



Sea - Seek

Ebook Sailing guide / Guide nautique

Arabian Sea

Mer du Nord - Ten degrees channel (India)

August 2024

Arabian Sea



Arabian Sea

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Arabian Sea

19°03.79 N
63°24.78 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea



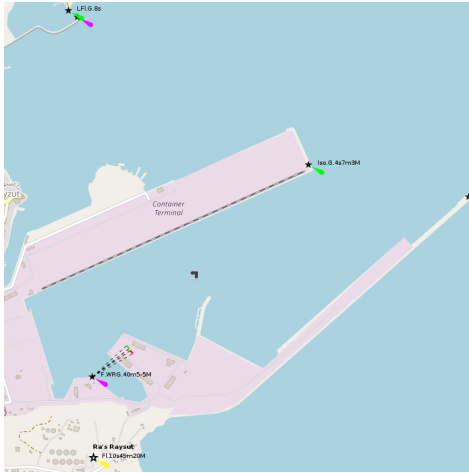
Arabian Sea

The Arabian Sea is a northwestern extension of the Indian Ocean, positioned between India, Oman, Pakistan and Yemen, and Cape Guardafui in far northeastern Somalia. The sea connects with the Persian Gulf through the Gulf of Oman and the Strait of Hormuz. In the southwest, the Gulf of Aden connects it with the Red Sea. The most significant ports in the Arabian Sea include Karachi, Pakistan, and Mumbai, India.

1 - Mina Raysut

16°56.63 N
54°00.67 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea



 Port protected by a breakwater.

 Port protégé par une digue.



2 - Masirah

20°24.17 N
58°45.47 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - Masirah



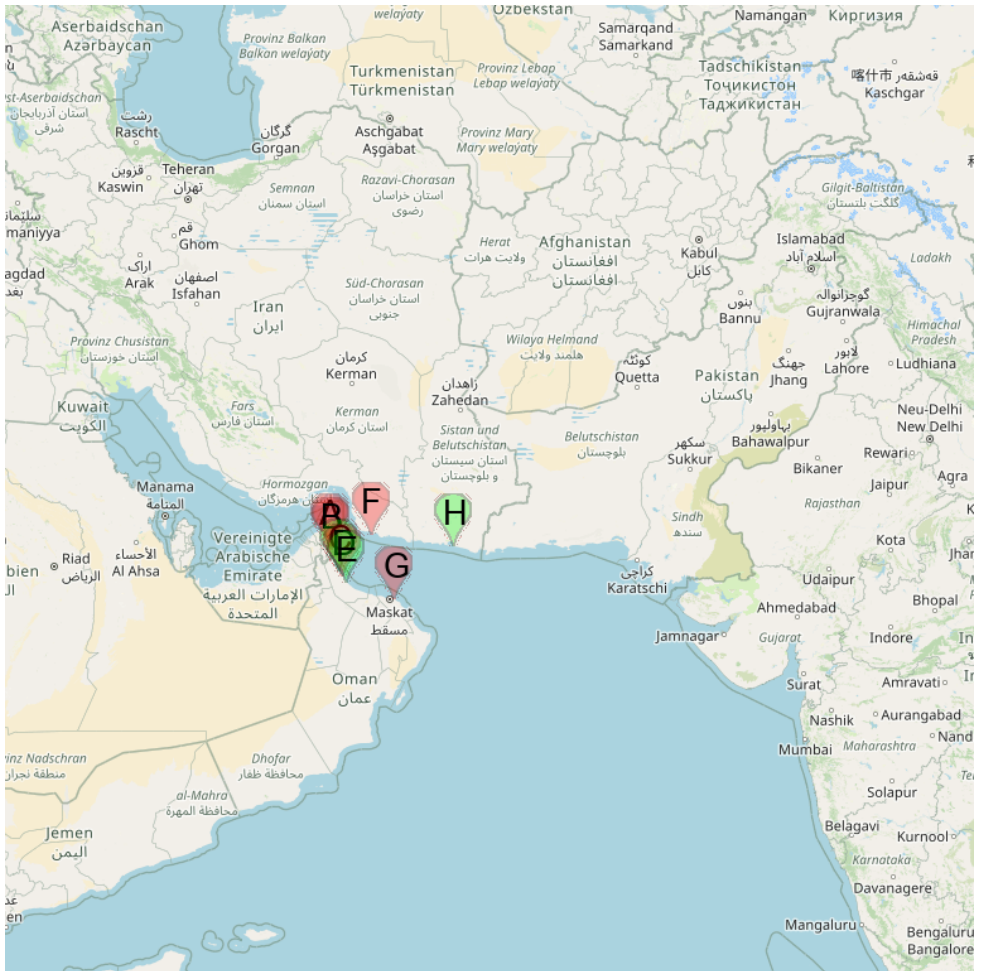
160 


Masirah (en arabe ?????) est une île qui fait partie de la région Ash Sharqiyah. Masirah est dotée d'une base aérienne.


3 - Gulf of Oman

24°01.46 N
58°51.49 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - Gulf of Oman



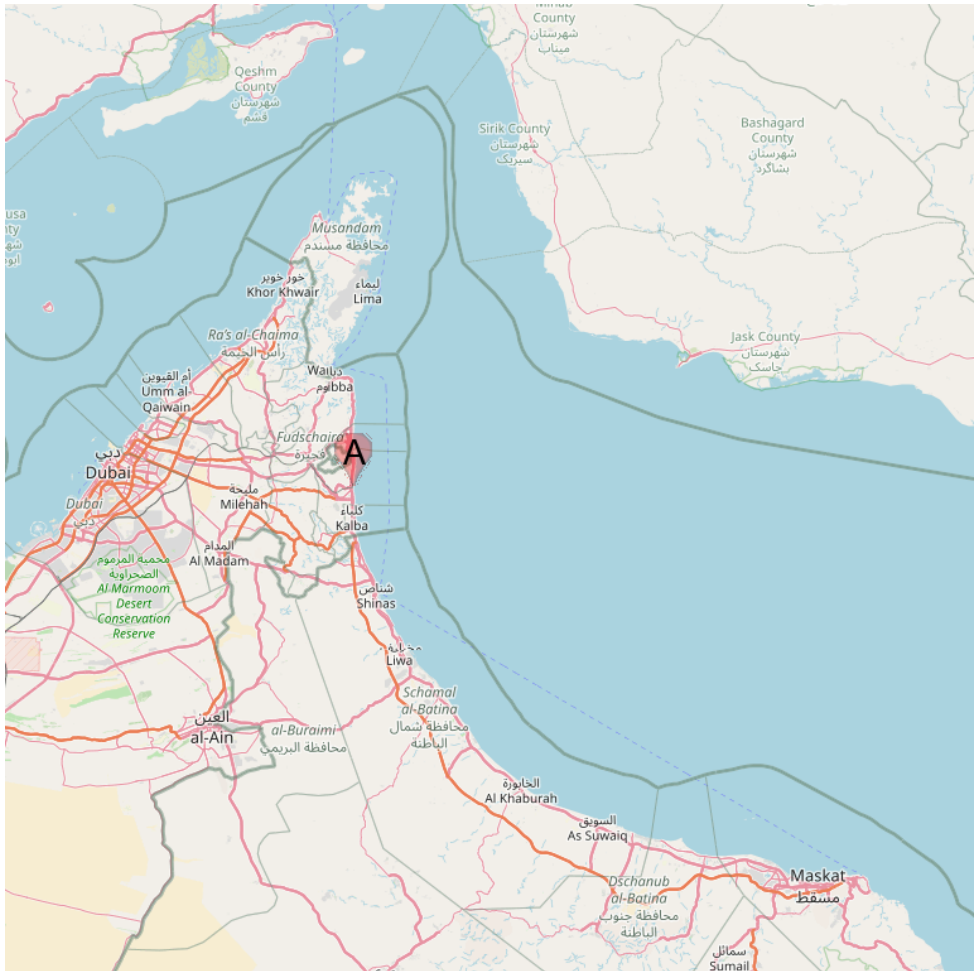
- | | |
|---|---|
|  A Fujayrah Emirate |  B Fujairah Port |
|  C Port Of Sohar |  D Sahar |
|  E Saham1 |  F Jask |
|  G Mina Qabus |  H Chah Bahar |

 The Gulf of Oman is a western extension of the Arabian Sea, positioned in the Middle East between Iran, Oman and the United Arab Emirates. It's the entrance to the Persian Gulf from the Arabian Sea and Indian Ocean,


3.1 - Fujayrah Emirate

25°18.63 N
56°18.54 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - Gulf of Oman - Fujayrah Emirate



A Fujairah Port

 Fujairah is one of the seven emirates that make up the United Arab Emirates, and the only one on the Gulf of Oman in the country's east instead of Persian Gulf (the other six emirates).

The Emirate of Fujairah covers approximately about 1.4% of the area of the UAE. Fujairah is the only Emirate of the UAE that is almost totally mountainous.

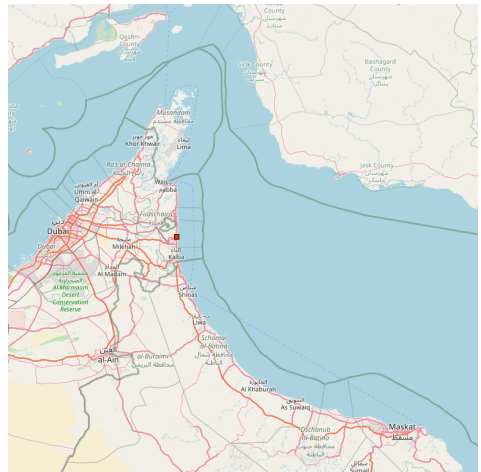


Fujairah Emirate

3.1.1 - Fujairah Port

25°10.75 N
56°21.75 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - Gulf of Oman - Fujairah Emirate



Port of Fujairah (or Fujayrah) is the only multi-purpose port on the Eastern seaboard of the United Arab Emirates, approximately 70 nautical miles from the Straits of Hormuz.

Initial Construction of the Port started in 1978 as part of the economic development of the UAE. Full operations commenced

in 1983. Since then the Port has embarked on a continuing process of enhancement to both its facilities and its comprehensive range of functions.

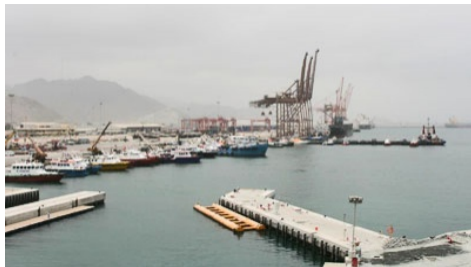
Good shelter.

Port of Fujairah General Contact:

Tel: 09-2228800

Fax: 09-2228811

Mail: info@fujairahport.ae




3.2 - Port Of Sohar

24°30.72 N
56°37.17 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - Gulf of Oman



Fujairah oil

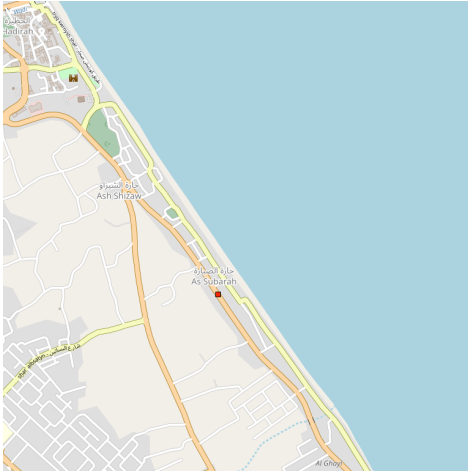
 Port protected by a breakwater.

 Port protégé par une digue.

3.3 - Sahar

24°20.90 N
56°45.56 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - Gulf of Oman

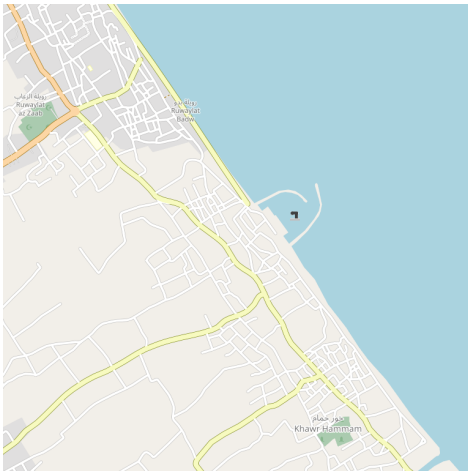


alsahar

3.4 - Saham1

24°09.19 N
56°54.46 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - Gulf of Oman



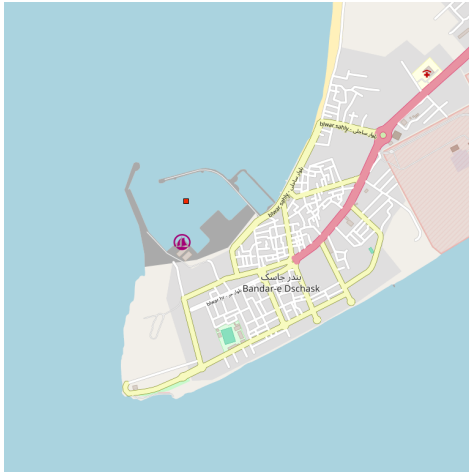
Fujairah

3.5 - Jask


25°38.92 N
57°46.07 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - Gulf of Oman





 Small port.

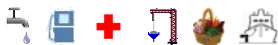
 Petit port côtier.

3.6 - Mina Qabus

23°37.69 N

58°34.19 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - Gulf of Oman



 Small port protected by a breakwater.

 Petit port protégé par une digue.



3.7 - Chah Bahar

25°18.53 N
60°36.37 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - Gulf of Oman



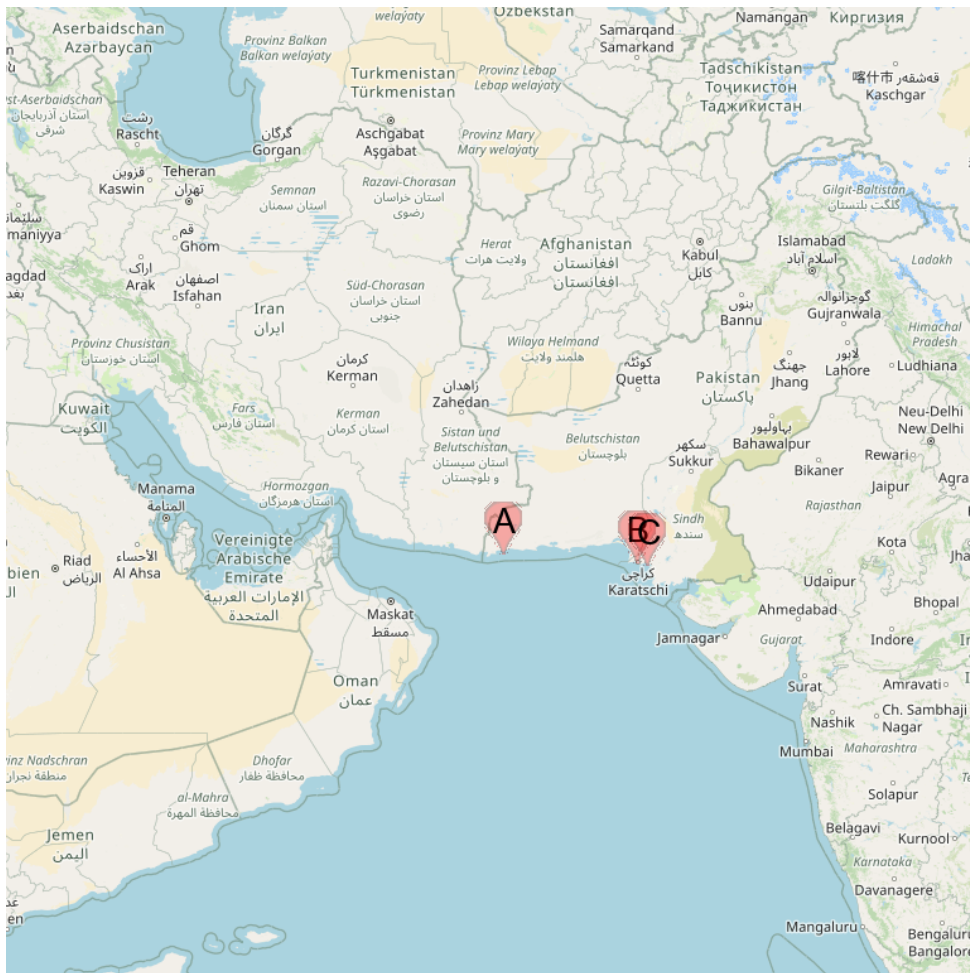
 Small port.

 Petit port côtier.

4 - Pakistan

24°25.68 N
65°08.67 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - Pakistan



A Gwadar

B Karachi

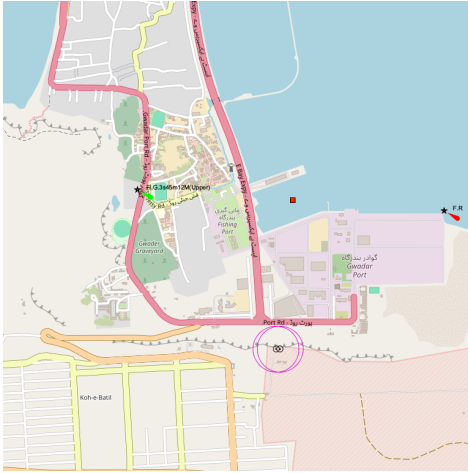
C Muhamamad Bin Qasim

4.1 - Gwadar


25°06.76 N
62°20.08 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - Pakistan





 Harbor.

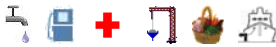
 Port de commerce côtier.



4.2 - Karachi


24°48.51 N
66°58.55 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - Pakistan





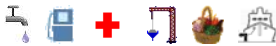
 Harbor.

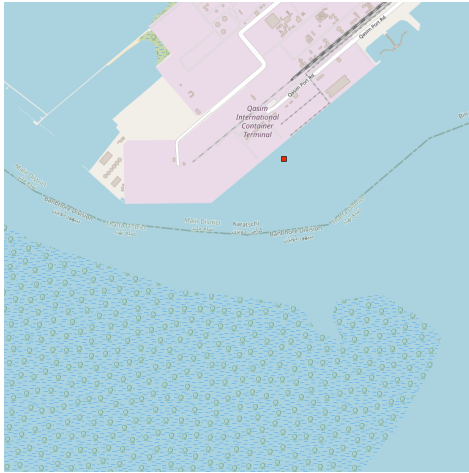
 Port de commerce côtier.

4.3 - Muhamamad Bin Qasim


24°46.00 N
67°19.97 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - Pakistan





 Port.

 Port côtier.




5 - West coast of India

16°53.79 N
72°34.38 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Between Diu Head (from N) and Cape Rama (to S), there is the gulf of Cambay and the largest sea-port on the W coast of India, the port of Mumbai (Bombay), the largest seaport on the W coast of India.

An extensive offshore area is being developed for oil production.

Numerous oil derricks, oil production platforms, single point moorings, etc., obstruct navigation within the area. Other unlit objects, pipelines, submerged obstructions, and well heads, sometimes marked by buoys, exist in this area; these features are not all charted due to their complexity and frequent change.

Recommended routes have been established by Indian authorities to aid traffic

transiting the area, as well as vessels bound to or from the port of Mumbai (Bombay).

The Indian government requests that vessels remain 1 to 2 miles to starboard of the tracklines shown on the chart, consistent with safe navigation, and the International Regulations for Preventing Collisions at Sea.

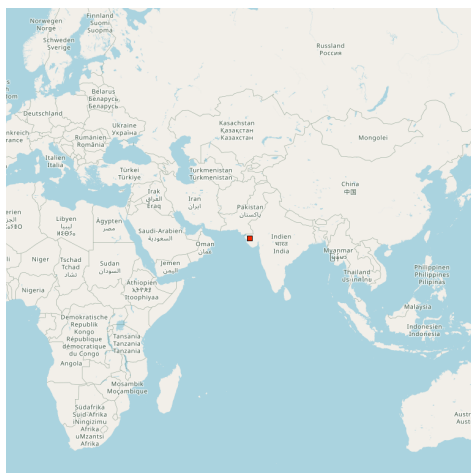
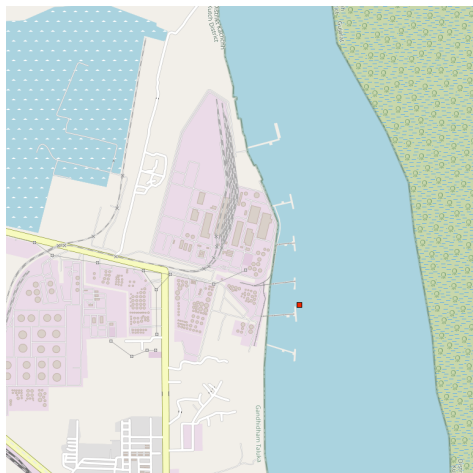


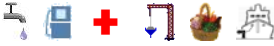
West coast of India

5.1 - Kandla

23°01.80 N
70°13.39 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India





 Port .

 Port .


5.2 - Okha

22°28.08 N
69°04.76 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Small port.

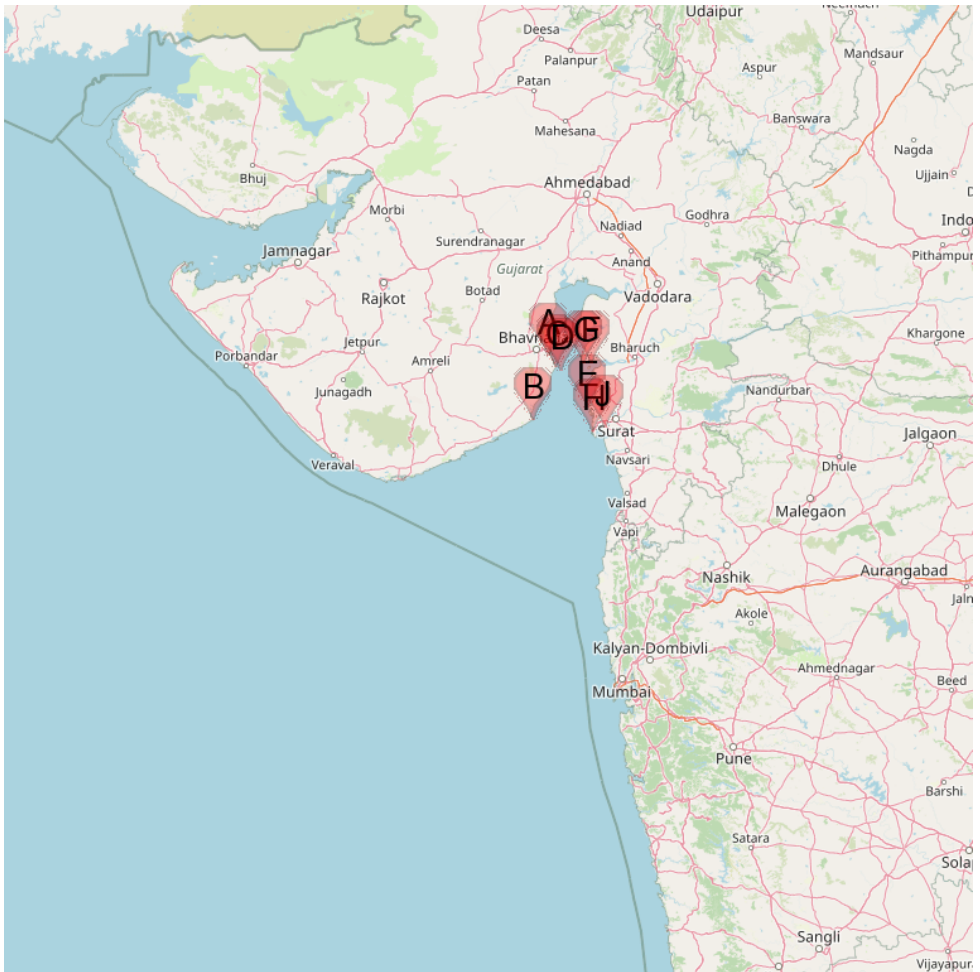
 Petit port côtier.




5.3 - Gulf of Cambay (W India)

21°42.21 N
72°25.04 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Gulf of Cambay (W India)



- | | |
|--|---|
| A W Gulf of Cambay (W India) | B Gopnath Point (W Cambay - India) |
| C Kuda point (W Cambay - India) | D Piram island (W Cambay gulf - India) |
| E Dani point (E Cumbay - W India) | F E gulf of Cumbay (W India) |
| G Luhara Point (E Cumbay - W India) | H Suvali Point (E Cumbay - W India) |
| J Magdalla port (W India) | |

 The Gulf of Cambay is about 30 miles wide at its entrance between Gopnath Point and Suvali Point.

Malacca Banks, with deep channels to the W and E, lie in the fairway of the

approach.

Grant Channel and Sutherland Channel are safer to use than the channels between the banks, as the mariner is able to accurately fix his position from the objects on the coast; Sutherland Channel should be used only by those with local knowledge.

The S part of the gulf is deep, but the N part is encumbered with sand banks, which frequently change because of the force of the bores and freshets from the rivers.

Deep-draft vessels can proceed up the gulf as far as Piram Island, about 28 miles NNE of Gopnath Point. Local knowledge is necessary for vessels navigating above Gogha, about 6 miles NW of Piram Island.

Caution

Considerable shoaling is reported in the entrance of the Gulf of Cambay and mariners should navigate with caution in this vicinity.

The sand and banks in the upper part of the gulf are subject to great alterations. Any directions for navigating this area must be considered as general only; local knowledge is necessary.

Malacca Banks is the general name for four long narrow shoals lying in and obstructing the entrance of the Gulf of Cambay, between the parallels of 20°20'N and 21°20'N. These shoals, named in order from W, are Western Bank, Narbada Bank, Breaker Bank, and Eastern Bank.

Deep channels are between these shoals, but they are narrow at their N ends, and it is inadvisable to use them.

Western Bank dries in places.

Grant Channel, between Western Bank and the coast NW, is steep-to on both sides, with general depths of 11.3 to 27m. bottom is sand toward the bank and mud toward the Channel off the N end of Western Bank.

Depths in Grant Channel between Gopnath Point and Western Bank, 6 miles SSE of Gopnath Point, were reported (2002) to be 1 to 1.5m less than charted.

Narbada Bank has a large area of drying sand near its center.

Breaker Bank has a long sand bank near its center, which may be seen a long distance from the masthead when the sun shines on it at high water neaps, but it is submerged at high water springs. Depths of 2.7 to 3.3m lie at the N end of Breaker Bank, about 16 miles ENE of Gopnath Point; a drying patch was reported (1954) in this vicinity. A dangerous wreck lies about 5 miles SW of Breaker Bank.

Eastern Bank has several shoal patches, some of which dry.

Because the depths are deep within 0.2 mile of these shoal patches in many

places, soundings give little warning of the approach to these dangers.

Sutherland Channel, between Eastern Bank and the coast E, is about 2.5 miles wide at its narrowest part, WNW of Suvali Point. Two lightage areas, one for general cargo and one for chemical and LPG cargo, which are best seen on the chart, are located about 5 miles W of Suvali Point.

Caution

Shoaling, including a drying patch about 300m wide, has been reported (2003, 2006) in an area extending from 2 to 3 miles SW of the SW corner of the charted General Lightage Area.

The coast of the W side of the head of the gulf from Johnston Point to the entrance of the Bhadar River, about 26 miles NNE, is composed chiefly of mangrove jungle, extending several miles inland. The sand bank fronting this coast dries and extends from 1 mile to 4 miles offshore.

Mal Bank, the S end of which lies about 7.5 miles E of Johnston Point, is a large sand bank lying in the middle of the head of the gulf, and extends about 4 miles N.

There are channels on the either side of Mal Bank, each about 1 mile wide in the fairway, but local knowledge is necessary.

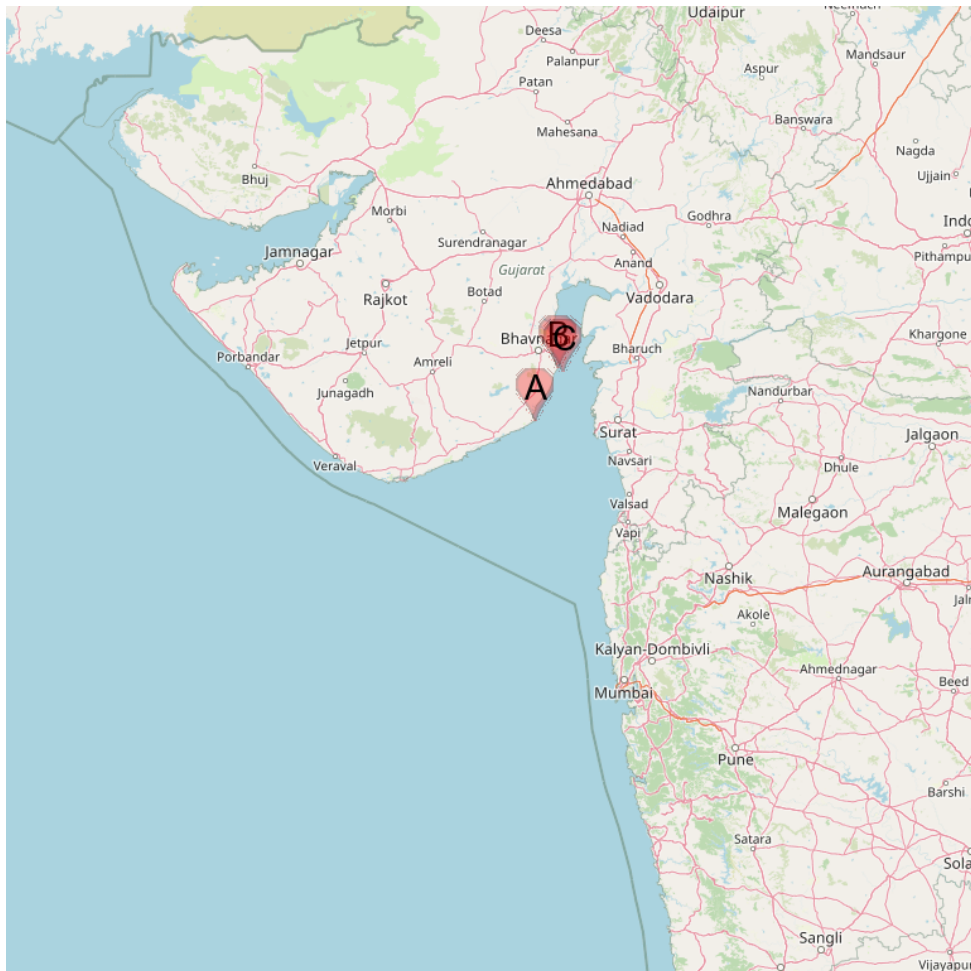
Malcolm Channel is the W channel.

Khambhat Channel leads NE into the estuary of the Mahi River from the N end of Mal Bank. Khambhat, the chief town in the area, lies on the N side of the estuary of the Mahi River.

5.3.1 - W Gulf of Cambay (W India)

21°43.31 N
72°14.28 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Gulf of Cambay (W India) - W Gulf of Cambay (W India)



A Gopnath Point (W Cambay - India)

B Kuda point (W Cambay - India)

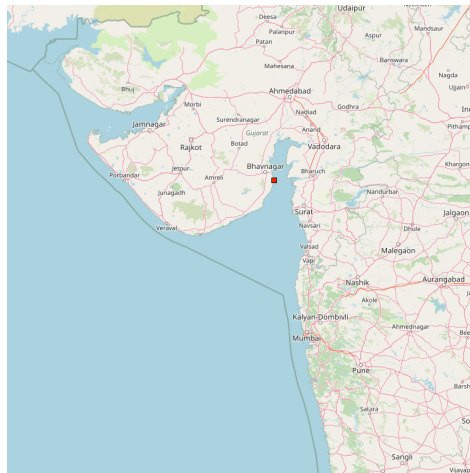
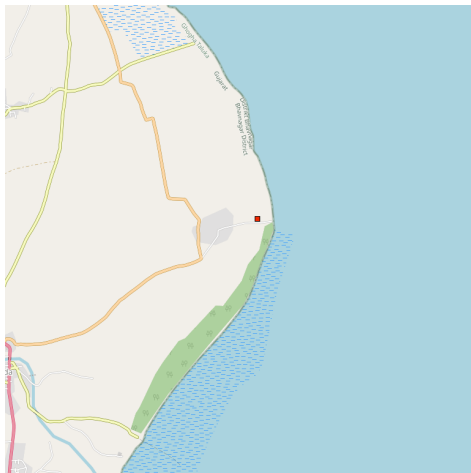
C Piram island (W Cambay gulf - India)


5.3.1.1 - Kuda point (W Cambay - India)

21°37.76 N
72°18.21 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Gulf of Cambay (W India) - W Gulf of Cambay (W India)





 The coast between Gopnath Point and Kuda Point, about 28 miles NNE, is low and covered with sandhills for about 18 miles to Mitivirdi; then it is comparatively high, with several ravines close to the coast.

The country is flat and cultivated, with many scattered villages mostly surrounded by trees; inland it is generally from 30 to 61m high.

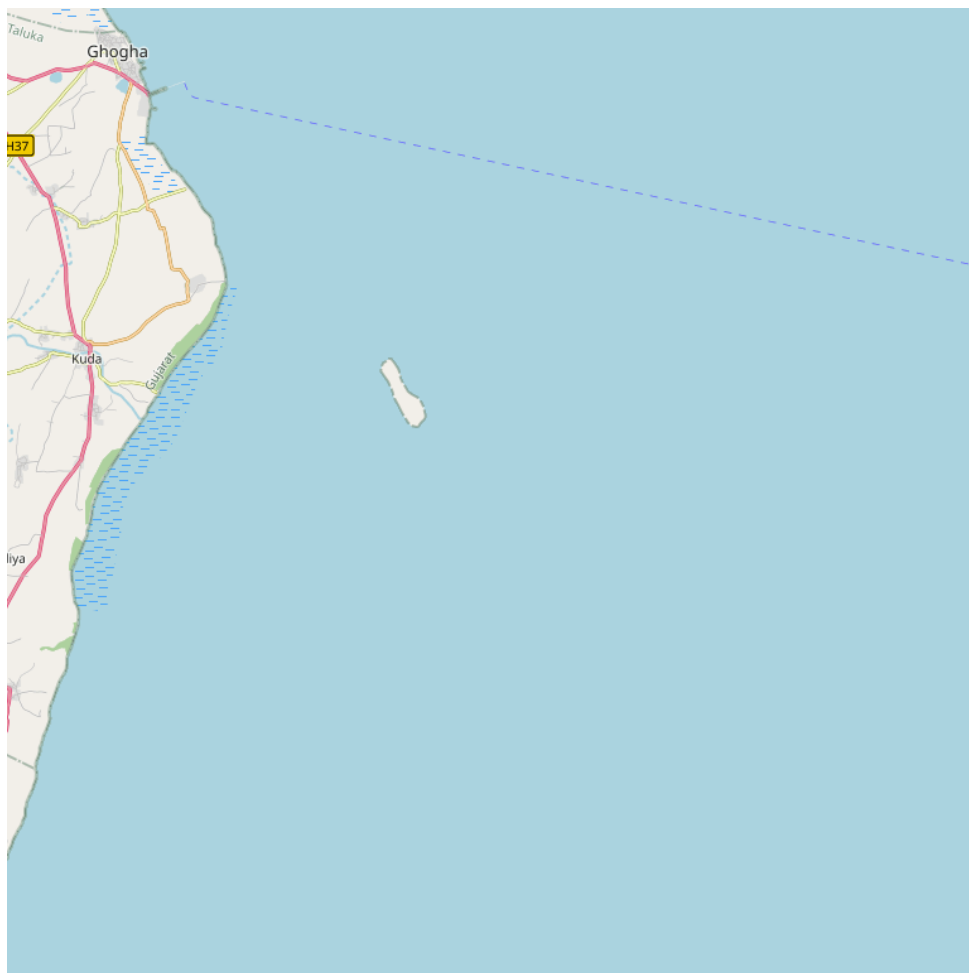
Kuda Point, 10m high, has a thick clump of trees and a white bungalow on it. The trees are conspicuous from N or S, and the bungalow shows well during the forenoon when seen from E.

Mallock Reef, about 1.5 miles SE of Kuda Point, lies on the W side of the channel between it and the reef extending NW from Piram Island.


5.3.1.2 - Piram island (W Cambay gulf - India)

21°36.09 N
72°21.33 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Gulf of Cambay (W India) - W Gulf of Cambay (W India) - Piram island (W Cambay gulf - India)



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 Piram Island, 11m high and composed of sand, lies with its N end about 2.8 miles SE of Kuda Point. At the S end of the island there are a few trees and a little cultivation; the NE side is fringed by a few mangrove trees.

