Allianz Sailing World Championships

BRING THE ACTION

10 • 20 August 2023
Scheveningen, The Hague

Allianz | SAILING WORLD CHAMPIONSHIPS THE HAGUE 2023 THE NETHERLANDS | World Sailing | The City The Beach The Hague.

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7. Meteorology and sailing conditions

THE CLIMATE

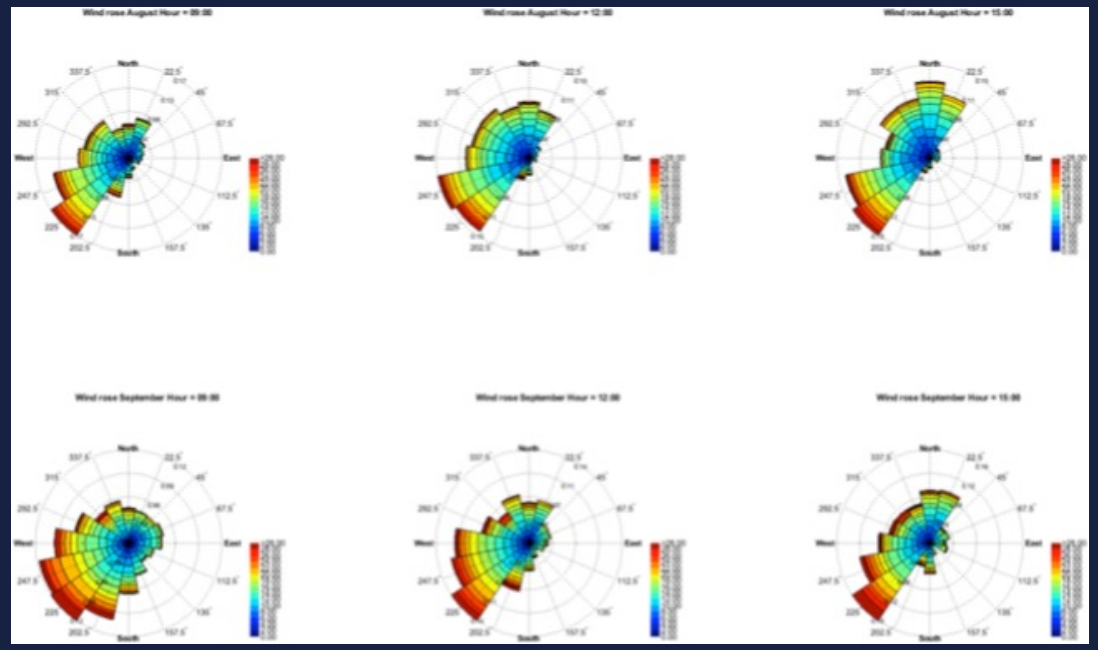
The climate in the coastal area of The Hague in the months of August and September is seasonal. The average temperature is 19 degrees Celsius (670F). The coastal area
has a high number of hours of sunshine in August and September: an average of 161 hours. It is 20°C or more on at least 13 days per month.
The Netherlands has a mild oceanic climate with relatively mild winters, mild summers and precipitation throughout the year. The weather in Scheveningen in August and September is characterised by many different weather types. Seawater temperatures are at their highest levels of the year, mostly at 18 to 19 degrees Celsius. There are regular Indian Summers, but the first autumn depressions can also influence the weather in September. The relatively warm seawater means that there is a minimum risk of coastal and sea fog.
The sun shines almost every day, and there are only a few days with absolutely no sunshine. Showers or persistent rain can occur, but rain generally doesn't last long. When the sailing is to take place (from 9.00 am until 9.00 pm) it only rains an average 3.5 percent of the time.
On average per month there are 4 days with thunderstorms. In most cases the thunderstorms are accompanied by showers and these occur mostly in the evening and at night. This means that day-time thunderstorms are not very likely, but can't be excluded. Excellent data provision regarding current weather conditions means that these can be anticipated in time.
The wind can come from all directions, depending on the actual weather situation, but the prevailing winds in this period are between south and west. The wind comes from this direction 40 percent of the time. Wind directions between east and south are the least prevalent, approximately 15 percent of the time.
As far as wind force is concerned there are hardly any situations in which sailing cannot take place. There is actually always wind in Scheveningen, with winds of less than 2 Bft occurring just 3 percent of the time. It's not often that there is too much wind; winds exceed 6 Bft just 5 percent of the time. Winds of between 3 to 5 Bft are expected over 70 percent of the time, the ideal winds for sailing.
We can thus conclude that the weather in Scheveningen in August and September offers challenging conditions for sailors, certainly in combination with the currents and tide. The likelihood of non-sailing conditions is low.

