



Coordination committee of Hydrometeorology of Caspian sea (CASPCOM)

I.R.of Iran, 26 November, 2024







سازماننقشهبردارىكشور











Synoptic Stations in Caspian Sea



Fig.2. Coastal and marine meteorological monitoring network of Mazandaran province



Nooshahr meteorological and oceanographic buoy Izadshahr supplementary synoptic station Amir Abad supplementary synoptic station and Meteorological Radar Center The main synoptic station of Babolsar The main synoptic station of Noshahr The main synoptic station of Ramsar Climatology station in Tonekabon Equipped with an automatic atmosphere station



Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)

th

I.R. of Iran, 26 November, 2024



view of the Oceanor-type buoy of Nowshahr port





L R. OF IRAN

METEOROLOGICAL

The restored the maker of	and a report part of print report report	spoord reap	-				
0 0 0		(H) (13				
Larent Report Type	Time Series Time Span						
ime Series Graph	 Time From 2015/02/06 06.2 	Time 1	Ter 2016/02/06	10 24 55 B w - F Inhe	it from last		
	The second secon	•]			gues report		
Generale report	Generated 2016/02/06 06 24 59 8 w Tase Zone: UTC +4 H	Station Name	Last Data Set	Time for last data Set	Status	Min. Imit	Max. Lin
Noshate.mdb	(III) and (III)	628757	0.000	2010/00/20 00 20 00 20 1	V 100 minutes since last data set		_
B WS027	All incharged Land (Ab)	W5007	0.063	2015/10/20 (9:30.00 # 3	> 110 control on order hard chain and	_	_
ANCharged	As the methy (/)	W5027	92 529	2015/10/20 09 30:00 4 3			
Anciechaged_Lead	As Presson (hPa)	WR027	1030 776	2015/10/20 09 20 00 4 1			
An Humidity	An Tanan Manada Mana")	W 5027	16.105	2015/20/20 20 20 20 20 2			
As Toron Mainte	As becoment as (day)	web27	14.044	2015/10/20 09 20 00 4 3			
At here_vacate	A resperance (dep.)	W3927	10.004	2015/10/30 00 30 00 1		-	
Reference	Card Michaelerer	W5067	1,000	2010/10/00 00 00 00 00 00			
Card No.	Canad Direction Idea 1	W 5547	161 719	2010/10/20 09 20 00 4		-	
Current Direction	Compt Energi (cm/s)	W5007	22.366	2015/10/20 09 20 00 4 3			
Current Speed	Current Speed (crivit)	W3067	22.000	2010/10/20 02:30:00 = 3		-	
EastPos	Even.or het	W3027	Compressed				
Heave	Treave (m)	W3027	Compressed	THE R P AND ADD ADD ADD ADD ADD ADD ADD ADD ADD		-	
hen0	New Inc	W5027	1.250	2015/10/30 09:30:00 # 3		-	
- hmDa	THUS (H)	W5027	0.000	2015/10/30 09 30 00 # 3		_	
- hm0b	reko ini	W3027	1.250	2015/10/30 09 30 00 1			
- hmax	Lange for	W3027	1.875	2015/10/30/03 30:00 4			
- mdr	mdx (deg.)	W5027	5.625	2015/10/30 09:30 00 4.3			
redea	molea (deg.)	W5027	2.013	2015/10/30 03:30:00 # 3		-	
- mditb	mikb (deg.)	W5027	5.625	2012/10/30 03 30 00 3			
NothPos	rearry or list	w5027	Longressed	NAMES AND ADDRESS OF ADDRESS OF ADDRESS OF			
SaleshCT	Saladyc 1 (proj	W54027	10.000	2015/10/20 09:30 00 3			
- sprip	ebub loads	ws/027	14.063	2015/10/20 09 20 00 3			
- ner	avv (deg)	W5027	8.438	2015/10/30 09 30:00 4 3			
- Orman	Ownax (deg)	W5/027	5.625	2015/10/30 09 30 00 4 3			
and the second	axb (qed)	W5027	0.000	2015/10/30 09:30:00 # 3			
1002	0x02(x)	W\$027	4.609	2015/10/30 09 30 00 # 3			
her(Ch)	6m02a (c)	W5027	16.406	2015/10/30 09 30:00 4 3			
10	tm02b (t)	W5027	4.688	2015/10/30 09 30:00 4 3			
1.1.1	(\$ [i]	W1027	6.094	2010/10/30 09:30:00 # 3			
Water Temperature	u juj	W\$027	0.938	2015/10/30 09:30:00 4.3			
Wind Direction	Water Temperature (deg.C)	W5027	19.453	2015/10/30 09:30:00 4 3			
Wind Gust	Wind Direction (deg)	W5027	322.031	2015/10/30 09:30:00 4 3			
Wind Speed	Wind Gust (m/s)	W\$027	5.742	2015/10/30 09:30:00 4 3			
	Wind Speed (m/s)	W\$027	4.219	2015/10/30 09:30:00 4 3			

