泳灘水質預報系統
BEACH WATER QUALITY FORECAST SYSTEM

新一代香港水質模型
A NEW GENERATION WATER QUALITY MODEL FOR HONG KONG

環保署研發的「泳灘水質預報系統」利用統計及數據驅動模型，根據最相關和最新的環境及水文氣象數據，為全港所有開放予公眾游泳的憲報公布泳灘提供每日水質預測。市民可透過手機應用程式或泳灘專題網站，獲取最新的泳灘水質預測資訊，預先計劃水上活動。

The "Beach Water Quality Forecast System" developed by the EPD utilises statistical and data-driven models to provide daily water quality forecast for all gazetted beaches in Hong Kong that are open for swimming, using the most relevant and the latest environmental and hydrometeorological data as model inputs.
Members of the public can obtain the latest beach water quality forecast information through the mobile application or the beach thematic website, facilitating early planning of water recreation activities.
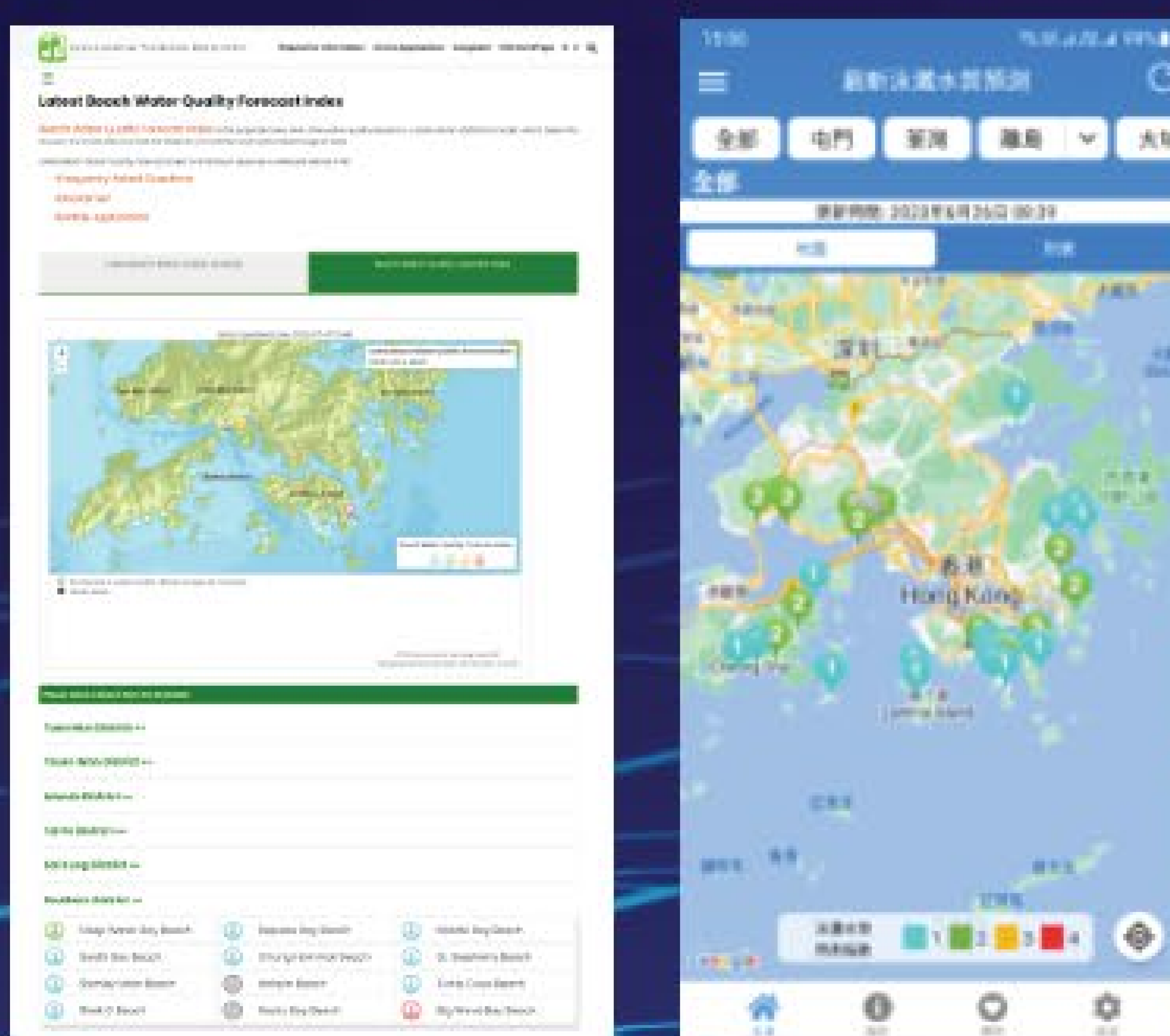
環保署應用嶄新的「Delft3D 靈活網格（DFM）」技術，研發了全新的三維區域水動力和水質模型。模型採用非結構網格技術，能更切合香港和鄰近水域複雜的海岸線和海底地型，更精細和如實地模擬水動力和水質變化，為各種工程項目對海洋環境的潛在影響作出定量評估。

