I.R.IRAN NATIONAL REPORT 23th session of

Coordination committee on

Hydrometeorology

of the Caspian Sea (CASPCOM)

Ashgabat,Turkmenistan , 30-31October 2018

Introduction

In this report we talk about:

- Activities in the field of development of observation network, forecasting and research, , special attention was paid to the climatic analysis of the Caspian Sea climatological characteristics
- Preparation of the I.R.of.Iran operational program of the Coordinating Committee CASPCOM is one of the important issues considered at the current meeting.
- Providing marine meteorological services to coastal users based on the needs of users is one of the national activities of the Islamic Republic of Iran called "TAHAK",
- Unification of the altitude zero to measure the fluctuations of the Caspian Sea water level, in particular the stations of the alignment of Iran with other countries, which reported activities in this area.

2. Development of measurement network in southern coasts of Caspian Sea

2-1- Coastal Marine Meteorological Network

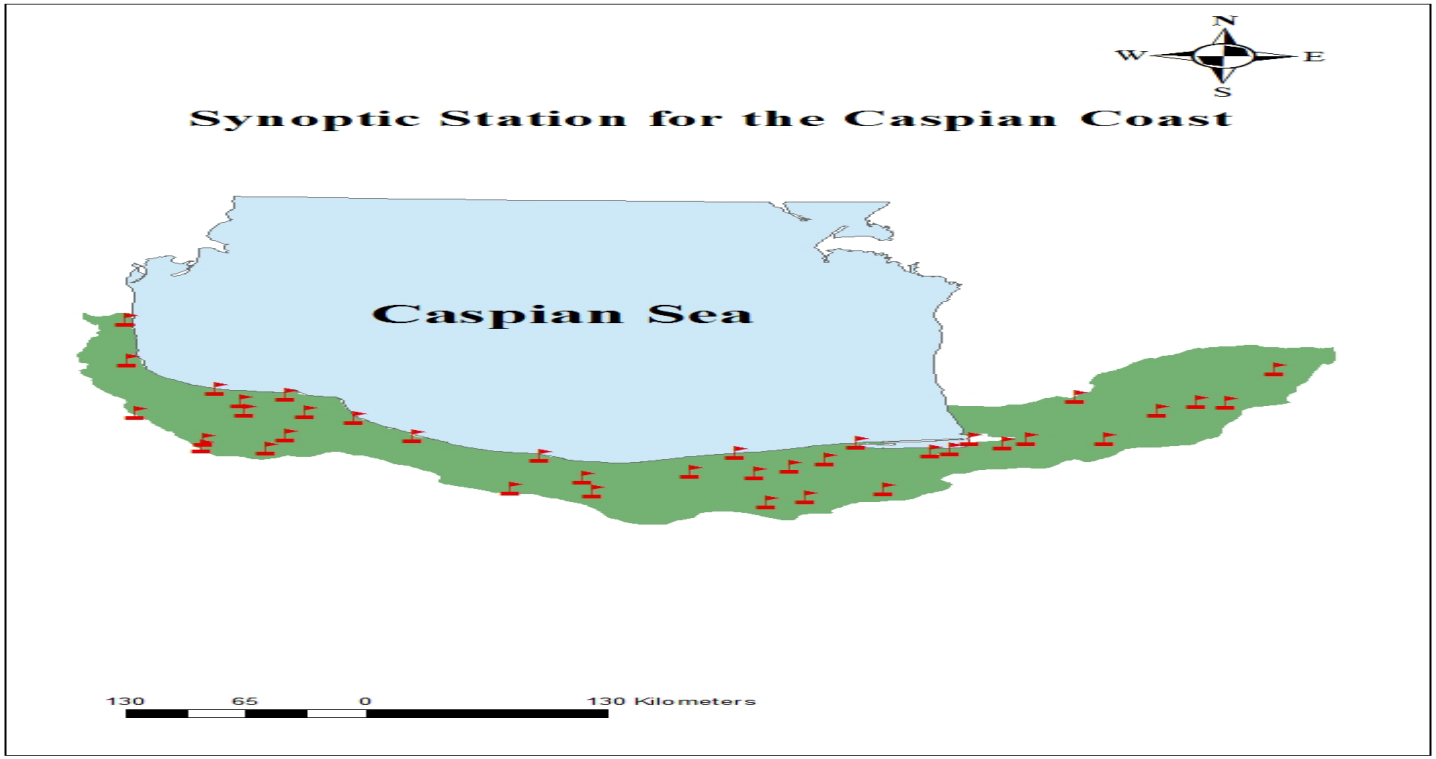


Fig.1 Synoptic Station for the Caspian Coast

2-2- Marine Meteorological Buoys

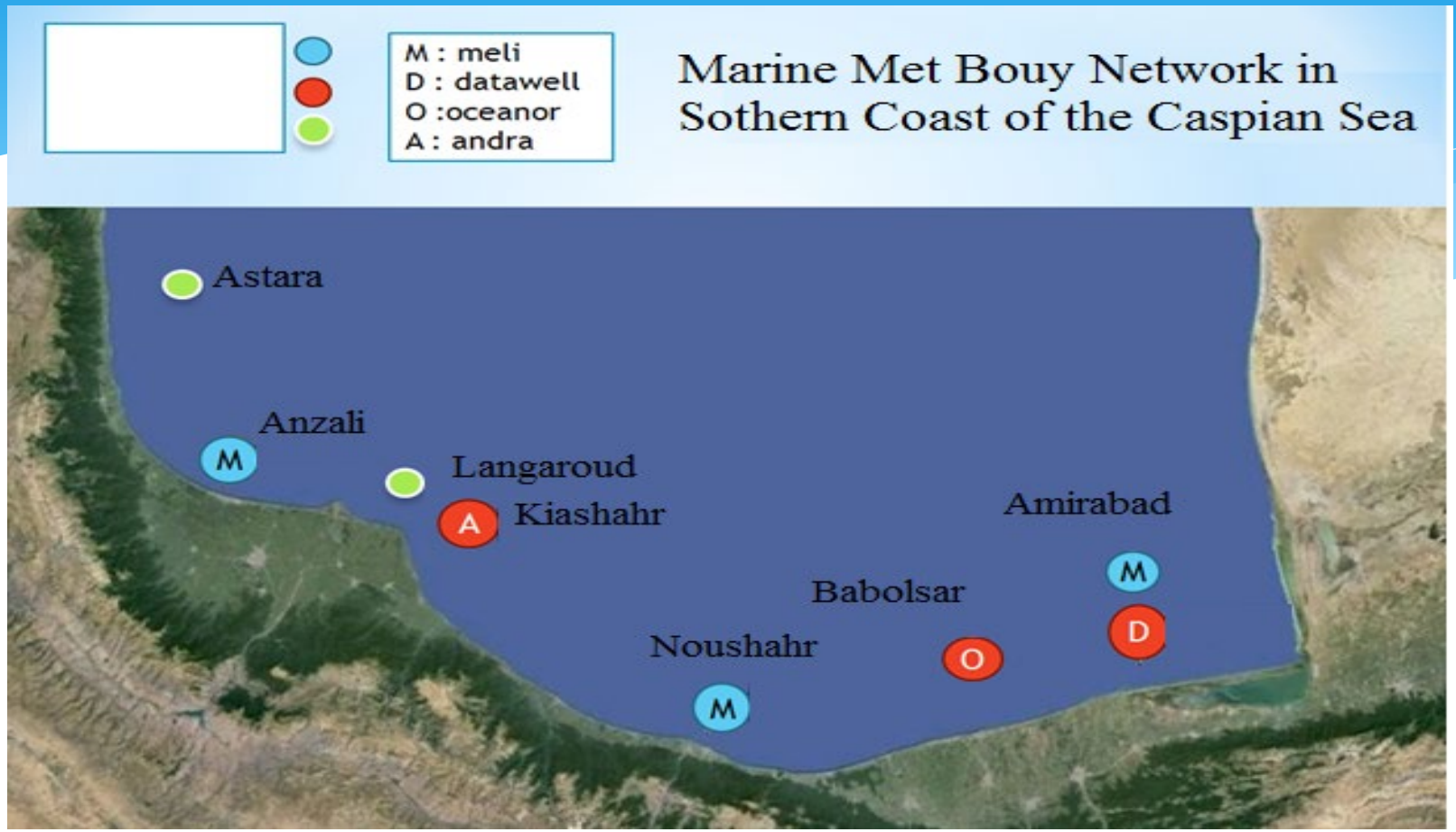


Fig.2- Marin Meteorological Buoys Network

2-3- Meteorological Radar

Fig.3- Amir Abad Meteorological Radar

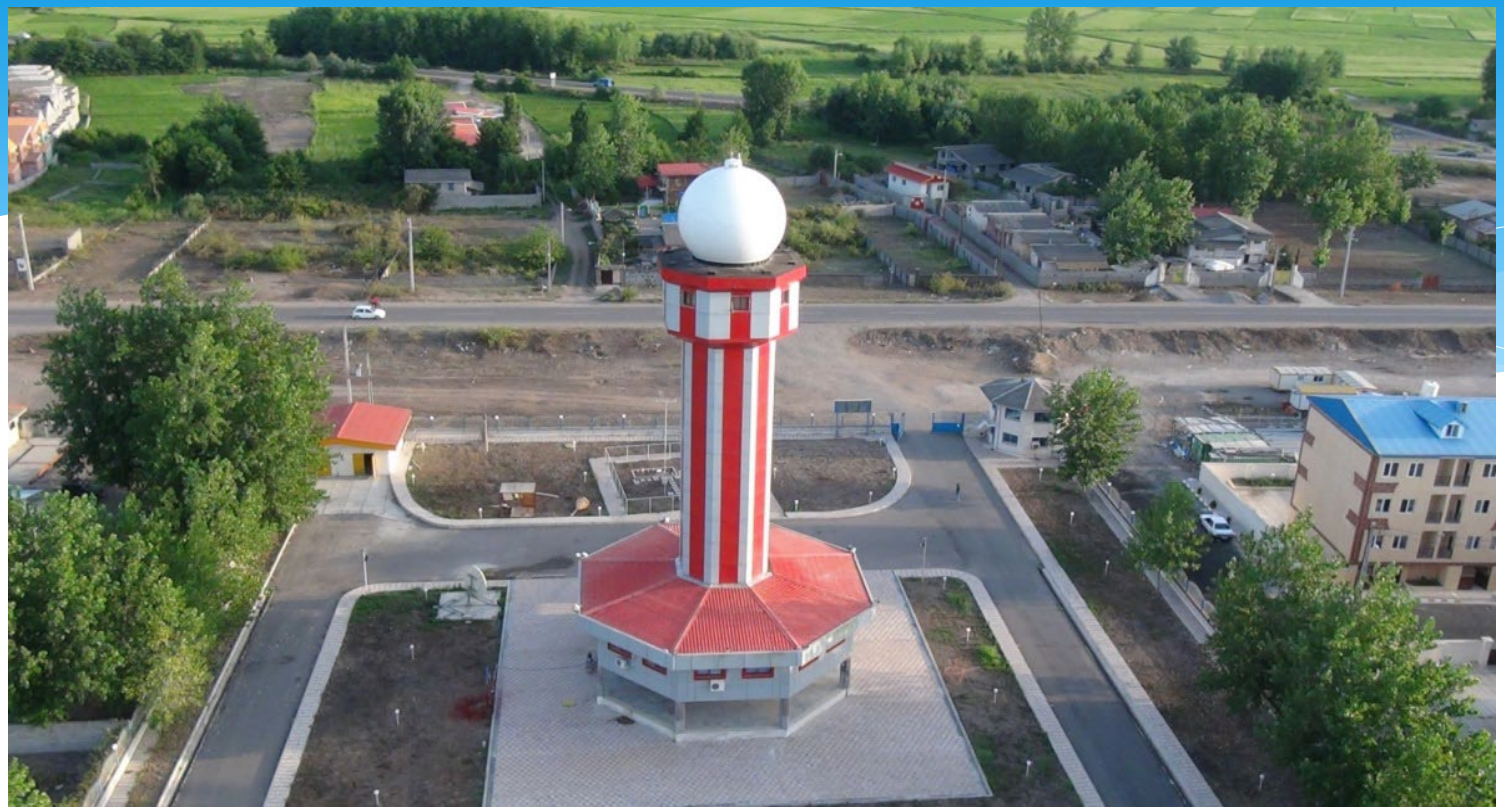


Fig 4. Kiashahr Meteorological Radar

2-4- Caspian Sea Level monitoring network

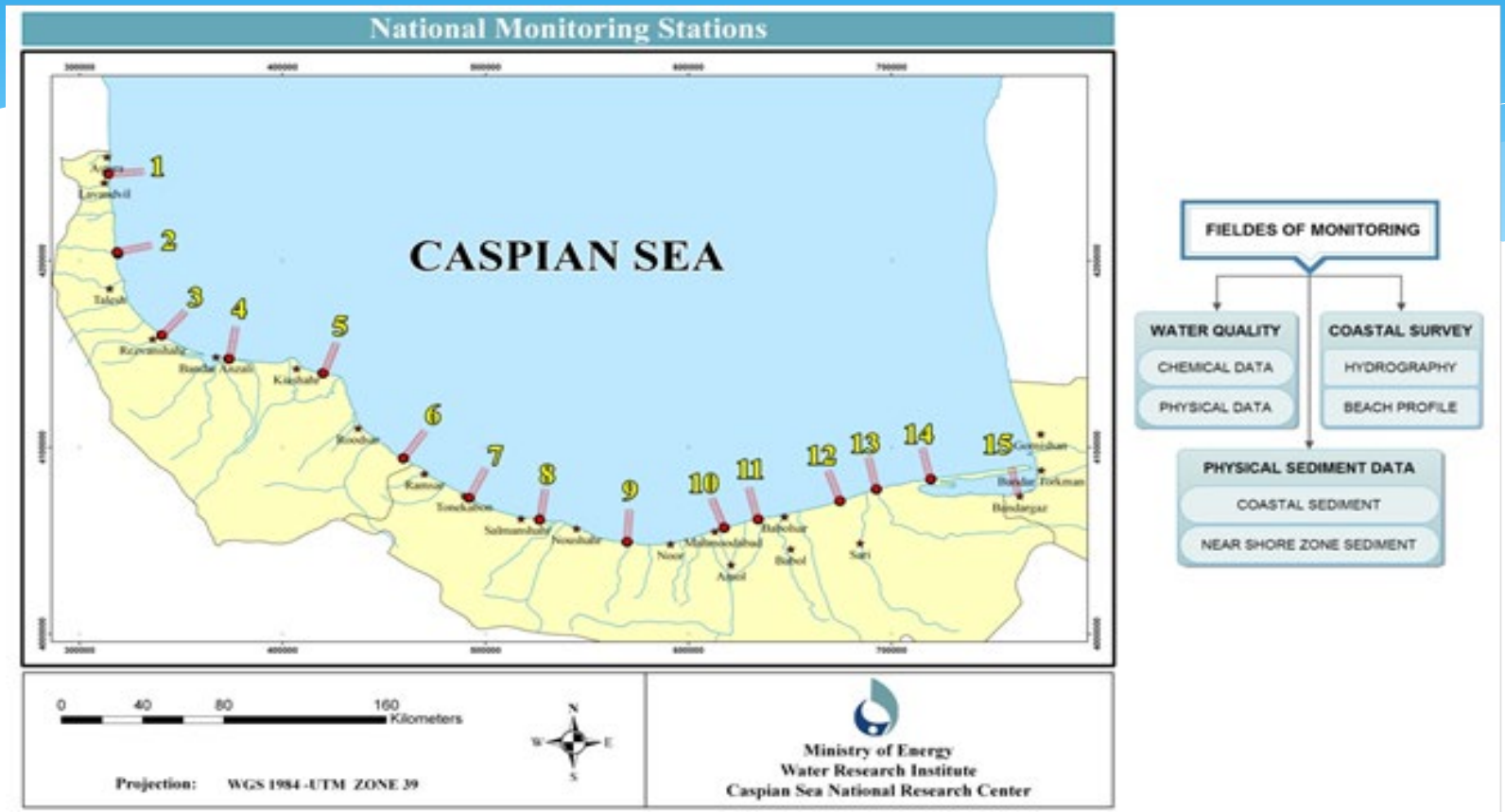


Fig. 5- Tide gauge Stations of Caspian Sea southern

- **River stations**

Annual data of the major rivers of the South Caspian coastline is provided using the river basin monitoring network.