Monitoring software



- Construction of coastal meteorological station and establishment of PMO center in the Faridunknar port office
- 1- According to the pessimistic scenarios of the esteemed consultants of the Ports and Maritime Organization, the sea surface is about 140 meters (the distance between the lines is equal to -28 meters to -31 meters), which, of course, will not have a significant effect on the scale of meteorological monitoring (figures below). In addition, even moving the platform on this scale is possible without any problem and easily.
- 2- Due to ongoing maritime activities, and the need to ensure the life and financial safety of the operators of this sector, including maritime transport, fisheries, tourism, oil and gas, etc., and the strong dependence of the economic efficiency of these users on the data And marine meteorological forecasts, the option of shutting down the development of monitoring and improving the accuracy of forecasts based on the sea background with the current trend in this geographical location is not a strong justification.
- 3- Due to the automaticity of meteorological and marine instruments and the possibility of moving them at any desired time, increasing the distance of the sea and the meteorological platform from the building to the limited amount mentioned does not cause a disturbance in the monitoring performance.



- 4- Measuring the direction and speed of the wind in the open area of the beach, air temperature, water surface temperature, water salinity, installing a wave sensor near the beach, etc. requires immediate proximity to the sea and direct access.
- 5- Due to the fact that the Nautex office is located in the Faridonkanar Port Authority, the Meteorology PMO expert will have the opportunity to come to the Nautex office of the PMO tower on certain days and at times of warning to have a discussion with the users and experts of the ports and Maritime affairs, issue forecast bulletins and recommendations based on the needs of users of this section.
- 6- Lastly, meteorological facilities and facilities, unlike ports and maritime administrations, are not so huge that it is considered a waste of resources, rather, as mentioned above, it is a kind of return on investment according to the essential needs of users.



Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)

I.R. of Iran, 26 November, 2024

Faridunknar Port and Maritime Administration





L R. OF IRAN

METEOROLOGICAL







1-Decrease in water level of the Caspian Sea:

- Evaporation caused by temperature rise and global warming

- Rainfall changes in the entire Caspian Sea basin and the rivers leading to it1-

The decrease in the flow of rivers leading to the sea due to human activities and...2- Sea pollution caused by:2-1- Urban and human waste water 2-2- Tourists' garbage 2-3- Factory effluents3- Consequences of transferring sea water to coastal province4- Reduction of fish stocks





Caspian Sea water level fluctuations in historical periods:

The water level at the beginning of the formation of human civilizations (about 10,000 years ago), the water level was about -50 meters, and then the water level rise.

But in recent centuries, its range of changes has been between -22 and -30 meters



Seasonal changes in the water level of the Caspian Sea





Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)

L R. OF IRAN

ORGANIZATION

I.R. of Iran, 26 November, 2024

Buoy data: maximum wave height





Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)

I. R. OF IRAN

ORGANIZATION

I.R. of Iran, 26 November, 2024

Maximum wind speed buoy data





Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)

L R. OF IRAN

ORGANIZATION

I.R. of Iran, 26 November, 2024

Air temperature buoy data





- Gilan:
- The monitoring of weather conditions on the southwestern coast of the Caspian Sea is done using the information obtained from 6 Synoptic Stations(Astra, Talesh, Rezvanshahr, Anzali, Kiashahr and Rodsar located in the coastal province of Gilan. Also, in line with the development and automation program of the monitoring network of Gilan province; Lisar automatic coastal station was opened and coded, and its data transfer to ICS is on the agenda. Also, an anemometer station for the Astara region has been purchased and is in the process of being set up.
- The master plan for the development of coastal and marine stations in Gilan province can be seen in Figure 1.
- A buoy was in the water in Kiashahr area
- research vessel
- Weather radar of Gilan



Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)

مار مان هواشناس

L R. OF IRAN

ORGANIZATION

I.R. of Iran, 26 November, 2024



Fig.4. General plan of coastal and marine stations in Gilan province, including meteorological stations, buoys, floats and cameras for complete monitoring of the coast and sea.