The lighthouse is conspicuous near the middle of the island; a small village is situated close N of the lighthouse.

Reefs surround the island and extend about 2.5 miles NNE, 0.5 mile E, and 1.5

miles SSE from the island. Shoal water, with depths of less than 11m, extends about 7.8 miles SSW from the S end of the reef surrounding Piram Island.

The narrow channel between Mallock Reef and Piram Island should not be used without local knowledge as the tide runs through at a great velocity and there is very little slack water.

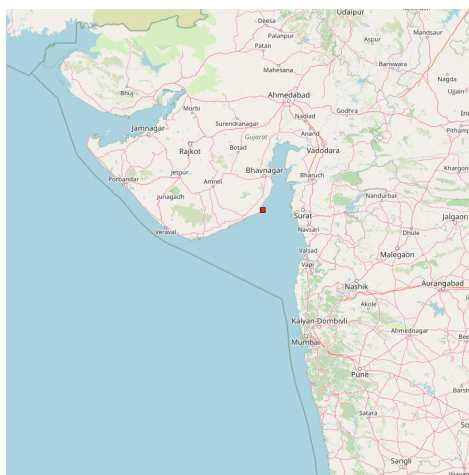
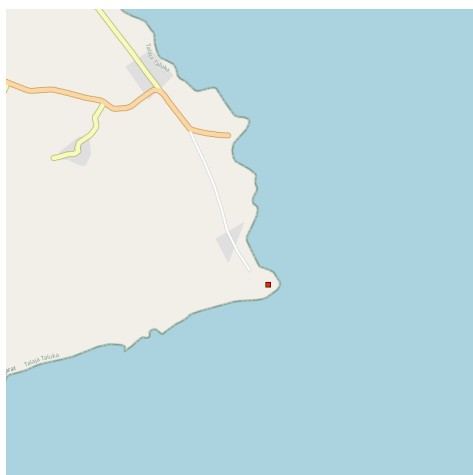



Piram island (W Cambay gulf - India)

5.3.1.3 - Gopnath Point (W Cambay - India)

21°11.97 N
72°06.64 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Gulf of Cambay (W India) - W Gulf of Cambay (W India)



 Gopnath Point, the W entrance point of the Gulf of Cambay, is moderately high, with a conspicuous light structure and bungalow on it. A temple, 23m high, lies near the coast, about 0.8 mile N of the point.

A reef, which dries 2.7m, extends about 1.5 miles ENE from Gopnath Point.

Gopnath Shoals, nearly steep-to on the E side, extend about 3.5 miles NNE from about 2 miles ENE of Gopnath Point. The shoals consist of a reef, which dries from 1.2 to 2.7m, and several patches with depths of less than 5.5m.

Sultanpur Shoals extend about 4 miles NNE from the N end of Gopnath Shoals to about 9 miles NNE of Gopnath Point, then W to the coast. These shoals consist of drying rock, sand and clay, and numerous patches with depths of 0.6 to 5.5m.

Tides?Currents:

Within Gopnath Shoal and Sultanpur Shoal the flood current at springs does not

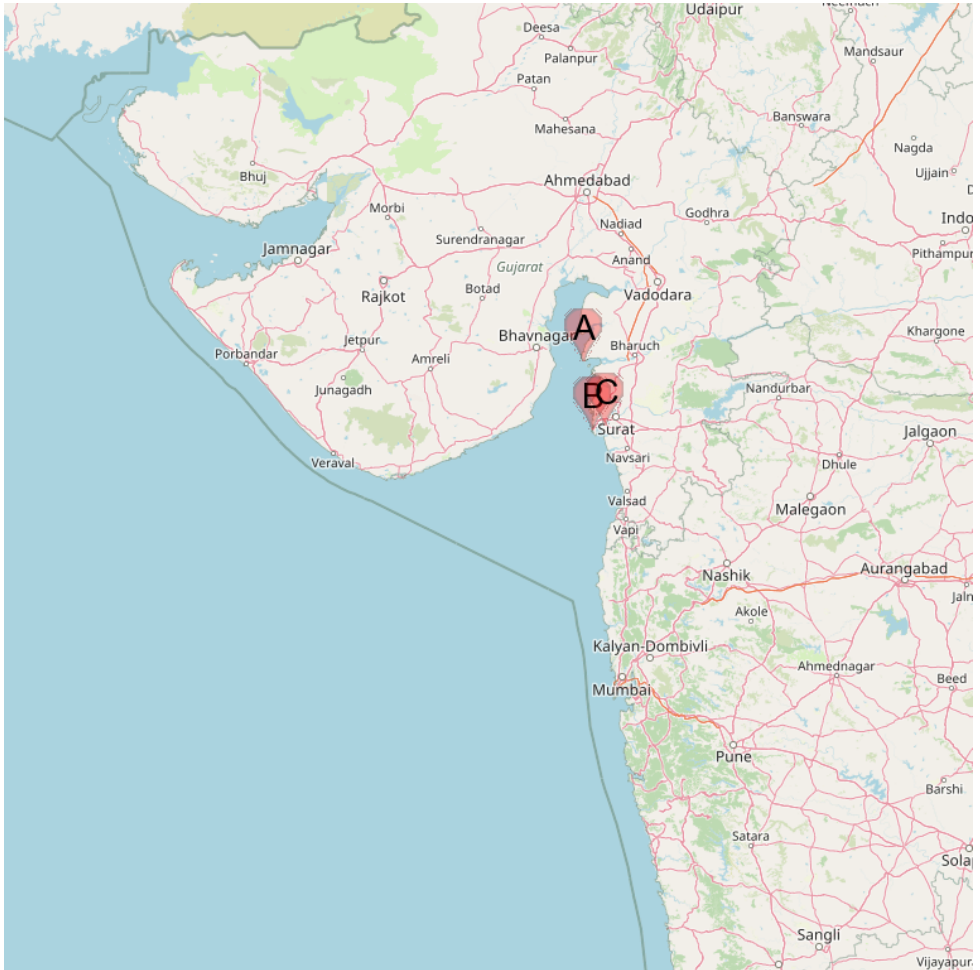
turn until more than 1 hour after the time of HW, and the ebb current continues to run for more than 1.5 hours after the tide has commenced rising.

At neaps the flood current turns 2 hours after the time of HW.

5.3.2 - E gulf of Cumbay (W India)

21°39.72 N
72°37.15 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Gulf of Cambay (W India) - E gulf of Cumbay (W India)



A Luhara Point (E Cumbay - W India)

B Suvali Point (E Cumbay - W India)

C Magdalla port (W India)

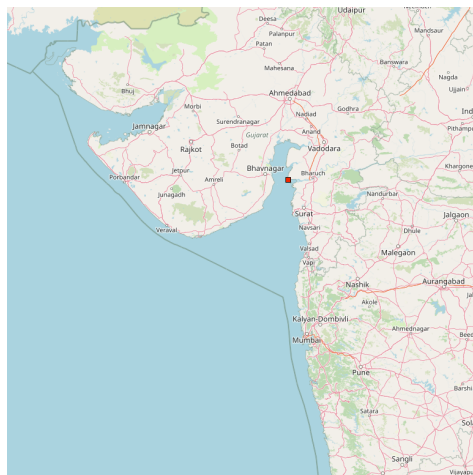
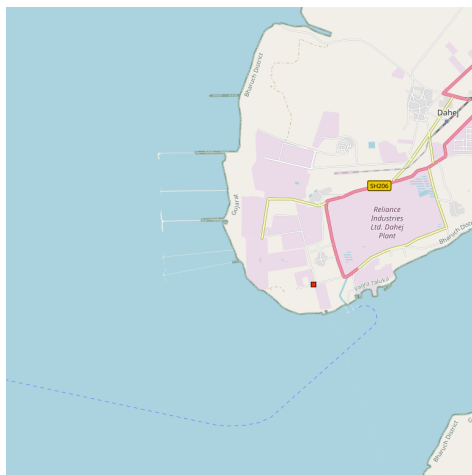
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5.3.2.1 - Luhara Point (E Cumbay - W India)

21°39.99 N
72°33.13 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Gulf of Cambay (W India) - E gulf of Cumbay (W India)



 The coast between the entrance of the Sena River and Luhara Point, about 18 miles N, is low and marshy. It is intersected by several streams and rivers, and is flooded at spring tides from 1 to 4 miles inland.

The Narmada River flows into the Gulf of Cambay, S of Luhara Point, through a wide estuary in which there are extensive sand banks which dry and are subject to change. The river itself also contains many sand banks with channels between them, which are mostly shallow and very intricate.

The flood current entering the Narmada River flows until about 1 hour after the time of HW, and sometimes attains a velocity of 5 to 6 knots. The ebb sets out strongly and runs occasionally until 1 hour after the time of LW.

During the flood tide there are heavy overfalls on the outer edge of the bar.

Alia Bet, low and covered with small scrub, lies in the middle of the estuary.

Mariners should navigate with caution off the S part of the estuary of the Narmada River, as the depths have changed considerably.

Tides?Currents: The tidal currents on the E side of the Gulf of Cambay set in a NE direction with the flood tide and in a SW direction with the ebb, except when their direction is altered by the sand banks.

Luhara Point, the N entrance point of the Narmada River, is the highest ground in the vicinity; the land is generally low, and consists of sand hills covered with trees. The highest sand hill, about 24m high, rises just within Luhara Point. Luhara Point Light, with a racon, is shown from a white tower with red diagonal stripes on the point.

The

drying coastal bank extends about 2.5 miles SSW, and about 1.3 miles W of the point. Bar Sands, which dry, lie close S of the S edge of the coastal bank, and are marked W by a red conical buoy.

Bharuch Roads is the roadstead W of the entrance to the Narmada River. The anchorage is unprotected, but the bottom is good holding ground of sand and mud. At the anchorage the tidal currents set N with the flood and S with the ebb; the flood runs for about 1 hour after the time of HW.

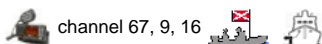
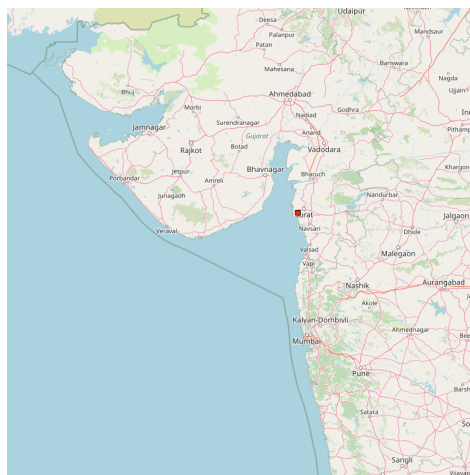
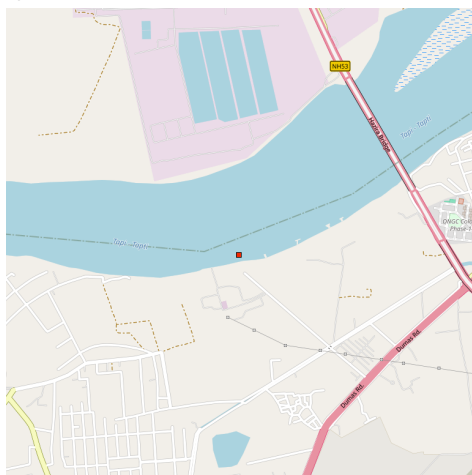
The coast between Luhara Point and Ban Creek, about 4.5 miles N, consists of moderately-high sand hills. Then to the entrance to the Dhadar River, about 7.5 miles farther NNE, the coast is low and composed of sand and mud.

5.3.2.2 - Magdalla port (W India)


21°08.40 N

72°44.09 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Gulf of Cambay (W India) - E gulf of Cumbay (W India)



Please send me tide time table of 2019 of tapi river at Magdalla port send me on priyankitpatel@gmail.com

 Magdalla, an official point of entry, includes the Hazira port complex comprised an Hazira Offshore Terminal, the Hazira LNG Terminal, and a

bulk/container terminal presently under construction.

The actual port of Magdalla is located about 5 miles upstream on the S bank of the Tapi River. Magdalla has four berths capable of handling barges with drafts up to 3.5m. Most cargo is handled at the Magdalla river jetties.

Tides?Currents

The flood tide sets N, continuing for 1 hour after the time of local HW. The tide often falls 2m just before the commencement of ebb tide.

Depths?Limitations

The Tapi River bar is dry at LW while the entrance and river itself contains many sand banks that are also dry at tides less than HW. Magdalla is approached through a buoyed channel marked 80m wide and dredged to a depth of only 3m.

Pilots

Pilots are not compulsory but any attempt to locate the entrance to the navigable channel should only be carried out through use of a local pilot.

Anchorage

Anchoring, best seen on the chart, is available in Surat Roads, SW of Hazira Point, in depths from 10m to 12m, but care must be taken due to the strong tidal currents, especially on ebb tide.

Hazira Offshore Terminal (21°09'N., 72°34'E.) is situated about 9 miles NNW of the Tapi River Fairway lighted Buoy. The terminal is an SPM (named Reliance) and is approached through Sutherland Channel.

Tides?Currents: Tidal currents set N and S in the channel at rates of up to 6 knots at springs. The tidal range is reported to be about 7m.

Depths?Limitations: There is a depth of 25m at the SPM. Vessels between 15,000 and 50,000 dwt and up to 250m in length, with a maximum arrival draft of 13m, can be accommodated.

Pilots: Pilots should be requested via the agent. The pilot boards 3 miles S of the SPM. Vessels are berthed only during daylight hours during slack water; a tug is available to assist.

Regulations: Vessels should send their ETA, via the agent, 72 hours, 48 hours, 12 hours, and 6 hours prior to arrival.

Signals: The terminal can be contacted 24 hours, as follows:

1. VHF: VHF channel 67
2. Telephone: 91-261-3035484
3. Facsimile: 91-261-3035489
4. E-mail: shippingradioroom@ril.com

Caution: Anchoring and fishing are prohibited within 1 mile of the SPM and as

well as within 0.25 mile of the pipeline extending from the coast to the SPM. A fog signal is sounded from the SPM ; the SPM also includes a radar reflector.

Hazira LNG Terminal (21°06'N., 72°37'E.) is located on the W side of the Hazira peninsula and is approached through the S part of Sutherland Channel.

Tides?Currents: Tidal currents attain a rate of at least 4.5 knots at springs.

Depths?Limitations: The harbor, open WSW, is protected by breakwaters. The entrance channel is 0.65 mile long; it is 0.37 mile wide at seaside, tapers to a width of 0.25 mile wide at the breakwaters, and is dredged to a depth of 13m.

The facility can accommodate an LNG carrier of 145,000m³, with a maximum length of 295m, a maximum beam of 50m, and a maximum draft of 11.5m. The berth, on the N side of the harbor, has an alongside depth of 13m, is oriented in a NE/SW direction, and consists of four breasting dolphins and five mooring dolphins.

Aspect: Range lights, in line bearing 070°, lead through the entrance channel. The seaward end of the entrance channel is marked by a pair of lighted buoys.

Pilots: Pilots are compulsory and board in vicinity of the General Lighterage Area in position 20°57'N, 72°35'E.

Regulations: Vessels bound for the terminal must report to Magdalla Port Control when 2 miles S of Magdalla Port Limits.

All LNG carriers must obtain passage approval from Magdalla Port Control prior to entering the entrance corridor.

Only one vessel at a time is allowed to be underway in the approach corridor. The use of tugs is compulsory; four tugs secure to the LNG carrier prior to entering the dredged entrance channel.

Signals: Magdalla Port Control/VTMS can be contacted, 24 hours, as follows:

1. VHF: VHF channels 9 and 16
2. Telephone: 91-261-2721700
3. Facsimile: 91-261-2721700

Magdalla Port Authority can be contacted, as follows:

1. Telephone: 91-261-2470533
2. Facsimile: 91-261-2475645
3. Telegraph: PORTAL MAGDALLA
4. E-mail: gmbpomin_adl@sancharnet.in

Anchorage: Anchoring is prohibited within the Magdalla Port Limits, which are best seen on the chart, except in an emergency. See paragraph 2.10 for anchoring information.

Caution: The N end of Malacca Banks should not be approached with an ebb

tide, because, being nearly steep-to, soundings do not give sufficient warning. This area also has not been closely examined. Tapti Oil Development Area, best seen on the chart, is located in the W approach to the Gulf of Cambay.

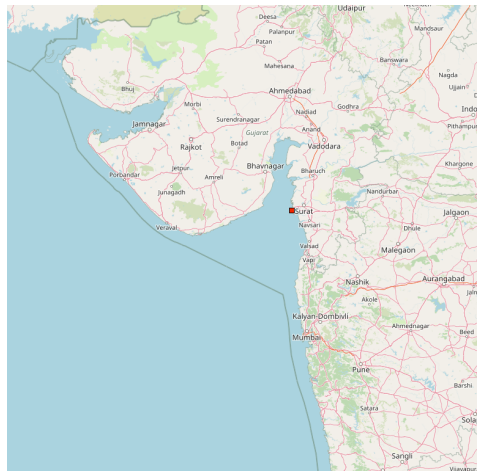
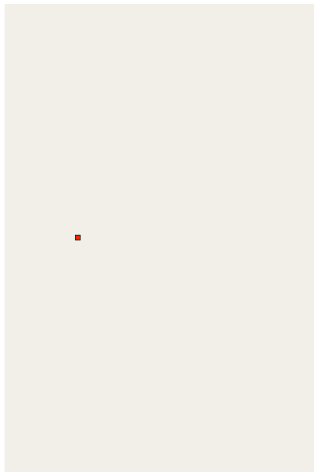
Unlit structures are situated on the Malacca Banks, Surat Roads, and the Sutherland Channel, as best seen on the chart.




5.3.2.3 - Suvali Point (E Cumbay - W India)

21°06.70 N
72°37.40 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Gulf of Cambay (W India) - E gulf of Cumbay (W India)



 Suvali Point, the E entrance point of the Gulf of Cambay, is fringed by the drying coastal reef which extends about 1 mile W of the point.

Tapti Light is shown from a white circular stone column, 27m high, on the point; a tomb lies close SE of the light structure.

The coast from Suvali Point to the entrance of Tena Creek, about 8.3 miles N, is fringed by a drying coastal reef. About 5 miles N of Suvali Point there are some sand hills, known as Suvali Hills.

Between the entrance to Tena Creek and the entrance to Sena Creek, about 9 miles N, the coast is fringed with thick groves of palmyra trees. The Kim River,

about 2 miles farther N, dries in its entrance.

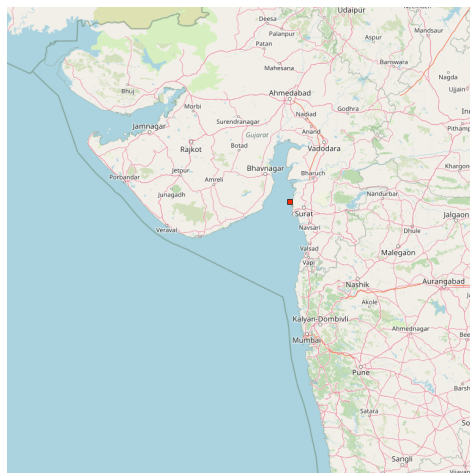
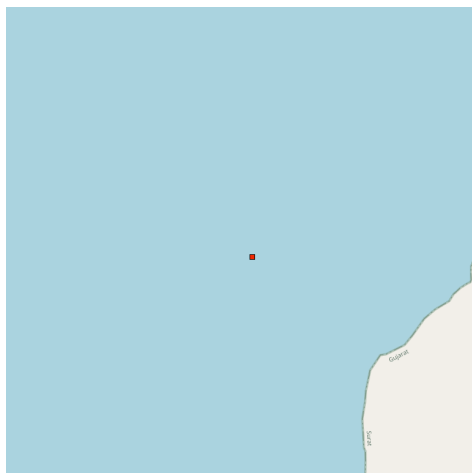
Tena Bank-Outer Bhagwa Sand, one continuous narrow bank nearly parallel with the coast, lies between the entrance to Tena Creek and the S entrance of the Kim River. Tena Bank, the S part of which dries, is a continuation of Outer Bhagwa Sand, the N part of which dries in patches. Bhagwa Channel, E of the above bank, is used only by small vessels with local knowledge.


5.3.3 - Dani point (E Cumbay - W India)

21°18.22 N

72°34.92 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Gulf of Cambay (W India)



 Dani Point Light is shown from a steel framework structure, 26m high, about 2.5 miles SE of the entrance to the Sena River.

Gulwala Bank, with depths of less than 11m, extends about 6.3 miles S from a position about 3.5 miles W of the S entrance point of the Kim River. There is a drying patch near its N end.

Between Gulwala Bank and Tena Bank and Outer Bhagwa Sand there are several shoals with depths of less than 5.5m.

The intricate navigation required to pass through the channel E of Gulwala Bank, with its rapid tides, should not be attempted without local knowledge. At night, or in a large vessel, it is necessary to keep well W of Gulwala Bank.

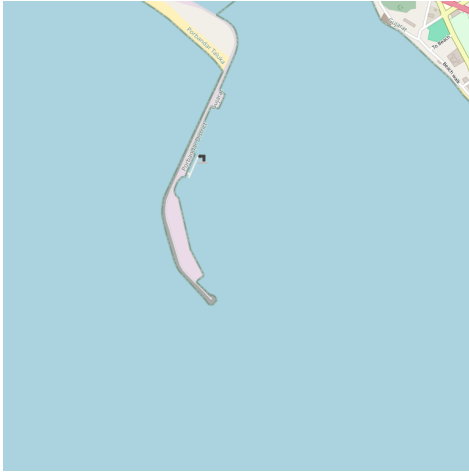
5.4 - Porbandar

21°37.60 N

69°35.42 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India





Small port protected by a breakwater.

Petit port protégé par une digue.

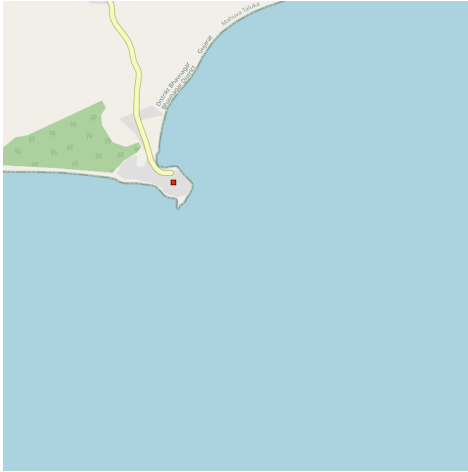


5.5 - Kotada Bluff (W India)

21°07.43 N
71°58.34 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India





🇬🇧 Kotada Bluff is 26m high and conspicuous.
During W winds, boats can land on the NE side of the bluff.



5.6 - Piparav Bandar port (W India)

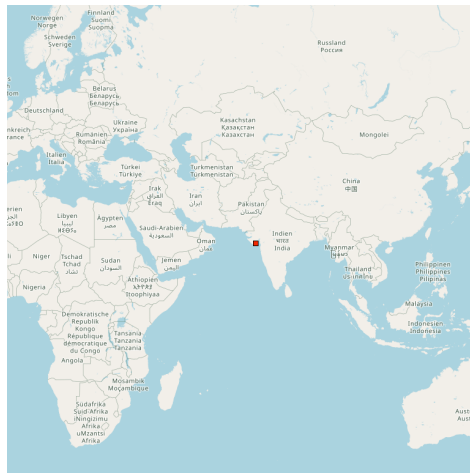
20°58.05 N
71°33.33 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



channel 16, 71





🇬🇧 Pipavav Bandar, the principal port for Dongar, about 6 miles N, is the principal town on this part of the coast.

Pipavav Bandar lies on the NW shore of the West Channel. It is an all season port offering container, bulk, break bulk and liquid cargo handling services. It imports and exports bulk cargo including coal, cement and fertilizer, break bulk, and LPG.

Chanch Island, the W extremity of which is located about 2.3 miles NNE of Shival Island, fronts the coast for about 4.5 miles. There is an extensive mangrove swamp close inland, which is submerged only at very high spring tides. A heavy swell occurs during the Southwest Monsoon.

Tides?Currents

The mean spring tidal range is about 2.7m. The mean neap tidal range is only 1.2m.

The ebb current, which sets SW from S of Chanch Island, divides N of Bhensla Rock. One branch sets W through East Channel and then SW through West Channel, attaining a velocity of 2 knots at springs and 1 knot at neaps. The other branch sets toward Savai Bet Reef and then W along the coast at a velocity of 2 to 2.5 knots at springs and 1.5 knots at neaps.

The flood current sets across the S approach to West Channel and there divides. One branch sets N through the channel and then NE toward Chanch Island at a velocity of 1.5 to 2.5 knots at springs and about 1 knot at neaps. The other branch sets ENE past Savai Bet Reef, and then toward Bhensla Rock at a velocity of 3 knots at springs and 2 to 3 knots at neaps.

Strong eddies form in West Channel at HW and LW.

Depths?Limitations

Pipavav Port is approached from the S through West Channel, about 0.75 mile long, dredged to about 14.5m, and marked by lighted buoys. West Channel is the recommended route to Pipavav Port and anchorage due to much shallower depths in the East Channel. East Channel, leading N of Bhensala Rock and Shiyal Bet, should only be used by light-draft vessels with local knowledge, and only at high water.

West Channel leads W of Shiyal Bet NNE from a position about 0.3 mile E of the W beacon for about 0.2 mile, then NE to a position between the N end of the GPPL Jetty and Lighted Buoy No. 9 light, where there is a turning basin with a radius 275m and a depth of 13.5m. West Channel can be used at any time day or night. The channel width varies from 380m at its beginning and widens to 575m in the vicinity of the GPPL Jetty before narrowing to a width of 200m in the vicinity of the N end of the LPG Jetty.

The GPPL Jetty, consisting of four berths, has three berths in line for container operations which can accommodate vessels up to 305m in length and has a dredged depth of 14m alongside.

The fourth berth extends 47m into the channel from the in-line berths and will accommodate container, bulk, and general cargo vessels up to 240m in length with a maximum draft of 13m.

Close N of the GPPL Jetty is the LPG Berth with a jetty length of 337m able to accommodate vessels up to 15.5m of draft.

The UCL Jetty serves a cement factory on the W side of the entrance channel, about 1 mile ESE of Chachuda Temple. The jetty is 337m in length, L-shaped, with a berth able to accommodate vessels up to 200m in length and draft up to 10.5m on arrival and 11m on departure. This jetty does not operate between June 16 and August 14.

Only small vessels with local knowledge can proceed to Pipavav Bandar, as there is only a depth of 2.1m in the channel leading to it.

Aspect

The shores of the islet are composed of rocky cliffs, 10.4 to 16.5m high, with the exception of the NE side and the shore of a small bay on its NW side, which are low and sandy. Remains of old fortifications are on the N and E sides of the islet. The greater part of the islet is covered with ruins of what must have been extensive buildings and temples.

Savai Bet Reef, a drying reef, steep-to on its E edge, extends about 0.4 mile E from Savai Bet.

Bhensla Rock, a bluff rocky islet, 15m high and nearly steep to on its E side, is located 1 mile ENE of Savai Bet.

Montapat Creek, separating the NW and N sides of Chanch Island from the mainland, is the outlet for waters that cover an immense tract of marshy land at high water.

A circular tower, 9m high, is conspicuous at the W edge of a reef extending about 0.3 mile WSW from the W extremity of Chanch Island.

One Tree Hill, at the W extremity of Chanch Island, is 14m high.

Spit Sand, which dries 0.3m, extends nearly 1.8 miles SW from the SW edge of the above-mentioned reef. The SW edge of Spit Sand is called The Spit and has a least depth of 1.9m.

A palace, 26m high, about 2 miles ENE of the circular tower, is a good landmark from the SE and S.

Beacons on the mainland, in line bearing 019°, and about 2 miles N of Shiyal Bet, lead through West Channel. Beacons stand on drying reefs on each side of the entrance to West Channel.

Chachuda Temple, 24m high, is conspicuous on the mainland, about 1.5 miles WSW of Shiyal Bet.

Pilotage

Pilotage is compulsory and available at all times.

Vessels should send their ETA 72 hours, 48 hours, 24, hours, and 12 hours, in advance to the harbormaster. Vessels should call Port Control on VHF channel 16 or 71 for pilot boarding information. The use of tugs is compulsory and the pilot boards from a harbor tug in position 20°52.5'N, 71°29.8'E.

Directions

Vessels should enter West Channel with the beacons on the mainland in line bearing 019° and steer in on this bearing until Chachuda Temple bears 275°, when course can be shaped to the anchorage.

Caution

Due to the strong current setting across the West Channel entrance, Pipavav Harbormaster recommends for vessels to maintain a speed over ground of 3-4 knots.

A ferry service operates between the SW part of the GPPL Jetty and NW Shiyal Bet.




5.7 - Jafarabad harbour (W India)

20°51.72 N
71°23.02 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Jafarabad is an open roadstead affording little protection during the Southwest Monsoon. The harbor is shallow and a ledge of flat rocks extends nearly 0.5 mile W from the E side of the harbor entrance.

Jafarabad is a walled town, with several round towers, on the highest of which there is a flagstaff, 35m high. The town, situated on high ground, can be seen from the S and E over the intervening rising ground, about 1 mile inland on the W bank of the river of the same name.

Jafarabad Harbor is situated in a shallow bay about 1 mile across, at the entrance to the Jafarabad River. A breakwater ends with an L-shaped jetty extending about 0.5 mile W from

the shore near the cement factory on the E side. A second breakwater extends ENE about 0.3 mile from the W entrance point of the bay. A light shows from the W breakwater head.

Tides? Currents

Outside the harbor, the tidal current sets E with the flood and W with the ebb along the coast.

At springs, the E current continues to run for about 1 hour after the time of HW, and the W current continues to run until 4 hours before the time of the following HW. Both currents attain a maximum velocity of 4 knots after running for 3 hours.

At neaps, the E current continues to run for 30 minutes after the time of HW, and the W current continues to run until 4.5 hours before the time of the following HW. The maximum velocity of the flood is 1.8 knots and of the ebb 1.5 knots.

At neaps, the current changes from ebb to flood in a clockwise direction and the flood to ebb in a counterclockwise direction.

Depths?Limitations

A channel about 40m wide, being dredged to a depth of 5.5m in 1986, leads to a dredged basin of the same depth having a diameter of 300m, around the Lshaped jetty. Range lights, in line bearing 222°, lead to the jetty.

Aspect

Barman Hill, 106m high, is conspicuous about 6.5 miles NNW of Jafarabad. Lor Hill, 146m high, about 3 miles W of Barman Hill, is also conspicuous.

A chimney, 90m high, and a conspicuous tower, 102m high, are situated close together at a cement factory on the E entrance point of the river.

Lights are shown from the SW and NE entrance points of the harbors. A white beacon marks the W edge of the ledge of flat rocks extending from the E side of the harbor entrance.

Varahaswaroop Temple, 29m high, is situated close to the coast, about 2 miles W of the W entrance point of Pipavav Anchorage, and is conspicuous from S.

Caution

A dangerous wreck lies about 0.8 mile E of the SW entrance point of the harbor.

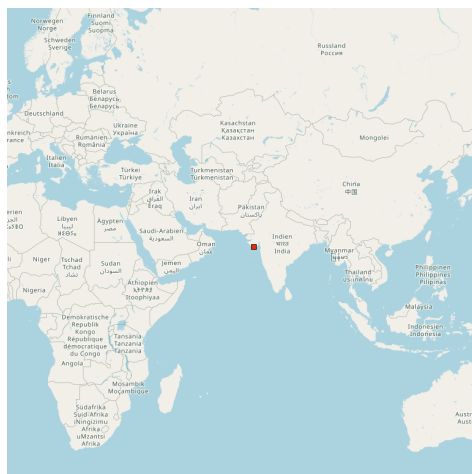
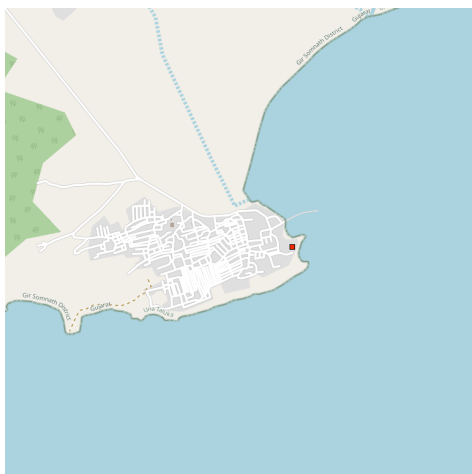
The coast between Jafarabad Harbor and the W entrance point of Pipavav Anchorage, about 5 miles ENE, is cliffy with precipitous points, and fringed by a coastal reef. Inland the country is undulating and partially cultivated. Small watch towers, about 1.8m high, lie on most of the hilltops on the coast.




5.8 - Nawabandar (W India)

20°44.42 N
71°04.78 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Nawabandar is a promontory situated 2 miles E of Diu Harbor; the intervening coast is high, with deep water close to it.

A light is shown from a white circular building on the promontory. The town of Delvada, about 2.5 miles NW of Nawabandar, has a large conspicuous temple with twin minarets. Storm signals are shown at Nawabandar; the Brief System is used.




5.9 - Diu harbor (W India)

20°42.96 N
70°59.72 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



channel 16, 71

 Diu Harbor, between the E end of Diu Island and the mainland N, is open E and somewhat encumbered by shoals.

There are end number of forts and monuments in Diu. One of such fort and monument is Fortim-do-Mar in Diu. Located exactly at the opening of the creek, this opulent stone

structure houses a light house and small chapel devoted to Our Lady of the Sea. It is almost a nautical mile away from the Diu Jetty.

A legend holds that Panikotha or Fortim-do-Mar in Diu was once linked with land by an under sea tunnel.

Tides?Currents

The flood current S of Diu sets ENE, with a greatest velocity at springs of 1.5 knots. It often runs for 2 hours after the time of HW by the shore. The ebb current sets WSW at a velocity of 2 knots at springs, and often runs for 2.5 hours after the water along the shore has began to rise. These irregularities of tides will account in some measure for the eddy currents off Diu Head.

Aspect

Diu Island is separated from the mainland by Sesalkhada Creek, which runs through the middle of a large swamp. The seaward side of the island is composed chiefly of sandstone cliffs; the hills on its W part are about 30.5m high. The citadel of Forte do Diu, at the E extremity of Diu Island, is conspicuous from seaward.

A light is shown near the center of Forte do Diu; Couraca Light is shown periodically from the NE extremity of the same fort. The town of Diu, close W of the fort, is enclosed by a wall which is breached in many places on its W sides. There are several prominent buildings in the town.

Forte do Mar is situated about 0.2 mile N of Forte do Diu, on the N side of the entrance to Sesalkhada Creek; it lies at the SE edge of a spit and is periodically marked by a light.

A temple, about 0.7 mile NNW of Forte do Mar, is conspicuous in the N part of the village of Ghoghla.

A guard house, with a red roof and a palm tree, are conspicuous about 1.3 miles NNE, and 2 miles N of Forte do Mar.

Signals

Storm signals are displayed from a flagstaff in Forte do Diu; the Brief System is used.

The port can be contacted on VHF channels 16 and 71.

Tel: +91 287 5252263 or +91 287 5253355

Mail: diu@nic.in

Anchorage depth: 14/15, 2 m

Anchorage

Diu Harbor affords no protection from the E; vessels should not anchor in the harbor during strong E winds, the holding ground, sand and rock.

The safest and best anchorage, in 14 to 16m, mud, lies with the light structure near the center of Forte do Diu bearing 315°, distant 0.5 to 0.6 mile. This anchorage is used by local vessels and affords protection from W winds.

There is anchorage, in 5 to 7m, about 1 mile E of Ghoghla. To reach it, vessels should steer for the temple N of Ghoghla, bearing 298°, passing between the dangers ENE of Forte do Diu, and anchoring when Couraca Light bears 240°.

Caution

A rock, with a depth of 1.3m, lies about 0.5 mile E of the E extremity of Diu Island. A 3m rocky patch lies about 0.8 mile farther ENE. A 4.7m depth lies about 1 mile ENE of the E extremity of Diu Island.

A reef, which dries in places, extends about 0.5 mile ENE from the E extremity of Diu Island.

From October to the end of January large fleets of fishing vessels based at Brancawara, at the W end of Diu Island, and also based at Diu, Nawabandar, and Simar will be found from 4 to 8 miles offshore; these vessels leave barrel buoys and logs to mark the fishing grounds, and it is advisable to give them a wide berth.



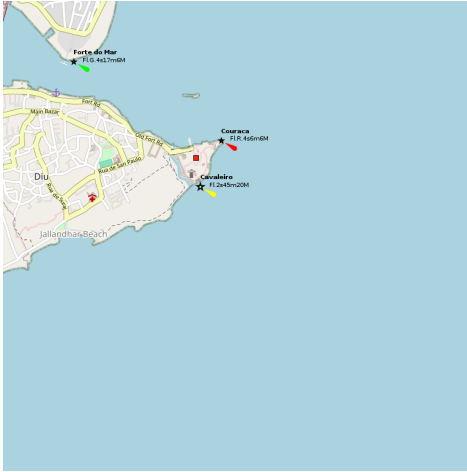
Fortim do Mar, or Fortress of Panikota was built by the Portuguese.