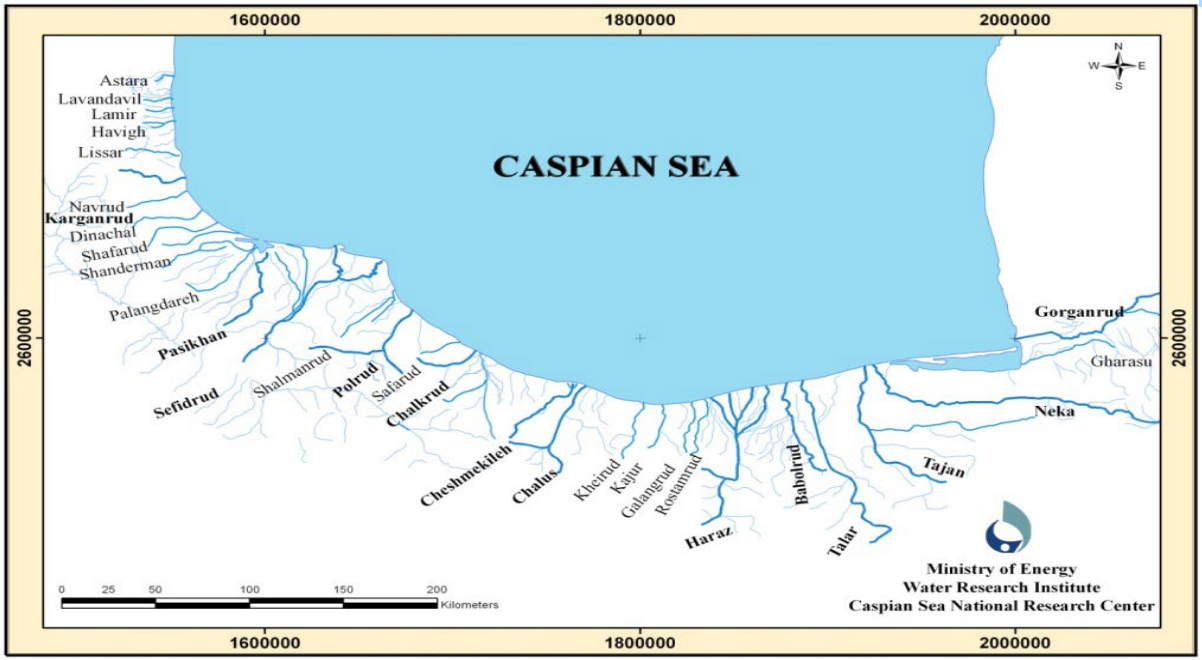
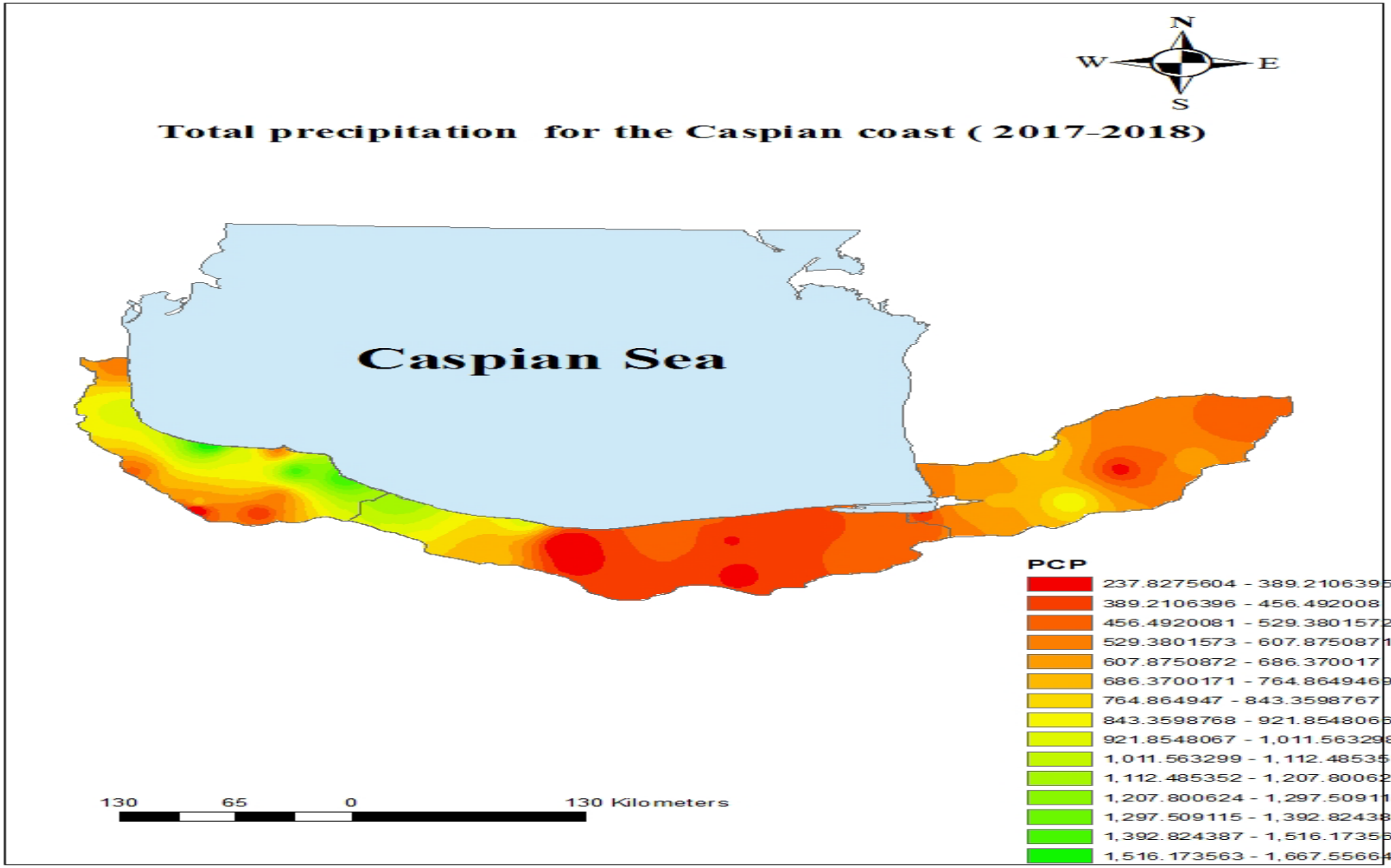
