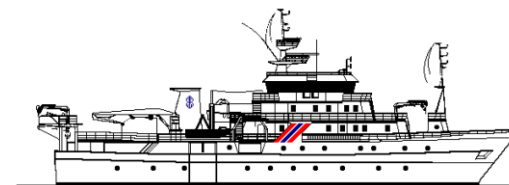
<p><b>Survey of the demersal fish resources of Angola</b></p>				<p>on seabreams (Sparidae), croakers (Sciaenidae), grunts (Haemulidae), groupers (Serranidae), hakes (Merlucciidae), cephalopods and shrimps (<i>Parapenaeus longirostris</i> and <i>Aristeus varidens</i>) on the Angolan shelf and slope (down to 800 m), from Cunene River (17°14'S) to Tombua* (15°40'S), and from Benguela (12°35'S) to Congo River (06°00'S) using bottom trawl and the swept-area method.</p> <ul style="list-style-type: none"> <li>• To collect biological data such as length, weight, sex and maturity stage of <i>Dentex macrophthalmus</i>, <i>D. angolensis</i>, <i>Pagellus bellottii</i>, <i>Pseudotolithus</i> spp., <i>Umbrina canariensis</i>, <i>Merluccius polli</i>, <i>M. capensis</i>, <i>Trachurus trecae</i>, <i>Brachydeuterus auritus</i>, <i>Penaeus notialis</i>, <i>P. keraturus</i>, <i>A. varidens</i>, <i>P. longirostris</i>, and <i>Chaceon maritae</i>.</li> <li>• To collect the stomach contents and otoliths for some species such as <i>D. angolensis</i>, <i>D. macrophthalmus</i>, <i>P. bellottii</i>, <i>P. senegalensis</i>, <i>P. typus</i>, <i>U. canariensis</i>, <i>B. auritus</i>, <i>M. polli</i>, <i>M. capensis</i>, and <i>T. trecae</i>, for subsequent analyses in the INIP Lab.</li> <li>• To monitor the general hydrographical conditions using thermosalinograph and CTD-sonde on trawl station and map the temperature, salinity and oxygen.</li> </ul>
<p><b>2013404</b> <b>Recruitment studies on sardinella <i>Sardinella aurita</i> and <i>S. maderensis</i> in the coastal waters of</b></p>	<p>24 May – 14 June (22)</p>	<p><b>Gabon, Congo, Angola</b></p>	<ul style="list-style-type: none"> <li>• IMR, Bergen, Norway</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the distributions of sardinella (<i>Sardinella aurita</i> and <i>S. maderensis</i>) eggs and larvae in the survey area</li> <li>• Identify oceanographic features affecting their distribution</li> <li>• If possible, explain the retention and distribution mechanisms for eggs and larvae in the survey area</li> </ul>





NANSEN PROJECT

# 2014

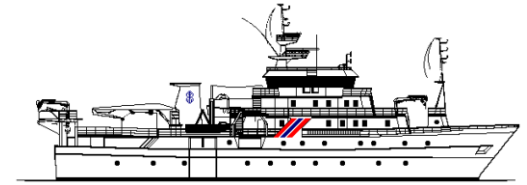


<p><b>Gabon, Congo and Northern Angola</b></p>				
<p><b>2014405</b></p> <p><b>Survey of the fish resources of Angola</b></p> <p><b>Survey of the pelagic fish resources</b></p>	<p>16 June – 17 July (31)</p>	<p><b>Angola</b></p>	<ul style="list-style-type: none"> <li>• IMR, Bergen, Norway</li> <li>• INIP, Luanda, Angola</li> </ul>	<ul style="list-style-type: none"> <li>• To estimate the relative abundance and map the distribution of the main commercially important pelagic and semi-pelagic fish species in Angolan waters, including the two sardinella species <i>Sardinella aurita</i> and <i>S. maderensis</i>, the Cunene horse mackerel <i>Trachurus trecae</i>, the Cape horse mackerel <i>Trachurus capensis</i> as well as other clupeid and carangid species.</li> <li>• To collect biological information of target species: <i>T. trecae</i>, <i>T. capensis</i>, <i>S. aurita</i>, <i>S. maderensis</i>, <i>Sardinops ocellata</i>, <i>Decapterus rhonchus</i>, <i>Selene dorsalis</i>, <i>Chloroscombrus chrysurus</i> as well as <i>Brachideuteirus auritus</i>.</li> <li>• To collect stomachs and otoliths from both horse mackerel species for analyses of diet composition and length-age relationships.</li> <li>• To collect depth stratified samples of zoo and phytoplankton in order to continue the studies on feeding biology, relating stomach contents to estimated zooplankton compositions and densities.</li> <li>• To observe and make records of sea birds and sea mammals in the survey area.</li> <li>• To map the general meteorological, hydrographical and biological conditions in the survey area by means of continuous recordings of weather data, CTD-casts (Temperature, Salinity and Oxygen), ADCP measurements (Acoustic Doppler Current Profiler) and plankton sampling along acoustical and hydrographical transect lines.</li> <li>• On-the-job training of cruise participants on the main survey</li> </ul>





2014



				routines, including use of the Nansis database and scrutinizing acoustical observation (echograms) with the post-processing system, the Large Scale Survey System (LSSS).
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