Golestan

Considering the importance of the Caspian Sea and Gorgan Gulf in the environmental climate, health and economy of Golestan province, monitoring weather conditions and measuring and recording marine physical and chemical data and preparing a database of these data to analyze and review existing conditions and estimating the future conditions is very necessary for accurate planning in various fields related to it. Therefore, in addition to the conducted investigations and field research, and considering that most of the marine activities of fly fishing and sturgeon fishing in Golestan province are carried out in the Mian Qale region. On the other hand, the lack of marine data in the region is one of the major problems in conducting research and marine studies and the accuracy of marine forecasts



Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)

I.R. of Iran, 26 November, 2024





سارمان مواطناسی کشور I. R. OF IRAN

METEOROLOGICAL ORGANIZATION







Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)

I.R. of Iran, 26 November, 2024



Development of marine meteorology observation, Noor and Tonkabon, Mazandaran Province



Meteorological Radar





Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)

I.R. of Iran, 26 November, 2024

- Anzali - Nowshahr - Amirabad - Astara - Gorgan Bay

- Tide gauge stations on the southern shores of the Caspian Sea



I. R. OF IRAN

ORGANIZATION



Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)

I.R. of Iran, 26 November, 2024

Anzali – 1951 Nowshahr 2012 AmirAbad 2012 Astara 2020 Gorgan Bay 2018-2022







I. R. OF IRAN METEOROLOGICAL ORGANIZATION



I. R. OF IRAN

ORGANIZATION

Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)

I.R. of Iran, 26 November, 2024

 Installing 30 benchmarks on the southern shores of the Caspian Sea and connecting to the country's level measurement network





• Reducing the water level of the Caspian Sea based on the level measurement stations in the ports



21 cm decrease from the summer of 2022 to the summer of 2023

132 cm decrease from 2013 to 2023

204 cm decrease from 1995 to 2023



• Reducing the water level of the Caspian Sea based on the level measurement stations in the ports

Station	Sea Lev el	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Torkman								-2728	-27.3	-27.66	-27.78
Amir Abad		-26.63	-26.85	-27.01	-26.89	-26.94	-27.02	-27.25	-27.28	-27.52	-27.66
Noshahr		-26.56	-26.79	-27.03	-26.88	-26.79	-26.9	-27.17	-27.24	-27.62	-27.77
Anzali		-26.56	-26.88	-26.88	-26.78	-26.91	-27.01	-27.17	-27.2	-27.47	-27.5
Astra										-27.47	-27.6
Khazar		-26.59	-26.76	-26.97	-26.86	-26.92	-26.97	-27.18	-27.24	-27.55	-27.85



- Effects of Level reduction:
- Decrease navigation depth
- Necessity of construction dredging,
- Instability of piles and piers,
- The need for changes in mooring equipment and unloading and loading systems





Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)



I.R. of Iran, 26 November, 2024



The numbers in the table are equivalent to the required thickness of dredging to reach the desired navigation depth. Anzali port: checking the stability of the pier Base level- Rajaee

1412 WL=- 31.30	1410 WL=-30.70	1408 WL=- 30.10	1406 WL=-29.50	1404 WL=-28.9	1401 WL=-28	Anzali
4.37	3.87	3.37	2.87	2.37	1.8	1 wharf
2.87	2.37	1.87	1.37	0.87	0.3	2Wharf
2.37	1.87	1.37	0.87	0.37	-0.2	wharf3
2.57	2.07	1.57	1.07	0.57	0	wharf4
2.77	2.27	1.77	1.27	0.77	0.2	wharf5
2.57	2.07	1.57	1.07	0.57	0	wharf6 ¹
1.87	1.37	0.87	0.37	-0.13	-0.7	wharf7
2.07	1.57	1.07	0.57	0.07	-0.5	wharf8 ¹
2.87	2.37	1.87	1.37	0.87	0.3	wharf9
2.57	2.07	1.57	1.07	0.57	0	whar10 f
3.07	2.57	2.07	1.57	1.07	0.5	wharf11
1.87	1.37	0.87	0.37	-0.13	-0.7	whar12 f
1.97	1.47	0.97	0.47	-0.03	-0.6	whar13 f
2.92	2.42	1.92	1.42	0.92	-0.7	whar14 f