5.10 - Diu Head (W India)

20°42.89 N
70°59.77 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India





 Diu Head, a rocky bluff about 30m high, can be identified by the lighthouse, two long buildings, and a small temple lying near its summit. From this summit the land slopes gradually E, terminating in a rocky point, on which there is a cairn, 8m high.

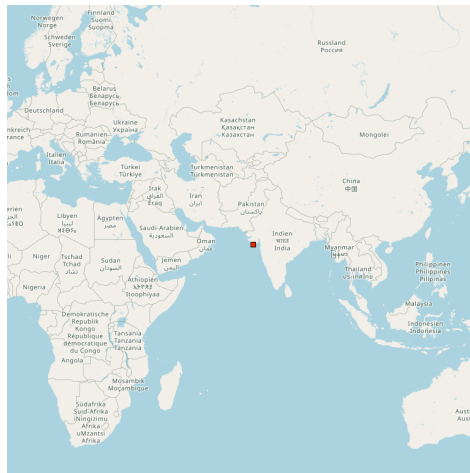
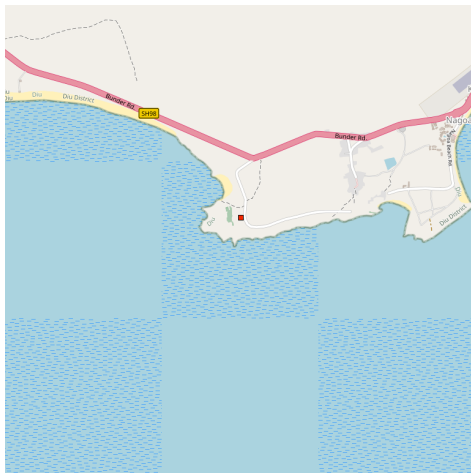



5.11 - Nagwa point (W India)

20°42.06 N
70°54.02 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India





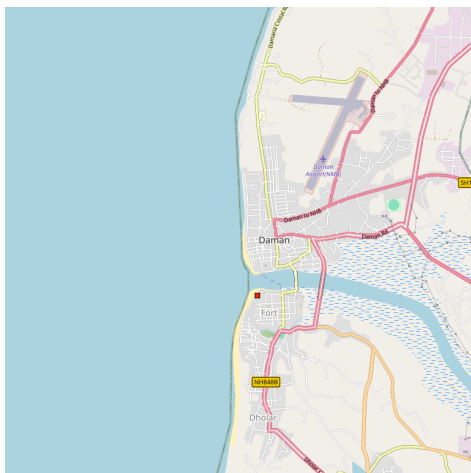
 Nagwa Point is the S extremity of Diu Island, about 3.5 miles E of Diu Head. It is a dark bluff, with cliffs 9.1 to 12.2m high, rising to a 20m summit marked by a bush.


Shoal water, over which the sea breaks occasionally, extends about 0.3 mile WSW from Nagwa Point.

5.12 - Daman Point (W India)

20°24.57 N
72°49.85 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Between Suvali Point and Daman, is an alluvial belt through which the Tapti River forms a deep and fertile delta.

Along the S part of this coast are small hillocks of drifted sand; the coast in some

parts is watered by springs and covered with a thick growth of creepers and date palms. Through the river mouths and inlets the tide runs up behind the sandhills and floods a large area of salt marshes. The rise of the tide renders these rivers and inlets accessible at HW, but local knowledge is necessary.

Daman (Damoā) lies on both sides of the Damanganga River; it can be identified by the forts on either side of the river entrance and by two square steeples and its white buildings. Other landmarks are a 109m hill, with an idgah, or Mohammedan place of prayer, on its summit, about 2.8 miles NE of the river entrance; Indragad Hill, 108m high, with a fort in ruins on its summit, about 3.3 miles SSE of the river entrance; and Jogmari Hill, 231m high, about 2 miles farther SSE.

Daman Light is shown from a white masonry tower on the bastion of the fort on the S side of the entrance.

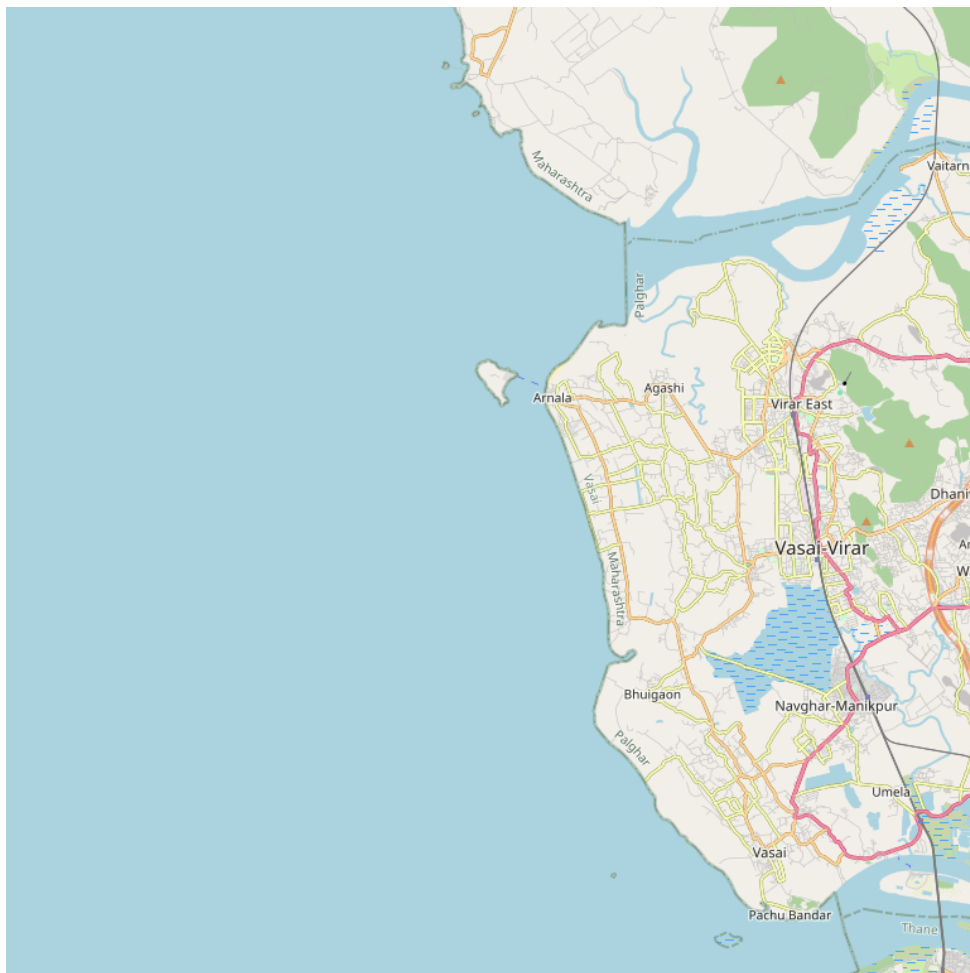
The coast between Daman and Vadhavan Point, about 30 miles SSW, is bordered by extensive reefs and foul ground extending up to 4 miles offshore. Vessels should not approach this coast in depths of less than 18.3m when navigating in the vicinity.



5.13 - Arnala island (W India)


19°27.76 N
72°43.67 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Arnala island (W India)



160



 Arnala Island, 4m high with a fort on it, lies about 0.5 mile offshore, and is fringed by rocks on all sides. Shoal water, with depths of less than 5m, extends about 1 mile W of the island. Arnala Island has been reported to give good radar returns at 27 miles.

Arnala Light is shown from a white framework tower on the coast, abreast the S end of Arnala Island.

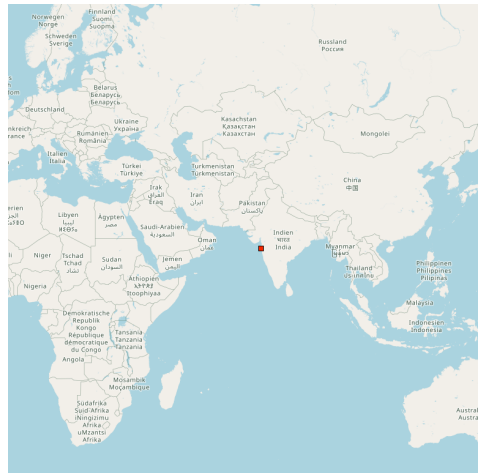
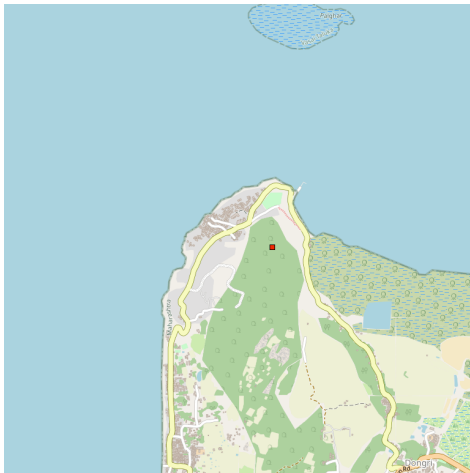


Arnala island (W India)

5.14 - Dongri Point (W India)

19°18.32 N
72°47.53 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



Dongri Point, the S entrance point of Bassein Creek, is a bluff point as seen from seaward. It rises to an elevation of 94m about 0.5 mile S of the point, and then slopes gradually to level country about 2 miles farther S.

A light is shown from about mid-September to mid-June.

Poshpur, a rocky islet 13m high, lies about 3 miles NW of Dongri Point.

Drying rocks extend about 2 miles WNW of the same point.

When there is no wind the sea does not break on the drying rocks and the sand banks in the entrance to Bassein Creek, and there are no indications of their existence.

Depths of less than 5m extend about 3.5 miles W of the entrance to Bassein Creek.

Tides?Currents:

Currents in Bassein Creek attain a velocity of 3 knots at springs, but about 5 miles above the entrance they decreases to 1.5 and 2 knots. In the creek the tidal

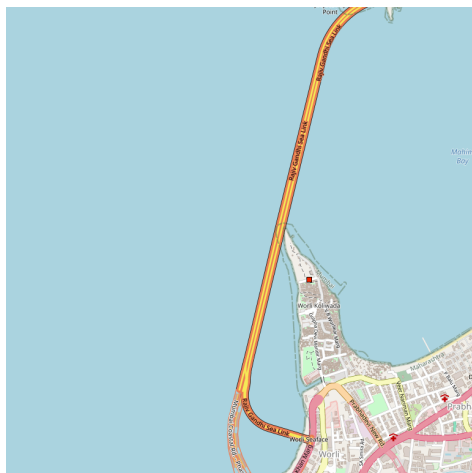
currents continue to set about 1 hour after the times of HW and LW. Slack water lasts for about 15 to 25 minutes.


Vasai lies about 0.5 mile inland on the N side of the creek. A fort, with the citadel near the middle, lies S of Bassein near the landing place.

5.15 - Worli Point (W India)

19°01.39 N
72°49.00 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



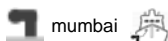
 The coast between Worli Point, the NW extremity of Bombay Island, and Malabar Point, about 5.3 miles SSW, is fringed by drying reefs and shoal water, with depths of less than 5.5m extending up to 1 mile offshore in the N part and about 0.5 mile off the S part.

A conspicuous TV tower lies at an elevation of 305m, 1.5 miles SSE of Worli Point.

5.16 - Mumbai (Bombay) (W India)

18°55.71 N
72°50.48 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



mumbai



Caution.?In the approach to Mumbai (Bombay), either from N or S, lines of strong fishing stakes, surmounted by baskets, which project about 6.1m out of the water, may be encountered anywhere in depths up to 18.3m and sometimes up to 22m. In the immediate approach to the harbor, within the area shown by dashed lines on the charts, no fishing stakes are permitted, but even within this area they are sometimes placed, and so may be encountered before the port authorities have been able to remove them. Occasionally the heads of the stakes are broken off at the waterline.and then they may not be seen above water.

All fishing stakes are normally removed each year for the duration of the Southwest Monsoon.

Caution is necessary in the harbor and its approaches as many buoys have been reported (2007) missing.

In 2001, it was reported that numerous fishing vessels were anchored directly in the inbound and outbound traffic lanes.

Numerous wrecks, best seen on chart, lie in the approaches, channels, and adjacent waters of the port of Mumbai (Bombay). Mariners should use caution while transiting these waters.

Heavy smog and haze may reduce the visibility in the harbor.

It was reported (2001) that heavy pollution and siltation in the harbor prevented the vessel's depth finder from giving accurate readings.

A submarine exercise area is centered 67 miles W of the entrance to Mumbai (Bombay) Harbor. Another submarine exercise area is centered between the Fifty Fathoms Flat and Direction Bank, about 75 miles offshore.


Numerous small fishing vessels, with buoyed nets, are likely to be encountered

up to 25 miles offshore from Mumbai (Bombay).

A depth of 23m was reported in 1987 close W of the 200m depth contour in approximate position 19°00'N, 69°55'E.

Mariners are advised not to anchor or fish near the pipelines to avoid damaging them.

Submarine oil and gas pipelines are laid from the SW point of Karanja Island, WSW through the entrance to Mumbai (Bombay) Harbor and then NW to Mumbai (Bombay) High Field.

 Depths in the approach to the coast between Mumbai (Bombay) and Cape Rama are fairly deep and clear of dangers, with the exception of Angria Bank.

Angria Bank, with a least depth of 20.1m in position 16°43'N, 72°03'E, lies about 65 miles off the coast, and is composed of sand, shells, and coral. The bank is steep-to on all sides, with great depths surrounding it. The tidal currents set NE across the bank during the flood and SW with the ebb, with a velocity of about 1 knot in spring tides.

A volcanic disturbance was reported observed (1949) in an area about 100 miles SW of Angria Bank. Vessels should approach this area with caution.

Caution. Between Khanderi Island and Boria Point, about 80 miles SSE, fishing stakes and logs are liable to be encountered in depths up to 22m.

The city of Mumbai (Bombay), on Mumbai Island (Bombay Island), is the largest city of India and the principal seaport on its W coast.

Mumbai Harbor (Bombay Harbor) lies between Mumbai Island (Bombay Island) and Trombay Island to W and N, and Karanja Island and the mainland to E and S. It is the only natural deep-water port on the W coast of India. The harbor contains several islands, rocks, and shoals, with numerous bays and inlets indenting its shores.

The direction and management of the port, including pilotage, berthing, docking, and wharves, are administered by the Mumbai Port Trust. The daily operations of the port are carried out by the Chairman and Deputy Chairman.

The facilities of the port are mainly on the E side of Mumbai Island (Bombay Island). There are also tanker terminals at Pir Pau (Butcher Island) and at Jawahar Dweep (Trombay Island).

Winds?Weather:

Visibility may be reduced by heavy rain during the Southwest Monsoon. A smoky haze frequently hangs over the area from November to March, mostly during the early morning and occasionally in the evening.

Tides?Currents:

The tidal rise for Mumbai Harbor (Bombay Harbor) is 4.4m at MHWS and 3.3m at MHWN.

The velocity and direction of the tidal currents in the approaches to Mumbai (Bombay) are generally as described below, but they are greatly influenced by winds and heavy rains.

The tide does not set fairly through the channel, but the flood sweeps E over the foul ground of Thal Shoal. During rains in the Southwest Monsoon the ebb sets strongly W out of Dharamtar Creek.

The velocity of strong spring tides between Thal Shoal and Prongs Reef (18°53'N., 72°48'E.) is from 2.5 to 3 knots and perhaps as much as 4 knots during the rains.

Between Thal Shoal and a position about 4 miles WNW, the flood current sets between ESE and ENE, resulting in a more N direction as the velocity increases. In East Channel Swatch, E of Thal Shoal, it sets about NNE, taking a more E direction as it crosses the mouth of Dharamtar Creek.

Off the SW extremity of Prongs Reef, the flood current at first sets ESE and, as the velocity increases, shifts to the NE.

East of Prongs Reef, as far as Sunk Rock, it sets between NNE and NE.

On the S side of the harbor entrance the ebb current starts setting WSW across the mouth of Dharamtar Creek, changing to SSW upon the vessel's approach to Thal Shoal, then more S as a vessel continues S.

From Thal Shoal extending WNW across the dredged approach channel to a position about 4 miles away, the current sets about SW.

On the N side of the harbor entrance, the current ebbs SW going from Sunk Rock until passing abeam Prongs Light, where it changes to W, then becoming SSW as the tide strengthens.

The velocity and direction of the tidal currents within Mumbai Harbor (Bombay Harbor) are generally as described below, but can also be greatly influenced by winds and heavy rains.

Tidal currents within Mumbai Harbor (Bombay Harbor) have velocities that range between 0.75 knot and 3 knots.

On the E side of the harbor, the flood current sets NE abeam Karanja Island, turning more ENE upon passing Karanja Beacon.

The current sets N between Butcher Island and Elephanta Island, then NE approaching Trombay Island.

On the W side of the harbor, from Sunk Rock to Cross Island, the flood current sets NNE, with a velocity of about 2 knots. The flood current splits N of Tucker

Beacon (18°58'N., 72°51'E.), setting N until abeam Mazagaon Pier, then turning NE and ENE, joining the current from the E side of the harbor N of Butcher Island.

On the E side of the harbor, the ebb current sets SW in the channel between Butcher Island and Elephanta Island, continuing out of the harbor past Karanja Island, then turning WSW upon passing abeam the entrance Dharamtar Creek.

On the W side of the harbor, from Cross Island to inside Middle Ground Islet, the ebb current sets SSW, and then to Sunk Rock in a SW direction. From Cross Island to E of Middle Ground Islet, in mid-channel, the ebb current sets from SW to SSW; from there to Sunk Rock it sets SW, but at the first of the ebb the set is more W.

The ebb current on the W side of the harbor occurs 30 to 35 minutes earlier than on the E side, and during strong spring tides it can begin 40 minutes to 1 hour sooner.

From Trombay Island until passing abeam Mazagaon Pier the current ebbs SW. Inshore and near the Indira Dock wall, during the Southwest Monsoon, the ebb current occurs about 45 minutes before the time of HW at Mumbai. This is important for vessels docking.

The ebb current sets SSW from abeam Cross Island until passing between Middle Ground Island and South Breakwater, whereas the ebb sets more S to SSW across the dredged channel and waters E of Middle Ground Island.

From Middle Ground Island to Sunk Rock, the ebb current sets between S and SSW, but at the start of the ebb the set is more W flowing.

The flood current in the vicinity of the tidal basin and wet docks runs parallel to the South Breakwater, then ENE past the entrance to the tidal basin, joining the main flood current setting N passing E of Middle Ground Island.

An eddy current flows S along the E side of Ballard Pier, then turns W into the tidal basin. This eddy current also flows close E to the head of South Breakwater before turning SW alongside the breakwater. The effects of this eddy have been observed up to 100m E of the SE extension of Ballard Pier.

Both the flood and eddy currents run strongly past the head of the South Breakwater, causing ships to sheer violently in this area.

Depths?Limitations:

Mumbai Harbor (Bombay Harbor) is approached through a series of dredged channels commencing about 4 miles SW of Prongs Reef Light. The initial depth is dredged to 11.1m for about 2 miles heading, then to 11m for about another 2 miles, then to 10.9m continuing into the harbor entrance to a point about 1.3

miles ENE of Middle Ground Island, then to 10.8m until the main channel, marked by range lights in line bearing 085°. The main channel continues S then SE of Elephanta Island, then passing NE of Jawaharlal Nehru

Port, and has a maintained depth of 11m. At the point where the main channel starts there is another dredged channel, with range lights in line bearing 202.7°, continuing NNE between Butcher Island and Elephanta Island, to about 18°58'N, then with a depth of 8.7m into Trombay Channel.

Mariners should navigate with caution through these maintained channels since they are subject to silting, especially during times of strong monsoon winds. For latest information concerning maintained depths of these channel, mariners should contact the Mumbai Port Authority.

The maximum drafts for alongside berths are subject to change due to siltation and dredging. The Port Authority at Mumbai should be contacted to determine the maximum allowable draft at any specific time, as well as any possible restrictions on berthing or departures during night hours.

The three enclosed wet docks in the harbor are named Indira, Victoria, and Prince's. In addition to these wet docks, there are also, along the harbor front, many bundars, which are open wharves and basins that have extensive facilities for the working and storage of many different types of cargo.

Further information on these areas is, as follows:

1. Indira Dock is entered through an entrance lock, 228m in length and 30.5m in width. The entrance lock is located close NNW of Ballard Pier.

Hughes Drydock is entered from Indira Dock. It can accommodate vessels up to a maximum length of 304m, and 30.4m in width. The pumps in Hughes Drydock have been electrified and are capable of increasing the water level to 10.5m at all berths within Indira Dock at any time.

Ballard Pier is the continuation of the W side of Indira Dock entrance lock and is the main terminal for passenger vessels. The N part of the pier is for container vessel accommodation.

2. Victoria Dock is entered through a swinging lock gate from the E side for vessels with a maximum width of 16.76m. The maximum loa for vessels during the day is 152m and only 122m during the night. The maximum entry draft is 6.7m at all times.

There is a channel connecting this dock with Prince's Dock that is 19.5m in width close N from the entrance.

3. Prince's Dock is entered through a swinging lock gate with an entrance width of 20m and a dredged channel depth of 6.6m. The maximum width for a ship that

can enter Prince's Dock is 13.8m.

Ships can be taken into Prince's Dock only from about 2 hours 45 minutes before the time of HW to 30 minutes after the time of HW. They cannot leave the dock after the time of HW because the ebb current commences in that vicinity about 90 minutes before the time of HW and sets directly down on to the reef N of Cross Island at about the time of HW.

There is a channel connecting this dock with Victoria Dock that is 19.5m in width close S from the entrance to Prince's Dock.

General berthing information for the wet docks plus the deepwater petroleum and crude oil facilities at Butcher Island and Pir Pau in Trombay Channel are given in the accompanying table titled Mumbai (Bombay) Berthing Facilities.

In Jawahar Dweep, loaded tankers are berthed at HW and two tugs are required to assist. It is compulsory to test astern power during the approach and before berthing at the terminal.

There is a turning circle, best shown on the chart, found close E of Berth JD-4.

Jawaharlal Nehru Port (Nhava Seva) is a separate port in the E part of Mumbai Harbor (Bombay Harbor) on the mainland SE of Elephanta Island. The facility is administered by a separate port authority from Mumbai (Bombay). The port provides container berths, bulk cargo berths, and bulk liquid berths accommodating vessels to 80,000 dwt, a ship repairyard, and a linkspan for ro-ro traffic.



Mumbai (Bombay) (W India)



Mumbai (Bombay) (W India)

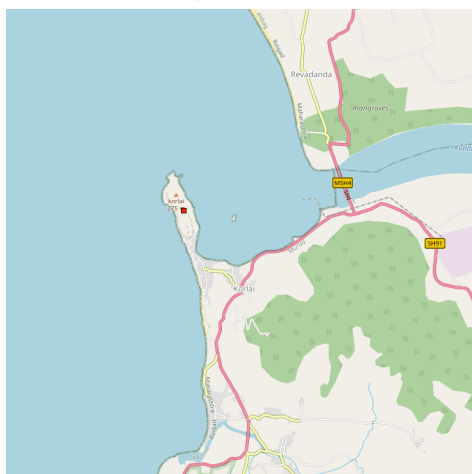



Mumbai (Bombay) (W India)

5.17 - Korlai Point (W India)

18°32.16 N
72°54.49 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Korlai Fort, on the S side of Kundalika River entrance, stands on the summit of a reddish-colored headland, connected to the mainland by a low, narrow, and sandy isthmus. The N part of this headland slopes gradually to the sea and terminates in a rocky point.

A light, with a racon, is shown from the fort.

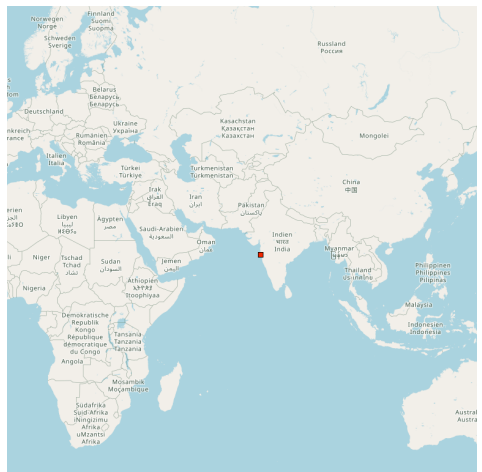
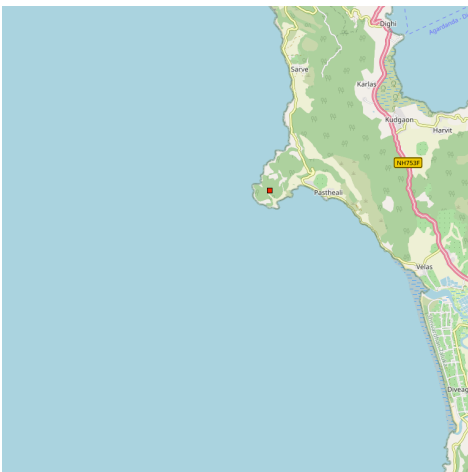
Revadanda, an old fortress, stands on the N entrance point of the river. The tower of the Franciscan convent, 30.5m high, is conspicuous above the walls of the fort.



5.18 - Kumbaru Point (W India)

18°13.30 N
72°56.19 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India

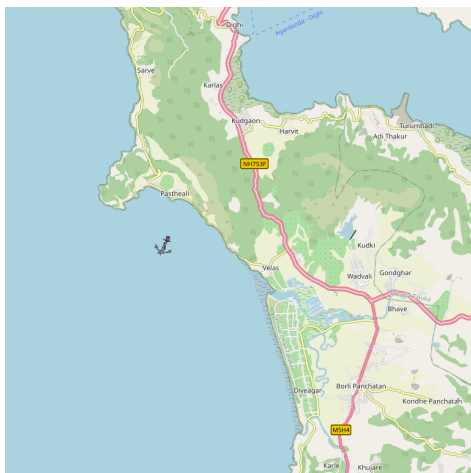



Kumbaru Point, 70m high, lies about 3.5 miles S of Nanwell Point and is the N entrance point of Kumbaru Bay. The point fronts densely wooded hills rising to about 240m; there is a conspicuous bluff about 2.3miles E of the point. Shah Jehan Shoal, with a least depth of 4.2m, lies about 1 mile SW of Kumbaru Point. Depths are irregular for a short distance W of this shoal and vessels in the vicinity should keep in depths greater than 11m.

5.19 - Kumbaru bay (W India)

18°12.44 N
72°56.97 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Anchorage, sheltered from NW winds, can be taken, in a depth of 3/5m, SE of Kumbaru Point, in Kumbaru bay.

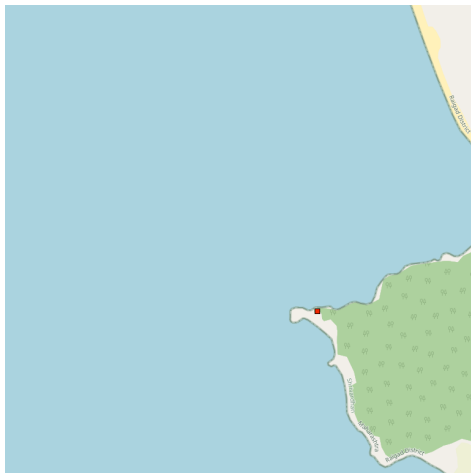


5.20 - Srivardhan point (W India)

18°01.25 N
73°00.24 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India





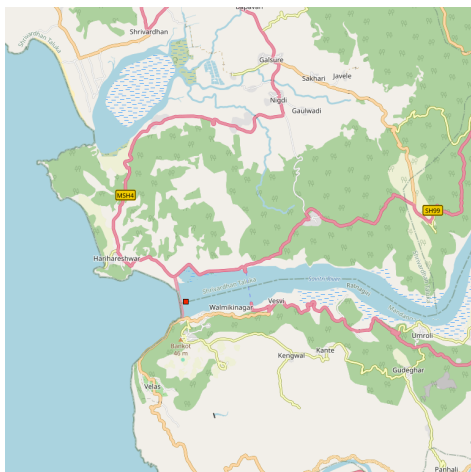
🇬🇧 Srivardhan Bay, about 5 miles SSE of Kumbaru Bay, is shallow and the village of Srivardhan lies at its head.

A light is shown from the S end of the N entrance point of the bay from September to May.

5.21 - Savitri River (W India)

17°59.00 N
73°02.63 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India

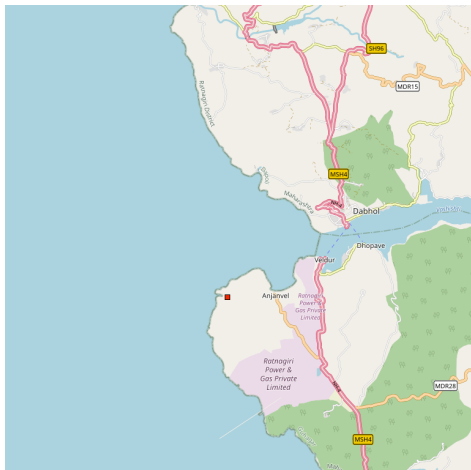



🇬🇧 The coast between the entrances of the Savitri River and the Vashishti River, about 25 miles SSE, consists of a series of plateaus at elevations of 150 to 210m. A vessel proceeding between the two rivers will not encounter any shoals by keeping from 1.5 to 3 miles offshore and in depths of over 9.1m.

5.22 - Tolleshwar Point (W India)

17°33.94 N
73°08.61 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India

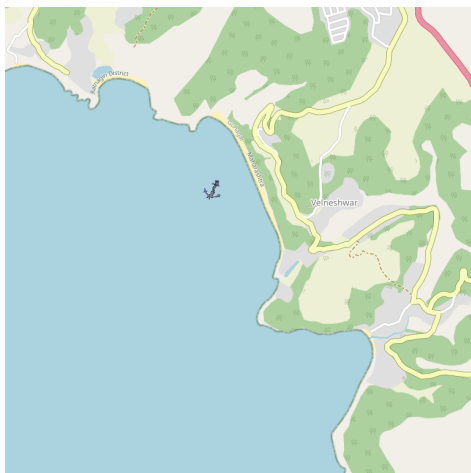


 Tolleshwar Point, the S entrance point of the Vashisti River, is bold and faced with cliffs about 90m high; an ancient Hindu temple and a prominent clump of trees stand on its summit.

5.23 - Boria Bay (W India)

17°22.81 N
73°12.32 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Boria Bay lies SE of Boria Headland. Anchorage, sheltered from NW winds,

may be obtained by small vessels, in a depth of 8m, mud.

The coast between Boria Headland and Bhandarawadi Point, 3.5 miles SSE, is composed of small, sandy bays divided by rocky points.

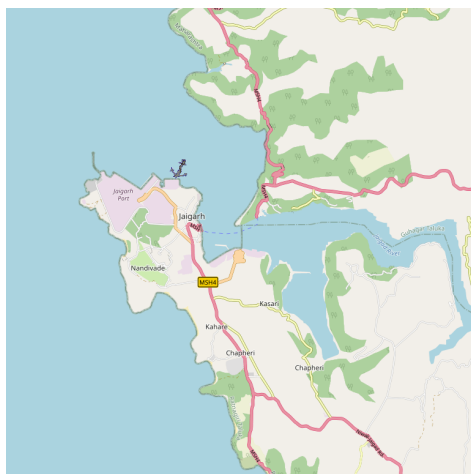



5.24 - Jaigarh Bay (W India)

17°18.44 N

73°13.04 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Jaigarh Bay is entered between Jaigarh Head and Bhandarawadi Point, about 1.8 miles NE.

The estuary of the Shastri River, which flows into the head of the bay, forms a sheltered, convenient harbor, fairly easy to access, even during the Southwest Monsoon, for vessels of about 3.4m draft with local knowledge.

The bar of the Shastri River extends NNE from close W of Jaigarh Fort to close E of Katane Reef, which dries 0.6m about 0.2 mile SW of Bhandarawadi Point.

A channel leads E across the S end of the bar about 0.2 mile offshore and had a least depth of 3.7m in 1964, but it is subject to change.

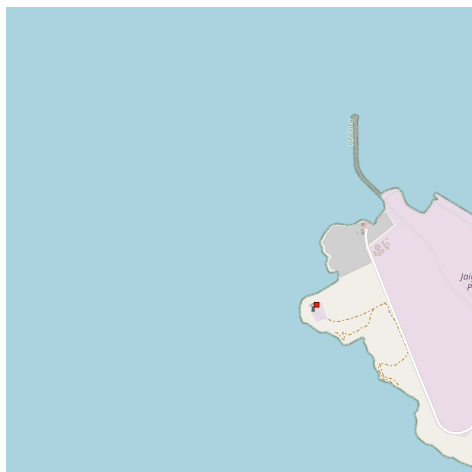
Mora Sands, which dry 1.2m, extend about 0.6 mile W of the NE entrance point of the Shastri River, leaving a navigable channel about 183m wide between Mora Sands and Jaigarh.


Caution. Vessels approaching Jaigarh Bay from the S should not close Karhateshwar Point within 0.3 mile to avoid foul ground.

5.25 - Jaigarh Head (W India)

17°17.95 N
73°11.44 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Jaigarh Head has Karateshwar Point at its NW extremity; this point appears from seaward to be a level and almost barren plateau terminating in steep rocky cliffs. A Hindu temple stands on the steep face of the cliffs. Jaigarh Head has been reported to be a good radar target at 20 miles.

Jaigarh Head Light is shown from a tall, black iron tower with white bands, on the SW end of Jaigarh Head.

Dhamankhol Light is shown from a white tower about 0.5 mile NE of Jaigarh Head Light.

Jaigarh Fort, an old fortress containing a few houses, is situated on a rocky point, about 2 miles E of Jaigarh Head Light; a light is shown from the NW corner of the fort. The town of Jaigarh extends along the coast for about 0.8 mile S of the fort.

A dangerous wreck lies 23 miles W of Jaigarh Head.

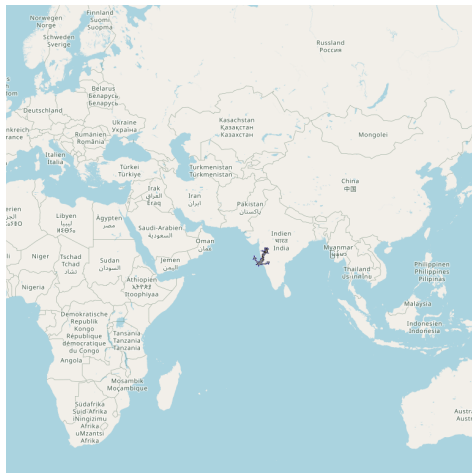
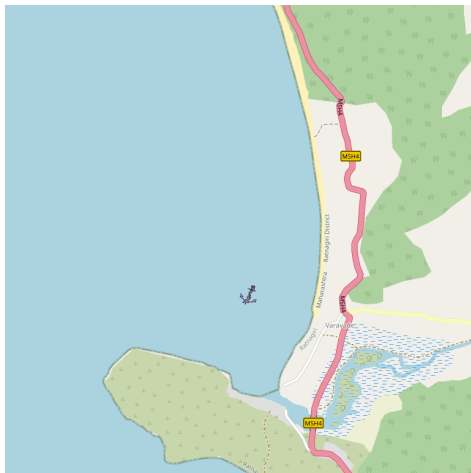



5.26 - Warori Bluff anchorage (W India)

17°12.31 N
73°14.45 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



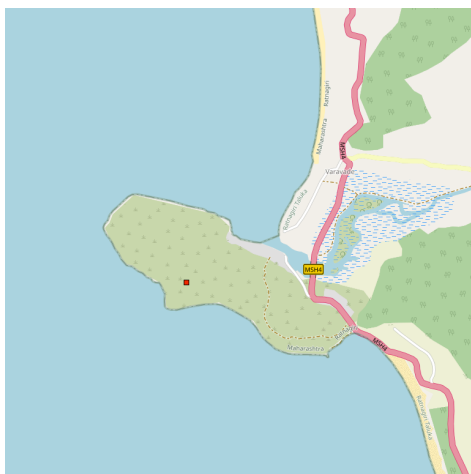



 A sheltered anchorage, during the Southwest Monsoon, can be obtained on the N side of Warori Bluff, in 5,5 m.