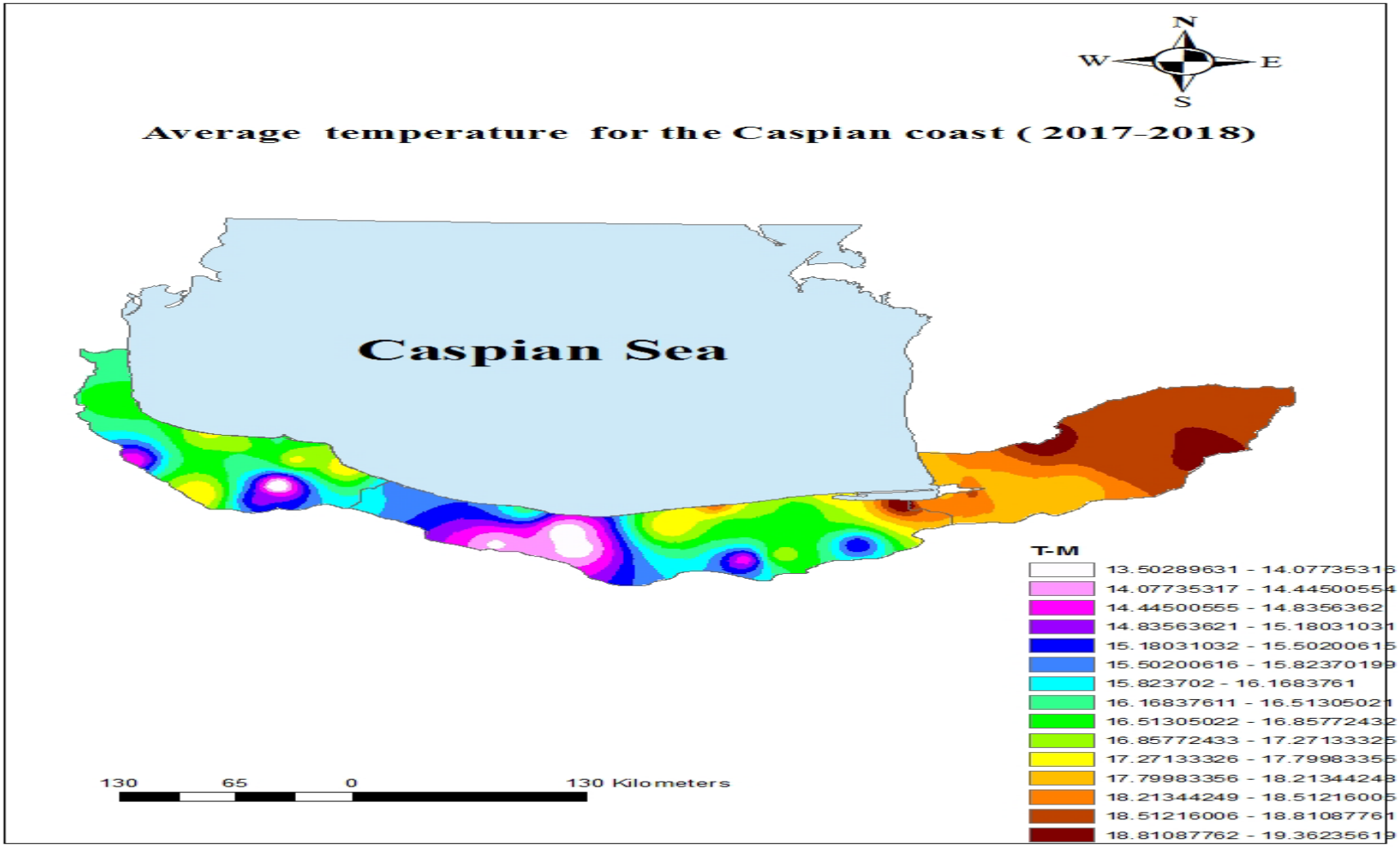
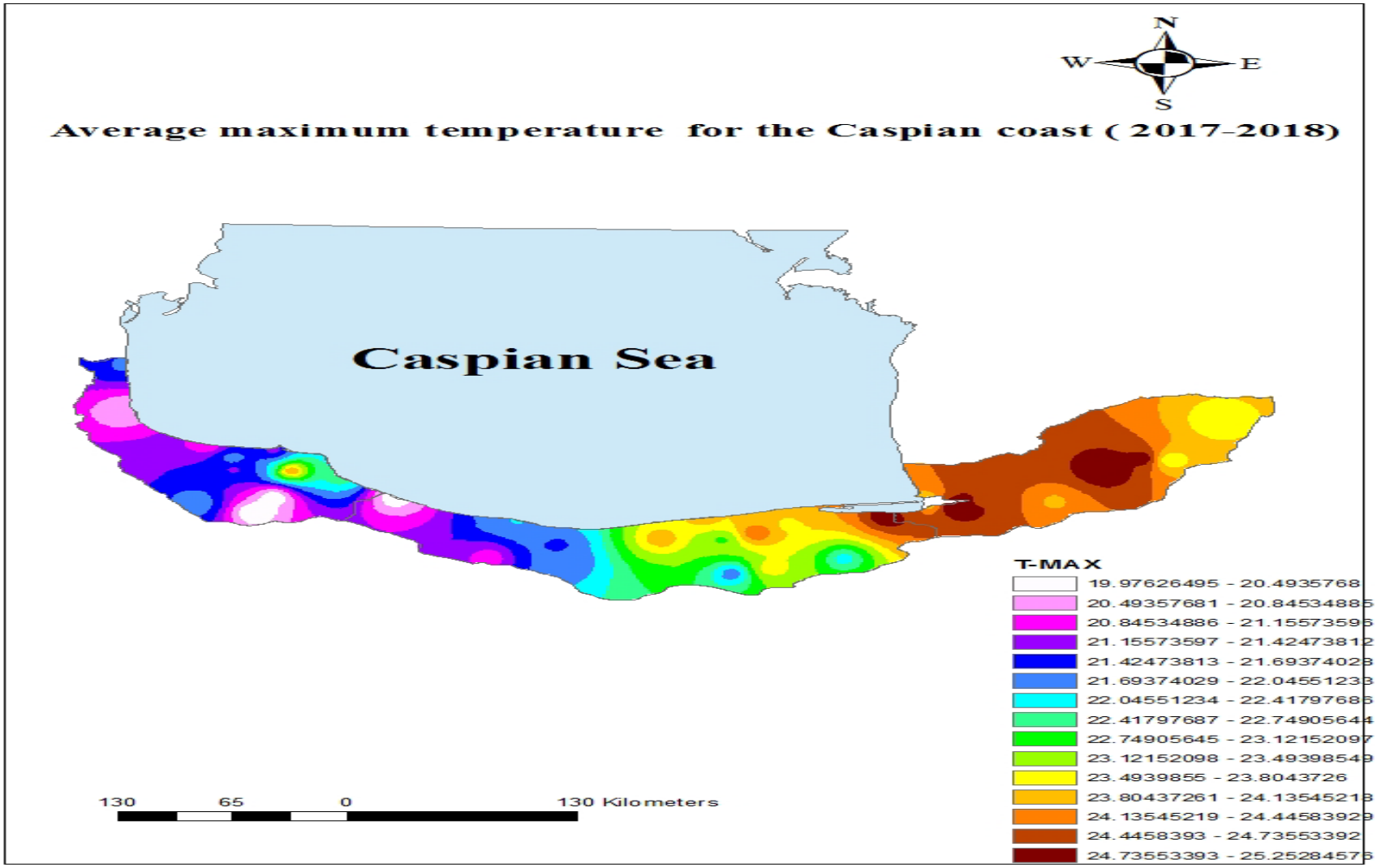