Weather summary Scheveningen September (mean values)	
Maximum temperature (°C)	18,4
Minimum temperature (°C)	10,9
Days with 20°C or more	7
Days with 15°C or more	28
Total precipitation (mm)	89
Duration of rain (%, night and day)	7
Days with no rain	10
Days with more than 10mm rain	3
Days with thunder	4
Sunshine duration (hrs)	147
Sunshine duration (%)	39
Days with no sunshine	2

WIND DIRECTION

The average wind direction in August/September is predominantly southwest (240 - 250 degrees), as is shown in the graphs below.

General monthly wind roses Scheveningen (52.16o N, 4.16o E)

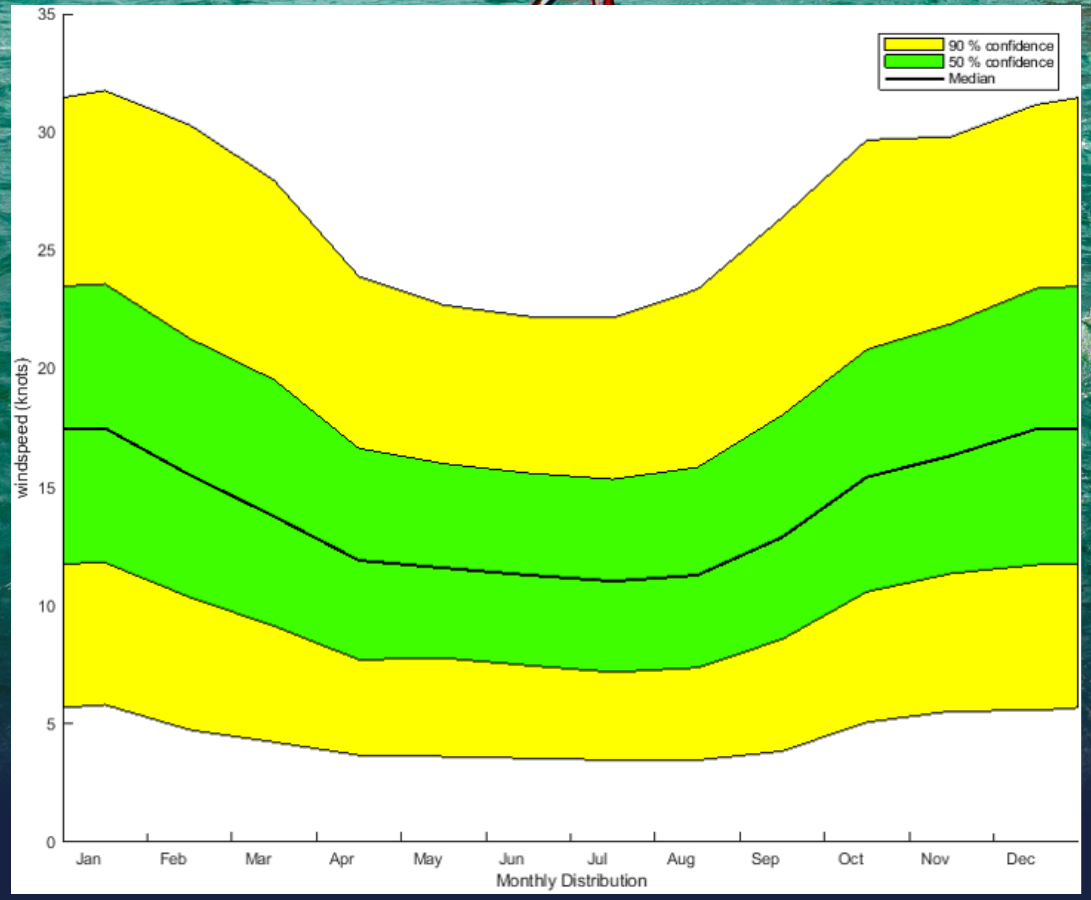


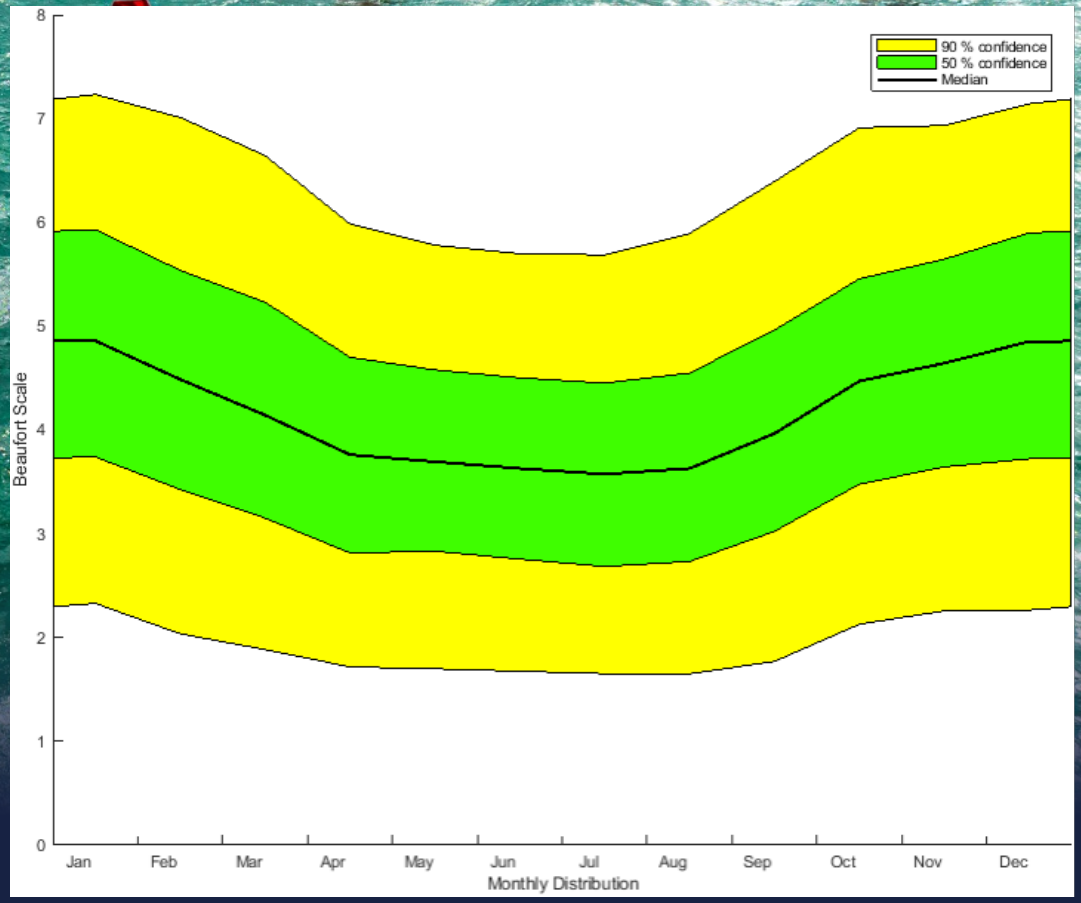
Source: KNMI – KNW wind atlas 30 year (model resolution 2.5*2.5km) link: http://projects.knmi.nl/knw/data/

WIND SPEED

The sailing conditions in August and September are fantastic with average wind speeds between 10 and 20 knots. The first two graphs below indicate monthly wind speeds in knots and Beaufort scale. The next tables show hourly wind speed percentages during the event period and hourly wind speed averages.