The EPD has developed a new three-dimensional regional hydrodynamic and water quality model using the Delft3D Flexible Mesh (DFM) technology. The model utilises the unstructured-grid technology to better match complex coastline and bathymetry of Hong Kong and the neighbouring waters, enabling a more realistic and refined simulation of the coastal hydrodynamics and water quality variations for quantitative assessments of potential impacts of various works projects on our marine environment.
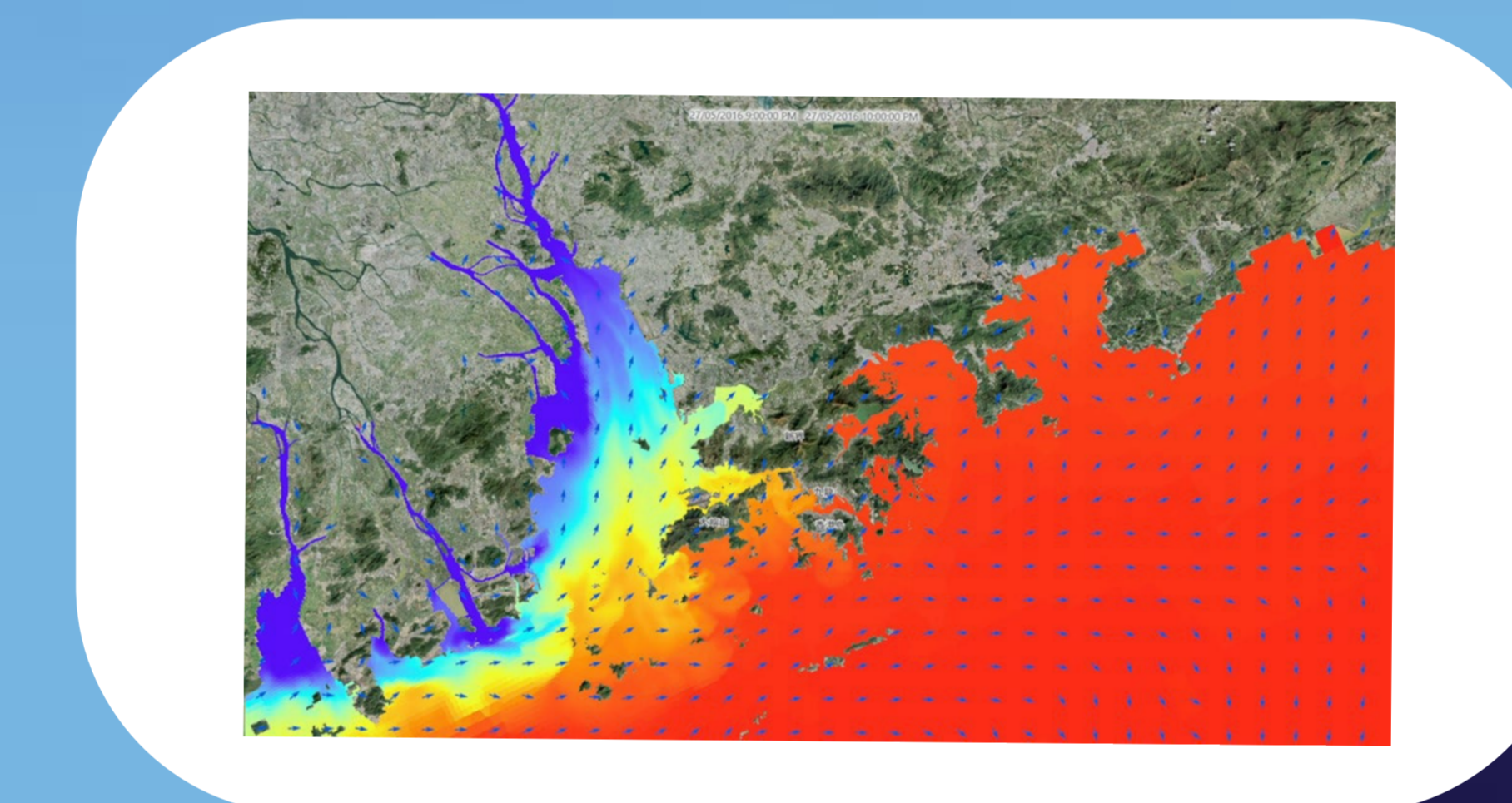

為讓市民更容易了解預測結果，指數參照現行的泳灘水質分級制度分為四級。當泳灘的預測結果為「4 - 極差」時，市民應考慮避免下水。

To facilitate easy understanding of the forecast results, the 4-level index system is established making reference to the existing rating system for beach water quality.When the forecast result of a beach is "4-Very Poor", bathers should consider avoiding swimming at the beach.

