

# Gulf Water Forecasting



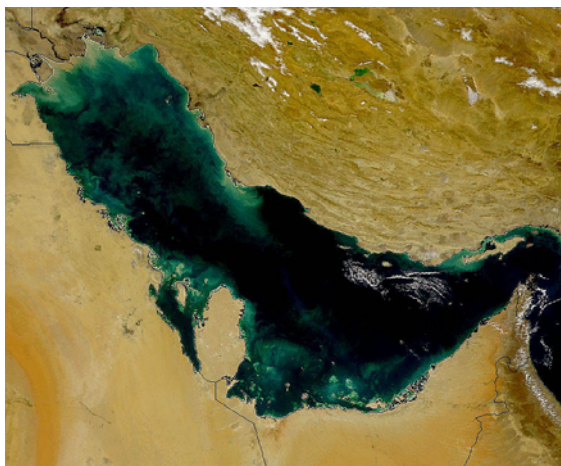
**DHI's Gulf Water Forecast Service ([www.waterforecast.com/gulf](http://www.waterforecast.com/gulf)) is a complete operational and online service. It is tailor made and provides hydrographic, environmental and meteorological information for the Gulf and Sea of Oman.**

## Users of the Service

The Gulf Water Forecast service provides high resolution operational forecasts of tides, water levels, waves and meteorology (provided by Oceanweather - OWI) throughout the Gulf and Sea of Oman.

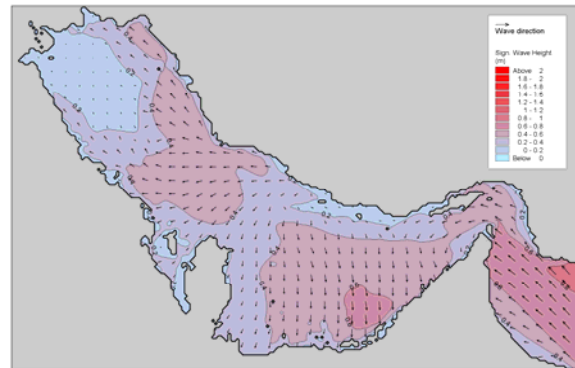
The service is based on OWI's and DHI's in-house state of the art simulation models.

Subscribers are offered detailed forecasts covering ports, offshore fields or coastal zone tailored to specific needs and requirements. Tailored forecasts are available from secure and dedicated websites and can also be transmitted via email and SMS.



The Gulf Water Forecast services are of benefit to asset owners, operators, service providers, industry, contractors and authorities. Users of the water forecast services will have fingertip access to operational met ocean data providing the best possible basis for optimal planning and execution of operations. Dissemination of water forecasts is typically tailored by DHI in close collaboration with users to meet very specific needs and requirements. This

custom service ensures that the water forecast adds tremendous value to sustain the highest operation efficiency and safety, at the same time protecting assets and the marine environment.



Key users of the Gulf Water Forecast are for example:

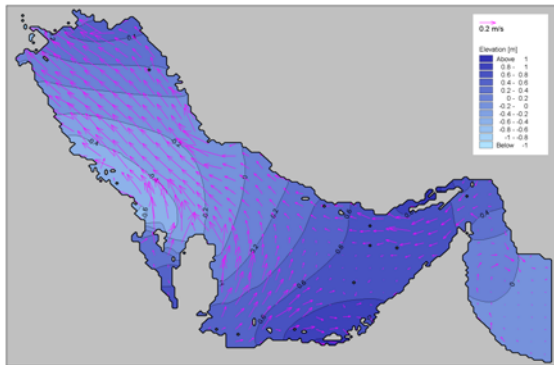
- The offshore oil & gas industry – met-ocean data for accurate site exploration, drilling and safe rig operation
- Maritime operators- where vessel operations and logistics depend on the metocean conditions
- Port and transportation authorities – for safe and efficient vessel (eg high speed ferry) operation and handling
- The dredging industry – for operational planning and spill impact minimization
- Marine and offshore industry – working at the coastline or offshore, where adverse conditions may affect the work and safety
- The shipping industry – for route planning
- Municipal and federal authorities – for wave forecasting, current and surge warnings, oil spill emergency, monitoring surveys in coastal areas

- Fishing industry – for planning of operations at sea and in ports, operation of aqua-culture

### The advantages

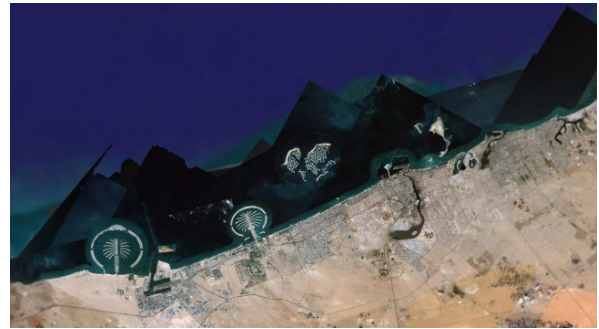
The Gulf forecast provides hourly 5-day forecast (updated twice a day) of the following parameters:

- Wave conditions, including wave heights ( $H_{m0}$  and  $H_{max}$ ), wave periods ( $T_{02}$  and  $T_p$ ), mean wave direction and directional standard deviation
- Water level and tides
- Depth-averaged current speed and direction
- Wind speed ( $U_{10}$ ) and direction
- Air pressure ( $P_{10}$ )
- Optionally the Gulf forecast can be customised to display comparison to available on-line measurements and forecasts statistics



The forecast data is customised to meet specific needs in terms of functionality, operability and support of design and other business processes. DHI staff provides continued system support and maintenance.

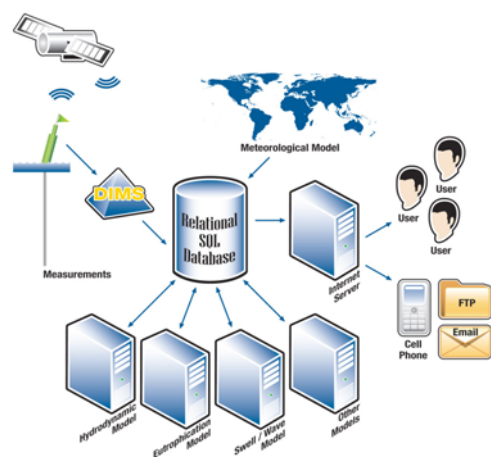
Local high resolution forecasts can also be offered on demand.



### Forecast Model

The Gulf Water Forecast is based on meteorological forcing provided by OWI. OWI uses local measurements to adjust the global GFS 1 degree resolution weather forecast to optimize the result, especially for the meteorology in the Gulf.

Wave, current and water level forecasts are available at 2 km resolution along the coastline providing optimal spatial prediction of the marine state. Refined local area models can be set up for individual subscriptions.



For a preview of daily forecasts for the Gulf visit [www.waterforecast.com/gulf](http://www.waterforecast.com/gulf)

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