The required dredging volume of Anzali port





Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)

I.R. of Iran, 26 November, 2024

Nowshahr Port: Investigation of the stability wharf

1408 WL=-30	1406 WL=-29.5	1404 WL=-29	1402 WL=- 28.50	1401 WL=-28	Noshahr
1.4	0.9	0.4	-0.1	-0.6	1 wharf
1.45	0.95	0.45	-0.05	-0.55	21
2.65	2.15	1.65	1.15	0.65	3
2.4	1.9	1.4	0.9	0.4	4
1.95	1.45	0.95	0.45	-0.05	5
1.25	0.75	0.25	-0.25	-0.75	6
1.75	1.25	0.75	0.25	-0.25	7
1.8	1.3	0.8	0.3	-0.2	8
2.85	2.35	1.85	1.35	0.85	9

The thickness of dredging required to calculate the optimal depth of navigation - evaluation of the stability of wharf





 Climatic report of the southwestern shores of the Caspian 2023-2024-

1- Investigating the precipitation of stations on the southern shores of the Caspian Sea

Investigations show that the distribution of rainfall in the current water year (1403-1402) compared to the long term has increased significantly only at Bandar Anzali station. In the rest of the stations, there was no significant change compared to normal, but a significant decrease was recorded in some stations compared to the last water year.





- 2- Investigating the humidity of stations on the southern shores of the Caspian Sea
- Investigations show that the humidity in the current water year (1403-1402) in most stations has had a long-term trend to some extent.





- 3- Investigating the evaporation of stations on the southern shores of the Caspian Sea
- Investigations show that evaporation in the current water year (1403-1402) in most of the stations has a long-term trend of decreasing to some extent.





- 4- Investigating the average temperature of stations on the southern shores of the Caspian Sea
- According to the average temperature graphs, the temperature in some stations of the northern coasts of the country have increased by 1.5 degrees Celsius compared to their long term. So that the maximum temperature for Bandar Gaz station is 19.2 degrees Celsius.





- 4-1- Examining the maximum temperature of stations on the southern shores of the Caspian Sea
- According to the maximum temperature diagram, the maximum temperature for the stations of Bandar Gaz is 24.4 degrees Celsius. During the studied statistical year, the maximum temperature trend has increased by 1.5 degrees Celsius according to normal.





- 4-2- Examining the minimum temperature of stations on the southern shores of the Caspian Sea
- According to the minimum temperature diagram, the minimum temperature for Ramsar station is 14.7 degrees Celsius. During the statistical year under review, the minimum temperature trend has increased by 1.5 degrees centigrade according to normal.





• Report of the meeting on the difference of the Caspian Sea Level H eight with Turkmenistan (virtual)

Ali Soltanpour

- Head of Hydrography Dep. Of National Cartographic Center of Iran
 - & Secretary of ECO Geomatics Committee

11 Nov 2024



Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)

I.R. of Iran, 26 November, 2024











ا سازمان مواشناسی کشور I. R. OF IRAN

ORGANIZATION



• Height Systems



Fig.1 Orthometric and Normal Heights









- Monitoring of Northern Coasts of Iran ,Port & Maritimre Organization (PMO)
- PMO has initiated a program for monitoring of the Iranian coastal waters and initiated a project titled "Comprehensive Studies on the Effects of Caspian Sea Level Reduction on Northern Ports."
- Due to the importance of meteorology parameters for the study, three permanent stations capable of collecting wide range of meteorological parameters are established in three PMO commercial ports. The stations provide online data such as wind speed, wind direction and air pressure, air temperature, humidity, etc.
- in order to have more information on sea level changes, three extra fixed stations are deployed to measure water level at three PMO major ports' basins. These stations are capable of providing online data



