# **Kuwait national report**

Hydrographic activities in Kuwait works under ministry of communications, transport sector, technical department. The technical department was established at 1982 but the hydrographic activities starts at 1986 when the first hydrographic survey was executed at that time The hydrographic survey control runs the activities bye two main sections

Drawing and marine charts section
 This section mainly deal with cartography and charts corrections and updates notice to mariners and navigations warning manually and automatically

2) Hydrographic survey section

Deal with the data collection bye hydrographic survey boats

or commercial surveys

Both sections cooperate with the navigation aids section at same department and with marine department at same sector that responsible for other marine issues such as safety of navigation

Therefore most of the problems encountered in data collection

reduced to minimum

### Surveys

 Main major hydrographic surveys was conducted in Kuwait In 1986 and 1998 at 10 years intervals

These surveys cover more than 90 per cent of Kuwaitis waters

 Small area surveys executed times to times depending upon new marine projects, this mainly done bye Kuwait oil companies and other cable laying companies with coastal inshore projects

3) Small hydrographic survey vessel usually hired commercially every 3 years to execute the small hydrographic

survey

The main specifications of such exsisting vessel as follows:

40 feet in length and 10 ft width Catamaran

Air conditioned and fully equipped with Multibeam echo sounder and Eiva software for both bathymetric and data processing

Tide gauge and other necessary hydrographic equipments The vessel run bye the company with our surveyors super vision and follow up

4) The new major coming planned projects now start and expected to be executed at the beginning of 2008

This project will mainly includes the northern areas where high sedimentations alter the depths there

Also the project will cover all the Kuwaiti waters to updates the huge changes happens at last 10 years in anew facilities on shore and off shore mainly at coastal areas

A net work of tide gauges will be established at this project and an aerial liader survey is also included especially at northern areas where a lot of khiran (small shallow and non accessible channels exists)

The estimate time of such project will be 2 years

### Charts and ENC

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Kuwait install finally anew compete system for charts production and updates

The system deals with the charts updates and ENC

The system was installed bye Caris Co. and includes most of the software necessary for the work

It's expected to issue anew charts bye the beginning of 2007

Kuwait has 22 charts produced until now

11 of which in Arabic

And 11 of which in English

No ENC yet produced

Pleasure charts planned to be issued since these type of charts are highly recommended and had a demand in fisheries boats that exceeds 15000 pleasure and fishing boats

### Problems encountered

- 1) Lack of experience in technical staff works in hydrographic survey and cartography with less no of trained people
- 2) Difficulty in surveying some areas in Kuwaiti waters due to mines and unsafe navigation especially at northern areas adjacent to Iraq
- 3) No coordination between adjacent countries to execute the survey of shared waters or produces the nautical charts

#### MSI

There is acoastal station but it is not according to the new GMDSS plan

It's necessary to cordinate between regional countries in such matter

## Capacity building

Its planeed for IHO to have a technical support visit in 2006-But still no arrangements or communicatioons made until now There is a matter of intend between kuwit and UKHO to sign abilateral agreement

Training was received from UKHO last year for astandard couse in cartography, and another one this year but uz of lack of person Kuwait apologize to participate in such course There is aneed to cooperate in another fild of training and hydrographic surveying especially for shared areas at north of Kuwait

Oceanographic and other activities

A new meteoroloical data colletion system was established 2 years before in kuwit

This system contain of 8 of shore stations distributed in kuwitit waters and run bye general public environment authority and can measure wave and tides also bsides environmental parameters

Another 8 shore stations now being established bye meteoroligical departmen in acivial aviation also in progress with awork station to be linked in our hydrographic office to show online data about tide and waves and currents

## Suggestions

 Speed up with bilateral arrangements with UKHO and cooperate with other hydrographic organizaation

2) Revise achart shcheme for kuwit during the next year

3) Hydrographic survey projects to be done with latest standards for IHO and preferably with technical supprt and aconsultancy of them if possible

 More training of kuwiti staff needed in afeild of charts updating and other levels of hydrography like cat A

5) An urgent need to adpot the ENC for territorial waters and other adjacent waters for other coutries to complete the chart sheeme for the reigon

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Done bye Eng.Nabil ALTurkait Chief engineer of transport sector Ministry of communication s State of Kuwait