General monthly wind conditions Scheveningen (52.16o N, 4.16o E)





Source: KNMI – KNW wind atlas 30 year (model resolution 2.5*2.5km) link: http://projects.knmi.nl/knw/data/

Hourly wind statistics Scheveningen (52.16o N, 4.16o E)

Hourly wind speed percentages Scheveningen August

		09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00
0-1 Bft	<1 kts	1	1	1	0	0	0	0	0	0	0	1	1	1
1 Bft	1-3 kts	8	9	6	5	7	5	4	5	7	8	9	9	7
2 Bft	4-6 kts	17	15	16	14	16	15	15	16	14	14	17	17	18
3 Bft	7 -10 kts	23	23	25	27	25	26	28	27	27	26	28	27	24
4 Bft	11-16 kts	31	32	31	31	32	34	33	32	32	31	30	31	31
5 Bft	17–21 kts	14	13	14	15	15	13	14	14	13	13	10	11	13
6 Bft	22–27 kts	6	6	7	7	5	5	5	5	6	7	6	6	5
>7 Bft	>28 kts	1	1	1	2	1	1	1	1	2	2	1	1	1

Hourly wind speed percentages Scheveningen September

		09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00
0-1 Bft	<1 kts	1	1	1	0	0	0	0	0	0	0	0	1	0
1 Bft	1-3 kts	6	8	8	6	6	6	5	5	5	6	6	5	5
2 Bft	4-6 kts	12	10	11	11	13	12	11	11	11	12	15	13	13
3 Bft	7 -10 kts	21	21	19	19	21	22	23	23	23	22	23	23	23
4 Bft	11-16 kts	32	31	33	34	31	32	33	33	33	32	31	31	30
5 Bft	17–21 kts	18	18	18	17	18	17	16	16	14	13	13	13	15
6 Bft	22–27 kts	9	9	9	10	9	9	9	8	9	10	10	11	11
>7 Bft	>28 kts	3	3	3	4	3	2	3	4	5	5	3	3	3

Hourly wind speed averages Scheveningen September

Hour	Wind speed	Max wind speed	Direction	
	kts	kts	mean	modus
09:00	13,8	18,3	191	190
10:00	13,9	18,6	194	190
11:00	14,1	18,7	196	200
12:00	14,2	19,0	205	210
13:00	14,3	19,2	210	250
14:00	14,5	19,4	212	260
15:00	14,6	19,6	218	240
16:00	14,7	19,6	217	230
17:00	14,7	19,6	215	240
18:00	14,6	19,5	209	240
19:00	14,4	19,2	202	240
20:00	14,2	18,9	194	240
21:00	13,9	18,6	185	230

Source: KNMI – KNW wind atlas 30 year (model resolution 2.5*2.5km) link: http://projects.knmi.nl/knw/data/