- Sea level changes due to phenomena such as wind and wave-setup, storm surges, river discharges, etc are numerically studied. Different scenarios, potentially responsible for the Caspian Sea recorded level changes are examined and predictions for various return periods are proposed. 3 OTT stations are located in Torkaman, AmirAbad, Nowshahr, Anzali and Astara Ports, which provides data based on MSL.
- Meteorological stations worldwide require access to sea conditions and marine environments to provide weather forecasts and warnings. This data is provided to the meteorological stations through 3 ODAS stations, in Nowshahr, AmirAbad and Anzali Ports, which provides wave and meteorological parameters measurement



Distribution of Tide gauge stations on northern coasts



Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)



I.R. of Iran, 26 November, 2024



Distribution of meteorological stations on northern coasts







Meteorological and Tide gauge station of Amirabad port



Meteorological and Tide gauge station of Noshahr port



Meteorological and Tide gauge station of Anzali port



- The Project has outlined a comprehensive range of services to be included:
- - Data collection, analysis, and review, along with updating available predictions models for the Caspian Sea level.
- - Preparation of reports on global experiences and case studies from other countries surrounding the Caspian Sea.
- - Presentation of potential future scenarios (optimistic and pessimistic) and corresponding strategies.
- Provision of a report detailing the damages caused by the decrease in the Caspian Sea's water level
- - Stability studies pertaining to quay walls, breakwaters, and other port structures affected by changes in the Caspian Sea level.



- - Examination of various scenarios to assess the impact of water level reduction on hydrodynamic changes and sedimentation in the studied ports.
- - Estimation of dredging volumes in port basins and canals, accompanied by a comprehensive plan for the supply of dredging equipment
- - Review and recommendation of necessary modifications to the queywall facilities, including fender systems and etc.



Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)



I.R. of Iran, 26 November, 2024

- Assessment and presentation of required changes in unloading and loading equipment.
- - Examination and presentation of the effects of level reduction on port navigation under different scenarios.
- Prioritization of ports to determine the sequence of required changes.
 Investigation of the possibility of revising layout, usage, and locations of the northern
 - Development of an educational and informative program.





• Marine forecast

Marine weather warnings and warnings of different levels for the country's marine areas as follows:

66 marine warning level yellow

36 orange level warning

	مواشناسی عمومی سازمان عواشناسی محمولات و خدمات
	ورزید را در دیرسانی ساز مان هواشناسه کشور
هواشناسی کشاورزی سایر مراکز	بواتن های پیش بینی انقشه های روزانه ا تصاویر دورسنچی ا هواشناسی هوانوردی ا هواشناسی دریایی ا هواشناسی کاربردی
	🖂 بورتاك سارمات هواشناستی کشور 4 سارمان هواشناستی کشور 4 اخبار و رویدادها 4 هشدارهای هواشناستی 4 هشدارهای دربایی
م مشدارمای مواشناسی	مشمار مواکستاسی فریایی-سطح تارتجی شماره ۳۹ سازمان مرکزی یک شنیه ۲۰(۲۹ - ۲۹-۲۹ (زیبرو مُسَار - عزیرم استبار) 1403/07/29 مواکناسی فریایی سطح زره شماره ۲۵ و یا تاکید بر اعتبار مشمار مواکناسی فریایی سطح تاریجی شماره - سماد بایستا ۱۹۱۹ ۱۹۹۹
29 مور 2012 متدار موافناسی دروایی سطح تارتجی ت	بوسنه سامانه: بعوب جریانات شمالی و افرایش سرعت ورش ناد و افرایش ارتباع اندواع دریا دروان شروع: دوسانیه ۲۷۰۰/۲۰۰۰
سازمان مرکزی یک شنبه ۲۰۹٬۷۰۴٬۹۰۰ (ایبر هواشناسی دریایی سطح زرد شماره ۲۵ و یا ۱۲	رمان بابان: طور جهارشنده ۲۰/۰۸/۲۰ (۱۲۰۲/۱۸۰۰)
فهرسا	نوع مخاطره: افرایش سنسینه سرعت ورش باد در محدوده 28 بات و افرایش بیشینه
🔫 جستجو پر اسامی ایستگاه دوائناسی	ارتفاع اندواع دریا در مناطق ساحلی یا 2 مدر و مناطق دور از ساحل پیش از 2 مدر مناطقه این
استان: نستان:	منعه این دوشنبه ۲۲۰۰۷/۲۰۱۲ سهشنبه ۲۰/۲۰۰۲ و جهارشنبه ۲۰/۲۰۲۰ مناطق ساحلی و دور از ساحل استانهای کنلان و مارندران. در تواجی غربی
01/08/1403 :out	انز محاطره؛ عرق شدت شناگران و عوامان، باره شدن بورهای صباحی و اسبت به قضن های بروزش ماهی، اختلال در فعالیت های
	انفریجی و برددهای دربایی قایق های نفریجی . شناورهای سبک و بیمه سبکی و سنگین، احتلال در بردد شناورهای مسافریزی و بردد کشتی های بجاری و احتلال در مالیت های فراساختی
ے معامدی پرزمیرہا دیما	بوصبه! متو شنا، متو فعالیت قاف بفریجی و شبلادی، احتناب از بردد شناورهاف سبک و بیمه سنگین، انجاد بمهندات لازم جهت بردد شناورهای سنگین، فعالیت های ساحلی و فراساحلی و اماده باش برای مواجهه با حسارت احتمالی
المعطة مستم المسركين باد	🖉 قابل بيوست
المحمد القمي	292.36 WAR211020-CNTR-M-O-30[1].pdf
 ا بارندگی 24 ساعت گذشته بارندگی 6 ساعت گذشته 	تصاوير مرتبط
حسجا	
	یست سرویت اسن نظر:
	ارساف نظر انصراف