Fig.6 Stations Location


N
W
E
S
Total precipitation for the Caspian coast (2017-2018)
Caspian Sea
PCP
237.8275604 - 389.2106395
389.2106396 - 456.492008
456.4920081 - 529.3801572
529.3801573 - 607.8750871
607.8750872 - 686.370017
686.3700171 - 764.8649469
764.864947 - 843.3598767
843.3598768 - 921.8548065
921.8548067 - 1,011.563298
1,011.563299 - 1,112.485351
1,112.485352 - 1,207.800623
1,207.800624 - 1,297.509114
1,297.509115 - 1,392.824386
1,392.824387 - 1,516.173562
1,516.173563 - 1,667.556641
130 65 0 130 Kilometers


N
W
E
S
Average temperature for the Caspian coast (2017-2018)
Caspian Sea
T-M
13.50289631 - 14.07735316
14.07735317 - 14.44500554
14.44500555 - 14.8356362
14.83563621 - 15.18031031
15.18031032 - 15.50200615
15.50200616 - 15.82370199
15.823702 - 16.1683761
16.16837611 - 16.51305021
16.51305022 - 16.85772432
16.85772433 - 17.27133325
17.27133326 - 17.79983355
17.79983356 - 18.21344243
18.21344249 - 18.51216005
18.51216006 - 18.81087761
18.81087762 - 19.36235619
130 65 0 130 Kilometers


