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National Report OF Iran

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Brief History of Iranian Tide Gauge Network

Iran has more than 2500 kms coastline in the north (Caspian Sea) and south (Persian Gulf and sea of Oman). Collecting Tidal observations started in Iran since 1945 at a tidal station which is situated in Anzali port that is located on south coast of Caspian sea. Iranian (NCC) Tide gauge network consisted of 10 tidal stations, 9 in south (Persian gulf ,Oman sea) and 1 on Caspian Sea (North of Iran) south coast. 2 of South Tidal stations have been located on north Coast of Oman Sea and 7 on north coast of Persian Gulf. The first NCC tidal station established On Shahid Rejaee port which is located on the north coast of Persian gulf in 1989.

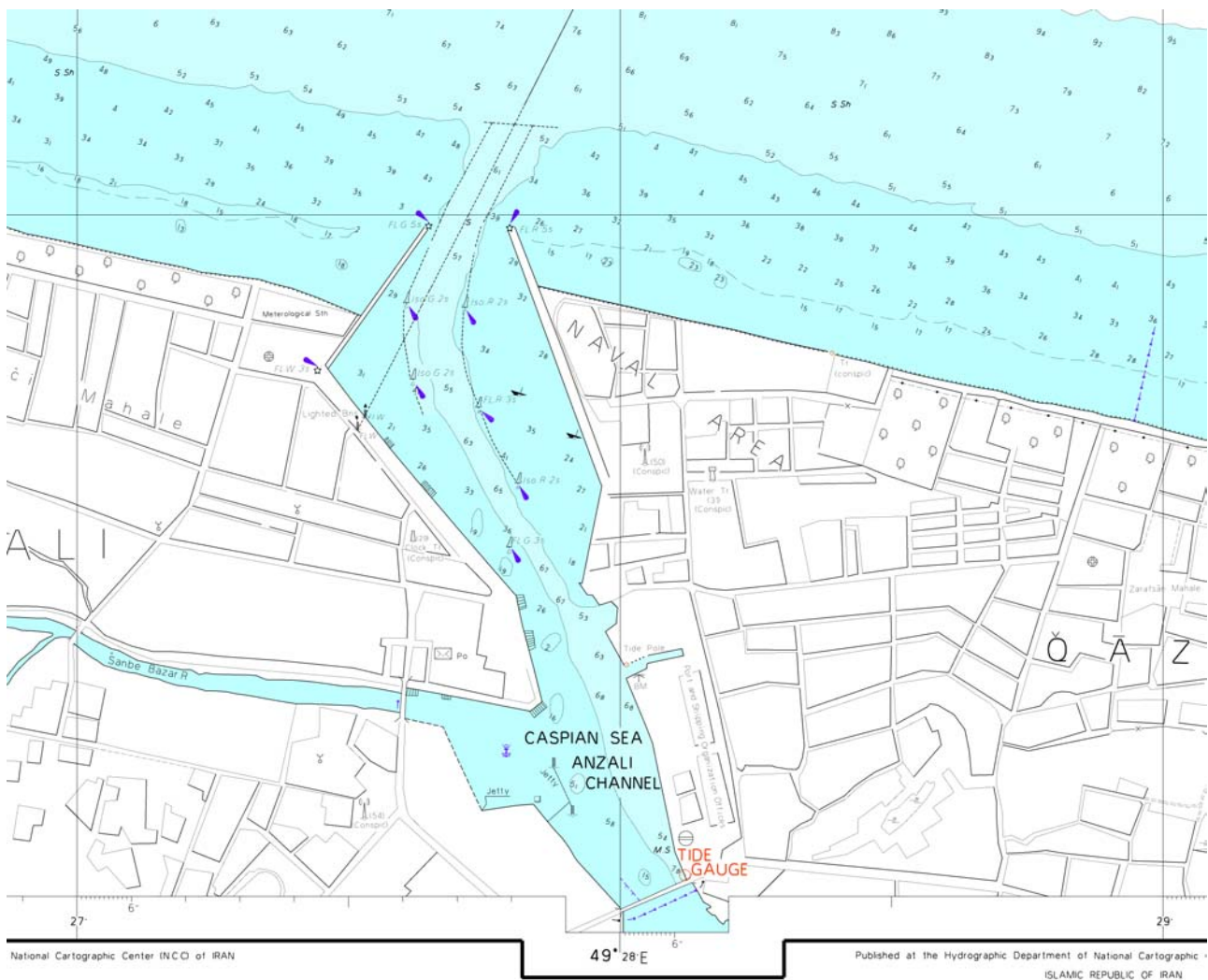
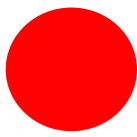