5.27 - Warori Bluff point (W India)

17°11.75 N
73°14.19 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



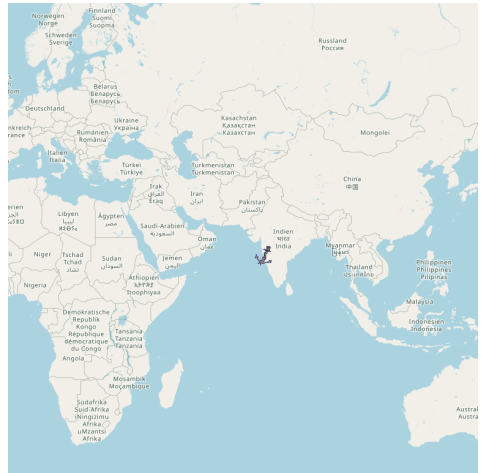
 Warori Bluff, about 4.5 miles SSE of Ambwah Point, is a conspicuous promontory, 70m high.


A light is shown about 0.5 mile SE of the W extremity of Warori Bluff. Good radar returns have been reported from Warori Bluff at 17 miles.

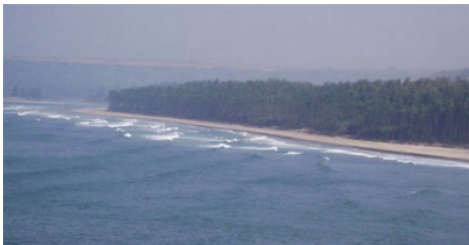
5.28 - Kalabadevi Bay (W India)

17°03.00 N
73°16.63 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



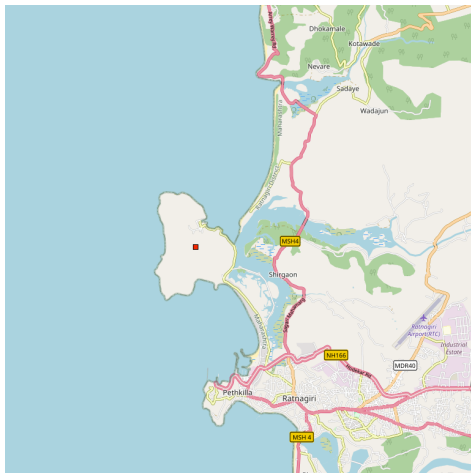
 Kalbadevi Bay is entered between Sookana Point and Kurne Point. Anchorage may be obtained, in 8m, about 0.7 mile E of Sookana Point and 0.3 mile offshore. Local vessels call here during the Southwest Monsoon.




5.29 - Vada Mirya (Mirya Donghur) (W India)

17°02.03 N
73°15.98 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Vada Mirya (Mirya Donghur), a high rocky headland, is lighter in color than the adjacent coast, and resembles an island when seen from the N or S. The W end of the headland terminates in steep cliffs. Mirya Peak, 142m high, the conspicuous summit of this headland, lies about 0.5 mile NNE of Miyet Point, the SW extremity of the headland.

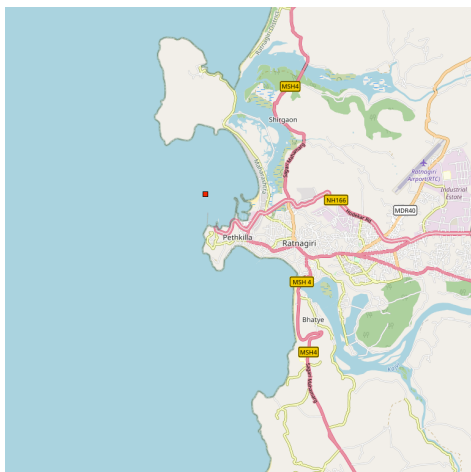
Tonkul Peak, 115m high, lies nearly 1 mile N of Mirya Peak. Good radar returns have been reported from Vada Mirya at 16 miles.

Sookana Shoals, with a least depth of 9.4m, lie about 1 mile NNW of Sookana Point, the NW extremity of Vada Mirya.

5.30 - Mudle Shoal (Taylor shoal) (W India)

17°00.38 N
73°16.15 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India

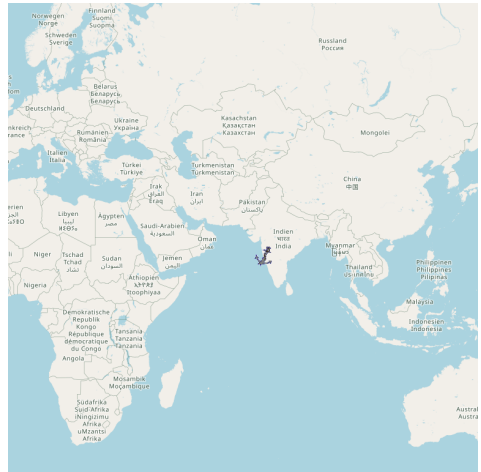
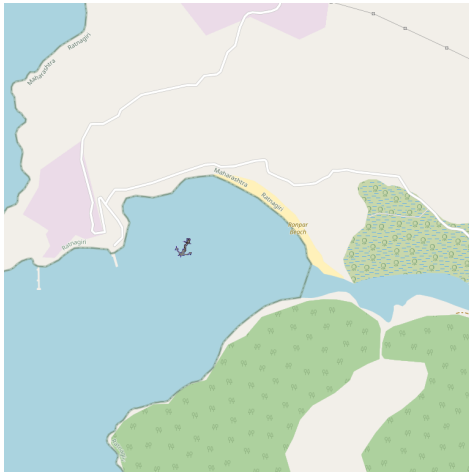



Mudle Shoal (Taylor Shoal), with a least depth of 1.1m, and marked on its S side by a buoy, lies about 0.7 mile SE of Miyet Point. The sea breaks over this shoal at LW.

5.31 - Pavas Bay (W India)

16°53.59 N
73°17.48 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Pavas Bay (Paos Bay) is entered S of Pavas Point, Golap Hill, 120m high, lies about 1 mile NE of Pavas Point.

Vessels can anchor in Pavas Bay, in a depth of about 8.5m, mud and sand, sheltered from NW winds.

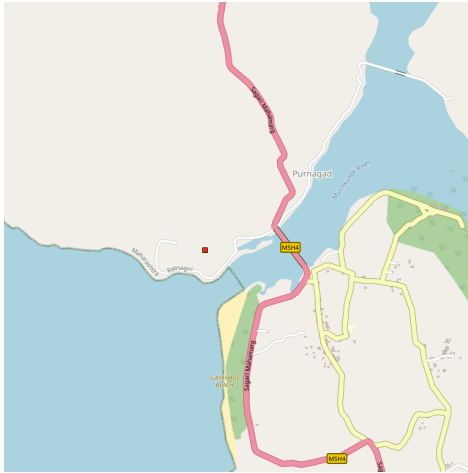
The coast between Pavas Bay and Purangad Bay, about 5 miles S, consists of rocky tableland and sandy bays, and is free from dangers.


5.32 - Purangad Point (W India)

16°48.53 N
73°18.89 E

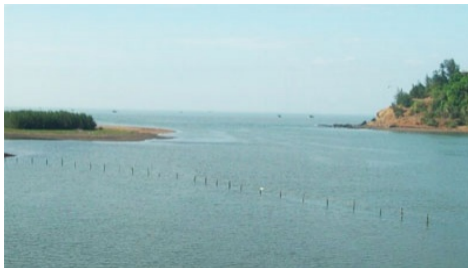
Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India





 Purangad lighthouse is shown, except during the strength of the Southwest Monsoon, from the N entrance point of Purangad Bay. About 1 mile farther E, a ruined fort stands on a bare hill on the N side of the entrance to the Machkandi River.

Khavri, a mountain 346m high, lies about 10 miles E of the river entrance. The coast between Purangad Bay and Wada Vetye (Yetia), a village about 6 miles S, consists of a rocky tableland; thence to Ambolgarh Point, about 3 miles farther S, it is sandy and backed by a range of hills 84 to 97m high. A conspicuous hill, 103m high, lies about 0.5 mile NW of Wada Vetye.




5.33 - Musakaki Point (W India)

16°37.57 N
73°20.43 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



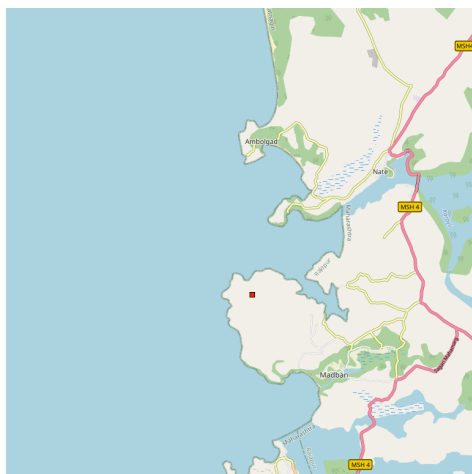



 Musakazi Point is about 21m high.
A light is shown from September to May.

5.34 - Wagapur Point (W India)

16°36.06 N
73°19.56 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



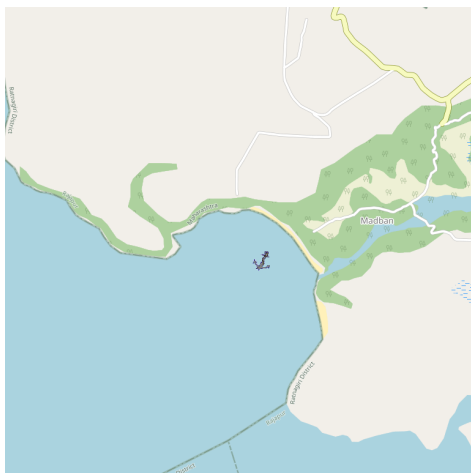
 A light is shown from a tall, white, square, concrete tower with black bands on Wagapur Point; foul ground extends about 0.1 mile WNW of the point.
The coast between Wagapur Point and Vijayadurg Harbor, about 2 miles S, consists of cliffs about 21m high. Holi Hill, 85m high, about 2.3 miles E of Wagapur Point, is a round sloping conspicuous hill on the E side of Rajapur Bay. It presents the same appearance from all directions, and lies out from the


tableland in this vicinity which is faced with steep cliffs.

5.35 - Vijayadurg Harbor (W India)

16°34.61 N
73°20.44 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Vijayadurg Harbor is entered between Burmana Point, 24m high, and a point about 1.5 miles NNE.

Burmana Reef, over which the sea breaks, extends about 0.2 mile WNW and 0.2 mile NNW of Burmana Point. An 8.2m shoal lies about 0.2 mile NW of the same point.

A conspicuous fort stands on a projecting rocky point, about 26m high and 0.8 mile ENE of Burmana Point. This point forms the W side of the entrance to the Vaghotan River. The fort is obscured from the S by the higher land in that direction.

Depths in the harbor decrease regularly from about 12m in the entrance to the E shore of the bay.

Depths in the fairway between the point on which the fort lies and a cliff, 19m high, about 0.7 mile ENE, are about 6.5m, but decrease sharply farther within the river to 3.7m.

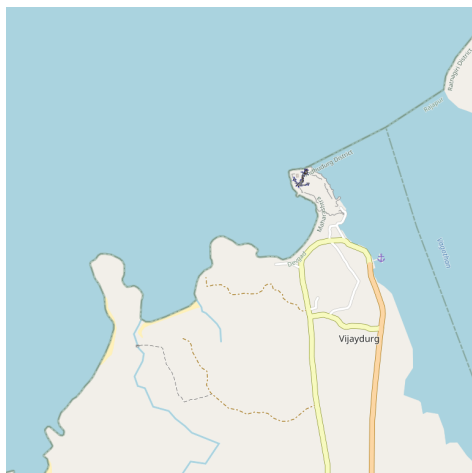
Anchorage can be taken anywhere in the harbor, according to draft, during good weather.




5.36 - Vijayadurg Point (W India)

16°33.68 N
73°19.94 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Vijayadurg Light is shown from a white steel tower with red horizontal bands on the NE corner of the fort. Vijayadurg, a small village, is situated about 0.8 mile S of the light.

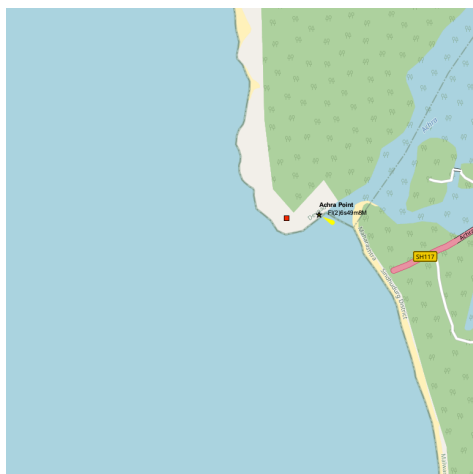
Anchorage can be taken in about 0.5 mile NNE of Vijayadurg Light, in 8m, mud. The coast between Vijayadurg Harbor and Devgarh Harbor, about 10 miles S, is fairly regular, although entered by numerous streams and creeks. Steep, abrupt cliffs are fronted by sandy beaches and coves. The land behind the cliffs is flat, but farther inland it rises to bare rocky hills with no vegetation except in the rainy season.




5.37 - Achra Point (W India)

16°12.03 N
73°25.81 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



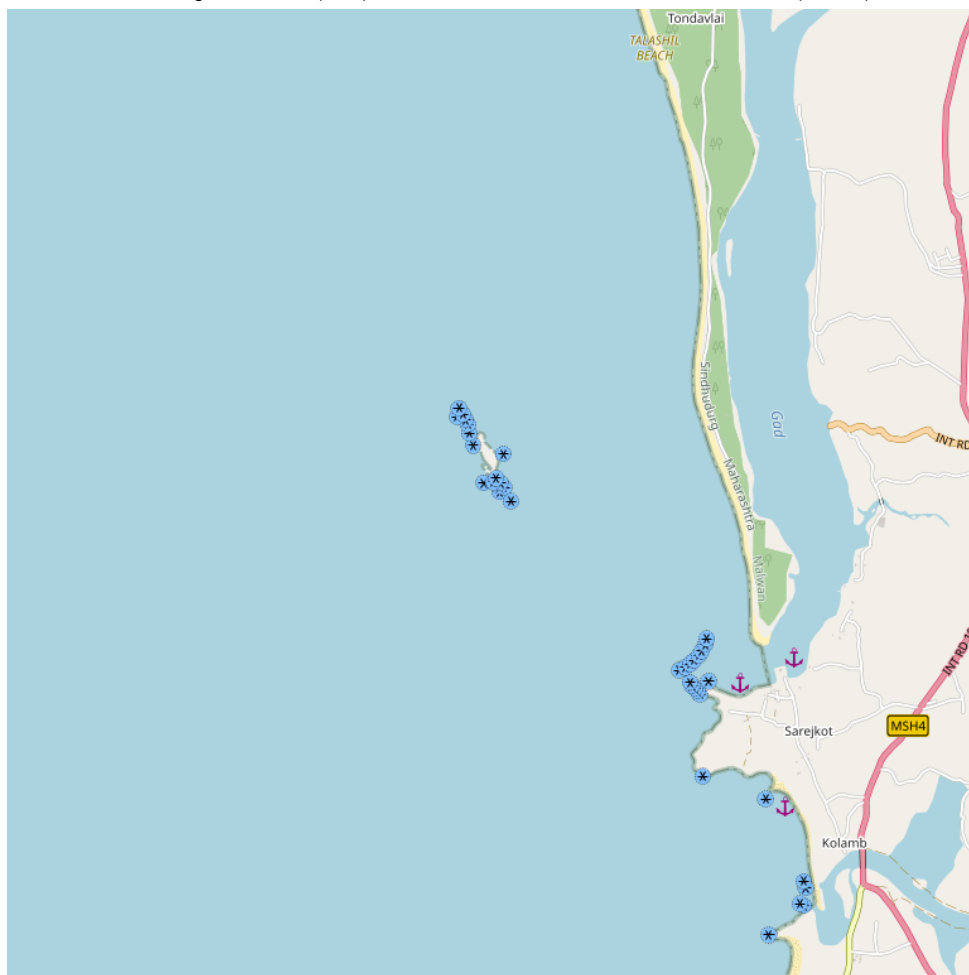
 Achra Point, 41m high, is the N entrance point of the Achra River, which is only accessible to boats.

A light is shown during good weather from the point. The coast from the mouth of the Achra River to the entrance of Kalavali Creek, about 7 miles SSE, is sandy and fringed with coconut palms. A range of hills of moderate height, with no conspicuous peaks, about 4 miles inland, extends roughly parallel with the coast. Kura Patches, with a least depth of 9.6m, lies about 2 miles SSW of Achra Point.

5.38 - Kura Islet (W India)


16°06.06 N
73°26.60 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Kura Islet (W India)



160



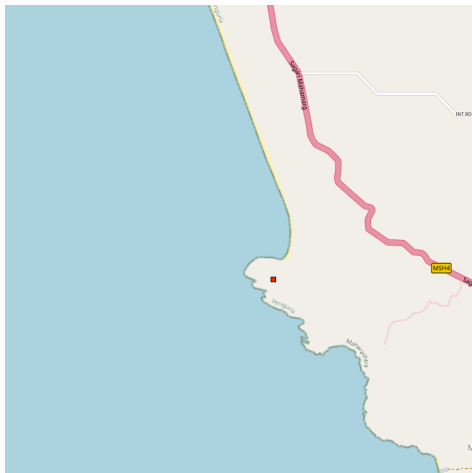
 Kura Islet, 9m high and the largest of three rocks, lies in the center of a group of rocks, about 1.3 miles NW of the entrance of Kalavali Creek.


A 10.5m patch lies about 2 miles NNW of Kura Islet and about 1.5 miles offshore. A 5m patch lies about 0.7 mile S of Kura Islet.

5.39 - Machlimar Point (W India)

15°48.96 N
73°38.29 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India

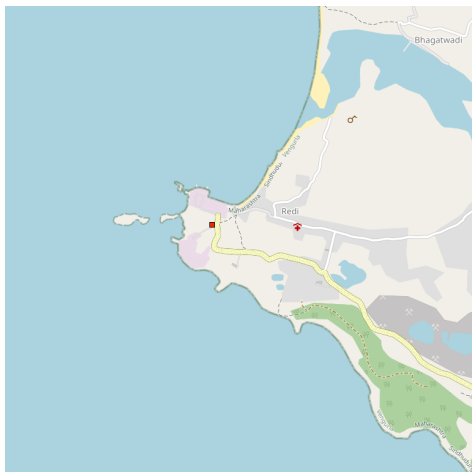


 Machlimar Point, 85m high, lies about 3.5 miles SSE of Vengurla Point. The entrance of the Talavda River lies about 1 mile SSE of the point.

5.40 - Redi Point (W India)

15°44.74 N
73°39.35 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Redi Point is a flat rocky projection, 15m high at its W end.

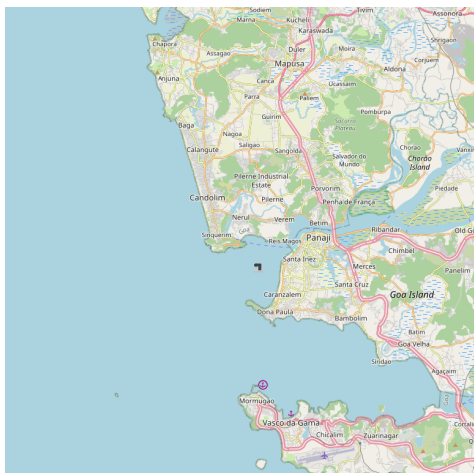
Redi Rock (Rairi Rock), 11m high, lies about 1 mile S of the point, at the S end of foul ground extending W and SSW of the point.


Redi Fort (Rairi Fort), with an elevation of 34m, stands about 1 mile NE of Redi Point.

5.41 - Aguada Bay (W India)

15°28.91 N
73°47.68 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Aguada Bay, entered between Aguada and Kabo Rajniwas, about 1.8 miles SSE, affords anchorage to moderate-sized vessels during the Northeast Monsoon.

The bay is free from dangers, but strong W winds produce a heavy swell.

Panaji, the capital and seat of government of the State of Goa, Daman, and Diu, is situated on the S bank of the Mandavi River, which enters the head of the bay.

The city is well built, with prominent buildings along the waterfront.

A bridge spans the river at the E end of the city.

Tides?Currents

The tidal rise at Panaji is 2.3m at MHWS and 2.06m at MHWN.

The ebb current sets strongly out of the Mandavi River, but is weak at the anchorage off Aguada, where the flood current is barely perceptible.

Depths?Limitations

Depths in the entrance of Aguada Bay are about 7.6m, decreasing gradually to the head of the bay.

Outer Patches, with a least depth of 0.9m, lies about 0.8 mile W of Kabo Rajniwas.

The bar of the Mandavi River, which is subject to frequent change, has a depth of 2.1m during good weather. During the Southwest Monsoon, heavy breakers extend across the entrance and render it impassable.

The main channel, less than 183m wide, lies between sand banks extending about 0.9 mile SW of Raji Magus, the N entrance point of the river, and about 0.5

mile SW from Gaspar Dias, the S entrance point of the river. Raj Magus Light is shown from mid-August to mid-June from a white round tower 0.3 mile NNE of Raj Magus Point.

Raj Sand, which dries, lies in the fairway W of Panaji.

The dangers in the channel are not marked.

Most cargo is worked from anchorage.

The port has a jetty, 92m long, with an alongside depth of 4.3m. There is a pier for inspections and surveys of barges and small craft up to 75m in length and a beam of 15m can be accommodated.

Aguada Light is shown from a white rectangular tower close N of the fort; a tower lies close SE in the N part of the fort. A racon is situated at the light. Another light is shown about 183m S of the tower.

A chapel, with an elevation of 74m, stands about 0.5 mile E of Aguada Fort Light. The coast close N of Aguada is low and a heavy surf always runs along the foreshore.

Pilotage is compulsory in the Mandivi River as well as for vessels proceeding to the inland portions of the Mandavi River and the Zuvari River. Local pilots may be engaged by contacting the Captain of the Port, Panaji.

Regulations

The vessel's ETA should be sent to the Port Captain 4 days, 3 days, 48 hours, and 24 hours prior to arrival.

Panaji is a fair weather anchorage port making any cargo operations worked from anchorages impossible during the Summer Monsoon period (about May 15 through September 15).

Contact Information

The port can be contacted, as follows:

1. VHF: VHF channels 16 and 74

2. Telephone: 91-832-2225070

91-832-2420580

91-832-2420579

3. Facsimile: 91-832-2420582

91-832-2421483

4. E-mail: captainofports@eth.net

The Port Captain can be contacted via mobile telephone at 91-9225-905926 and 91-9890-331573.

Hours of operation are 0930 to 1745 local time.

Anchorage

During good weather large vessels can anchor about 14m, mud, about 2 miles W of Aguada.

Vessels of moderate size can anchor, in 6.4m, mud, with Aguada Fort Light bearing 333°, distant 1 mile.

Caution

Vessels approaching from the N should give the W extremity of Aguada a berth of at least 1 mile. A dangerous wreck lies in about 4.5 miles NW of Mormagao Head.

Vessels approaching from the S should take care to avoid the dangers in the entrance to Marmagao Bay and the foul ground extending W from Cabo Point.

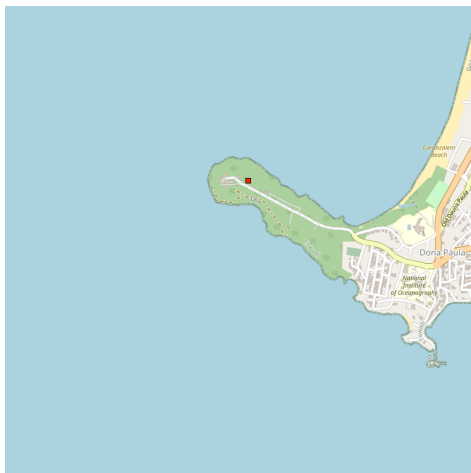



Aguada fort and lighthouse

5.42 - Cabo point (W India)

15°27.78 N
73°47.41 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Cabo point, at the W extremity of the island of Goa, is a prominent headland, 55m high.

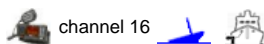
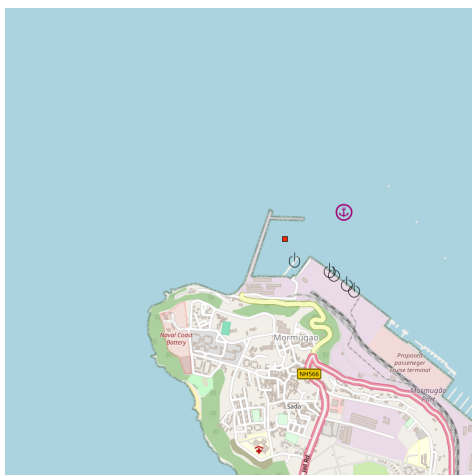
A conspicuous church spire is situated near the seaward end of the headland.




5.43 - Marmagao Port (W India)

15°25.01 N
73°47.57 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



channel 16

 Marmagao (or Mormugao) port is located in marmagao bay that is entered between Marmagao Head and Kabo Point.

The entrance to the bay is encumbered with shoals. The Grandi Islands lie in the S approach to the bay.

The S side of Marmagao Bay is bold and rocky, rising to the tableland of Marmagao Head.

The N shore of the bay between Kabo Point and Nazaret Point, about 4.5 miles ESE, consists of alternating stretches of sand and rock. The land within is

covered with jungle and rises to an elevation of 45m.

A radio mast, with an elevation of 175m, is conspicuous about 2 miles NNW of Nazaret Point.

Marmagao is one of the oldest ports on the west coast of India, protected by a breakwater as well as a mole constructed E of the seaward end of the breakwater. The port lies on the N side by Marmagao Head. It is the leader in exporting iron ore in India as well as manganese ore and alumina. Imports include petroleum products, chemicals, other general cargo and a growing container trade.

Winds?Weather

Occasional strong NE winds from about the middle of February to the end of March cause a heavy swell in Marmagao Bay. These winds usually last from 3 days to a week and decrease in strength from sunset to sunrise.

However, it has been cautioned by the local authorities that the weather deteriorates without warning.

Tides?Currents

The tidal rise at Marmagao is 2.3m at MHWS and 1.6m at MHWN.

Tidal currents in the outer anchorage off Marmagao Bay are weak.

Depths?Limitations

The port is approached through a dredged channel entered between Lighted Buoy No. 1 and Lighted Buoy No. 2, moored 2 miles W of of Marmagao Point.

The channel, which leads to the inner anchorage and the berthing area, is about 4.6 miles long and 250m wide. The channel has been dredged to a depth of 14.4m although lesser depths have been reported (2002).

Vessels up to 70,000 dwt, with a maximum draft of 12m, can berth alongside.

Vessels up to 275,000 dwt can be accommodated in midstream.

The port authority applies an underkeel clearance of 1.2m and a swell allowance of 0.5m. During the Southwest Monsoon period a higher swell allowance is used.

A quay extends 1.5 miles E and SE from the root of the breakwater and affords ten numbered berths, including berths for tankers and ore carriers at its SE end.

Limitations at these berths are given in the accompanying table titled Marmagao Bay?Berth Limitations.

Draft limitations for the above berths are subject to frequent change in conjunction with the state of tide, underkeel clearance, prevailing sea, and weather conditions. Details of changes can be obtained from the local pilot or the Port Officer.

Night navigation is permitted only during the fair season (mid-September to the

end of May), but there are still restrictions placed on vessels working at Berths 9, 10, and 11. Detailed information should be obtained from the Harbor Master if this is applicable.

A floating dock extends NE from Berth:

No. 1. A breakwater extends NE from between Berth No. 2 and Berth No. 3.

Vessels requiring to top-off to their seasonal mark may be permitted W of the breakwater during fair weather season.

Several mooring buoys are situated E and SE of the head of the mole. Five finger piers for small vessels and barges lie within 0.2 mile SE of the Berth No. 9.

Foul ground borders Grandi Island up to 0.3 mile offshore. A 5m patch lies about 0.5 mile NE of the E end of the island; other patches, with depths of 3.9m, lie 0.7 mile N and 0.6 mile NNW of the same position.

Saint Georges Reef, which dries 1.5m, lies about 0.3 mile E of Grandi Island.

Sail Rock, 14m high, lies about 0.5 mile S of the W end of Grandi Island; this pillar rock can easily be mistaken for a sail.

A reef, which dries 1.2m, lies about 0.2 mile NE of Sail Rock.

Saint George's Bank, with a least depth of 6.5m, lies about 0.8 mile WNW of Grandi Island.

Martha Patches, a group of rocky shoals with a least known depth of 2.7m, lie about 1 mile N of Grandi Island.

Marmagao Rocks, with a least depth of 6.1m, lie about 0.5 mile N of Marmagao Point, and are marked on their S side by Lighted Channel Buoy No. 6.

An 8.2m patch and a 7.9m patch lie about 0.5 mile NNW and 1.3 miles W of Marmagao Point.

Amee Shoals, close N of Marmagao Rocks and lying in the middle of the entrance to Marmagao Bay, is a group of shoals with a least depth of 1.8m.

Sunchi Reefs, about 1 mile S of Kabo Rajniwas, are rocky shoals, one of which dries 0.9m. Marivel Patches, with a least depth of 0.4m, lie close NE.

Kambariam Islet (Buffalo Rock), 6m high, lies about 1 mile SW of Marmagao Point, the NW extremity of Marmagao Head. Foul ground extends about 0.2 mile N of the islet.

Sawyer Patches, with depths of 4.9m, lie about 0.5 mile N of Kambariam Islet.

A mole extends E about 0.1 mile from E side of the breakwater; Breakwater East Head Light is shown from a squat masonry tower at the head of the mole.

Tel: +91 832 2521100

+91 832 2521200

Fax: +91 832 2521105

Mail: mptgoa@mptgoa.com Anchorage depth: 7.1m - 9.1m Cargo pier depth: 11m - 12.2m Oil terminal depth: 11m - 12.2m

Max size: Up to 500 feet in length

Pilotage

Pilotage is compulsory. Vessels should send, via their agent, a request for pilotage, at least 48 hours in advance.

Vessels awaiting a pilot may anchor, in about 13m, mud, about 2 miles WNW of Marmagao Point.

The pilot boards about 0.9 mile W of Lighted Buoy No. 1 and Lighted Buoy No. 2. In bad weather, the pilot will guide the vessel from the pilot vessel until boarding is possible.

Pilotage is available 24 hours during the fair weather season (September to May), but is not available at night during the Southwest Monsoon (June to September). During these times, vessels are guided up to the breakwater by the pilot launch and with assistance from the VTMS.

Regulations

Vessels should send their ETA, via their agent, 48 hours and 24 hours in advance.

A Vessel Traffic Management System (VTMS) controls traffic to the approaches to Marmagao Harbor. Vessels should contact Marmagao VTMS Center on VHF channel 16 (call sign: Goa Port) when within 2 hours prior to arrival or no less than a radius of 12 miles from the breakwater.

Vessels at anchor should maintain a continuous listening watch on VHF channel 16.

Anchorage

Large vessels can anchor S of Grandi Island, with shelter from NW winds, in about 18m, mud, about 0.4 mile SW of the SE extremity of Grandi Island. Smaller vessels can anchor, in about 17m, about 0.1 mile ESE of the above point.

Anchorage can be taken in Marmagao Bay, in 7m, about 0.6 mile NE of the head of the breakwater.

Anchorage is prohibited between Searle Patch (15°27'N., 73°48'E.) and Ameer Shoals, 1 mile SW.

Anchorage is also prohibited off the S side of the W end of Grandi Island (15°21'N., 73°46'E.) and about 0.5 mile and 1.5 miles SE of Pikene Island (15°23'N., 73°48'E.).

Directions

Vessels bound for Marmagao Bay from the S should pass about 2 miles W of

Grandi Island and about 1 mile W of Kambariam Islet, then steer NE to enter the buoyed channel.

Vessels approaching from N should steer to pass about 2 miles W of Aguada Head (15°29'N., 73°46'E.), then keep Kambariam Islet in range with the E end of Grandi Island, bearing 168°; this leads W of all dangers in the entrance to Marmagao Bay.

Caution

At night do not proceed into depths less than 13m when between Aguada Head and the Saint George's Islands.

The sea breaks heavily on the dangers in the entrance during the Southwest Monsoon.

During the Southwest Monsoon, in presence of heavy swell at the approach to the port, good steerage should be maintained while rounding the breakwater to avoid being set E; ensure there is sufficient underkeel clearance to allow for the swell and maneuvering.

A spoil ground lies 2 miles WNW of Marmagao Point.

Dangerous wrecks lie 1.3 and 0.8 miles from the fairway buoy.

Submarine Exercise Areas are centered 30 miles and 45 miles W and 20 miles SW of Marmagao Head.

A channel, marked by lighted and unlighted buoys, leads S of the spoil ground and N of Marmagao Head to the harbor.

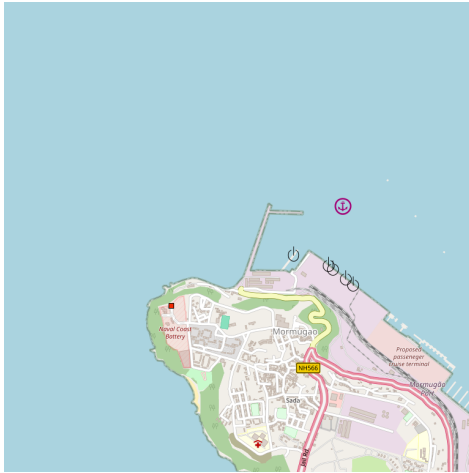



5.44 - Marmago Head (W India)

15°24.71 N
73°47.09 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India





 Marmagao Head, about 61m high, is a tableland peninsula with steep sides, especially W. It is connected to the mainland SE by a narrow neck of low ground. A conspicuous water tower, with an elevation of 74m, is situated about 0.5 mile SE of Marmagao Point.

North Head Breakwater Light is shown from a white concrete tower at the N point of the breakwater.

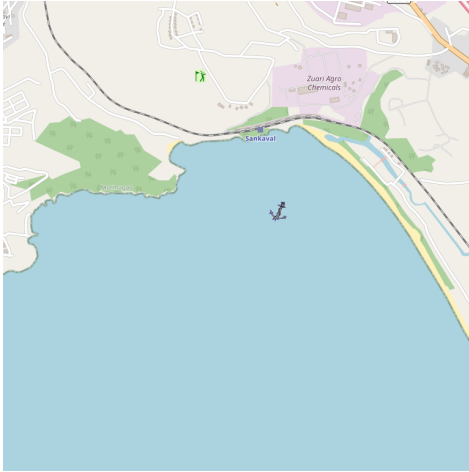



5.45 - Cola Bay (W India)

15°21.91 N
73°52.16 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India





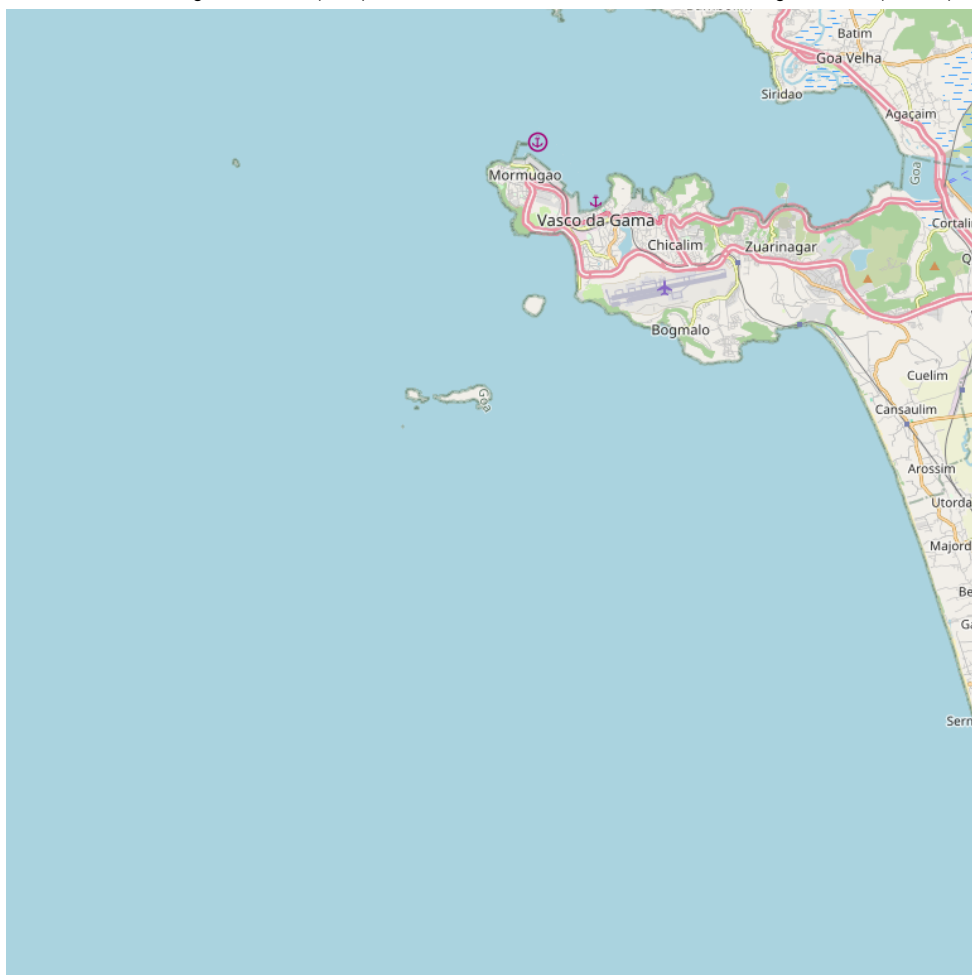
 The coast between Cola Bay and the Sal River, about 14 miles SSE, consists of low cultivated land with several churches on small hills. Anchorage, sheltered from NW winds, can be taken, in a depth of about 7m, in Cola Bay.