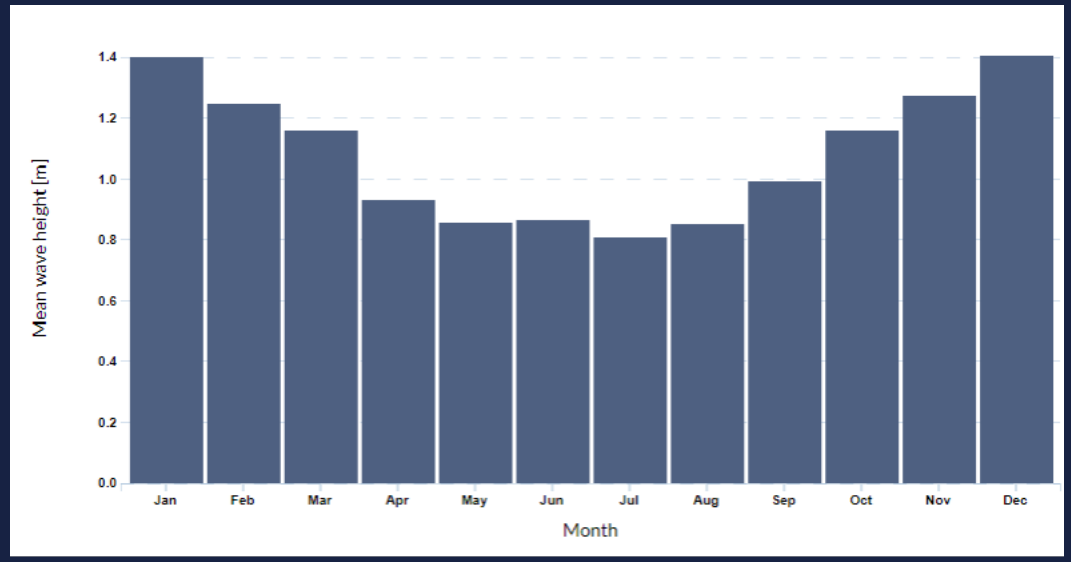
WAVE HEIGHT

The wave height off the coast and at the race course locations is principally determined by the combination of local wind direction and force. A swell can also be caused by the force and direction of distant winds. In offshore winds the sea remains flat. With winds parallel to the coast, wave height can increase to around 1 metre. In onshore winds of around 4 to 5 Bft, wave height can increase to around 1.5 metres. The table below gives insight into average wave height distribution:

TIDAL STREAMS

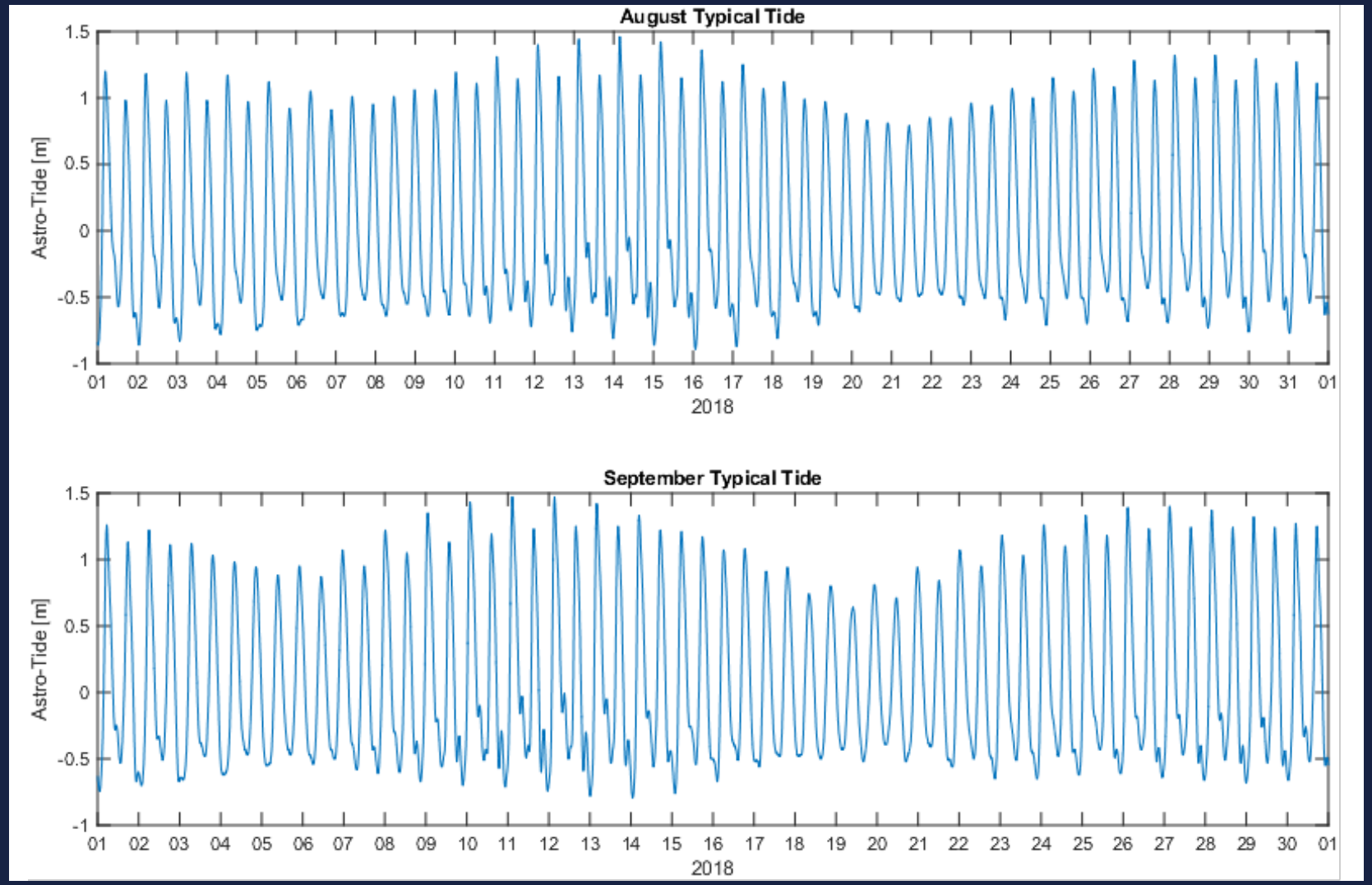
The current off the coast of Scheveningen is caused by the tide, with an average tidal range of around 2 - 2.5 metres.

Monthly wave height statistics Scheveningen (52.16o N, 4.16o E)



Source: SWAN wave modelling year round

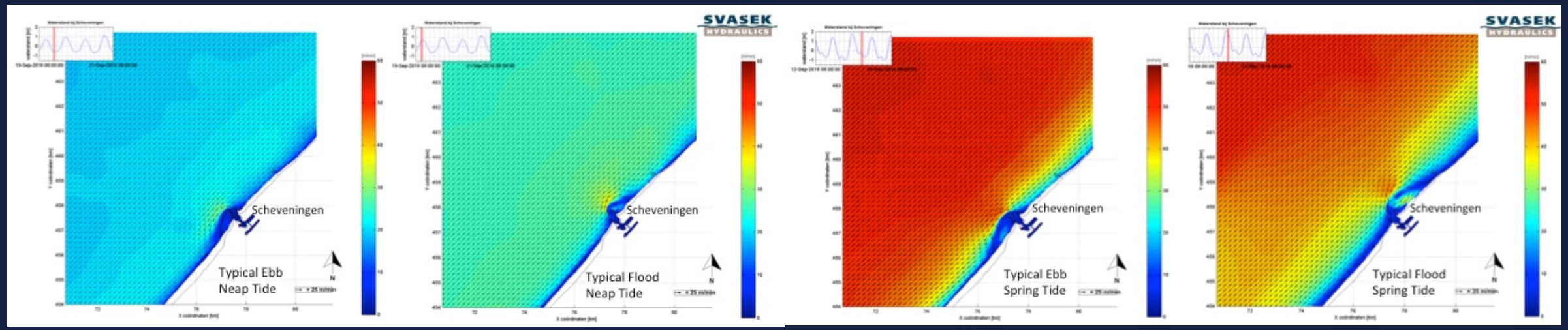
Typical Semidiurnal Tide Scheveningen (52.15o N, 4.2o E)