Marine weather recommendations are produced for fishing, tourism, ports and shipping groups, based on the needs declared by marine users, most of them are weather forecast, wind direction and speed, and wave height. Sending daily text messages contains two-day forecasts of weather conditions, direction, wind speed, and wave height in the desired area of users. In this regard, a forecast format has been designed, and in this proposed plan, coastal areas in the north and south of the country are divided between seven provinces. For each province, a 12-hour sea forecast, a 72-hour sea forecast, and a 96-hour sea forecast are provided. will be issued.



Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)

th

I.R. of Iran, 26 November, 2024

ceanic & Atmospheric cience Centre





A 12-hour forecast will be issued for areas near the coast and areas far from the coast at 08:00 and 20:00 local time, which includes the forecast of horizontal visibility (km), weather conditions, wind direction and speed (knot), wave height (ft), water temperature. °(C) and in the last part, a perspective is given with the advice of relevant experts



I. R. OF IRAN METEOROLOGICAL ORCANIZATION

Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)

I.R. of Iran, 26 November, 2024

Consume & Admonstratic Science Center		Marine Weather Bulletin Mazandaran			
12-Ho	urs Mari	ne Forecast From Tue 10-22-20	024, 08 To Tue	10-22-2024, 20	
SYNOPSIS:					
Noshahr		NEARSHORE		OFESHORE	
Visibility	WEAK		WEAK		
Condition	CLOUDY	AND RAINY	CLOUDY AND RAIL	~~	
Wind Dir & Sod	W TO NW	10 TO 26 KT	NW 10 TO 26 KT		
Wave Height	HSIG 4.6	TO 3 3 FT (HMAX UP TO 7 2 FT)	HSIG 4.6 TO 3.3 FT	(HMAX UP TO 7.2 FT)	
Water Tomp	DEC C 33		DEG C 32	(
Chefloork	LARGEN			SU TO STROMS MAND	
COLIDOR	LOOKGE IN		LORGE HAVE - FR		
Babolsar		NEADSHODE		OFFERMORE	
	NEARSHORE		and and	OFFSHORE	
visionity	CLOUDY		WEAK		
Condition	CLOODT		NUM TO NE 40 TO		
Wind bir a spa	NW TO N		HSIG 4.0 TO 3.0 ET (HMAX UP TO 6.3 ET)		
wave Height	HS8G 4.0	10 3.0 FT (HMAX UP 10 6.3 FT)			
Water Temp	DEG.C 23	5 	DEG.C 23		
Outlook	LARGEW	AVE - MODERATE WIND	LARGE WAVE - MO	DERATE WIND	
Amirabad					
		NEARSHORE		OFFSHORE	
Visibility	WEAK, G	RADUALLY GOOD	WEAK, GRADUALLY GOOD		
Condition	INSTABIL	AND RAINY, GRADUALLY DECREASING ITY	INSTABILITY		
Wind Dir & Spd	NW TO N	E, 10 TO 20 KT	NW TO NE, 10 TO 20 KT		
Wave Height	HSIG 2.3	TO 3.3 FT (HMAX UP TO 5.3 FT)	HSIG 2.3 TO 3.3 FT (HMAX UP TO 5.3 FT)		
Water Temp	DEG.C 23	1	DEG.C 23		
Outlook	LARGE W	AVE - MODERATE WIND	LARGE WAVE - MC	DERATE WIND	
Forecaste	r: eshagh	hamidi			