5.46 - St George's Islands (W India)

15°21.82 N
73°46.78 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - St George's Islands (W India)



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 St George's Islands consists of three islands between 1.5 and 2.5 miles SSW of Marmagao Head.

Grandi Island is the collective name of the two S islands of the group, which are connected by a narrow reef of rock and shingle.

The W of the two islands, 76m high and conical, is bold, rocky, and covered with trees towards its summit.

The E island rises to a 76m summit at its E end, which, with the N side of the island, is covered with jungle. Sail Rock, lies close SSW of the E most Grandi Island and remains uncovered to a height of 13m with a wreck next to a reef that covers and uncovers to 1.5m close NE.

Pikene Island, the third island of the St George's group, is about 61m high and lies about 1.5 miles NE of Grandi Island.

This circular island is flat-topped, precipitous, and covered with trees.

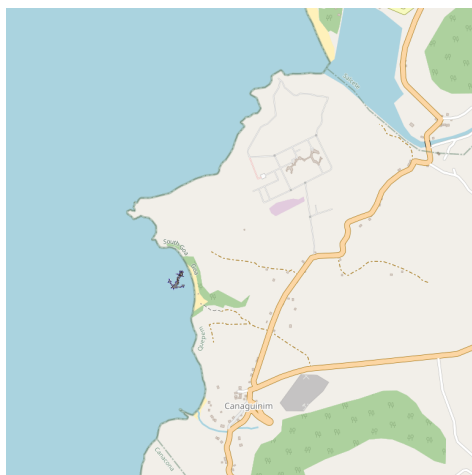
Grandi Island Light is shown from a four-sided metal tower on the summit of the W island. In 1974, an obstruction was reported 1.5 miles WSW of Grandi Island Light.


A prohibited anchorage projects 1.8 miles W and 1 mile S from the W end of Grandi Island.

5.47 - Canaguinim Bay (W India)

15°07.67 N
73°56.33 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Canaguinim Bay is entered between Canaguinim Point, about 1 mile SW of Betul Point, and Moliem Point, about 2 miles SW.

Two rock patches, each drying 1.2m, lie about 0.1mile and 0.3 mile, respectively, SW of Canaguinim Point.

Cliffs, about 38m high, lie on the E half of the bay. A rocky islet, 0.9m high, lies at the head of the bay.

Anchorage can be taken, in 9.1m, 0.5 mile NNE of Moliem Point.

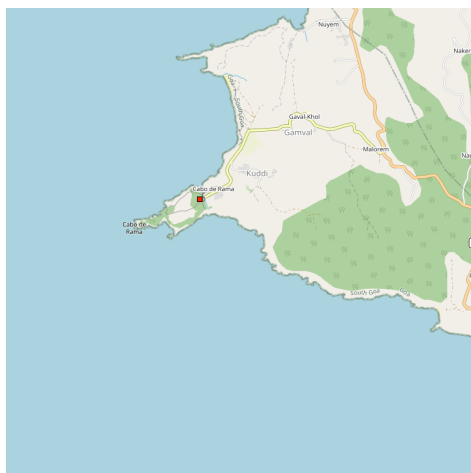



5.48 - Rama cape (W India)

15°05.31 N

73°55.27 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 The coast between Khanderi Island and Cape Rama, about 228 miles SSE, consists of sandy bays separated by bold rocky capes.

There are a number of river estuaries and it is often bordered by tableland in the middle of its S part. The Western Ghats, which are generally from 609 to 904m high, with some peaks nearly 1,524m high, lie like a wall parallel to the coast at an average distance of 30 miles inland.

Cape Rama projects 1 mile W from Rama False Bluff, which rises abruptly E of the tableland of Cape Rama to a height of about 200m. The land then rises gradually E in a succession of hills for a distance of 4 miles and terminates in East Peak, 448m high. Kankon Peak (Kanakona Peak), 646m high, about 9 miles ESE of Cape Rama, is the W summit of a range of hills extending E, and is separated from East Peak by a gap.

Cape Rama is prominent and has a fort on it, but during the thick weather of the Southwest Monsoon, no part of this coast is visible for more than 4 or 5 miles. Good radar returns have been reported from Cape Rama at 16 miles.

Pandigat Point (Paidegal Point), about 5.5 miles SE of Cape Rama, is a steep projecting headland rising to an height of 192m; a village is situated on its N side.

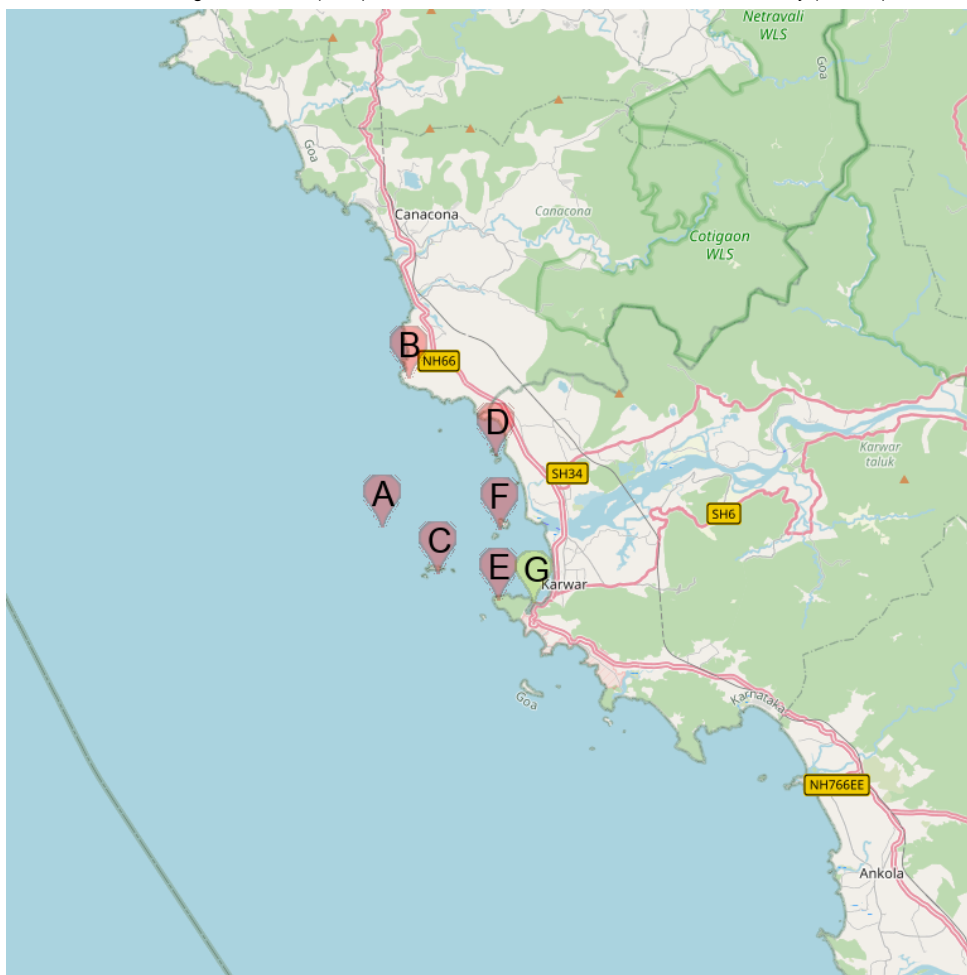
Kankon Islet, fringed by a reef, lies about 2 miles farther SE.




5.49 - Karwar Bay (W India)

14°51.76 N
74°04.68 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Karwar Bay (W India)



- A Parker Rock (W India)
- B Loliem (Lolien) Point (W India)
- C Oyster Rocks - Mandal and Karkal islands (W India)
- D Kangiguda Island (W India)
- E Karwar Head (W India)
- F Kurmagadgudda island and Shimisgudda Island (W India)
- G Karwar Port (W India)

 Karwar Bay is entered between Dayamada Point, the N entrance point of Kalinadi Creek, and Badchidhar Point, the NW extremity of Karwar Head, about 2.8 miles SSW. Karwar Head, with an elevation of 207m, is covered with dense jungle.

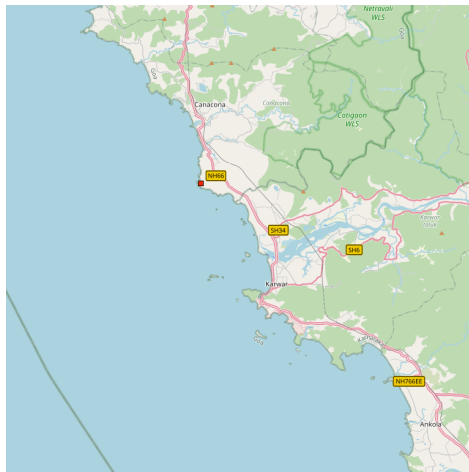
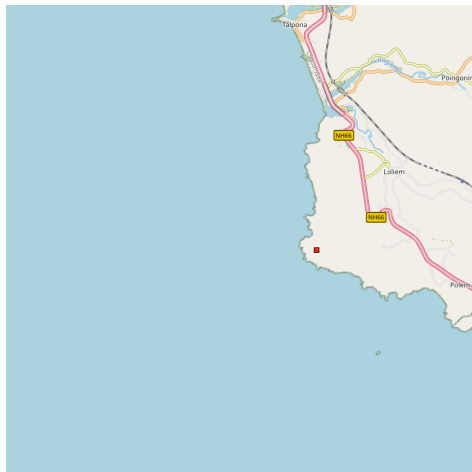
The entrance leading to Kalinadi Creek is much encumbered by sand banks and the channels are subject to frequent change.

5.49.1 - Loliem (Lolien) Point (W India)

14°55.24 N

74°02.83 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Karwar Bay (W India)



 Loliem Point (Lolien Point), in the N approach to Karwar, attains an elevation of 175m about 0.2 mile inland, and is steep, rocky, and well-wooded.

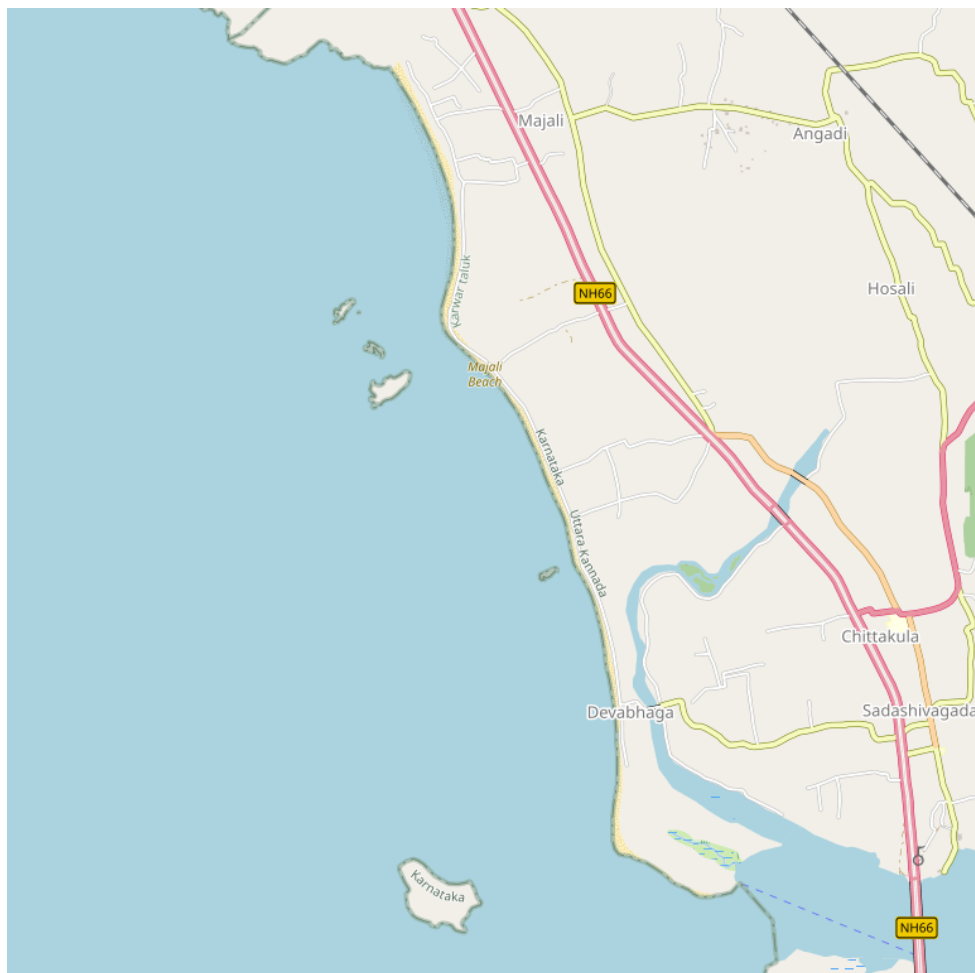
Loliem Rocks, awash at LW springs, lie about 1 mile S of Loliem Point; a rock, with less than 1.8m over it, lies about 0.2 mile N of the rock. Black Rock (Kumbae), 19m high and fringed with rocks, lies about 1.8 miles SE of Loliem Point.

5.49.2 - Kangiguda Island (W India)

14°52.79 N


74°05.71 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Karwar Bay (W India) - Kangiguda Island (W India)



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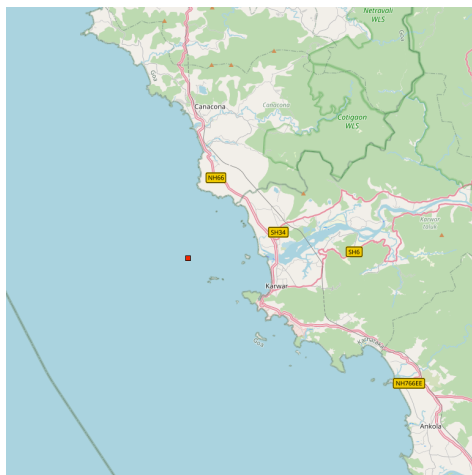
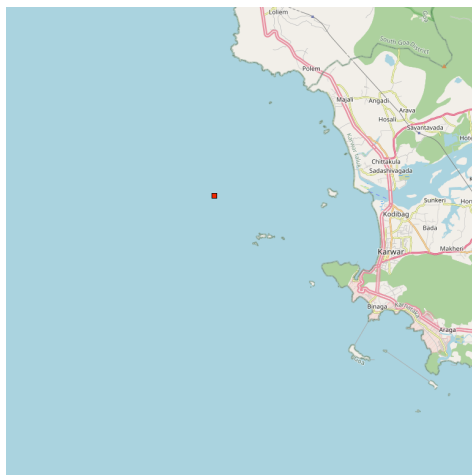
 Kangiguda Island, 51m high, lies about 4 miles SE of Loliem Point and about 0.2 mile offshore.


5.49.3 - Parker Rock (W India)

14°50.53 N

74°01.98 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Karwar Bay (W India)

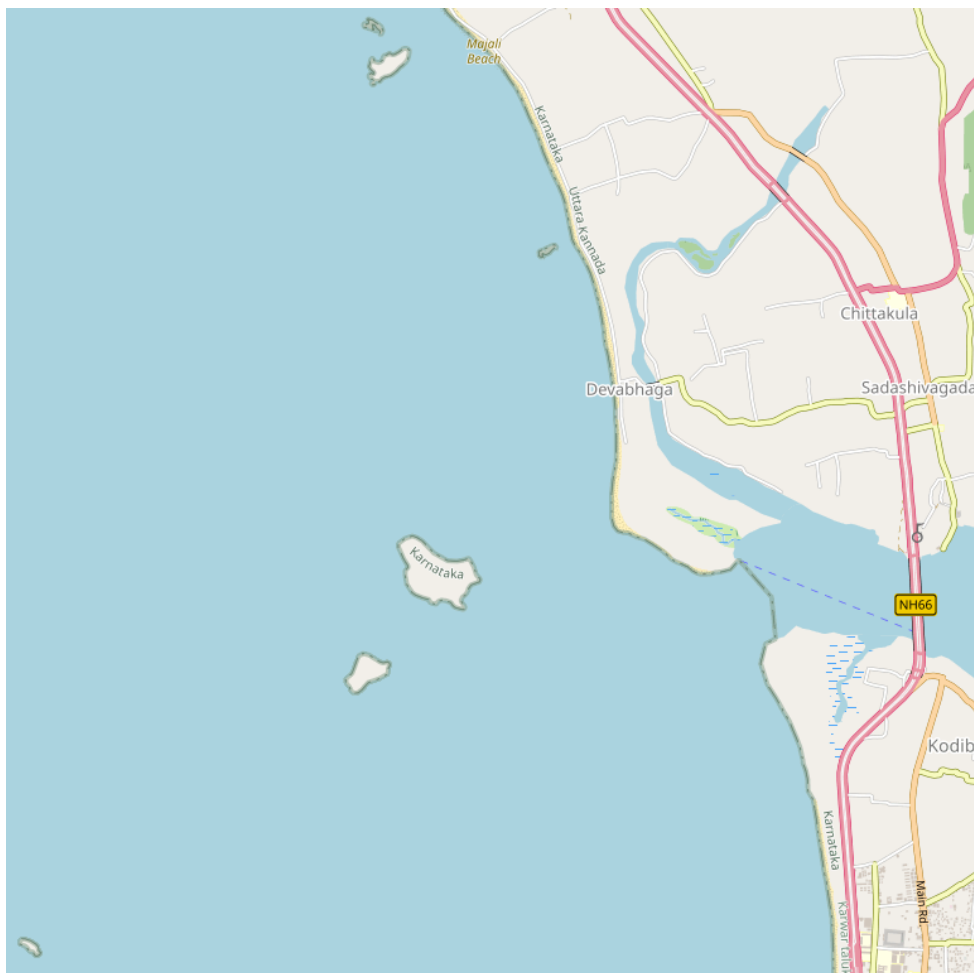


 Parker Rock, with a least depth of 4.7m, rock, sand, and shell, lies about 2.5 miles NW of Devgad Island.


A detached 10m patch lies close E of the rock. A breakwater, 250m in length, lies close S of the end of the approach channel.

5.49.4 - Kurmagadgudda island and Shimisgudda Island (W India) 14°50'46" N 74°05'08" E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Karwar Bay (W India) -
Kurmagadgudda island and Shimisgudda Island (W India)

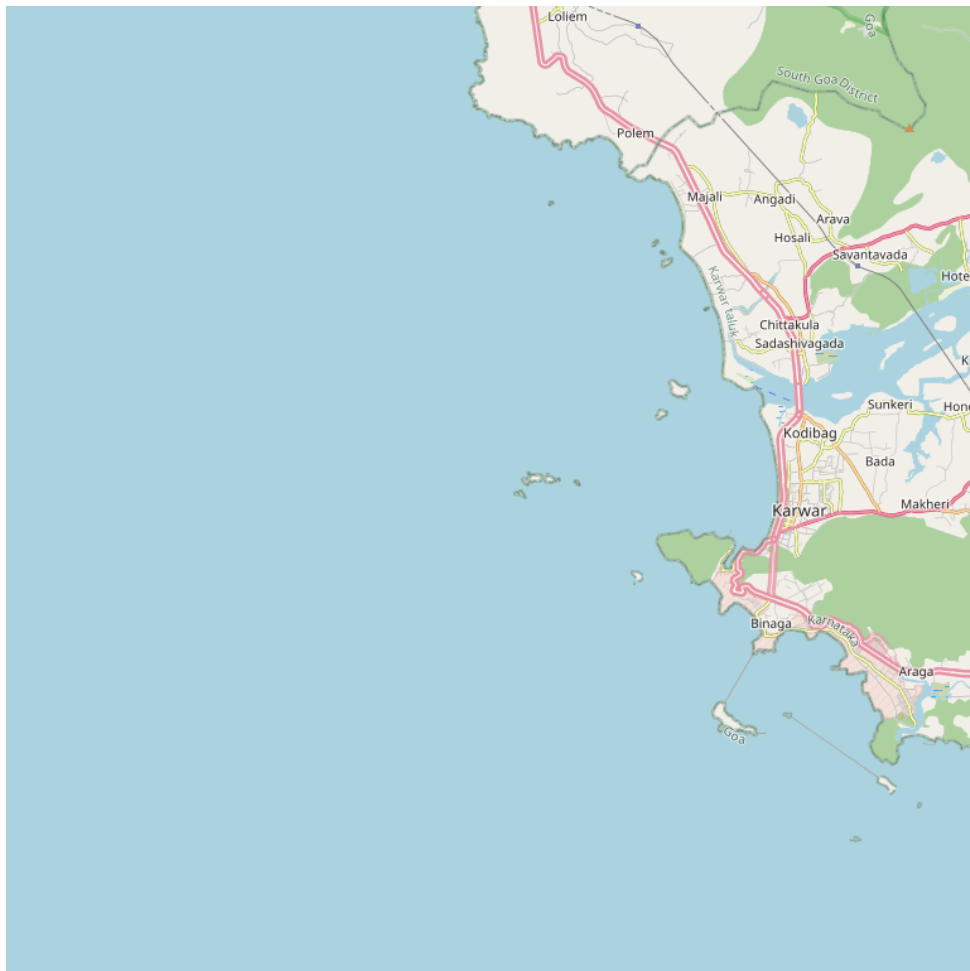


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 Kurmagad Island (Kurmagadgudda Island), encircled by fortifications and with its summit rising to a height of 60m, lies about 2.5 miles N of Karwar Head. The island is surrounded by foul water, but there is a safe narrow channel, with charted depths of about 7m, between Kurmagad Island and Sunghiri Island (Shimisgudda Island), 31m high, about 0.2 mile SW.


5.49.5 - Oyster Rocks - Mandal and Karkal islands (W India) ^{14°49.06 N}_{74°03.78 E}

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Karwar Bay (W India) - Oyster Rocks - Mandal and Karkal islands (W India)



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 Oyster Rocks consist of a prominent group of islands and rocks. Devgad Island (Devgadgudda Island), 44m high to the tops of the trees, is the largest and highest island; it is bold, rocky, and steep-to on its W side.

Oyster Rocks Light, with a racon, is shown from a red round masonry structure, with white bands and a white cupola, on the summit of Devgad Island.

Mandal Island (Mandelgudda Island), 26m high, lies about 0.2 mile SW of

Devgad Island; a 5.2m patch lies about 183m E of the island.

Karkal Island (Karkaigudda Island), 33m high and covered with jungle, lies close E of Devgad Island. East Island, a bare rock, 9m high, lies about 0.3 mile farther E. A 0.3m patch lies between Karkal Island and East Island.

During the Southwest Monsoon, anchorage can be obtained NE of Karkal Island (Karkaigudda Island), in 10m, soft mud, with Oyster Island Light bearing 248°, distant about 0.8 mile.

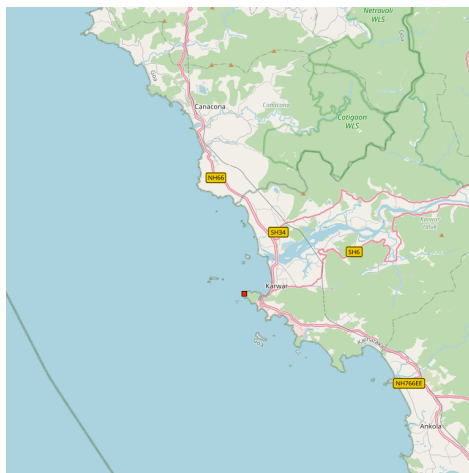
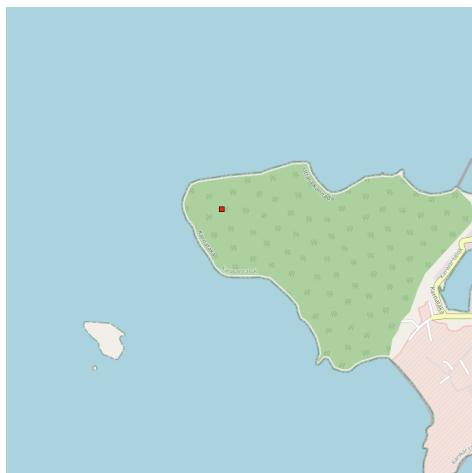
A rock, which dries 1.2m, lies close E of East Island; the sea breaks over this rock at HW. A detached shoal, with a depth of 2m lies close SE of this rock.


5.49.6 - Karwar Head (W India)

14°48.21 N

74°05.75 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Karwar Bay (W India)



 Range beacons N of Karwar Head lead through the dredged channel to Karwar. The initial range is picked up between Oyster Rocks and Karwar Head.

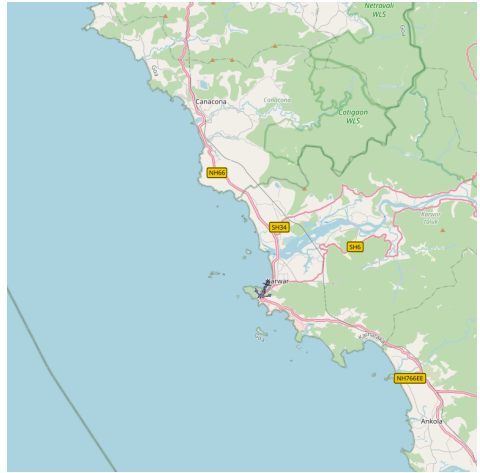
5.49.7 - Karwar Port (W India)


14°48.14 N

74°06.91 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Karwar Bay (W India)





 Karwar is a lighterage port on the SE side of Karwar Bay. Karwar is also a seaside town situated on the banks of the Kali river.

Karwar port is located in Baitkol area of Karwar town on the edge of Karwar bay. The bay's mountain range opposite the port towards the Arabian Sea protects the ships berthed at the port from the sea waves, which makes Karwar among the best natural harbours in the world.

Tides?Currents

The average maximum tide rise is 1.6m MHWS and 0.7m at MHWN.

Depths?Limitations

A channel, about 2.5 miles long, 150m wide, and dredged to a minimum depth of 10.0m to as deep as 10.7m, leads to the Baitkal Cove, where the alongsidewharf facilities for Karwar are located.

The channel is marked by ranges. There is a turning circle dredged to a depth of at least 10m at the junction between the approach channel and Baitkal Cove.

On the SE side of Baitkal Cove is a quay, 560m long, divided into two berths. One berth, 355m in length, can accomodate two vessels with a maximum draft of 9.75m; the other berth is a lighterage wharf, 205m in length, dredged to a depth of 2.5m alongside. A stone masonry wharf, nearly 244m in length with an alongside depth of 2.5m, is located in the NW side of Baitkol Cove.

Tel: +91 838 2221342 or +91 838 2221494

Fax: +91 838 2228918

Mail: dir@karnatakaports.in Anchorage depth: 9.4m - 10m Cargo pier depth: 6.4m - 7.6m

Max size: Up to 500 feet in length

Pilotage

Pilotage is compulsory and available 24 hours.

Pilots are contacted on VHF channels 10, 12, and 16.

Vessels waiting for the pilot to board may anchor about 0.65 mile SSE of Oyster Rocks Light, in a depth of about 12m, soft mud and sand.

Regulations

Cargo operations at the anchorage are suspended during the Southwest Monsoon period (May-September.)

Baitkal Cove provides year-round all-weather operations.

The vessel should send its ETA 48 hours in advance.

Directions

Vessels approaching or entering Karwar Bay, either by day or night, should have no difficulty after having made Oyster Rocks Light.

Approaching from N, pass on either side of Sunghiri Island (Shimishgudda Island) according to draft.

The SW extremity of Kurmagad Island (Kurmagagudda Island), bearing 131° in range with Guddehalli Betta, leads SW of Loliem Rock.

At night, steer for Port Karwar Light, bearing 124°, if proceeding to the inner anchorage.

The E end of Mogeraguda Island in range with the W end of Anjadip Island bearing 154°, barely leads clear of, by less than 0.2 mile, the dangers E of Oyster Rocks.

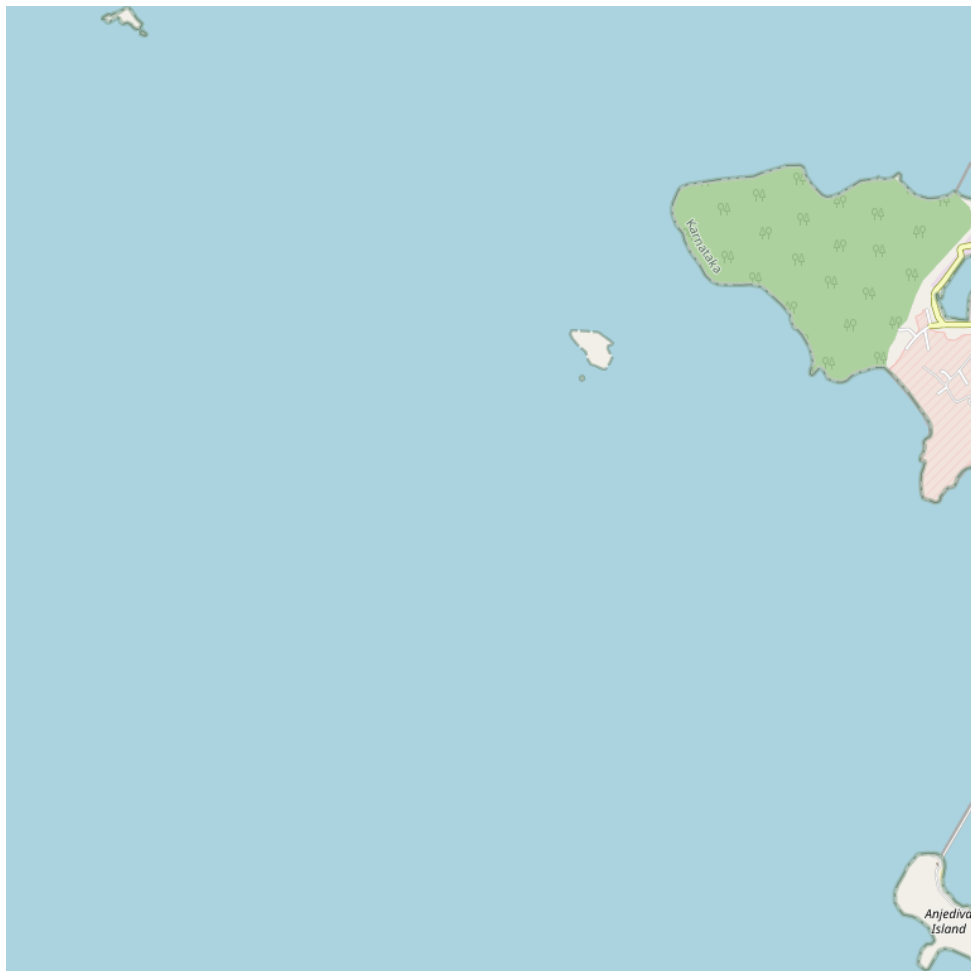
If approaching from S, pass between Oyster Rocks and Karwar Head. The summits of Kurmagadgudda Island and Ramnathguda, in range bearing 036°, lead clear of the dangers E of Oyster Rocks; a white framework tower stands on the summit of the island.

The principal anchorage for working cargo (October-April) is in the SE portion of Karwar Bay, in a depth of about 7m, soft mud.


5.50 - Mogeragudda Island and Gudsar Sunv (W India)

14°47.75 N
74°05.15 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Mogeragudda Island and Gudsar Sunv (W India)



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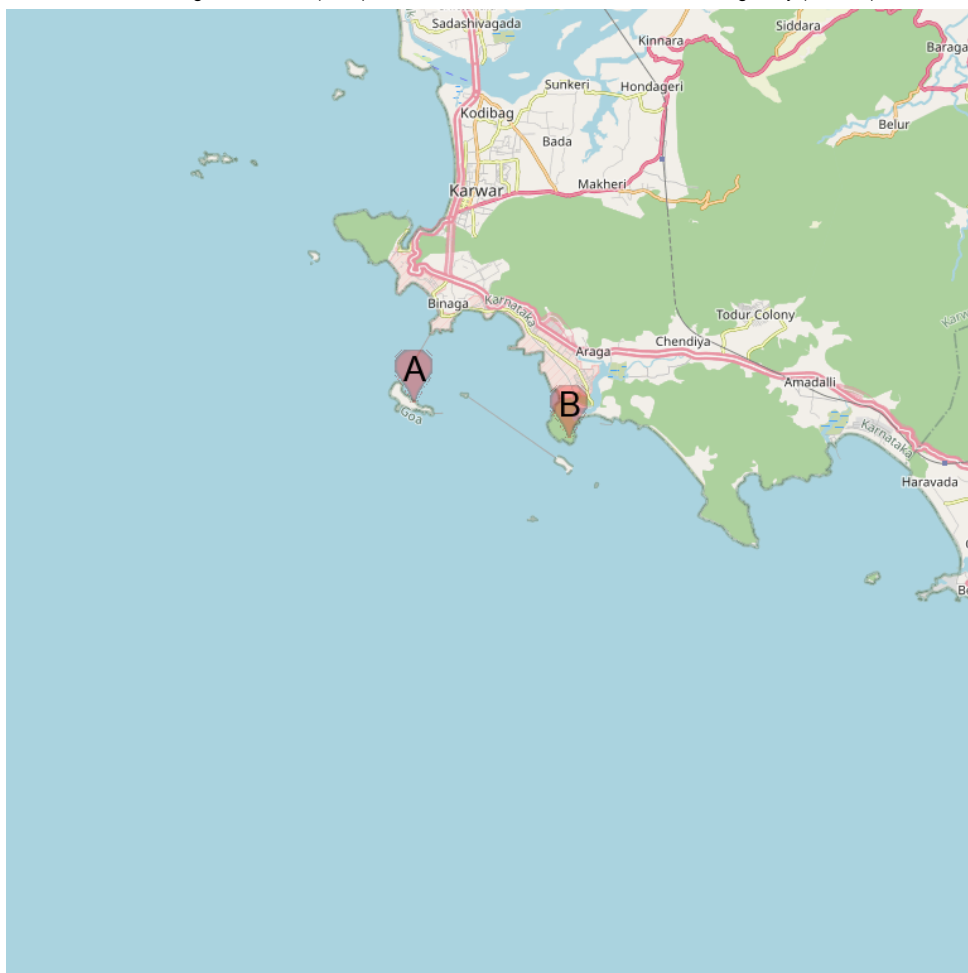
 Mogeragudda Island, 56m high, rocky, and covered with jungle, lies about 0.5 mile SW of Karwar Head. A 4.3m patch lies about 0.3 mile SSW of the island. Gudsar Sunv (Karwar Rock), with a least depth of 2.4m, lies about 0.5 mile WNW of Mogeragudda Island.

The channel between Mogeragudda Island and Karwar Head is free from dangers, with a least charted depth of 7.6m in the fairway.

5.51 - Binge Bay (W India)

14°45.64 N
74°08.03 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Binge Bay (W India)



 A Anjadip Island (W India)

 B Arge cape (W India)

 Binge Bay lies between Binaga Point and Arge Cape, 2.5 miles SE.

A restricted area, into which entry is prohibited, extends from a position about 0.5 mile SE of Karwar Head to Kwada Point.

A major naval base, which includes shipbuilding and repairs facilities, is located on the NE side of the bay. The base is approached through a dredged channel initially heading N between Anjadip Island and Round Island, then NE and E to the Naval Jetty. This channel has maintained depths of 14m in its outer part E of Anjadip Island, 13m in a short stretch W of

Round Island, and then 12m from Round Island to the Naval Jetty.

The outer part of the channel is marked by lighted buoys, unlighted buoys, and range beacons in line bearing 359°. North Breakwater connects Binaga Point with the N extremity of Anjadip

Island; South Breakwater connects the SE extremity of Round Island with the NW extremity of Arge Island.