N
W
E
S
Average maximum temperature for the Caspian coast (2017-2018)
Caspian Sea
T-MAX
19.97626495 - 20.4935768
20.49357681 - 20.84534885
20.84534886 - 21.15573595
21.15573597 - 21.42473812
21.42473813 - 21.69374028
21.69374029 - 22.04551233
22.04551234 - 22.41797685
22.41797687 - 22.74905644
22.74905645 - 23.12152097
23.12152098 - 23.49398549
23.4939855 - 23.8043726
23.80437261 - 24.13545219
24.13545219 - 24.44583929
24.4458393 - 24.73553392
24.73553393 - 25.25284575
130 65 0 130 Kilometers

3-2- Report of Caspian Sea Level fluctuations 2015-2016

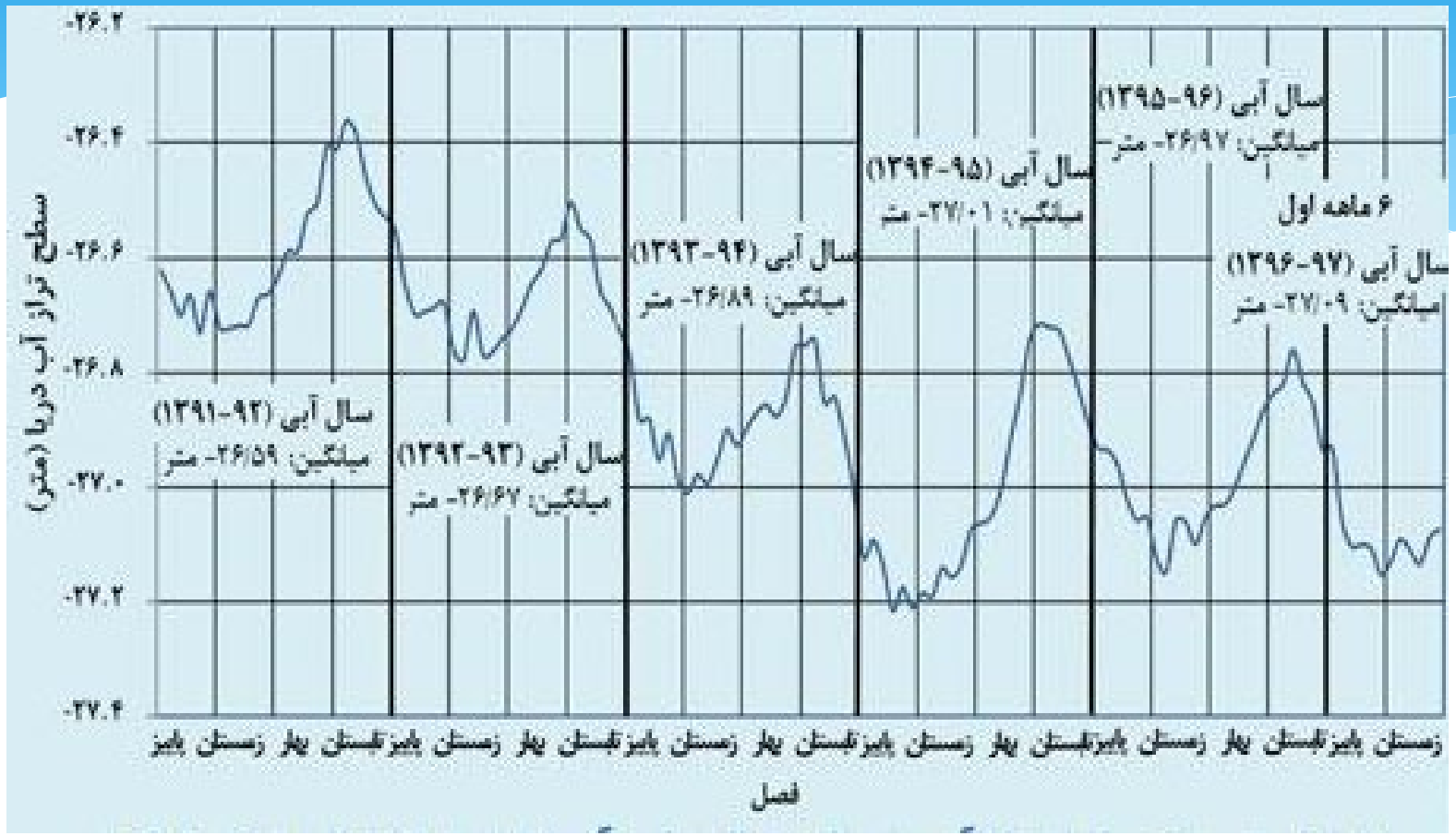


Fig. 10- Water Level Fluctuation 2012-2018

Seasonal variations in water level in the year 2017-2018

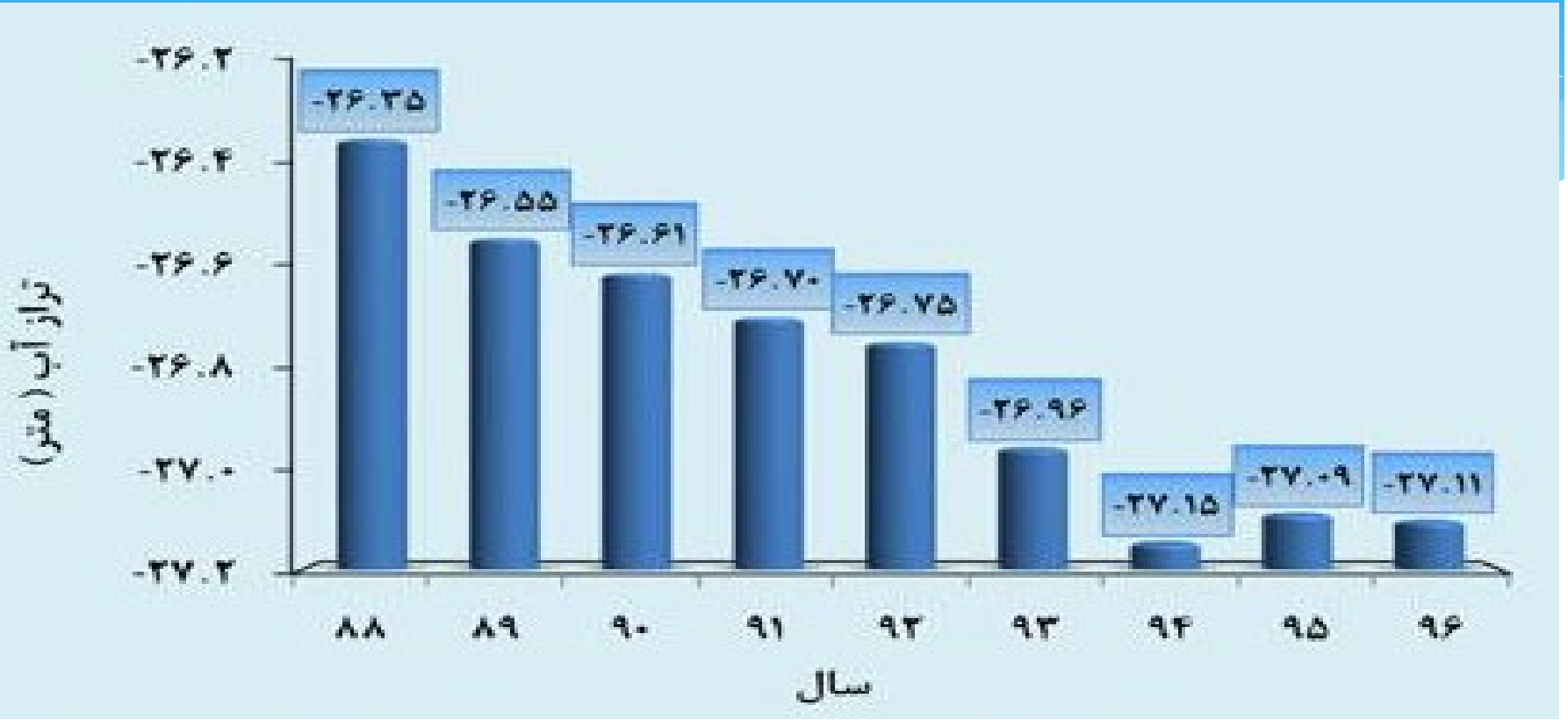


Fig.11- Water level Fluctuation in winter 2009 – 2017

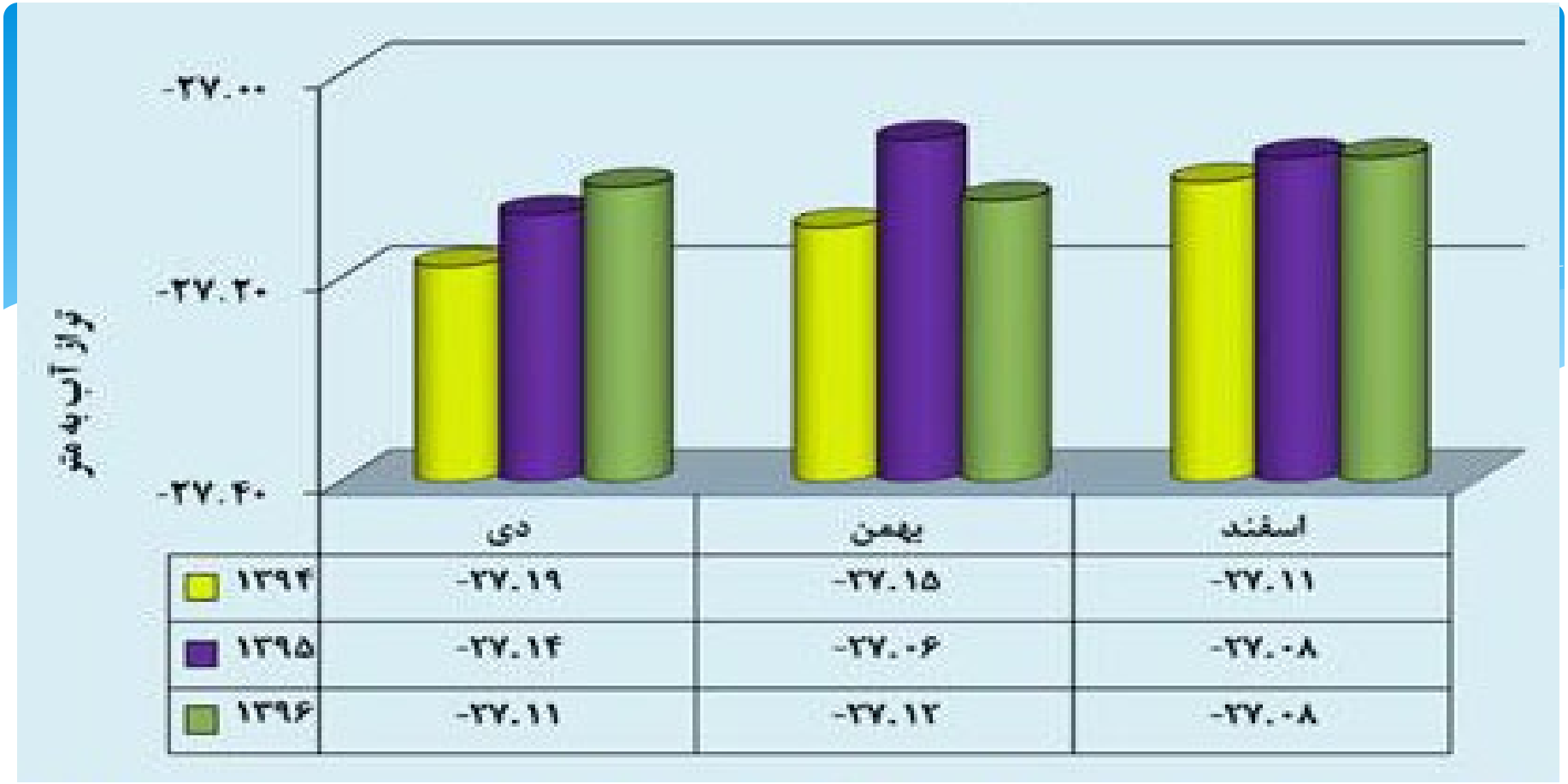


Fig.12- Comparison of monthly water level Fluctuation in the winter between 2015 2017