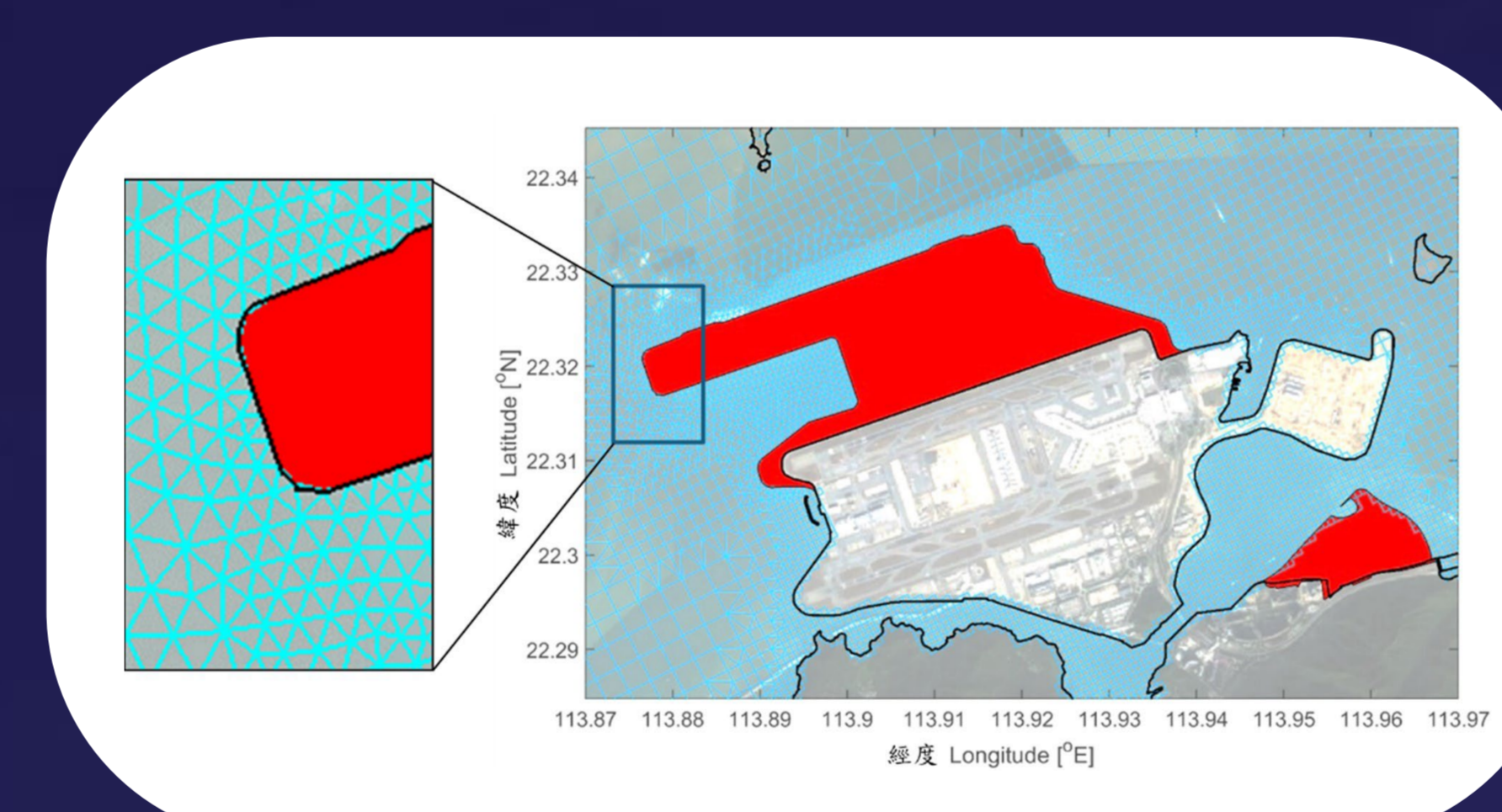**水流和鹽度模擬結果**
Model simulation results of current and salinity