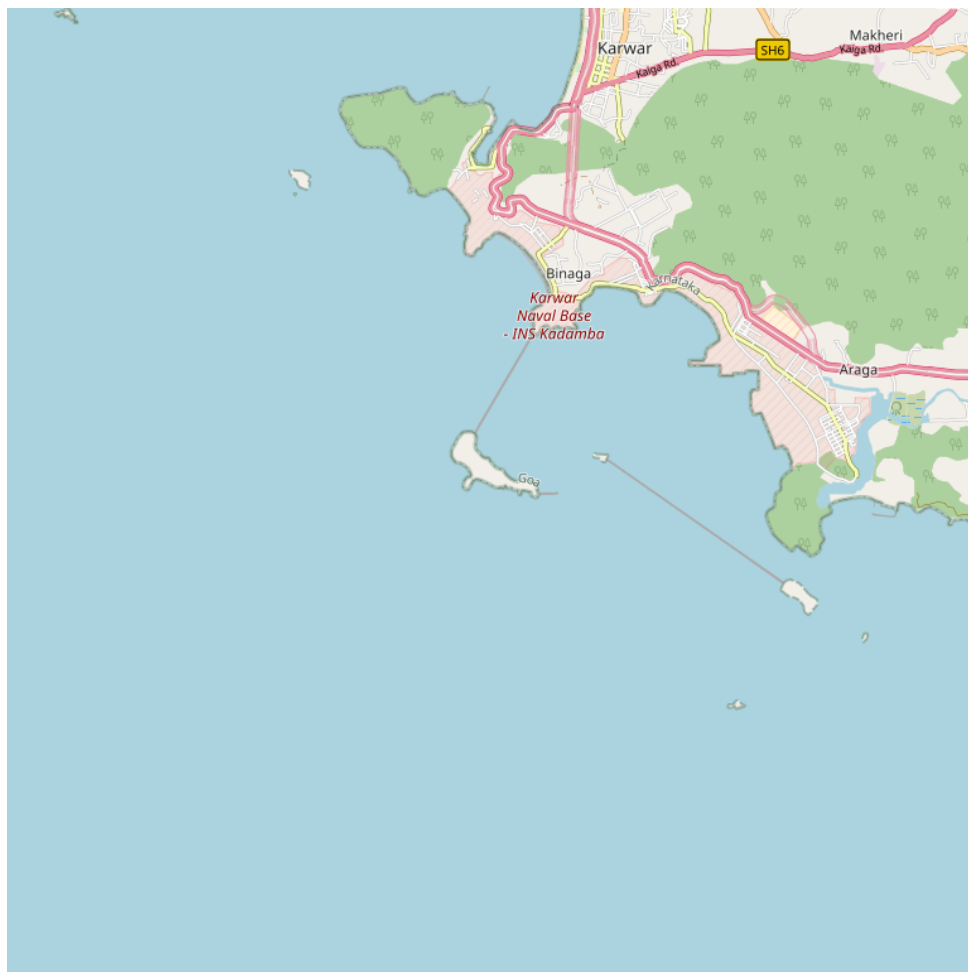
Anchorage can be obtained about 0.4 mile ENE of Round Island, in a depth of 11.7m, mud. A prohibited anchorage area lies about 0.4 mile SW of the Naval Jetty.

5.51.1 - Anjadip Island (W India)

14°45.38 N


74°06.90 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Binge Bay (W India) - Anjadip Island (W India)



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 Anjadip Island (Angediva Island), in the S approach to Karwar, lies about 3 miles S of Karwar Head.

A flagstaff lies at an elevation of 72m near the NW end of the island, with a church close ENE of it.

A shoal patch, with a least depth of 3.2m and marked close E by a buoy, lies about 0.2 mile SE of the SE extremity of the island.

Round Island, 19m high and fringed by reef, lies about 0.7 mile ENE of the same extremity.

The island forms a good breakwater and vessels have ridden out the Southwest Monsoon here. A strong current sets SE during this season.

Caution

A circular spoil ground, with a radius of 1 mile, lies about 1.8 miles SW of the SW extremity of Anjadip Island.

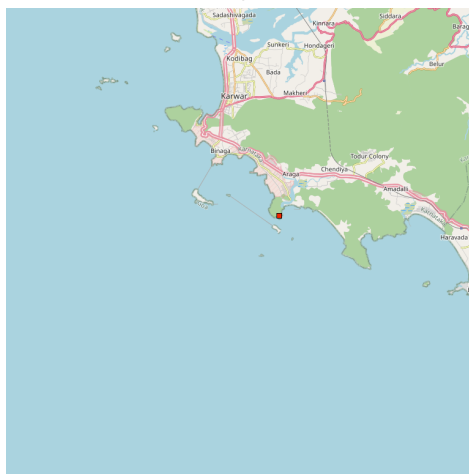
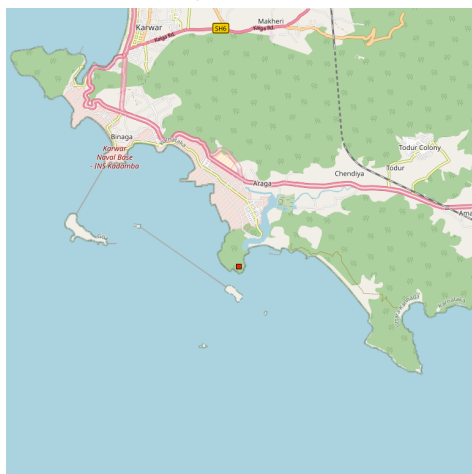
A submarine pipeline is laid from a position ashore between Binaga Point and Baitkal Point, in a SW direction for about 0.5 mile, then for 1.5 miles in a WSW direction.


Vessels are advised to avoid anchoring in the vicinity.

5.51.2 - Arge cape (W India)

14°44.82 N
74°09.43 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Binge Bay (W India)



 Arge Cape has a summit close within the cape, 168m high. Arge Island, 52m high, lies about 0.2 mile S of the cape.

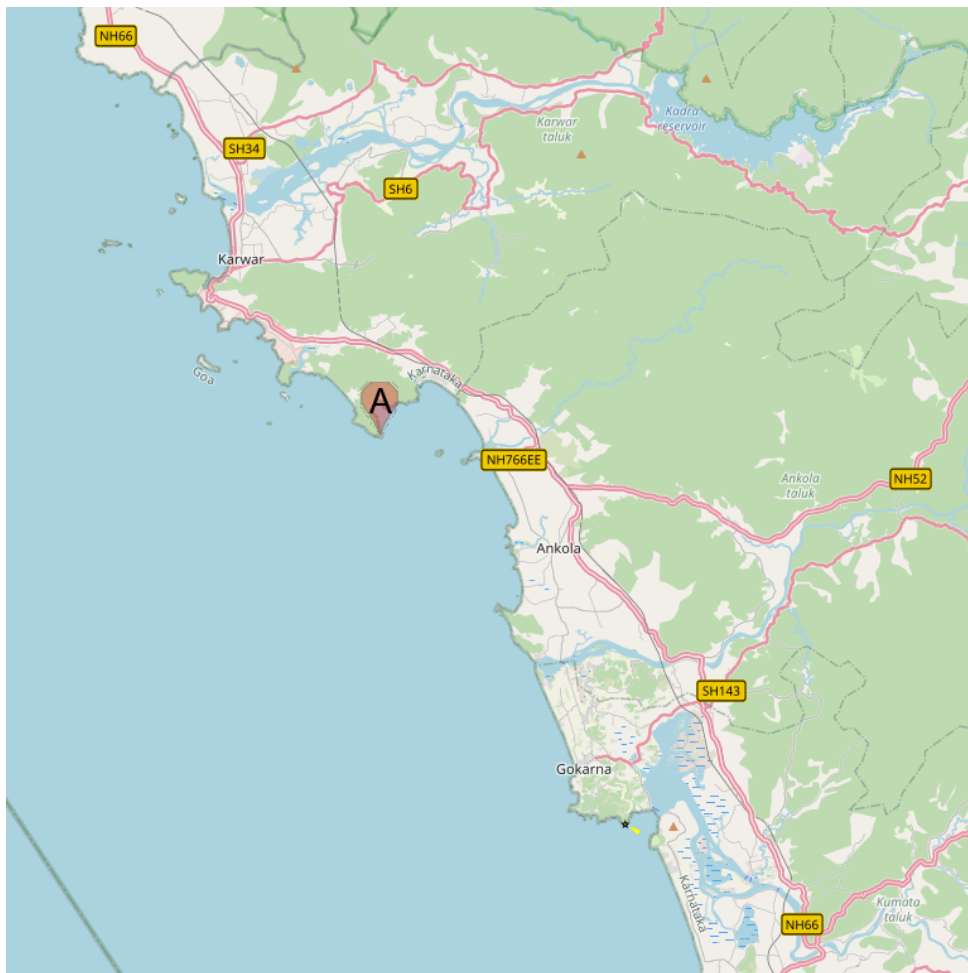
Button Rock, small and black, lies about 1.5 miles SSW of Arge Cape.


Kukra Islet, 55m high and wooded, is conspicuous about 1.3 miles W of Belekeri Point. A light is shown, from September to May, from a white tower with black bands on Kukra Islet.


5.52 - Belekeri (W India)

14°43.68 N
74°14.35 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Belekeri (W India)



 Kwada point (W India)

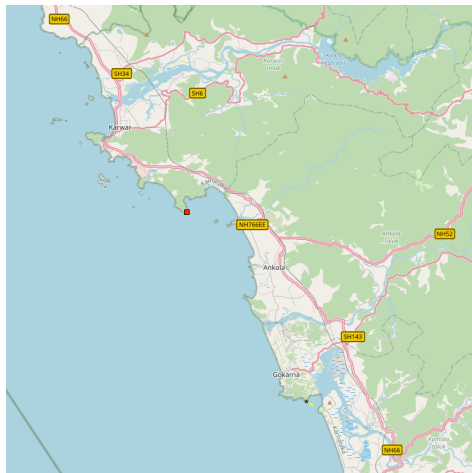
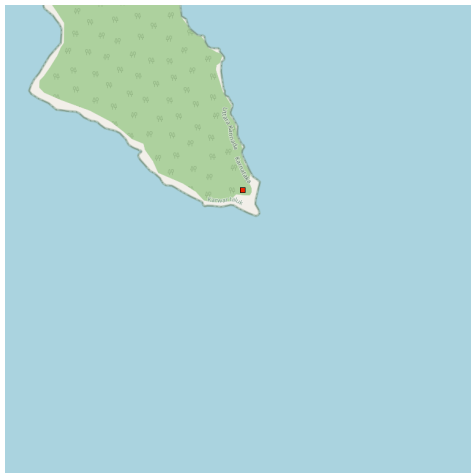
 Belekeri Bay (Roads) has depths of less than 5m. Foul ground extends about 0.7 mile W of Belekeri Point, a low, flat, and rocky point at the head of the bay. Several small islets lie close N and about 0.2 mile WSW of the point.


5.52.1 - Kwada point (W India)

14°43.18 N
74°12.44 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Belekeri (W India)



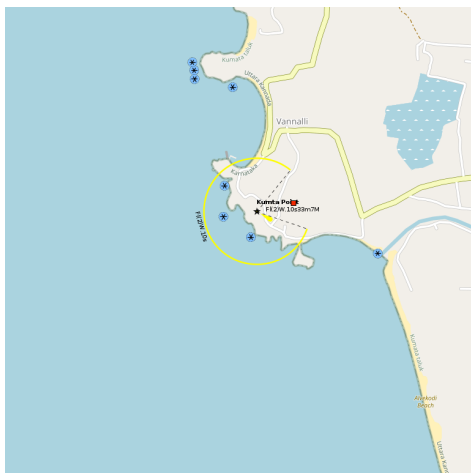



 Kwada Guda, about 0.8 mile NW of Kwada Point, is the conspicuous summit of a steep, rocky headland, 216m high. It's the N cape of Belekeri bay. Belekeri Hill, 474m high and prominent from S and W, lies about 3.5 miles ENE of Kwada Point, at the SW end of a range which rises near the coast N of Belekeri Creek.

5.53 - Kumta point (W India)

14°25.27 N
74°23.20 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



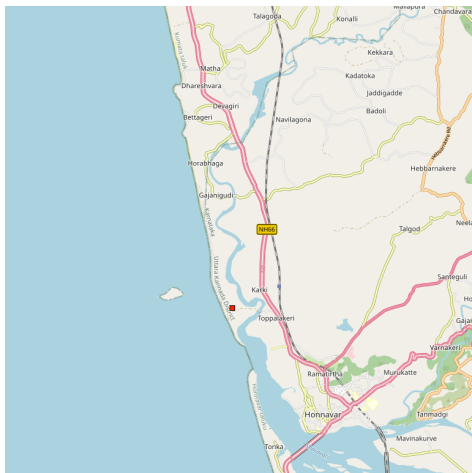
 Kumta Point (Kumpta Point), marked by a light, shown from mid-September to mid-June, lies at the N entrance to a creek, with the town of Kumta about 1.5 miles E.


Snail Rock, 7m high, lies about 1.8 miles NW of the point, and 0.8 mile offshore; it resembles a snail when seen from N.A rock, awash, lies 0.5 mile N of Snail Rock.

5.54 - Basavrajurg island (W india)

14°18.60 N
74°25.16 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Basavrajurg Island (Baswaraj Drug) is 51m high and conspicuous. It is the site of an old fort, in ruins, and is covered with trees and bushwood.

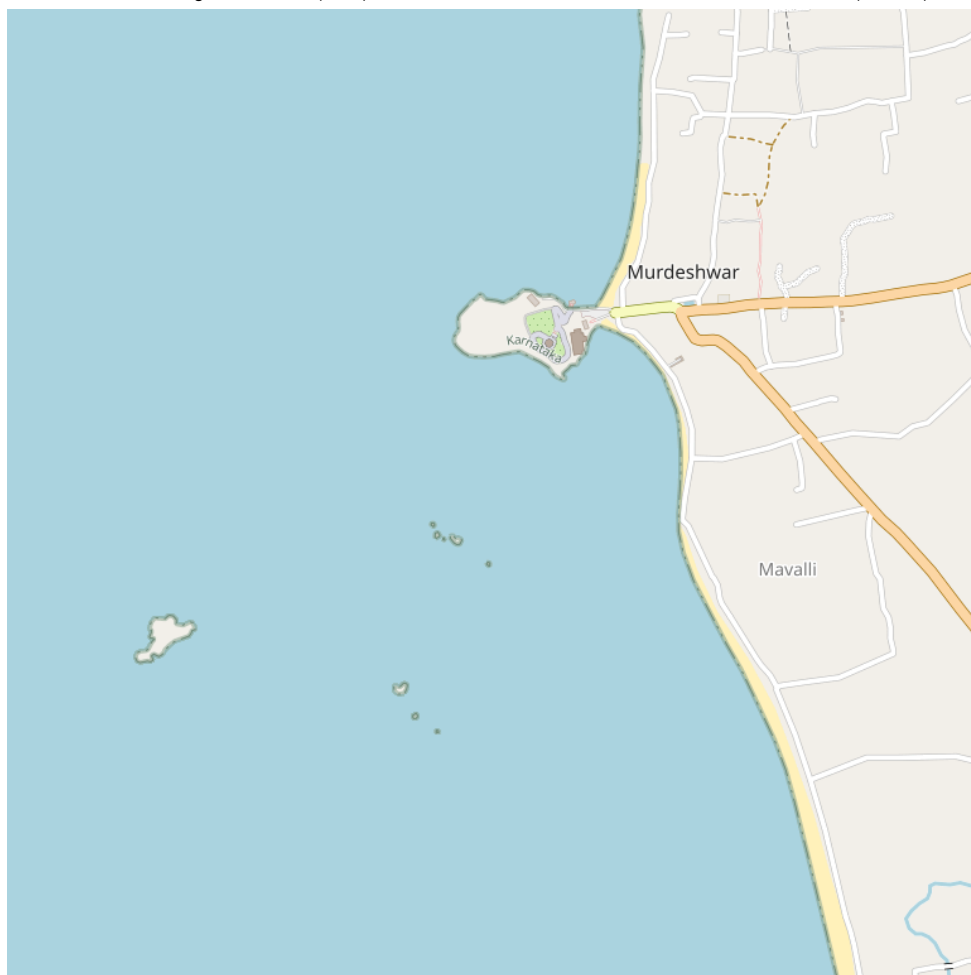
Indravati Patch, about 0.6 mile W of Basavrajurg Island, is a rocky shoal with a depth of 4.6m; a 5m patch lies midway between the rocky shoal and the island.

5.55 - Murdeshvar islet (W India)

14°05.63 N


74°28.97 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Murdeshvar islet (W India)



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 The coast between Honavar and the entrance to the Bhatkal River, is low and sandy with some rocky points. A ridge, reaching an elevation of about 150m, extends about 2 miles along the coast from a position about 3 miles S of Honavar.

The ridge is covered with brushwood and contrasts strongly with the sandy shore; the cliffs, 46m high at its base are prominent.

Murdeshvar, an islet 32m high, lies about 6.5 miles S of the above ridge.

A rocky island, 9m high, lies about 0.8 mile SW of Murdeshvar at the W end of foul ground extending from the coast.

Hawkins Reef, awash, lies with its SW extremity about 1 mile NW of Murdeshvar and about 1 mile offshore.

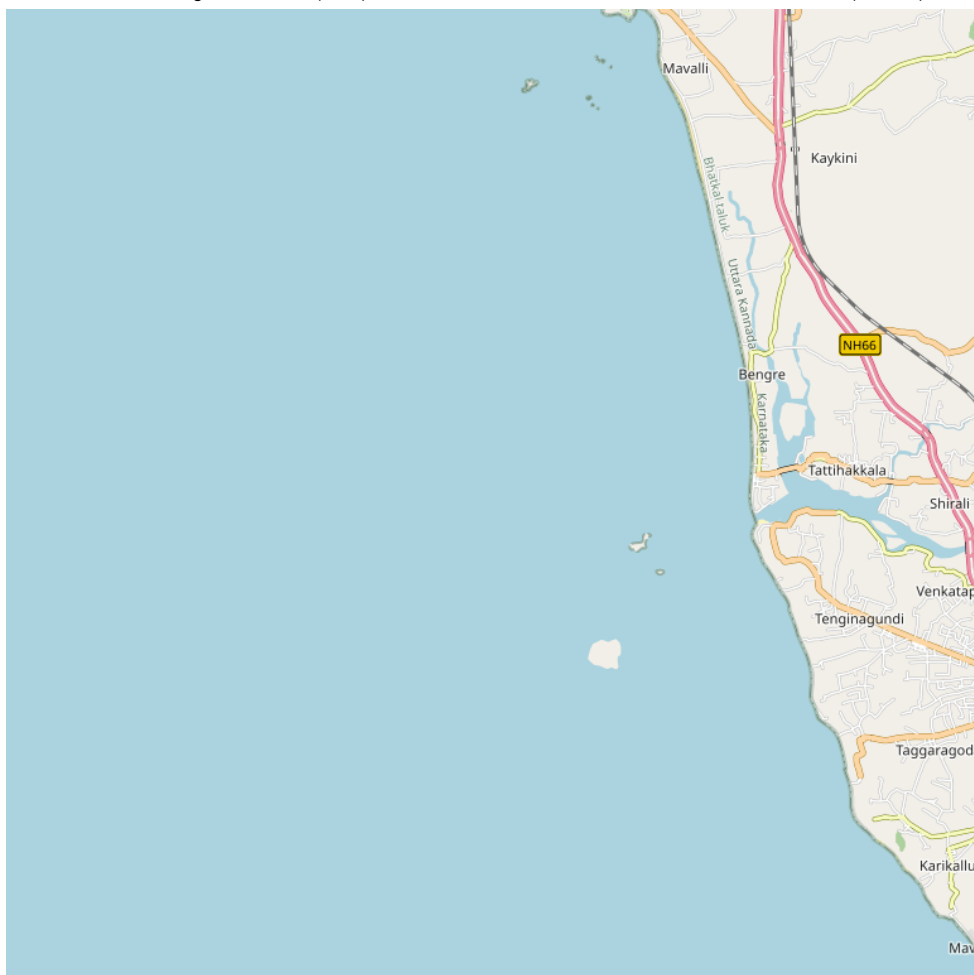
Dart Rock, with a least depth of 2m, lies about 1.8 miles WSW of Murdeshvar.

5.56 - Kerekund island (W India)

14°01.57 N


74°29.16 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Kerekund island (W India)



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 Kerekund, a rocky islet 19m high, lies about 4 miles S of Murdeshvar and on the W edge of the coastal reef. A rock, 3m high, and a rock, 7m high, lie about 0.5 mile NNE and SE, respectively, of the islet.

Between Kerekund and Bhatkal Fort, about 4.5 miles SE, the low and sandy coast is fringed by foul ground extending up to 1.8 miles offshore.

Shirali (Hog Island), about 1 mile S of Kerekund, is a peaked island 109m high.

Two rocks, each drying 1.2m, lie close W and 0.2 mile SE, respectively, of the island.

When in the vicinity of this island do not enter into depths of less than 18m.

5.57 - Netrani (Pigeon Island) (W India)


14°00.92 N
74°19.83 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Netrani (Pigeon Island) (W India)



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 Netrani (Pigeon Island), about 9 miles W of Shirali, and 10 NM of Murudeshwara, is a coral island, wooded and flat-topped with a conspicuous summit, 101m high. It is steep-to except for a rock, 16m high, off its S end, and a rocky shoal close E of the island.

This Island has some of the best sites for scuba diving easily accessible from Goa, Mumbai or Bangalore. There are many dive

shops from Goa that regularly organize dive expeditions to Netrani. The island adjacent to Netrani is used by the Indian navy for target practice. It is not recommended to visit Netrani without permission.

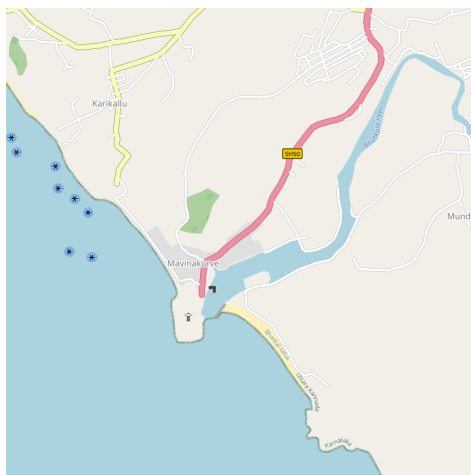


Netrani (Pigeon Island) (W India)

5.58 - Bhatkal port (W India)

13°58.08 N
74°32.08 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



This port is well - protected port on the bank of Bhatkal river. Presently fishing vessels are utilising the facilities of this port.

Caution.?When approaching the port of Bhatkal, do not proceed into depths of less than 18.3m unless local knowledge is available.

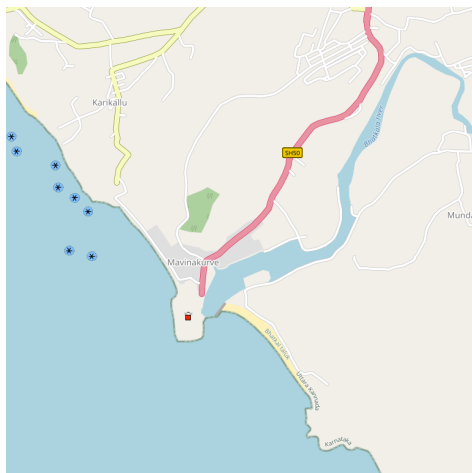



Bhatkal should be one of the biggest and bigger port of karnataka and also in india should be at top

5.59 - Bhatkal lighthouse (W India)

13°57.97 N
74°31.98 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Bhatkal Fort, in ruins, lies on a rocky point, 46m high, at the entrance to the Bhatkal River.

Bhatkal Light is shown from a square masonry tower with red bands on the fort, and is obscured by Shirali on bearings between 129° and 132°.

The town of Bhatkal lies on the N bank of the river, about 1.5 miles NE of the fort.

The channel over the river bar is very narrow and dangerous for ship's boats.

Anchorage may be obtained, in 10m, with Bhatkal Light bearing 075°, distant 1 mile. Small vessels may anchor, in 7m, sand and shell, with Bhatkal Light bearing 014°, distant 0.3 mile.

Caution. When approaching from the S, pass W of a 3m rocky shoal which lies about 1 mile SW of Bhatkal Light . Take care to avoid other rocky patches in the approach to Bhatkal, including two 5m patches and a 4m patch which lie about 1.3 miles WSW, 1 mile S, and 0.8 mile W, respectively, of Bhatkal Light.

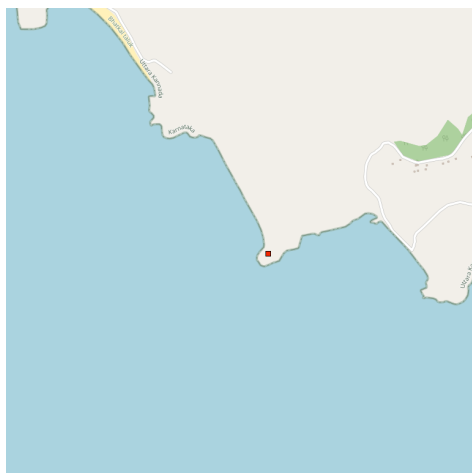
When approaching from the N, keep the summit of Shirali bearing not less than 006°, and alter course for the anchorage when Bhatkal Light bears 090°.




5.60 - Huddi Point (W India)

13°56.95 N
74°32.97 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 The coast between Bhatkal and Huddi Point, about 1.3 miles SE, consists of cliffs up to about 60m high.

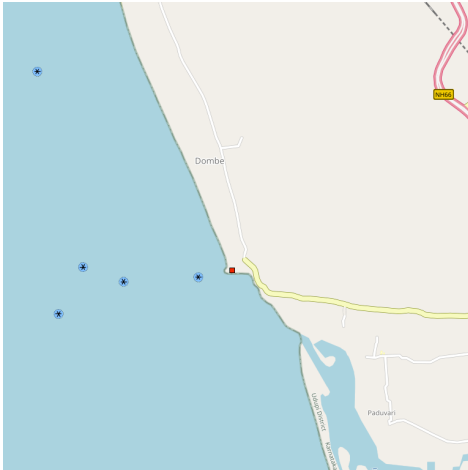
Huddi Point is a clifly promontory, rising to a height of about 52m about 0.5 mile inland; a small rounded hill, 35m high, lies on the extremity of the point.


The coast is then low and sandy to Coondapoor, about 20 miles SSE.

5.61 - Baindur Head (W India)

13°52.38 N
74°36.13 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Baindur Head, about 6 miles SSE of Huddi Point, is 61m high and cliffy. It is conspicuous from seaward, being the W point of a table and extending some distance inland.

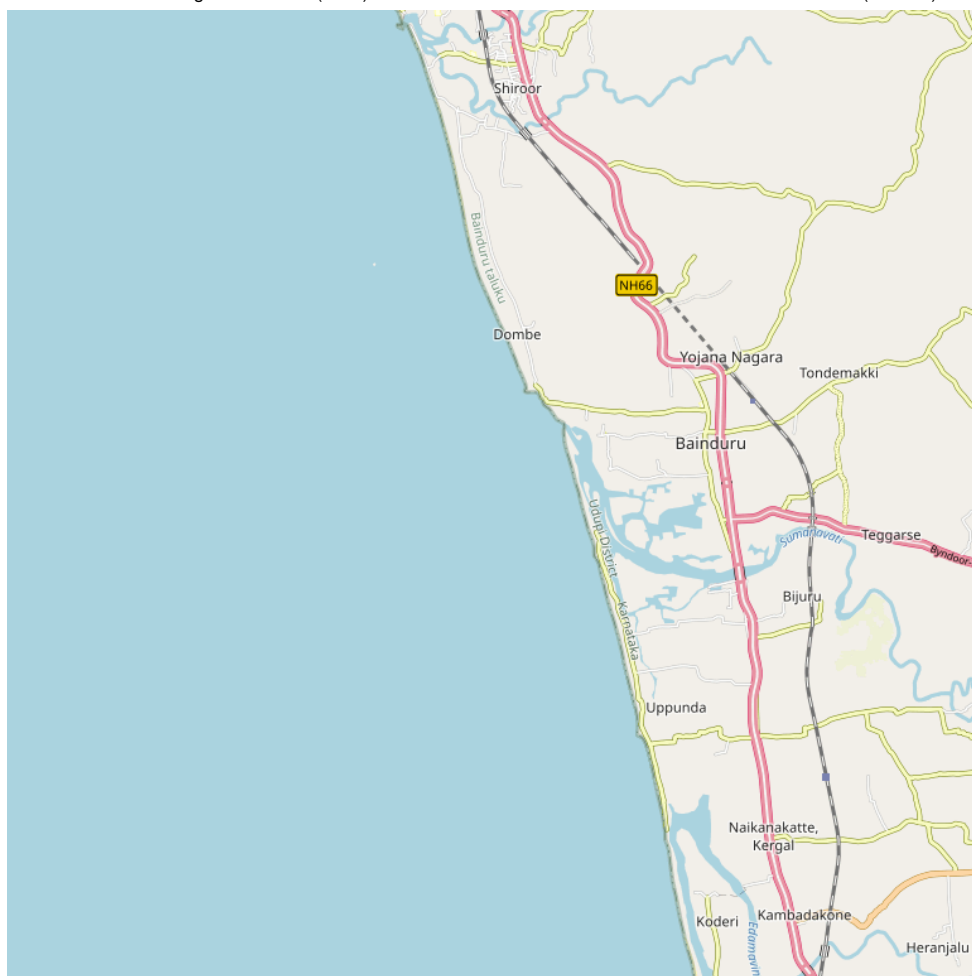


5.62 - Two White Rocks (W India)

13°51.59 N


74°35.49 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Two White Rocks (W India)



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 Two White Rocks, 5m high and close together, lie about 4 miles WNW of Baindur Head, and are very prominent when the sun shines on them.

Single Rock, 3m high, lies about 2 miles N, and a rock awash lies about 0.8 mile SSE, respectively, of Two White Rocks.

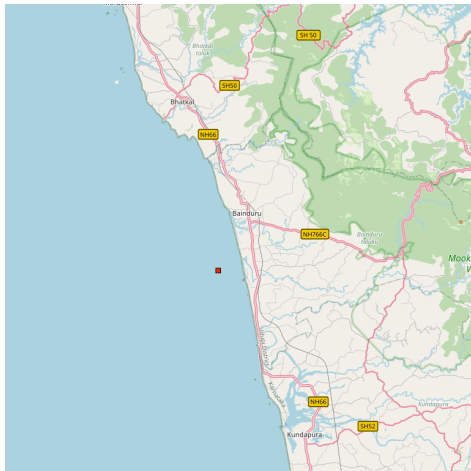
Caution. Although the area inside the above dangers has been examined and dangers found, it is possible that others may exist.


It is recommended, therefore, that vessels should not attempt to pass inside them, and they should keep in depths of more than 20m between Hog Island and Coondapoor.

5.63 - Nancowry Rock (W India)

13°48.21 N
74°35.72 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India

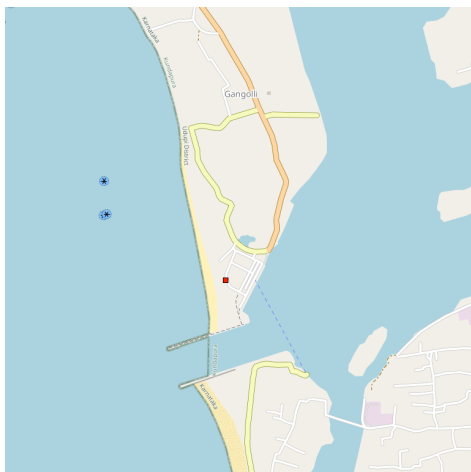


 Nancowry Rock consists of two rocky shoals; the W shoal has a depth of 3m. A rock, 3m high, lies between Nancowry Rock and the coast.

5.64 - Tippu Sultan Gudda Light (W India)

13°38.27 N
74°40.05 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India

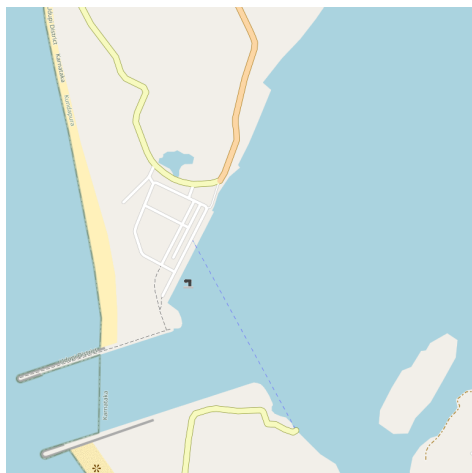



Tippu Sultan Gudda Light is shown from September 15 to May 15, about 1.5 miles NNW of the Haladi River entrance. Two conspicuous objects are a white house is close NE and a gray chimney, 40m high, 1 mile E of the entrance of the river.

5.65 - Haladi river (W India)

13°38.19 N
74°40.16 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Coondapoor (Kundapur) is an open roadstead off the common entrance of the Haladi River and the Chakranadi River.

The coast N of the river entrance consists of low hills up to about 37m high. The coast S of the entrance is flat, sandy, and fringed with coconut trees up to 24m high.

A wreck, best seen on the chart, lies almost 4 miles W of the harbor entrance.

A shoal patch of 7.4m lies 2.1 miles W of Coondapoor Light.

Foul ground, with rocks above and below-water, extends for about 3.5 miles N of the entrance to Coondapoor to a distance of about 1.3 miles offshore.

Pate Rock, which dries about 1m, lies at the SW edge of this foul area.

A rock, 4m high, lies about 0.2 mile NE of Pate Rock.

A 4.6m patch and a 4.9m patch lie about 0.3 mile SSE and SE, respectively, of Pate Rock. Gangoli Shoals, with a least depth of 5.2m, lie about 3.5 miles WNW of the port entrance.

A 6m shoal lies about 2.8 miles WSW of the entrance. It is marked W by a red and white striped barrel buoy from October to May.

A 6m depth and a 7m depth lie about 1 mile NW and 1.5 miles WNW of the 6m shoal.

The bar across the entrance to Coondapoor had a least depth of 2.5, and is constantly changing.

Steering for the entrance, bearing 055°, leads over the bar in the deepest water. A dangerous wreck lies 3.8 miles W of the harbor entrance. Another wreck lies about 1.5 miles S of the above wreck.

The port is normally closed during the Southwest Monsoon, usually from the middle of May until the middle of September, depending on the weather conditions.

The lighted buoys marking the bar and the channel are removed during this time period.

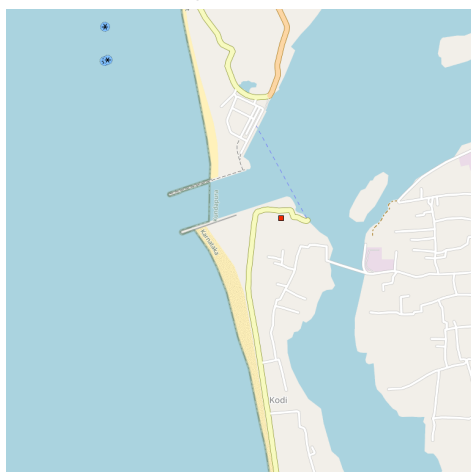


Haladi river port


5.66 - Coondapoor Light (W India)

13°37.90 N
74°40.28 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



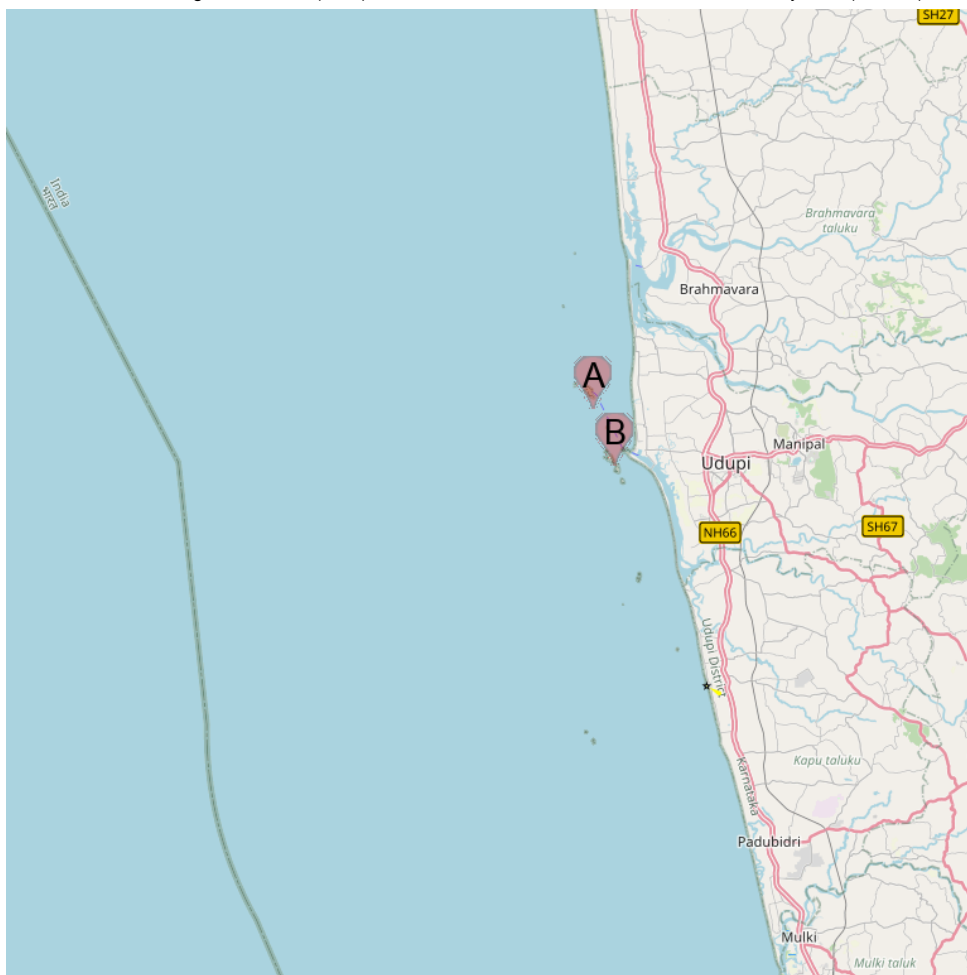


 Coondapoor Light is shown from a steel mast, about 0.8 mile S of the entrance, from September 16 to May 15. It is difficult to distinguish from other white lights nearby.