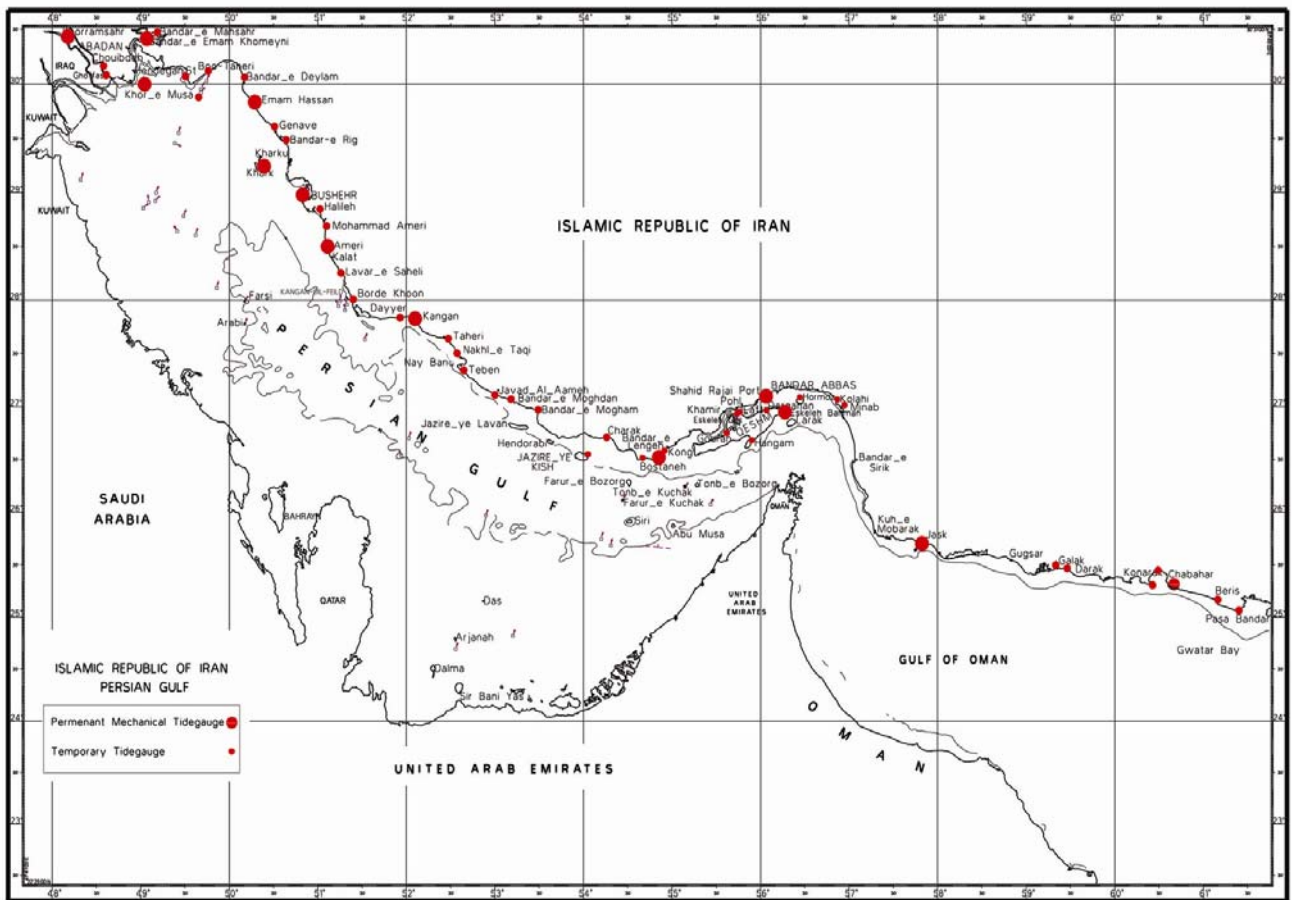


Fig. 1 Anzali gauge site

Map of Iranian tide gauge net work



Tidal Stations



Temporary Tidal Stations

List of Iranian (NCC) Gauge Sites:

No.	Name	Date of Establishment	Geographical Coordinates (E, N)	
1	Shahid Rajaei Port	Nov. 1989	56 04	27 06
2	Bushehr Port	Nov. 1989	50 39	29 34
3	Kangan	Dec. 1989	52 03	27 50
4	Chabahar Port	Apr. 1990	60 37	25 17
5	Imam Hassan Port	Jan. 1991	50 15	29 50
6	Jask Port	Jun. 1997	57 46	25 39
7	Khark Island	Jan. 2002	50 20	29 16
8	Imam Khomeini Harbor	Feb. 2002	49 05	30 26
9	Khorammshahr Port	Jan. 2003	48 12	30 25
10	Neka Port (Caspian Sea)	Jun. 1998	53 16	36 51

Tide Gauge Models and Technology Employed in the net work

All Tide gauges employed by NCC for collecting data are float mechanical gauges made by OTT. We have experienced some electronics pressure & float gauges at some other sites but not satisfied us so far.