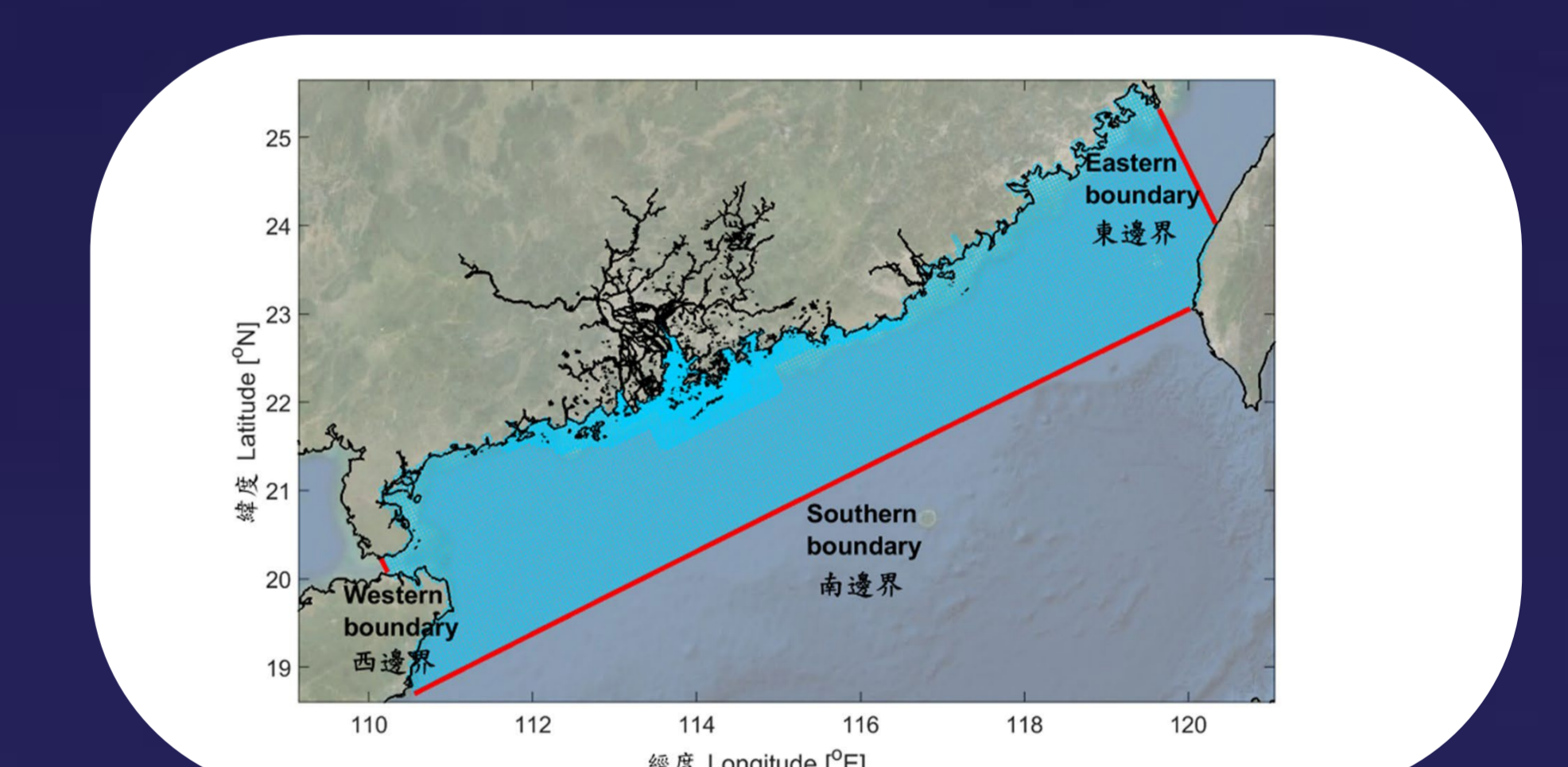各泳灘的水質預測指數會在每天早上於手機應用程式及環保署泳灘專題網站內的泳灘水質預測專頁發布 (www.epd.gov.hk/BWQForecast)。

Latest BeachWater Quality Forecast Index for individual beaches is released daily through the mobile application and the dedicated beach water quality forecast page (www.epd.gov.hk/BWQForecast) on EPD's beach thematic website.

採用非結構網格技術以貼合複雜的海岸線
Utilising unstructured-grid technology to better match complex coastline

DFM 模型覆蓋整個香港水域及延伸到離岸更遠的南中國海大陸架，可一併考慮氣象驅動和洋流變化對水體的影響。
The DFM model covers the entire Hong Kong waters and extends offshore to the continental shelf in the South China Sea, taking into consideration the variations of meteorological forcing and oceanic current on the impact of water body.