5.67 - Saint Mary Isles (W India)

13°21.49 N
74°40.45 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Saint Mary Isles (W India)



- A** Coconut Island (St mary's Islands-W India) **B** Darya Bahadurgah Islands (S Mary Islands-W India)

 The coast between Coondapoor and Malpe, about 17.5 miles S, is fringed by coconut trees and broken only by the mouth of the Sita Nadi River.

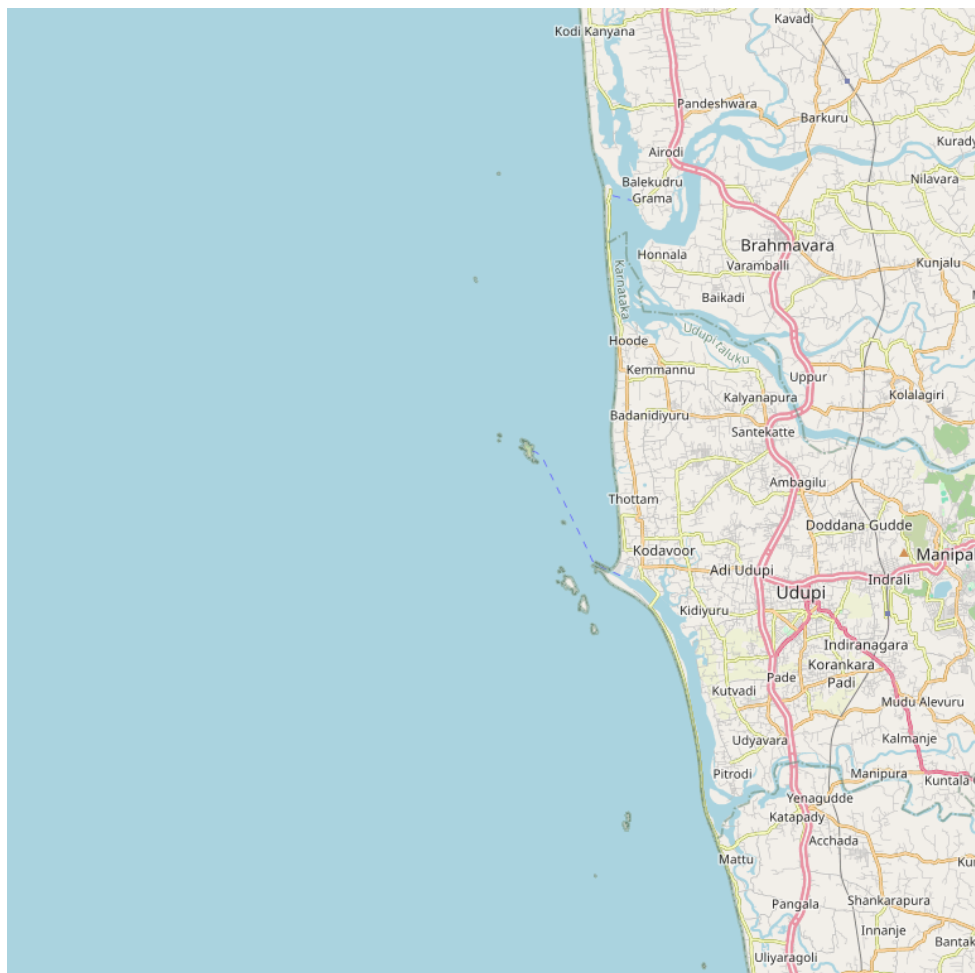
The Saint Mary Isles consist of Coconut Island, Middle Rock, Entrance Rock, and the Darya Bahadurgarh Islands.

Passage between the islands is obstructed by numerous rocks and should not be attempted except by small craft with local knowledge.


5.67.1 - Coconut Island (St mary's Islands-W India)

13°22.22 N
74°40.49 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Saint Mary Isles (W India) - Coconut Island (St mary's Islands-W India)



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 Coconut Island, about 2.5 miles NW of Malpe, is well-wooded, with trees about 26m high. Foul ground surrounds the island and extends about 0.8 mile WNW to a rock which dries 2m. A rock, 2m high, lies about 2 miles NW of the island and a chain of rocks, above and below-water, extend about 3.5 miles farther NNE.

Middle Rock, 4m high, lies about 1 mile SSE of Coconut Island. Foul ground

extends up to 0.2 mile W and NW of Middle Rock.

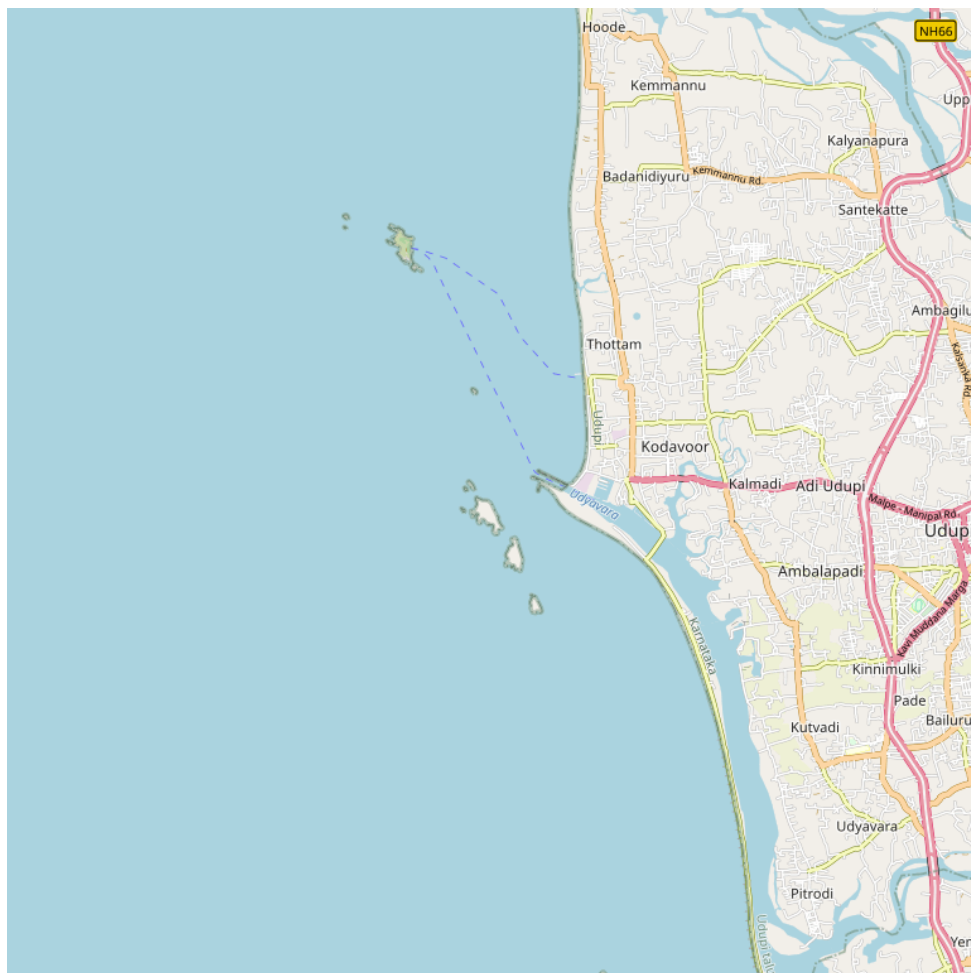
Entrance Rock, 1.2m high, lies at the S end of a rocky ridge extending about 0.2 mile S of Middle Rock.



Coconut Island (St mary's Islands-W India)

5.67.2 - Darya Bahadurgah Islands (S Mary Islands-W India) 13°20.41 N 74°41.21 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Saint Mary Isles (W India) -
Darya Bahadurgah Islands (S Mary Islands-W India)



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 The Darya Bahadurgah Islands consist of three islands.

North Island, 15m high at its SE end, is marked by Malpe Light, shown from a conspicuous square tower on the summit of the island.

Darya Bahadurgah Island, 16m high, lies about 183m SE of North Island.

South Island lies about 0.2 mile SE of Darya Bahadurgah Island and has a rock, with a least depth of 3.7m, about 0.2 mile SSE of it.

Caution.?Vessels in the vicinity of Black Rocks and Outer Rocks should not enter depths of less than about 15m by day or 22m by night.

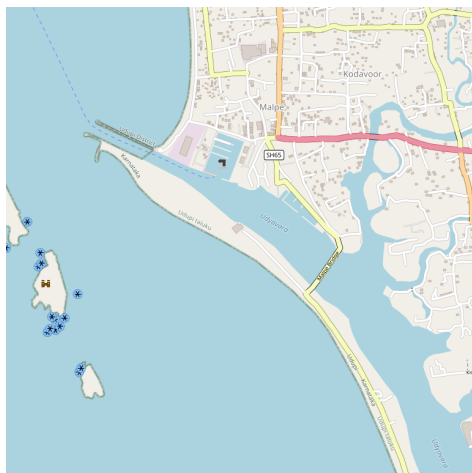
Anchorage can be obtained, in 9m, mud, about 1 mile WNW of the light structure on North Island. Small vessels can anchor, in 6m, sand and mud, with the light structure bearing 185°, distant 0.5 mile. Small vessels can anchor, in 6.1m, mud and sand, about 0.5 mile E of the summit of South Island.


5.68 - Malpe port (W India)

13°20.81 N

74°42.01 E

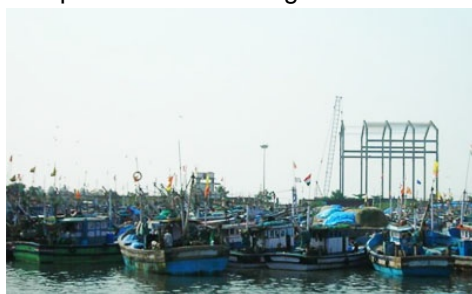
Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Malpe is a natural, important and fishing port on the Karnataka coast. Malpe is also a town situated on the N side of the mouth of the Udyavara river.

Malpe has four small jetties, accommodating vessels up to 33m long with a draft up to 3.7m. The open roadstead W of Malpe is afforded some protection by the Saint Mary Isles.

The port is closed during the Southwest Monsoon due to heavy swells.

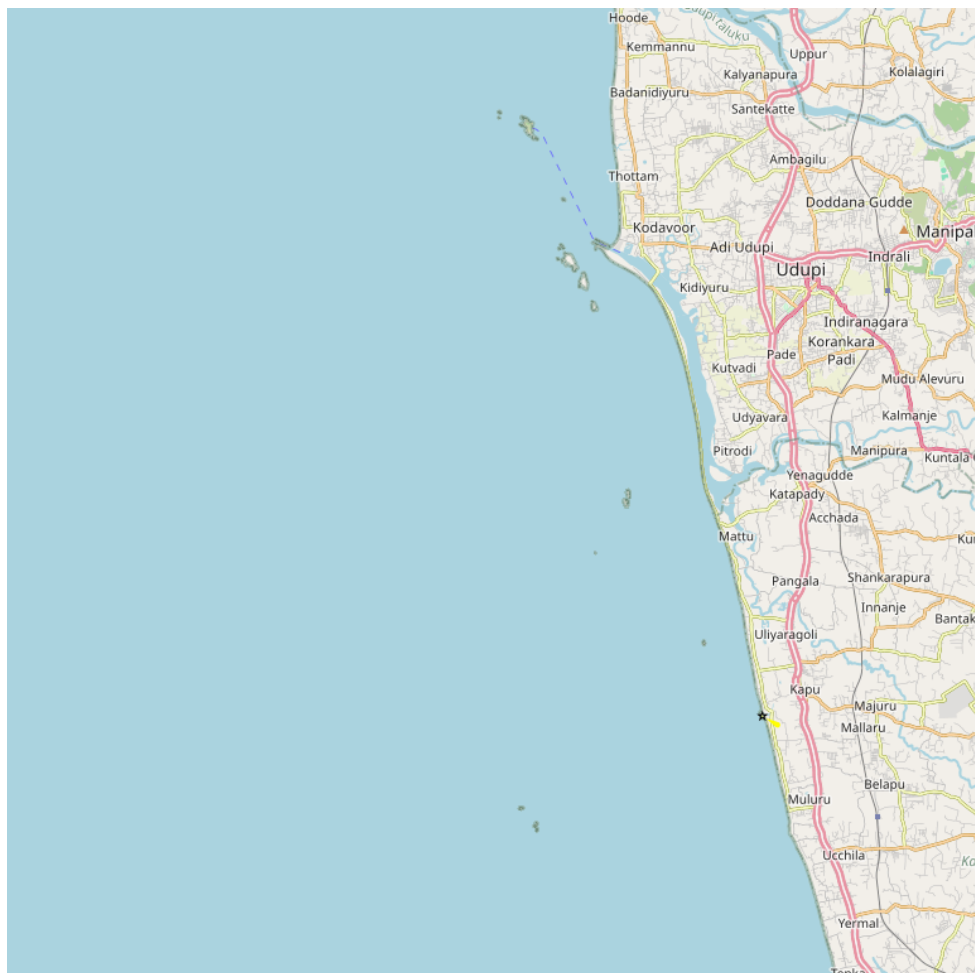


5.69 - Black rocks Two Rocks Outer Rocks (W India)

13°16.59 N


74°41.50 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India - Black rocks Two Rocks Outer Rocks (W India)



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 The coast between Malpe and New Mangalore, about 26 miles SSE, is straight and fringed with coconut trees.

Black Rocks, 13m high and conspicuous, lie about 4 miles S of Malpe.

Two rocks, 3m high, and two rocks, 5m high, lie about 0.5 mile NW and 0.2 mile WSW, respectively, of Black Rocks.

Outer Rocks, 13m high and prominent, lie about 1 mile SW of Black

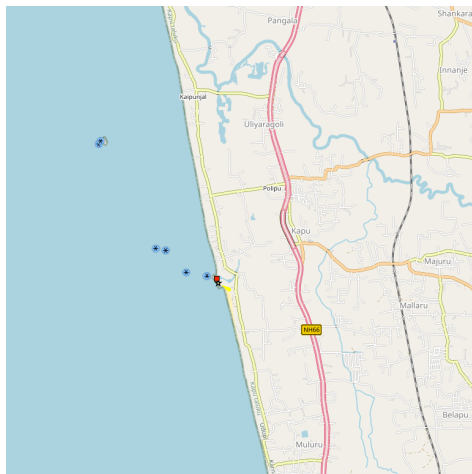
Rocks.Caution.?Vessels in the vicinity of Black Rocks and Outer Rocks should not enter depths of less than about 15m by day or 22m by night.


5.70 - Kap light (W India)

13°13.44 N

74°44.19 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Kap Light, about 8 miles SSE of Malpe, is shown from a white tall masonry tower with black bands standing on a rock near a battery in ruins.

Kap Rock, 13m high, is prominent about 1.5 miles NNW of the light. A rock, 1m high, with a drying rock close NE, lies about 1 mile SSW of Kap Rock.

Mulki Rocks, some of which are 13m high and of black basalt, lie about 4 miles WSW of Kap Light.

Caution.?Vessels in this vicinity at night should keep in depths of not less than 24m. A 4m depth lies about 3 miles SW of Kap Light. Kunjar Gudda, 105m high, is a prominent landmark about 4 miles NE of Kap Light.

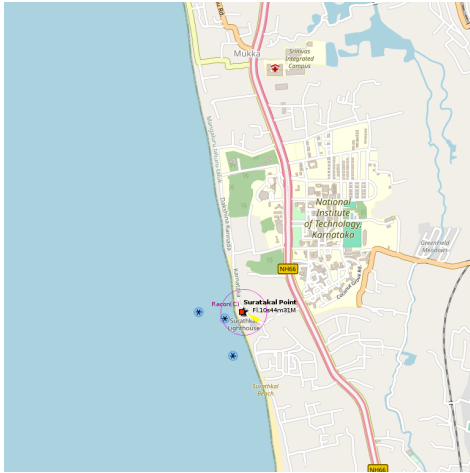
5.71 - Suratkal Point Light (W India)


13°00.28 N

74°47.37 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India





 Suratkal Point Light, with a racon, is shown from a 36m high white masonry tower with black bands standing on Suratkal Point, about 5 miles S of the entrance to the Mulki River.



5.72 - New Mangalore port (W India)

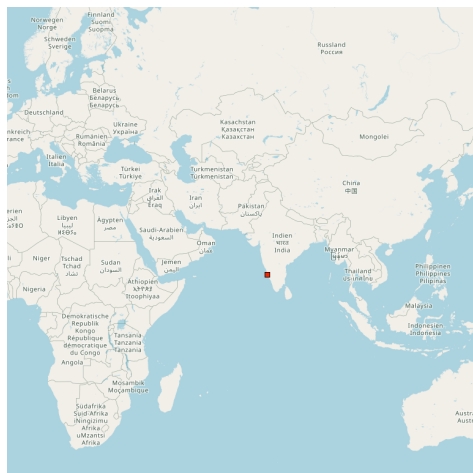
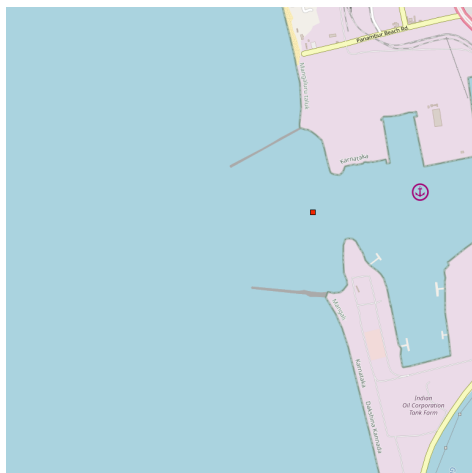
12°55.57 N
74°48.32 E


Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



channel 12, 16





 The port of New Mangalore, a major all-weather port, is situated about 5 miles NNW of the old Mangalore port.

Fairway Lighted Buoy is moored about 4 miles W of the port. Range lights, in line bearing about 079°, at the E side of the port, mark the approach channel through the entrance.

A signal station and port radio station are situated on the N entrance point of the port. A white concrete tower lies close S of the S entrance point. Two towers, one of which is conspicuous, lie a short distance inland from the head of the harbor. There is a conspicuous water tower about 0.2 mile S of the S entrance point of the harbor.

The harbor is protected by breakwaters that extend about 700m from the coastline at points N and S of the entrance.

The port consists of a turning basin, with radius of 245m, dredged to a depth of 15.1m, oil and LPG jetties on the SW side of the lagoon and near the approach channel, and seven berths contained in a basin extending N from the turning basin.

The berths are used for general cargo, the export of iron and manganese ore, and the import of materials for a chemical and fertilizer factory.

Depths? Limitations

The port is approached by a channel about 4 miles long and 245m wide; it is maintained by dredging to 15.4m and marked by lighted buoys.

Several shoal patches, depths of 7.5 to 9.7m, lie close S of the channel and are best seen on the chart.

A depth of 15.1m is maintained within the harbor leading from the entrance to the

turning basin. It has been reported that the maximum depths allowable for entry into the harbor can be reduced during the Southwest Monsoon (May-September) period so vessels drawing 14m or more should check with the Port Authority for the latest information.

Pilotage

Pilotage is compulsory for vessels over 200 grt and is available 24 hours for vessels up to 245m in length. Vessels whose loa exceeds 245m, including Suezmax tankers, are handled only during daylight hours.

Pilots board, as follows:

1. Vessels with a maximum draft up to 10m?About 1 mile ENE of Fairway Lighted Buoy (12°55'13.8"N, 74°45'33.0"E.).
2. Deep-draft vessels?Close NW of Fairway Lighted Buoy (12°54'57.0"N, 74°44'16.8"E.).

The pilots can be contacted, as follows:

1. VHF: VHF channels 12 and 16
2. Telephone: 91-824-2407428
91-824-2407341

Regulations

Vessels should send an ETA message at least 48 hours in advance. The message should contain the following information:

1. Vessel name.
2. Nationality.
3. Call sign.
4. Draft fore and aft.
5. Length overall.
6. Gross tons and nrt.
7. Last port of call.

An ETD message should be sent to the harbormaster?s office at least 2 hours in advance.

A Vessel Traffic Management System is in operation in the port. Vessels will be automatically identified as they enter the port (about 4 miles from the inner harbor) so there will be no need for communications between the vessel and Port Control.

Signals

Storm signals are displayed from the signal station; the General System is used.

Tel: 91-824-2407428

91-824-2407300

Fax: 91-824-2408390

91-824-2408300

Mail: nmptdc@sancharnet.in

Anchorage

Anchorage is recommended NNW of Fairway Lighted Buoy, in depths of 16 to 18m. A spoil ground is established about 1 mile S of Fairway Lighted Buoy.

Caution.?Stay well clear of a dangerous wreck lying close S of the anchorage. Haze settles over the land after sunrise.

Even during good weather, the coast remains indistinct until about the middle of the day, making normally conspicuous objects difficult to discern.

Mangalore Harbor lies in the backwater formed by the confluence of the Gurpur River and the Netravati River. The port is only of importance to coastal vessels, as it is fronted by a shallow bar between low sandy spits. The port is closed from June through August during the Southwest Monsoon, when the bar is impassable. A shoal, with a depth of 15m, lies 6.5 miles WNW of the entrance to Mangalore.

The town of Mangalore is almost entirely concealed from the offing, but the following landmarks are conspicuous:

1. Mangalore Light, a squat, white, masonry tower with black bands, attached to a house resembling a small chapel, about 0.5 mile ENE of the harbor entrance.
2. A 41m high dome, surmounted by the steeple of the Roman Catholic Cathedral, about 0.5 mile N of the light structure.
3. The 76m high square tower of Saint Aloysius College, about 1.3 miles NNE of the cathedral.
4. A conspicuous white cross about 3.5 miles N of the harbor entrance.
5. A group of white houses close S of the harbor entrance. A radio tower, having an elevation of 153m, lies about 1 mile NNW of Saint Aloysius College.

Pilotage.?Pilotage is compulsory for all vessels over 100 grt and is available during daylight hours only.

Signals.?Vessels can communicate with a signal station close S of Mangalore Light.

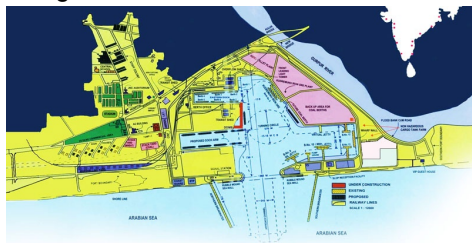
VHF channel 12

Tel: 91-824-420104

Anchorage.?Anchorage may be obtained, in 9.1m, mud, with Mangalore Light bearing between 050° and 100°, distant about 2 miles. Vessels should not approach the lighthouse closer than 1.5 miles, as the depths then decrease rapidly.

Caution.?It is preferable to arrive off Mangalore during the afternoon with the sun astern, or at night when the light can be seen. The landmarks are difficult to distinguish during the morning haze.

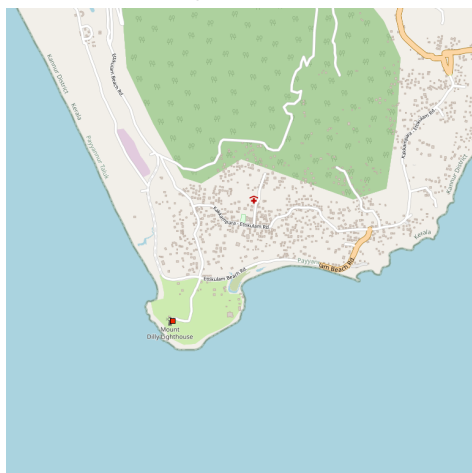
Dangerous wrecks lie about 1.8 and 2.5 miles WSW of Mangalore Light.




5.73 - Kotte Kunnu (Mount Dill) point (W India)

12°00.42 N
75°12.12 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Kotte Kunnu, a bluff point 52m high, at the SW extremity of a headland, is joined to the more elevated land by a low neck; a fort lies on Kotte Kunnu. Mount Dill Light (Kotte Kunna Light) is shown from a white triangular stone tower with red bands on the bluff point.

A stranded wreck lies 2 miles NNW; a dangerous wreck lies 3 miles SSE from Mount Dill Light.

The coast from Mount Dill to Cannanore, about 13 miles SE, is sandy and fringed with coconut palms. The Valapattanam River, marked on the N side of its entrance by a clump of casuarina trees, flows into the sea about 7 miles SE of Mount Dill. The bar at the entrance to the river has a least depth of 1.2m, and is

subject to seasonal change.

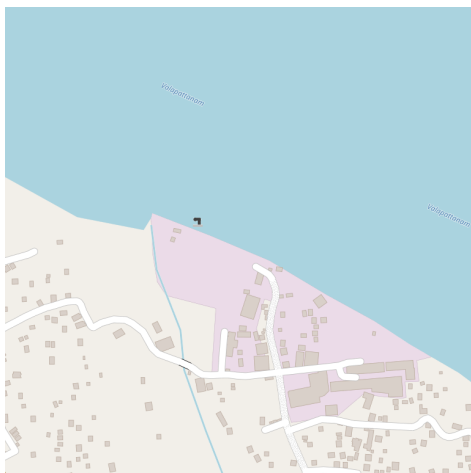
Azhikhal Light is shown at the S side of the entrance. Storm signals are displayed near the light.




5.74 - Azhikhal port (W India)

11°56.17 N
75°19.86 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Azhikhal, with a thriving timber trade, lies on the S bank of the river, about 1 mile within the entrance. Boundary pillars, NW and SE of the river entrance, define the limits of the port.

Presently the port has only one wharf, 50m in length, that can accomodate one vessel up to 2,000 dwt, with a maximum length of 30m, a maximum beam of 10m, and a maximum draft of 3m.

Pilotage is not available.

Vessels should advise the Port Officer Kozhikode of their ETA 24 hours in advance and then confirm their ETA 2 hours in advance to the Port Officer in

Azhikal on VHF channel 16.

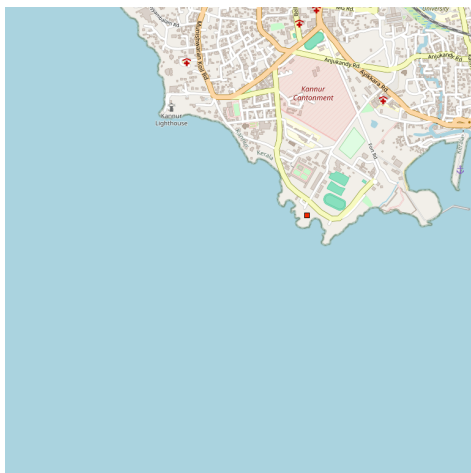
Anchorage can be taken, in a depth of 9m, sand and mud, good holding ground, about 2.5 miles WSW of the river entrance.




5.75 - Cannanore Light (W India)

11°51.18 N
75°21.92 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Cannanore Light is shown from a white, concrete column with red bands 1 mile WNW of Fort St. Angelo.

A red conical buoy is moored about 0.5 mile SE of the fort from October to May and marks the approach to the inner anchorage for small craft.

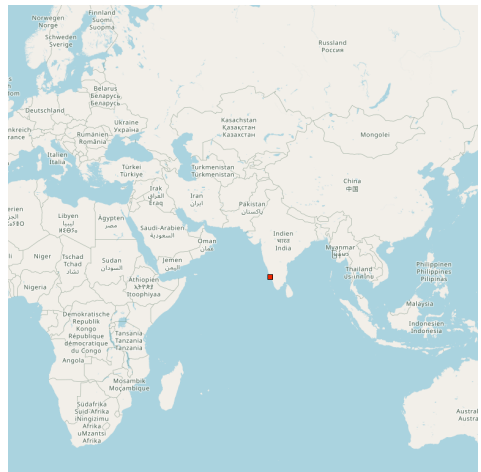
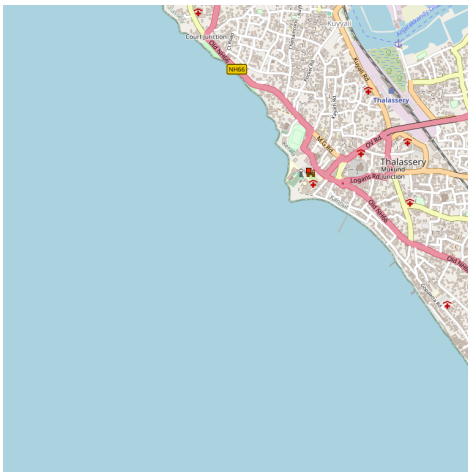
The coast between Cannanore and Tellicherry, about 9 miles SE, consists of alternate sandy beaches and cliffs, fringed with coconut trees. Rocks, above and below-water, fringe the coast.




5.76 - Tellicherry Light (W India)

11°44.90 N
75°29.19 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



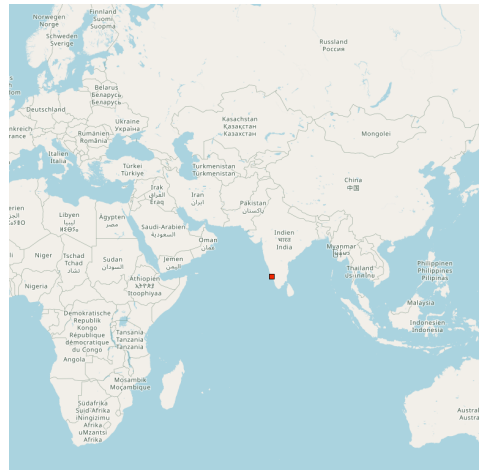
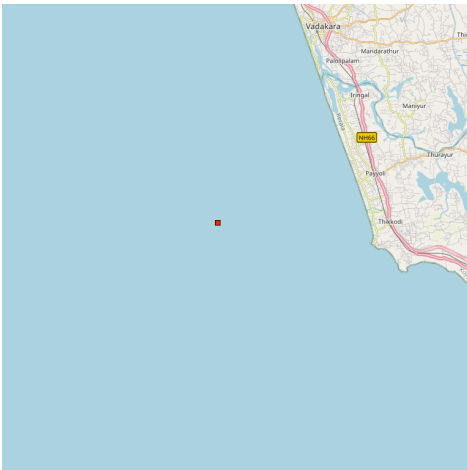
 An ancient fort stands on rising ground near the coast. Tellicherry Light is shown from the NW bastion of the fort. Bilikulu, a natural breakwater of basalt, 6m high, lies parallel to the coast, about 0.5 mile SW of the fort.




5.77 - Sacrifice Rock (W India)

11°29.33 N
75°31.88 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Sacrifice Rock, 18m high and conspicuous, lies about 6.5 miles WNW of Kadalur Point. It consists of granite and, having a white appearance, can be seen

10 miles in clear weather.

The passage between this rock and the coast is free of dangers, but vessels using it should keep near the rock, and not proceed into depths of less than 13m.

Vessels passing W of this rock at night should not proceed into depths of less than 27m which are found about 2.5 miles W of the rock.

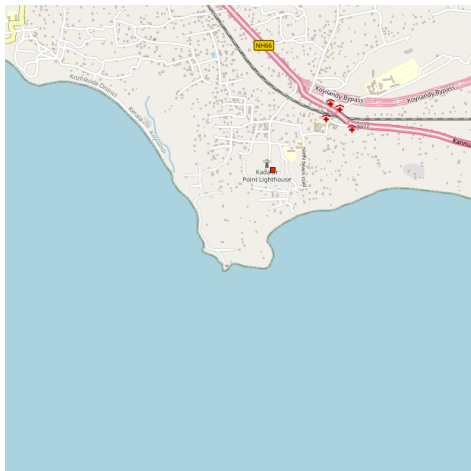
A shoal, swept to a depth of 2.7m, lies almost 1 mile offshore W of Tikkotti village.

5.78 - Kadalur Point (W India)

11°28.11 N

75°38.26 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India





🇬🇧 Kadalur Point, low but prominent, is covered with palm trees, over which will be seen a large round tree. Hills gradually rise NE of the point; the nearest summit is 78m high, about 1.3 miles NE of the point.

The coastal reef extends about 1.5 miles W and 1.3 miles S from the point. Tri Kodi Reef, with a least depth of 1.5m and Kadalur Reef, with a least depth of 3.4m, are the W and SW ends, respectively, of the coastal reef.

The coast between Kadalur Point and Calicut (Kozhikode), about 14.5 miles SSE, is generally low, sandy, and fringed with palms. Red laterite hills back the coast.

Quilandi, a large village, lies about 3.8 miles ESE of Kadalur Point. A water tower is conspicuous on the coast, close S of the village.

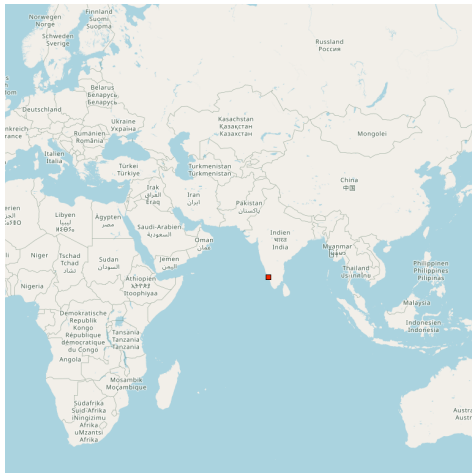
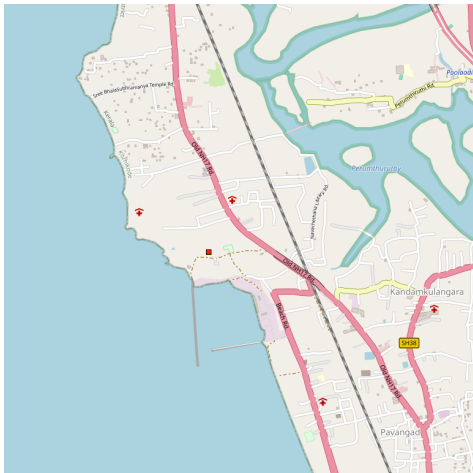
The conspicuous summit of Palkunnu, 297m high, rises about 7.5 miles ESE of the village. A large black rock, with a tree on it, lies on the coast about 2.8 miles SSE of Quilandi.


5.79 - Elattur Cape (W India)

11°19.37 N
75°44.58 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



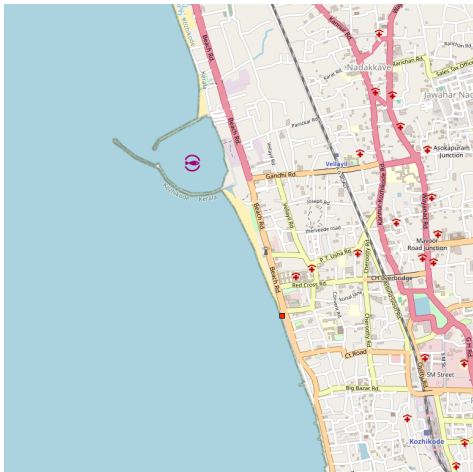



 Elattur Cape, about 4 miles farther SSE, is low and rocky, with coconut palms close inland. The mouth of the Elattur River, a shallow and rocky river, lies about 1.3 miles N of the cape.

5.80 - Calicut (Kozhikode) port (W India)

11°15.23 N
75°46.21 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 The port of Calicut, also known as Kozhikode, is an open roadstead of considerable commercial importance. Cargo is worked at the anchorage by lighters. The port is unusable from the beginning of June to the end of August.

Depths? Limitations

Reliance Shoal, with a least depth of 8.6m, extends about 2.5 miles NNW from a

position 3.5 miles W of Calicut Light; the shoal is rocky, but the bottom near it is soft mud.