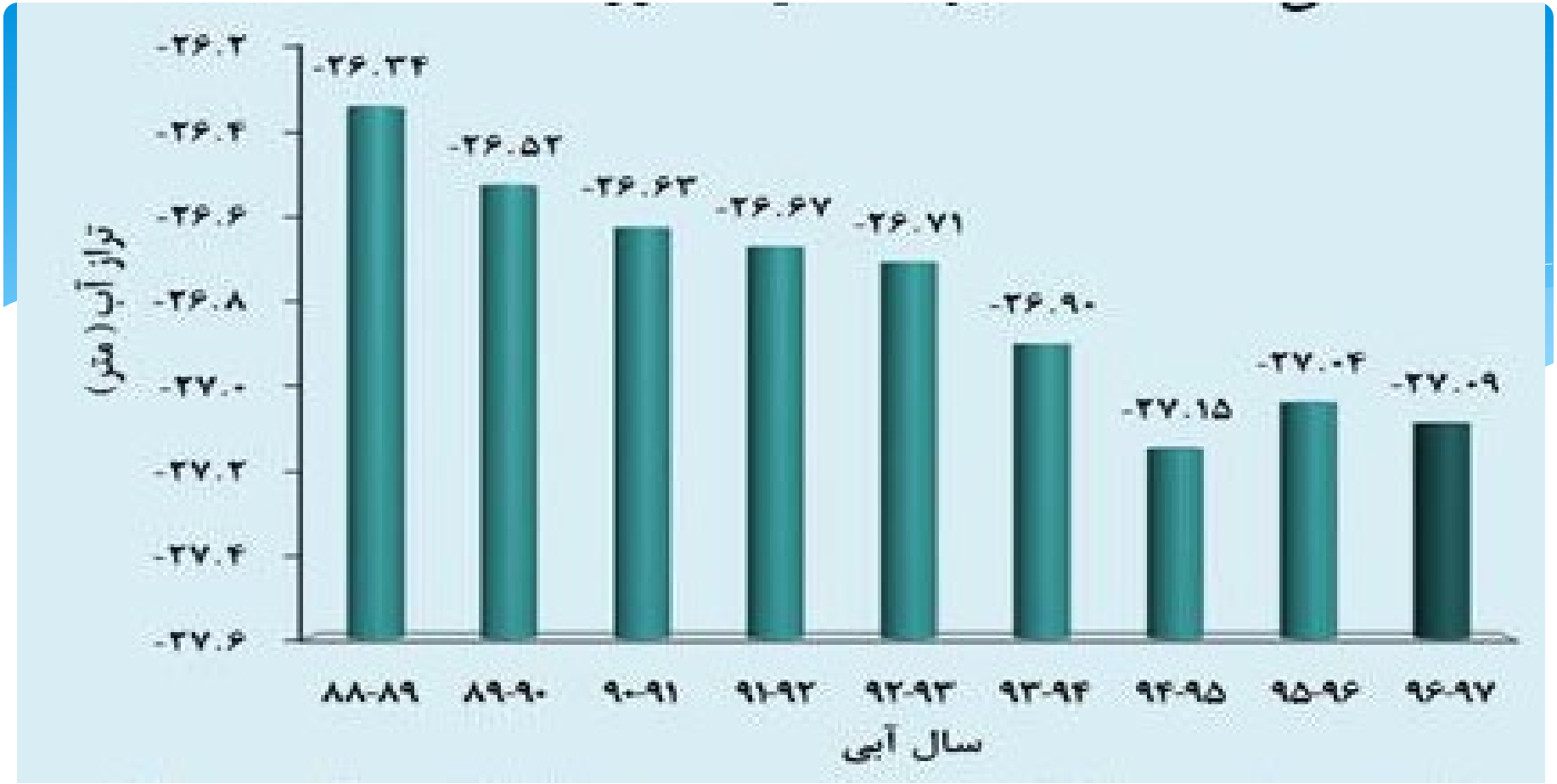


Fig.13 - Comparison of the average water balance in the first six months of the water year 2009-2010 to 2017-2018

3-3- Action Plan

No	Tittle	Aim	Start date	End date
1	Development and promotion of required stations for fixed observation networks	50 Fixed Stations	2017/05/01	2018/05/01
2	Development of marine buoys network	20 Buoy	2017/05/01	2018/05/01
3	Development and promotion of required stations for mobile network monitoring	15 Voluntary ships	2017/05/01	2018/05/01
4	Development and promotion Marine Meteorological Forecast for the Caspian Sea (Bulletin and Map)	1 report	2017/05/01	2018/05/01

4	Development and promotion Marine Meteorological Forecast for the Caspian Sea (Bulletin and Map)	1 report	2017/05/01	2018/05/01
5	Development and promotion the common data bank Marine Meteorological	1 data bank	2017/05/01	2018/05/01
6	Development and promotion of the platform for the exchange of marine meteorological information between the Caspian littoral states	1 report	2017/05/01	2018/05/01
7	Researches included -- Development and set up a system for long-term and medium-term measurements to modernize observation networks to determine the hydrological characteristics and environmental pollution of the Caspian Sea. -Meteorological measurements in the Caspian region, by comparing the methods used to measure atmospheric rainfall and evapotranspiration of sea surface -Equipping chemical analysis laboratories in the framework of the project -Follow up observing the long-term ship in the standard and official sections of the Caspian Sea -Completion of aerology observation networks in the Caspian Sea -Formation of an automated system for collecting, processing and distributing information in order to calculate and predict the Caspian Sea's environmental and its pollution, including natural phenomena forecast and dangerous in hydro meteorology and the harmful effects of technological processes and (phenomena Storms, unexpected floods, oil spills, etc) - Identify regional needs for training education, and the transfer of information and experiences	13	2017/05/01	2018/05/01

4. Marine prediction

4.1- Marine TAHAK and aims of its institution:

In order to implement the Applied Meteorological Development Plan (Tahak) in the seaplane section, seven steps are considered below.

1. Identify the end users of the Marine TAHAK (including the list of individuals and groups of applications)

2. Requirements for marine users, such as completing the need-assessment form (design by total chart) and resource-based identification

3. Production of marine data and product

4. Ways to communicate with end users

5. Capacity building

6. Survey based on the feedback form designed by the General Directorate

7. Documentation and Value Added

5. Uniform Altitude Zero Align at the stations of the Caspian Sea

STATION	CORRECTION (meter)
Aastara	-1.136
Anzali	-1.055
Raamsar	-1.000
Nowshahr	-0.976
Fereydoonkenar	-0.955
Amirabaad	-0.971
Torkman	-0.997