Source: Tide levels from Astronomical Harmonic Analysis
(Ministry of Public Works, RWS)

WATER LEVEL IN CM

The figures below present examples of the typical speed and direction of tidal streams at flood and ebb around Scheveningen during spring and neap tides. An eddy develops close to the port of Scheveningen to the north of the harbour during flood and to the south during ebb. Otherwise, the current runs parallel to the coast. The maximum tidal stream speed during the proposed race period (between spring and neap tide) is approximately 0.8 m/s (= 54 m/min).

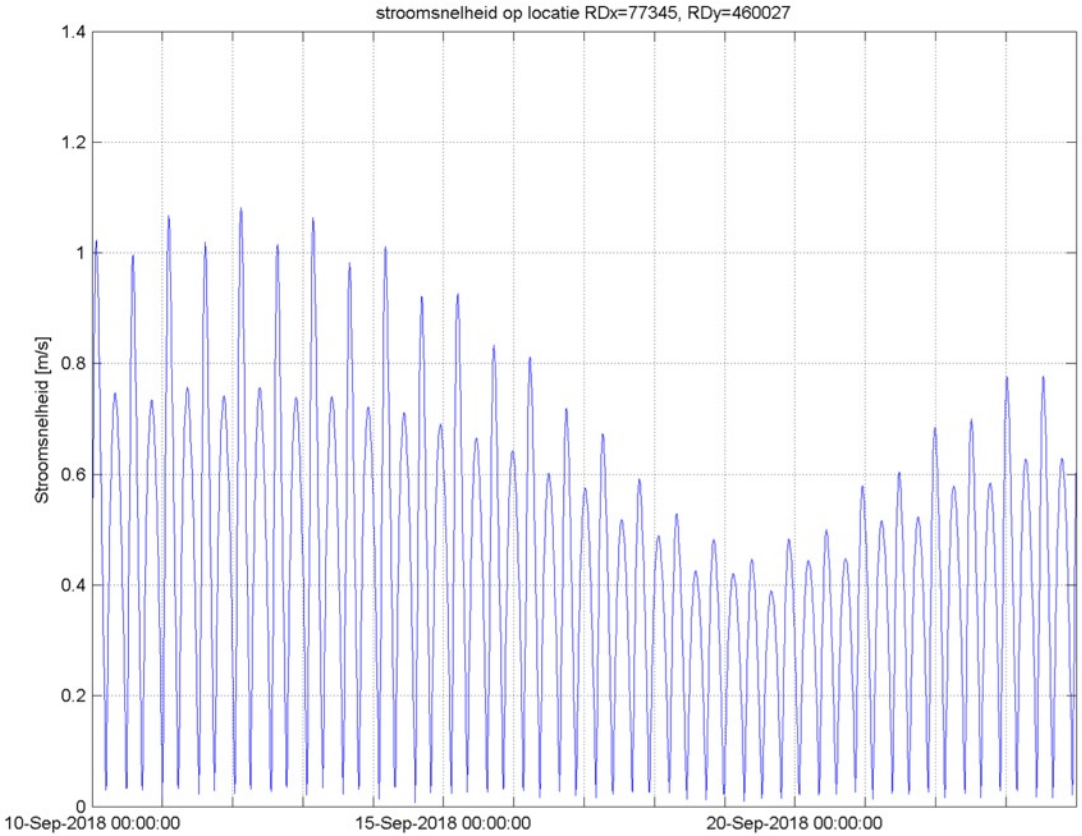


Source: data from numerical modelling, see http://www.finel2d.com/finel2d.html

Tidal stream speed at location 1 (52° 7'22.81"N, 4°15'11.70"O)

PARTNERS PROVIDING DATA

The data in this chapter were realised in cooperation with Svašek Hydraulics and well-known meteorologist Gerrit Hiemstra.



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