Anchorage Reef, with a least depth of 3.7m, lies about 1.3 miles WSW of Calicut Light. A lighted buoy, painted in black and white stripes, is moored W of the reef; it is in position from October to May.

Calicut Reefs, a group of rocky shoals with a least depth of 4.1m, extend about 1.5 miles N from a position 2.5 miles SSW of Calicut Light.

Coote Reef, with a least depth of 0.9m and over which the sea generally breaks, lies about 1.5 miles S of Calicut Light. A black and white striped can buoy is moored about 0.3 mile W of the reef. Gilham Rock, about 0.3 mile farther S, has a depth of less than 1.8m.

Pilotage

Pilotage is compulsory and is available during daylight hours only. The pilot boards in the anchorage.

Regulations

Vessels should send their ETA 48 hours and 24 hours in advance. For vessels bound for the harbor, the ETA should also be advised 12 hours in advance; all ETAs should be confirmed 2 hours prior to arrival on VHF channel 16.

Signals

The signal station, close N of Calicut Light, communicates with shipping by flags of the International Code or by Morse Code. Landing conditions are indicated by the following flags of the International Code:

1. K?Surf is impassable.
2. M?Communication with the shore is dangerous.
3. N?Boats can leave the harbor.
4. F?Boats can enter the harbor.

Storm signals are shown at Badagara: the General System is used.

Contact Information

The port can be contacted, as follows:

VHF: channel 16

Tel: 91-471-2724842

91-471-2724533

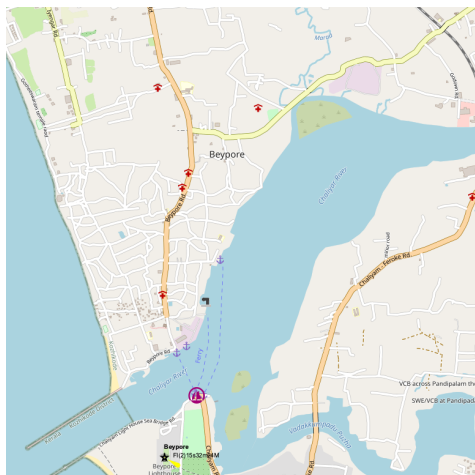
Fax: 91-471-2724533


Mail: calicutport@sanchamet.in

5.81 - Beypore (Beipur) (W India)

11°10.13 N
75°48.52 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 The port of Beypore (Beipur), an open roadstead, lies off the entrance of the Beypore River (10 Km south of Calicut) at and is considered a wharf of the port of Calicut (Kozhikode).

New Beypore Light is shown from an octagonal masonry tower, with red and white bands, on the SE side of the entrance to the Beypore River.

Depths? Limitations

Black Rocks, 1.2m high, lie towards the SE end of a reef about 0.8 mile S of the entrance to the Beypore River. A rock, with a depth of 1.5m, lies about 0.5 mile SSW of Black Rocks. The bar of the Beypore River had a depth of 3.5m between the breakwaters in 1990.

Caution.?Vessels in the vicinity of Beypore at night should not enter depths of less than 15m.



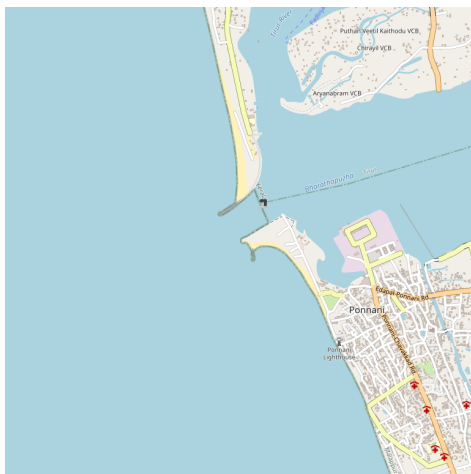
Beyport light




5.82 - Ponnani port (W India)

10°47.24 N
75°54.70 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 The coast between Beyport and Ponnani, about 24 miles SSE, is low, sandy, fringed with palms, and backed by red laterite hills.

A light is shown at Tanur, an important fishing village, about 11.5 miles SSE of Beyport. A tableland, covered with palms, lies about 1 mile NE of the village. A tableland, about 90m high, with a few scattered trees, lies about 9 miles N of Ponnani.

Ponnani, a busy seaport for local craft, lies on the S side of the entrance to the Ponnani River. The port is closed during the Southwest Monsoon, and is in charge of a Port Conservator responsible to the Port Officer at Calicut (Kozhikode).

The extensive backwater of the Ponnani River forms a wide gap in the line of palms when viewed from WSW.

The entrance of the river is wooded and prominent from the S.

Ponnani Light is shown from a white, round, concrete tower with black bands, 0.8 mile S of the river entrance. The bar of the Ponnani River has a depth of not more than 2.1m, but small vessels with local knowledge can enter it at HW. There are some unlicensed pilots available.

Storm signals are shown at Ponnani; the Brief System is used.

The town of Chetwai lies about 1.5 miles within the entrance to a backwater. The existence of the boundary pillars N and S of the backwater entrance is doubtful. Chetwai Light is shown from a 30m high circular concrete tower, lying 1.5 miles N of the boundary pillar.

Anchorage can be taken by small vessels, in 11m, mud, off the entrance to the backwater; local knowledge is necessary.

Tel: 91-471-324533

Fax:91-471-324842



Ponnani Light

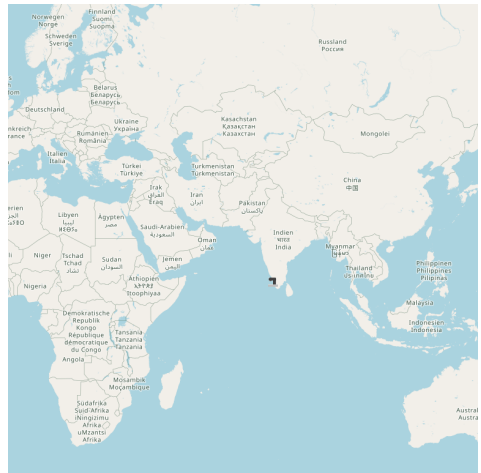
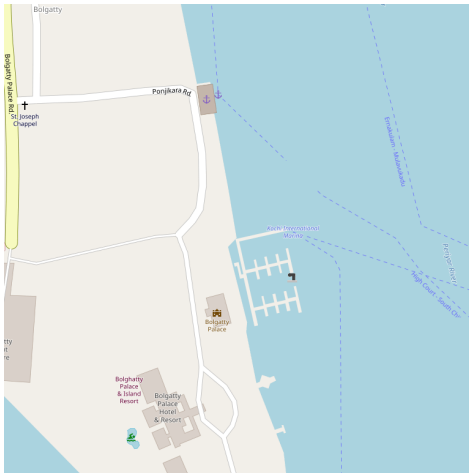


5.83 - Kochi International Marina


9°59.12 N
76°16.09 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India





Not particularly cheap but negotiable for longer term. weather security excellent. access security flakey. starting to take off. email me at bryan@mastershipyard.co.in or mjtee@otenet.gr photos to follow. we have been the Vasco de Gama rally in port at the moment Kerala is the greenest ,cleanest, state in India. English is widely spoken. Having travelled India from north to south. with 40 years of travelling in the middle east. it's no hassle ,friendly, and every visitor , french included loves the food.but don't, argue with the locals they are mule heads.

 The Kochi International Marina is a marina in the city of Kochi, located in the eastern coast of the Bolgatty Island.

The Kochi Marina is the only marina in India. It's a modern all-weather port and a rapidly growing maritime gateway to peninsular India.

Port Control must be contacted on both arrival and departure once in the approach channel.

Yachts must anchor for clearance off the steamer point on the north tip of Willingdon Island, opposite the two jetties of the port office and the Malabar Hotel in front of the Port Trust Building.

No one must land before clearing Customs, who will come out in a launch.

The captain can then go ashore and clear at the port office (open 1000-1700), where port dues must be paid.

The Customs and Immigration offices must be visited next. Customs will retain the ship's papers until departure and issue a receipt. The Immigration office is near the railway terminus and landing passes may be issued by them, or, as in 2007, only the passports stamped.

After clearance, one may then go to the yacht anchorage south of Bolgatty Island, or the new marina at the Bolgatty Palace Heritage Hotel on the east of Bolgatty Island. Boats drawing more than 6 ft (2 m) should wait for high tide as the channel is shallow in places. Written permission from the Port Captain must be obtained if one moves to another area.

With prior warning, yachts planning to call at Kondo Syokai for repair, can call on them for assistance with clearing.

You can leave your boat in Cochin and travel inland in India. If you want to leave the boat there and travel out of the country, you will need special permission from the authorities in Cochin. The boat must have a guard on board or be stored in a recognised boatyard/workshop.

If planning a day sail from the port, Port Control must be advised in advance, by fax, stating vessel, crew and duration of the trip (in hours).

The Coast Guard are likely to come alongside to check when sailing in the vicinity of the port.

50 b

Contact: Deputy

Conservator's Office, Cochin, Tel: 04 84 666871, Fax: 04 84 668163.




5.84 - Kochi (Cochin) Port (W India)

9°58.35 N
76°14.90 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India





 The port of Kochi (Cochin) is a fine natural harbor formed by the estuary of the Periyar River and its backwater.

The inner harbor is able to shelter a large number of vessels with drafts up to 9.1m at all seasons. It is the main deep water harbor S of Bombay and a base for the Indian Navy.

The N and S limits of the Port of Kochi (Cochin) extend 7.5 miles in a 270° direction from a position on the coast 5 miles SSE and 2 miles NNW of Kochi (Cochin) Light. The port area includes the harbor and backwater, with the creeks and channels connecting with them and their shores, whether of the mainland or of islands, as may lie within 46m of the spring tide HW mark.

The great estuary, or backwater, on which Kochi (Cochin) lies, extends for about 50 miles NNW to Ponnani, and about 30 miles S to Alleppey. Its width varies from 8 miles to a few hundred meters, and its channels connect with other inland waters.

It has a least depth of 1.8m and is affected by tidal influence. Several rivers flow into the backwater making it brackish. During the Southwest Monsoon, which brings heavy rain to the seaward side of the Western Ghats, the watershed drainage of these rivers increases greatly and, entering the sea through numerous openings into the backwater, probably causes the constant shifting of the soft mudbanks off this part of the coast.

Winds?Weather

Kochi (Cochin) is outside the cyclone area, but during the Southwest Monsoon, short gusts of wind 50 to 55 knots are sometimes experienced.

Tides?Currents

The tidal rise at Kochi (Cochin) is 0.9m at MHHW and 0.8m at MLHW. Salinity within the harbor has values between 1000 and 1020, according to tidal and seasonal factors.

The maximum velocity of the ebb current at springs, throughout the year, is from 2 to 3 knots, and at neaps from 0.8 knot to 1.3 knots. The velocity of the flood current at springs, throughout the year, varies 1.5 to 2 knots and at neaps from about 0.8 knot to 1.3 knots. Both currents run for a considerable time after the predicted times of HW and LW, from 1 to 2 hours on the flood, and from 2 to 3 hours on the ebb, according to the season.

After heavy inland rains the ebb current may run continuously for many days, while the flood current enters the harbor under the surface ebb. On very rare occasions, and after high inland floods, the tidal current in the harbor may have a velocity of 5 knots or more.

In January and February, the effect of the ebb current is not noticeable W of the outer channel buoys, and no appreciable current is experienced off the coast in the vicinity of Kochi (Cochin). Under monsoon conditions, strong eddies and crosscurrents were experienced in the harbor entrance between Vypin Island and Kochi (Cochin), and also off the NW point of Willingdon Island.

On the ebb current, between the harbor entrance and the NW end of Willingdon Island, there is a strong set across the channel from the N part of the harbor; the limits of this current are marked by tide rips which cause a vessel to sheer.

Depths?Limitations

The approaches to Kochi (Cochin) are clear of outlying shoals or banks, except for the shoal water of the bar, through which the deep approach channel has been dredged.

Outer Approach Channel?about 6.5 miles in length, 175m in width and maintained at a depth of 13.8m.

Inner Approach Channel?All the same as the Outer Approach Channel except that it extends to a width of 400m.

Ernakulam Channel?about 3.1 miles in length and a minimum width of 200m, dredged to a depth of 13.8m to the Cochin Oil Berths and to the Rajiv Gandhi Container Terminal, then 11m until the fertilizer berth (Q10), then 10.0m to Berths Q5 to Q7, and 9.75m to the S and N Tanker Berths.

Mattancheri Channel?about 1.6 miles in length, to a width of 183m, and maintained to a depth of 10.75m until the S end of Boat Train Pier, thence 9.75m for the remainder.

Local authorities should be consulted for prevailing depths in the channels and

alongside berths. Plans are to increase the width to 260m and depths to 16.7m in the approach channel sometime in the near future.

A shoal area N of the dredged channel includes a spoil ground which is awash in places. South of the dredged channel a shoal, with a depth of less than 1.8m, and on which the sea breaks, extends about 0.9 mile W from the coast.

Vessels, once E of Fairway Lighted Buoy, must not attempt to enter or leave the approach channel without a pilot on board.

In 1985, less water than charted was found to exist outside the dredged channel on both sides. Another spoil ground lies about 2.5 miles SW of Outer Signal Station. A dangerous wreck and a small foul area lie near the N limit of the dredged channel, 1 mile E of Fairway Lighted Buoy.

Within the harbor entrance the dredged channel is about 0.2 mile wide; its N limit is marked by two lighted buoys. An anchorage for sailing vessels is situated N of the fairway, close within the harbor entrance.

The dredged channel then divides into Mattancheri Channel and Ernakulam Channel leading W and E, respectively, of Willingdon Island. A road bridge, with a lifting span, connects the SW end of Willingdon Island with the mainland W; a road and rail bridge, with a navigable opening marked by lighted dolphins, connects the E side of the island with the mainland E.

Approximately 0.8 mile SE of the fertilizer berth is Naval Jetty. Caution is necessary when berthing alongside Naval Jetty, on the W side of the channel, as the ebb current sets strongly off the pier and the flood current strongly onto it. The bar at the entrance to the harbor is dangerous for ship's boats when the ebb tide is setting strongly against the sea breezes, resulting in a short choppy sea.

There are two mooring buoys on the E side of Mattancheri Channel which can accommodate a vessel up to 145m in length. There are also two numbered mooring buoys in the SE portion of Ernakulam Channel.

Tankers in ballast are subject to draft restrictions. Tankers less than 152.4m in length must have a minimum draft forward of 4.3m (plus or minus 0.6m and trimmed by the stern) and 4.9m aft. Minimum drafts for tankers of 152.4m and over are 4.9m (plus or minus 0.6m) forward and 6.1m aft. Additionally, tankers over 213.4m in length are subject to a maximum draft of 8.5m.

Aspect

The coast in the vicinity of Kochi (Cochin) is low, sandy, and thickly fringed by palms.

A buoy, painted in red and white stripes, is moored 32 miles WNW of the entrance to Kochi (Cochin) Harbor.

Kochi (Cochin) Light, with a racon, is shown from a concrete tower with red and white bands.

A wooden pile beacon lies 1.3 miles SSW of Kochi (Cochin) Light; a concrete pile beacon, 9.1m high, lies 1.5 miles WSW of the light.

The dredged entrance channel, Mattancheri Channel, and Ernakulam Channel are marked by lighted buoys. The harbor office, which is conspicuous, lies on the NW end of Willingdon Island. Range lights, situated N and NE of Willington Island, lead through the harbor entrance and through the center of Ernakulam Channel abreast the tanker berths.

A number of Indian Naval vessels are situated at Vendurutti (Venduruthy Island) on the E side of Willingdon Island. In this area there are several flagstaffs; a radio station, with several masts, is situated 183m NNW of the W end of the road and rail bridge.

Pilotage

Pilotage is compulsory for all merchant vessels over 100 grt and is advisable for smaller vessels. Pilots are available at any time. Deep-draft vessels are advised to wait for the pilot 0.5 mile W of Fairway Lighted Buoy. Pilots board vessels in position (9°57.7'N., 76°08.4'E.). The pilot vessel has a red hull with a white house. Communications with pilots is through VHF Channel 16.

Vessels may anchor in this vicinity, clear of the axis of the channel, good holding ground, mud. Vessels can enter or leave the harbor day or night at almost any state of the tide, except for crude oil tankers which may only enter by day. A vessel, equipped with radio, is stationed near the seaward end of the approach channel; it will transmit and receive messages concerning pilotage only. A vessel awaiting a pilot should, if anchoring, lie about 1 to 2 miles NNW of Fairway Lighted Buoy.

Regulations

Vessels should send ETA messages 48 hours in advance to the harbormaster. Any changes in ETA should be sent at least 12 hours in advance. The message should include the ETA (in local time) at the outer roads and the salt water draft fore and aft.

Vessels should contact port control 2 hours before and 30 minutes before arrival at Fairway Lighted Buoy for pilotage and berthing instructions.

Vessels awaiting a berth should maintain a listening watch on VHF channel 16.

Immobilization of main engines is not permitted without written consent by the Port Authority. Discharge of oily water or other rubbish is forbidden.

When plague is prevalent in Northern India, vessels must obtain pratique before

communicating with the shore.

Ship-to-ship transfers of liquid bulk cargo and gas are authorized in an area with a radius of 1 mile centered on position 10°03.5'N, 76°04.5'E, about 10 miles NW of the harbor entrance.

The transferring vessel should anchor in the center of the area. The vessel's agent should notify the harbormaster in the vessel's ETA message prior to the commencement of any transfer operations.

Signals

The Signal Station situated at the 37m flagstaff close W of Fort Cochin communicates by flags and Morse Code as necessary. Storm signals are displayed; the General System is used.

The following flags of the International Code should be displayed by vessels entering or leaving Kochi (Cochin) (meaning of hoist follows flags):

1. Q?My vessel is healthy and I request free pratique.
2. Q over First Substitute?My vessel is arriving from a yellow fever port and requests health clearance.
3. G?I require a pilot.
4. H?I have a pilot on board.
5. An oil tanker should display a red ball below these flags.

A vessel must not enter harbor until the signal has been repeated by the Signal Station. Signals for vessels leaving the harbor will also be repeated by the Signal Station.

A vessel shifting berth within Kochi (Cochin) Harbor must display a black ball or shape at least 0.6m in diameter at half mast and shall proceed at not more than half speed.

The following flag signals may also be displayed:

1. EM?Vessel shifting from Ernakulam Channel to Mattancheri Channel.
2. ME?Vessel shifting from Mattancheri Channel to Ernakulam Channel.
3. DN?Port's dredge proceeding to sea.
4. DF?Port's dredge entering harbor.

A vessel on fire and requiring assistance should continuously:

1. Sound on it whistle or siren the letter ?F? in Morse Code together with rapid and continuous ringing of the ship's bell.
2. Hoist, by day, appropriate International Code Flag Signal (CB6, IT, etc.).
3. Telephone Port Fire Station, the Port's Fire Float, or Harbormaster.

A vessel requiring assistance in an emergency (moorings carrying away, oil leakage, urgent medical and police assistance, etc.) may sound at frequent

intervals:

1. A succession of blasts on its whistle or siren to attract attention.
2. Sound V (3 short and 1 long blast) to mean ?I require assistance.?
3. Sound W (1 short and 2 long blasts) to mean ?I require medical assistance.?
4. Hoist V or W of the International Code of Signals.

Contact Information

The port can be contacted, as follows:

1. Call sign: Kochi Port Control
2. VHF: VHF channels 14 and 16
3. Telephone: 91-984-7049056 (mobile)
91-484-2667105
4. Fax: 91-484-2668163
5. Mail: mail@cochinport.com

Anchorage

Anchorage is available off the port of Kochi (Cochin), in 14.5m, with Kochi (Cochin) Light bearing 075°, 4.5 miles. During the Southwest Monsoon, the best anchorage, with good communication with Kochi (Cochin), is about 2 miles NNW of Fairway Lighted Buoy.

Caution

Vessels approaching Kochi (Cochin) should keep in depths of not less than 11m and W of Fairway Lighted Buoy. When in this position, hoist the signal for a pilot and await the pilot's arrival. The outer channel was dredged to 12.8m in 1986; the inner stretch of the channel to was dredged 11.9m in 1986.

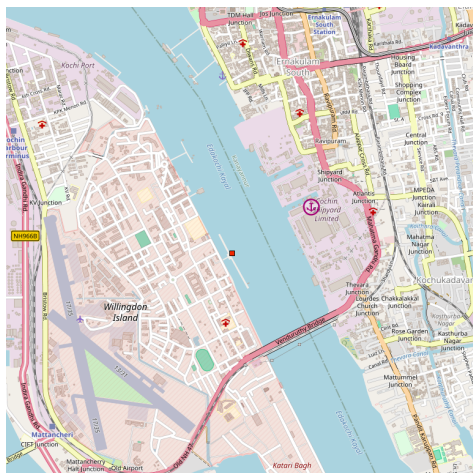
Two Submarine Exercise Areas are centered 25 miles W and 100 miles SW of the entrance to Kochi (Cochin) Harbor.

5.85 - Kochi Naval Base

9°57.10 N
76°16.97 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



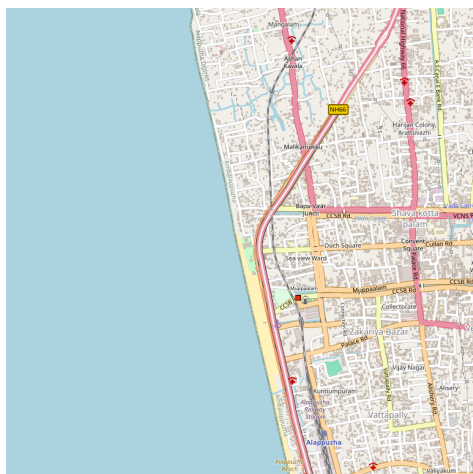



Indian Navy - Headquarters Southern Naval Command

5.86 - Alleppey point (W India)

9°29.64 N
76°19.23 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Alleppey (Alappuzha) lies about 29 miles S of Kochi (Cochin). The coast between the ports is low, sandy, thickly fringed with palms, and densely populated.

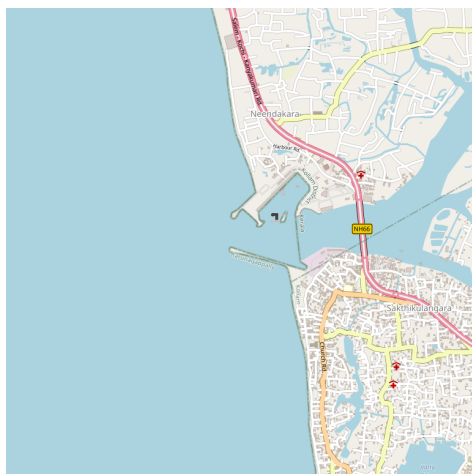
Alleppey Light is shown from a white, round, masonry tower, about 0.3 mile E of the root of Alleppey Pier. As the town of Alleppey is difficult to distinguish from seaward, it is advisable to make a landfall while it is still dark to ensure identifying the lighthouse.




5.87 - Nindakara port (W India)

8°56.13 N
76°32.32 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



channel 16

 Nindakara (Neendakara) is an open roadstead port at the entrance to Ashtamudi Backwaters.

At the entrance of that fishing port, two breakwaters shelter a shallow basin, with jetties on its N side where barges load ilmenite sand.

The entrance can be identified from seaward by a break in the palms fringing the shore, and by a bridge, which is prominent, spanning the outlet. The port is seasonal, operating from mid-November to mid-April.

Pilotage is not available.

Storm signals are displayed; the Brief System is used.

The port can be contacted from 0800 to 2200, only when a vessel is loading, as follows:

VHF: VHF channel 16

Tel: +91 471 2324842

Fax: +91 471 2324533

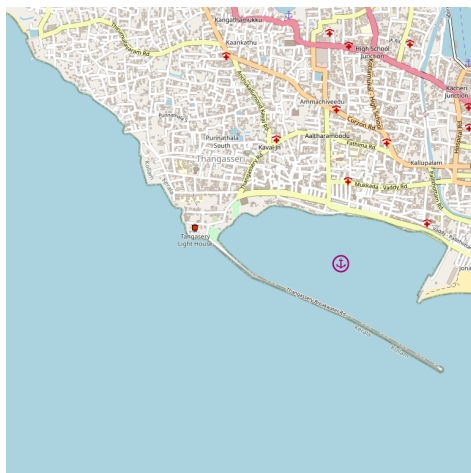
Mail: portsdir@asianet.in




5.88 - Tangasseri Point (W India)

8°52.83 N
76°33.96 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Tangasseri Point Light is shown from a concrete tower, 41m high, painted in black and white diagonal stripes, on the point. The point has been reported to be a good radar target at 17 miles.

The coast from close E of Tangasseri Point to about 3 miles NNW of it is rocky with groves of palms growing close to the HW line.

Caution: Vessels approaching Quilon (Kollam) from the N should not approach Tangasseri Point in depths of less than 20m to avoid the foul ground W and SW of the point. When the tile work?s prominent red 35m high chimney bears 044°, steer for it on that bearing, which leads between Gamaria Rock and Pallikall Shoal.

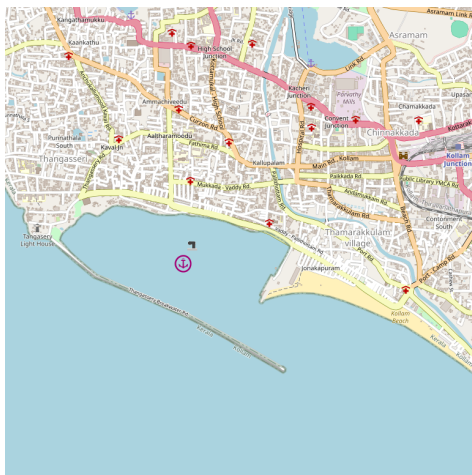



5.89 - Kollam (Quilon) Port (W india)

8°52.76 N
76°34.61 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India

  channel 16



 The port of Quilon (Kollam) is a small roadstead lying in the bight close SE of Tangasseri Point. The N and S limits of the port are defined by lines extending in a 247° direction from two boundary pillars. The N pillar and the S pillar lie about 0.7 mile E and 3 miles ESE, respectively, of Tangasseri Point. The W limit is defined by a line extending 180° from the point.

Depths? Limitations

Tangasseri Reef, consisting of foul ground and shoal water, extends about 1.5 miles W and 1 mile SW of Tangasseri Point. Pallikall Shoal, with a depth of 2m, lies about 0.7 mile ESE of Tangasseri Point, near the SE end of the coastal reef. A black buoy and a red conical buoy are moored about 1 mile and 1.3 miles SE, respectively, of Tangasseri Point.

The port is protected by the Tangasseri Breakwater, extending about 1.1 miles SSE of Tangasseri Point. The breakwater was completely restored and strengthened in 2009 after tsunami damage that had occurred 5 years previous and now has a permanent road laid along the entire length. There is also a lee breakwater extending about 500m SSW of the old Post Office with a wharf, 116m in length, located at the W end of this breakwater.

There is a least depth of 8.9m in the fairway of the channel between the buoys and a depth of 8.6m about 0.2 mile SSE of the black buoy. The red conical buoy marks the NW end of a group of dangers, with a least depth of 6.4m, extending ESE.

The basin presently accommodates vessels up to a draft of 7m but there are plans (2009) to increase this to 10m.

Gamaria Rock, with a depth of 7m and marked close N by a black and white

conical buoy, lies about 1.3 miles ESE of Tangasseri Point. The above buoys are in position from October to May. There is heavy surf along the steep beach fronting the bight and landing is dangerous except in native boats.

Contact

Tel: 91-474-743825

Fax: 91-474-743825

Mail: portkollam@yahoo.co.in

Anchorage

Anchorage off Quilon (Kollam) is exposed to winds from the NW through W to SE, and is little frequented during the Southwest Monsoon, when communication with the shore is only practicable by signal. During the Southwest Monsoon vessels should anchor, in not less than 15m, with Tangasseri Point bearing about 000°, distant over 1 mile.

Between October and May, vessels can anchor in the inner anchorage, between Gamaria Rock and Pallikall Shoal, in about 9.1m, sand, with the red chimney of the tile works bearing 040°, and Tangasseri Light bearing 299°. A large vessel may find a position about 0.3 mile farther SW more comfortable.

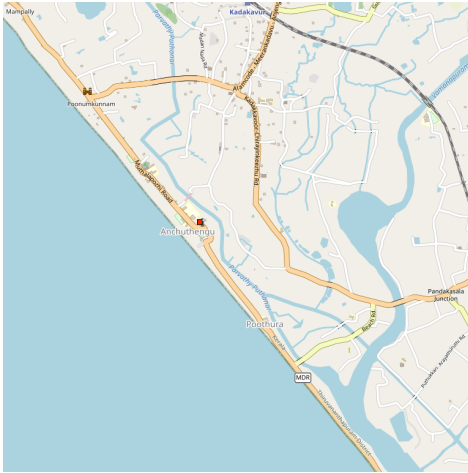



5.90 - Anjengo point (W India)

8°39.81 N
76°45.85 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India





 Anjengo, formerly of importance but now a fishing village, is seldom visited as its anchorage is exposed to the surf at all times. It is not easy to identify, even from a short distance, as the fort and other buildings are low and screened by trees.

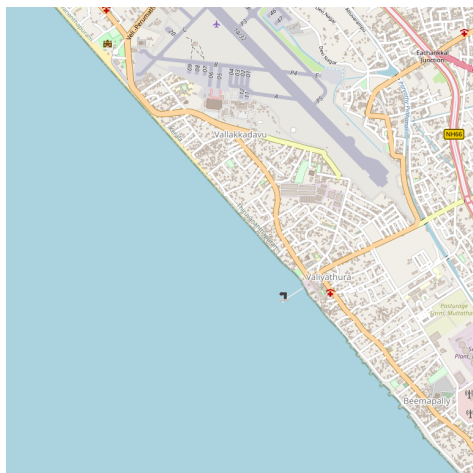
A light shows at a height of 38m from a circular concrete tower at Anjengo. A church with a white face is visible on the coast NW of the fort.




5.91 - Trivandrum port (Kerala-W India)

8°27.78 N
76°55.42 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Trivandrum (Thiruvananthapuram), the capital city of the state of Kerala, lies about 1 mile from the coast. The ruins of a pier, extending to the LW line, are prominent on the coast S of the city.

Trivandrum is a lighterage port with no docking facilities available.

Pilotage is not compulsory but one is available.

Trivandrum is closed during the Summer Monsoon season, usually May through August.

Landing should not be attempted by small boats due to a strong surf running along the coastline during the winter monsoon season.

Tel: 91-471-324533

Fax: 91-471-324842

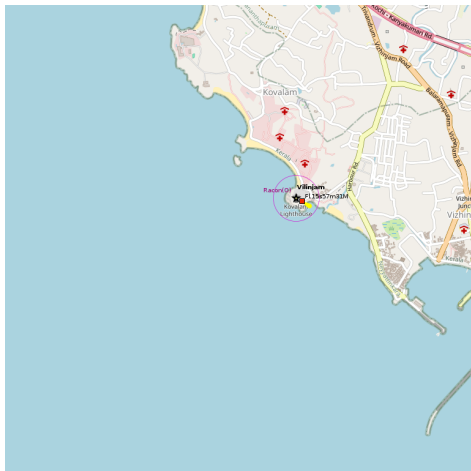
Mail: portsdir@asianet.in




5.92 - Kovalam Point (W India)

8°22.96 N
76°58.80 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Kovalam Point (Covelong Point) is a bluff point with a conspicuous red-roofed building on it.

Good radar returns have been reported from the point at 19 miles.

KovalamBeach is probably the best known surf spot in India.

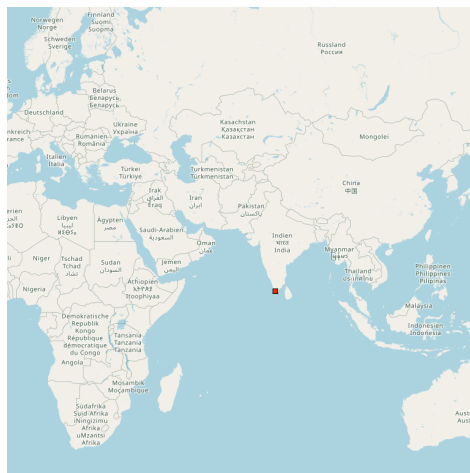
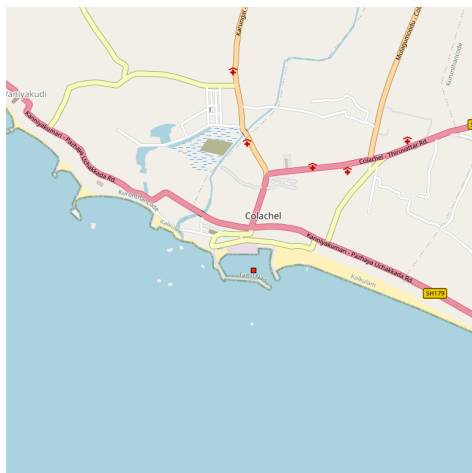



5.93 - Kolachel Port (W India)

8°10.28 N
77°15.07 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India





 Kolachel (Colachel) is an open roadstead with anchorage in about 13m in the lee of four small islets. The port is important for the export of ilmenite sand.

Vessels of 10,000 15,000 grt have called here. Landing during good weather is fairly easy as the rocks off the village form a practical breakwater to the heavy surf on

the coast.

Depths?Limitations

The depths shoal gradually from 21m in the outer anchorage to 10m about 0.2 mile offshore in the area E of the town.

Several rocks, above and below-water, extend up to about 0.3 mile S and SW of Kolachel. Kurusukal, 6m high and surmounted by a white shrine carrying a black cross, lies about 183m S of Kolachel Light.

Ahnakal, 3m high, lies close SSE of Kurusukal, with a rock awash close SE of it.

Pulleri, 1m high, the SE danger in the approach to Kolachel, lies about 0.3 mile SSE of Kurusakal.

Patna Rock and Constance Rock, with depths of 2m, lie about 183m W and 0.5 mile WNW, respectively, of Pulleri.

Signals

Storm signals, using the Brief System, are displayed from a flagstaff 0.4 mile E of

Kolachel Light.

Contacts

Tel: +91 442 5670959

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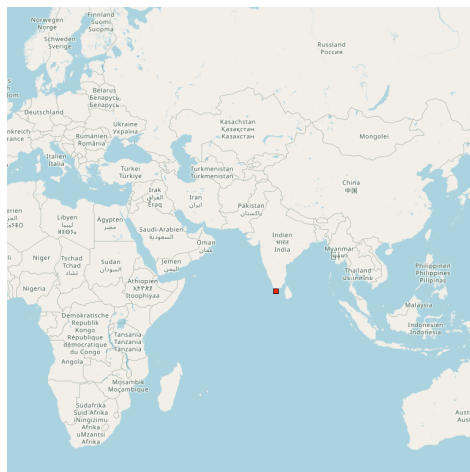
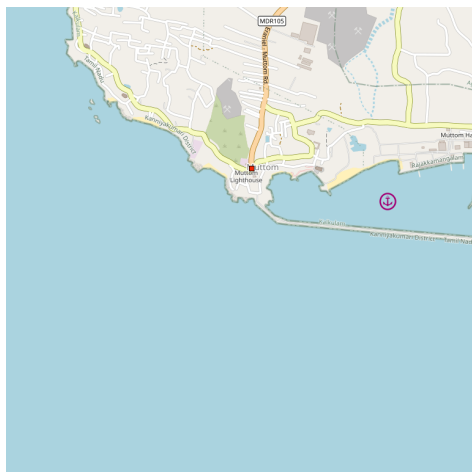
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5.94 - Muttam Point (W India)

8°07.44 N

77°19.02 E

Mer du Nord - Ten degrees channel (India) - Arabian Sea - West coast of India



 Muttam Point (Muttum Point), 35m high and with steep red cliffs, lies about 5.5 miles SE of Kolachel. The village of Muttamtura lies on the point.

A light, with a racon, is shown on the point. A group of palmyra trees on high red ground, about 1 mile N of the light structure, forms a good landmark which can usually be seen above mist which may obscure the lighthouse.

Muttam Point has been reported to give a good radar response at 18 miles.

Vessels in the vicinity of Muttam Point, at night, should not approach into depths of less than 45m due to the dangers W and SW of the point.

Crocodile Rock, a dangerous sunken rock about 3 miles SW of Muttam Point Light, is the outermost danger; the sea does not break over it in calm weather.

Adunda Rock, 5m high, lies about 1.3 miles SW of the point. It is difficult to identify from seaward, and foul ground extends about 0.2 mile NNW from it.

Kota Rock, 6m high and steep-to on its W side, lies about 1.3 miles WNW of Adunda Rock. Vessels should not pass inside of Adunda and Kota Rocks.



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Responsabilité

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