The five-day marine forecast is also provincial for Sunday to Tuesday and Wednesday to Saturday, including the forecast of horizontal visibility (km), weather conditions, wind direction and speed (knot), wave height (ft), temperature. The water is °C and a sea bream recommendation is issued for fishing in coastal provinces. To issue forecasts, the results of numerical models, various forecasting maps, monitored information, as well as information and data from other regions of the world are used, and notices are also issued when necessary. Below is a summary of the sources used to issue the forecast.



Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)



ceanic & Atmospheric ience Centre





 Point marine forecast including about 30 points in the north and south seas of the country with a credit interval of 5 days and 7 days in two shifts in the morning at 8 local time and in the evening at 6 pm local time with the help of numerical meteorological model and numerical wave model including the prediction of side parameters And wind speed, wave height, etc. are exported





Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)

th

ا سازمان مواطناسی کشور I. R. OF IRAN I

METEOROLOGICAL ORGANIZATION

I.R. of Iran, 26 November, 2024





L R. OF IRAN METEOROLOGICAL ORGANIZATION

Coordination committee of Hydrometeorology of Caspian Sea (CASPCOM)

I.R. of Iran, 26 November, 2024

مرکز علوم جوی و اقیانوسی Oceanic & Atmospheric Science Center		Marine Weather Bulletin Gilan			
12-Hou YNOPSIS:	urs Marin	e Forecast From Mon 08-29-2	022, 20 To Tue	08-30-2022, 08	
Astara					
		NEARSHORE		OFFSHORE	
Visibility	2.2-4.4nmi	LOC	2.2-4.4nmi LOC		
Condition	CLEAR TO	P.CLOUDY/CLOUDINESS INCR OCNL	CLEAR TO P.CLOU	JDY/CLOUDINESS INCR OCNL	
Wind Dir & Spd	SE TO W 1	2 Knot	SE TO W 12 Knot		
Wave Height	1.5FT		2FT		
Water Temp	29C		29C		
Outlook	INCR 2 Hpa - SMALL WAVELETS		INCR 2 Hpa - LARGE WAVELETS		
Anzali, Kiashahr					
	NEARSHORE OFFSHORE		OFFSHORE		
Visibility	1.7-4.4nmi	LOC	1.7-4.4nmi LOC		
Condition	CLEAR TO	P.CLOUDY/CLOUDINESS INCR OCNL	CLEAR TO P.CLOUDY/CLOUDINESS INCR OF		
Wind Dir & Spd	E TO SW 1	4 Knot	E TO S 14 Knot		
Wave Height	1.5FT		2.5FT		
Water Temp	29C		29C		
Outlook	INCR 2 Hp	a - SMALL WAVELETS	INCR 2 Hpa - LARGE WAVELETS		
Chamkhaleh, Ro	odsar				
		NEARSHORE		OFFSHORE	
Visibility	2.8-5nmi	2.8-5nmi			
Condition	CLEAR TO	P.CLOUDY/CLOUDINESS INCR OCNL	CLEAR TO P.CLOU	JDY/CLOUDINESS INCR OCNL	
Wind Dir & Spd	E TO SW 1	4 Knot	E TO S 14 Knot		
Wave Height	1.5FT		2.5FT		
Water Temp	29C		29C		
Outlook	INCR 2 Hp	2 Hpa - SMALL WAVELETS INCR 2 Hpa - LARGE WAVELETS			

Forecaster: samira mohammadi

Thankyou