Fig. 3 OTT Tide gauge in the hut.

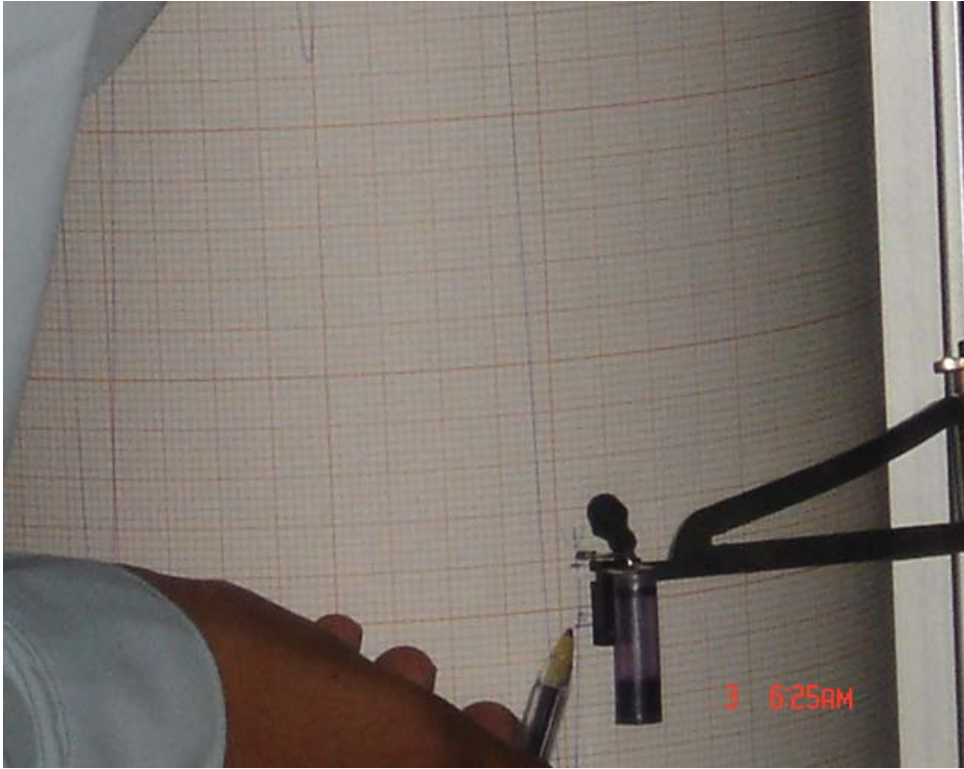


Fig. 4 Tide gauge chart plotter.

Tide Gauge Huts

The huts are made of aluminum. The Area of the hut of the most gauges is about 2.5 m².



Fig. 5 Shahid Rajaei Gauge Hut



Fig. 6 Tide gauge pole

Bench Marks

NCC has provided an extensive leveling network of bench marks along Iranian coasts. There are vertical bench marks near gauges which have been connected to the tidal stations) by leveling. Tide stations are also connected to the bench marks which have been built by hydrographic department. At some sites, GPS observing stations (for example: Shahid Rajae port, Chabahar port...)have been established by NCC.



Fig. 7 Shahid Rajae Bench mark of the leveling network

data availability

All tidal charts collected by NCC staffs at the site and are sent to main Hydrographic office in Tehran. Data is checked by the staffs and converted to digital format. A typical format of digital records is shown below:

01/JAN/ 1999	Hour 1/2Hour (centimeter)
00 127 128	17 204 205
01 132 134	18 204 200
02 137 139	19 192 186
03 142 142	20 178 171
04 143 142	21 163 156
05 142 140	22 149 142
06 135 130	23 135 129
07 126 122	
08 117 111	
09 108 105	
10 104 105	
11 109 115	
12 122 130	
13 140 150	
14 161 171	
15 179 188	
16 195 200	

Web address of tidal information

<http://www.iranhydrography.org>

Remarks

Since establishing of the tidal station in 1990, a NCC staff has been charged for reading, assuring observations are of high quality; maintenance and sending tidal charts to NCC.