MWQESR
Information Dissemination

GUIDE 2021
APPLICATION

MWQESR Information Dissemination

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Chapter I - Thematic Maps

A **thematic map** is a specialized map made to visualize a particular subject or theme about a geographic area. Thematic maps can portray physical, social, political, cultural, economic, sociological, or any other aspects of a city, state, region, nation, continent, or the entire globe

The **color** has a noticeable function in the map design, which is a very active factor in the map vision variables. The Color itself is one kind of map signal as map color has informational and esthetical value concurrently.

This is reflected on our system, in addition to multi-functions that help our users to get the required information in a neat and usable way that makes their tasks far easier.

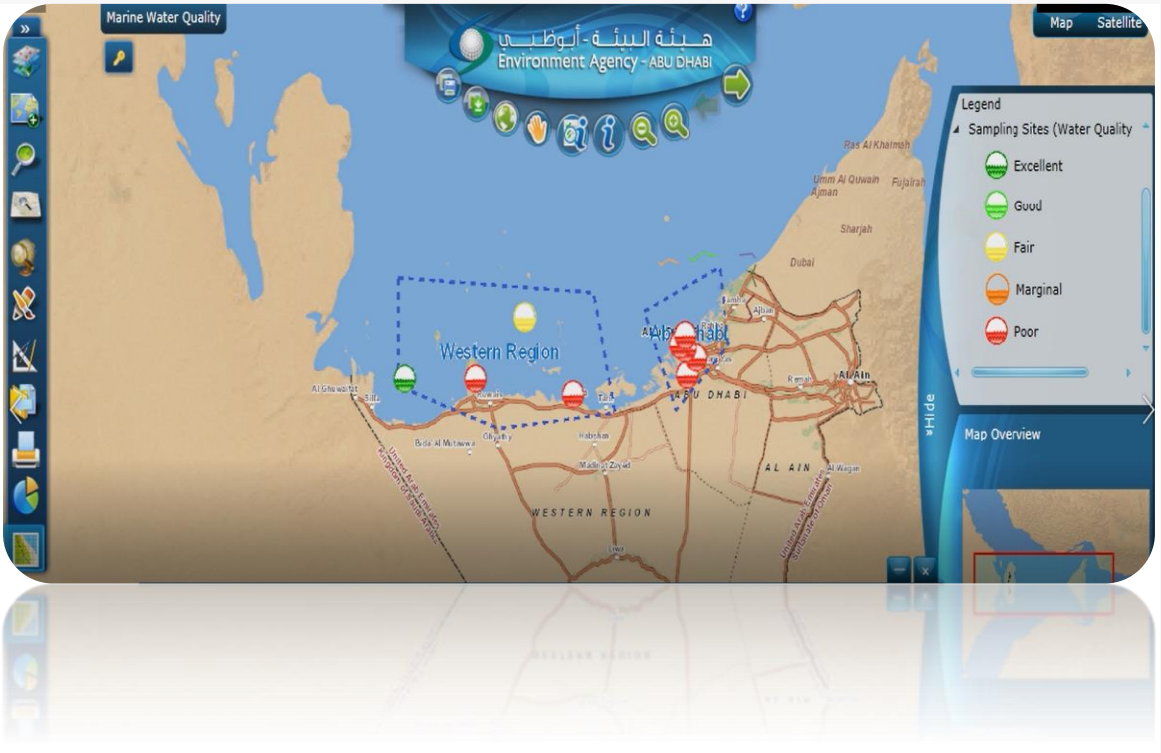


Figure 1-1 Thematic Map Sample

1.1 Marine Water Quality

Water is the second most important need for life to exist after the air. Accordingly, water quality has been described extensively in different scientific research and resources. To define it simply:

It is the physical, chemical, and biological characteristics of water

Water quality is a measure of the condition of water relative to the requirements of any human need or purpose or for other species. Therefore, the need to develop a tool for planning and managing the water quality has become a must to ensure simple but accurate information about the quality of water.

Water quality affects human health, as well as ecosystems, biodiversity, food production, and economy. While improving water quality worldwide is essential to sustainable development, reliable data is scarce, especially in remote areas and developing countries where monitoring networks and capacity are lacking.

Our system helps to monitor and manage water resources sustainably. The colors reflect the quality of water and then they are represented in an index table, which will be explained in detail below.

1.1.1 Main Features

- Colors indicating the quality of marine water in different locations
- Sampling sites symbology
- Water Quality Index
- Ability to change the classification to any other parameter
- Creating and manipulating charts for water quality variation at a site representing for any sampling site you select within your defined periods.

1.1.2 What the System Saves You

- You don't need to establish well-equipped central and even regional laboratories for water analysis, at the provincial and district levels.
- You don't need a good road system and transport for all sampling officers
- You need the minimum level of analysis should therefore include testing for unpredictable contamination factors.
- You don't need to explore the potential of Earth Observation in filling the global data gap on water quality.

1.2 Water Quality Map Indicating Colors

The color has a noticeable function in the map design, which is a very active factor in the map vision variables. Map colors have informational and esthetical value concurrently. In the thematic map, the geographical factors are divided into thematic factors and basic geographical factors.

- Thematic factors are subjects of a map, which belong to the upper-level plane of visual effects.
- Geographical factors show the geographical environment where the subject occurs, which serves as a thematic factor.

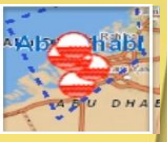
1.2.1 Sampling Sites Water Quality Colors

On the first look at the map, you can grasp the quality of marine water at different locations on the map, as indicated by the colors that are translated in words in the top right corner of the map.

The following table shows you what each color indicates on your map, while you can find them also explain visually in the top right corner of your thematic map.

Color	Indication
	The **dark green color** indicates that the quality of water in the corresponding location is *Excellent*.
	The **light green color** indicates that the quality of water in the corresponding location is *Good*.
	The **yellow color** indicates that the quality of water in the corresponding location is *Fair*.
	The **orange color** indicates that the quality of water in the corresponding location is *Marginal*.
	The **red color** indicates that the quality of water in the corresponding location is *Poor*.

You may find duplicate colors icons on the map due to the use of the scale for the map.



1.3 Water Quality Index

The water quality index table covers all *In-Site water quality parameters*. However, users can change the classification to any other parameter, as shown in detail below:

Figure 1-2 Water Quality Index Table

➢ **To change classification of the Thematic Map, do the following:**

1. While you are in the *Water Quality Index* table, select the project name from the *Project Name* drop-down list, either use the default one.
2. Click on the parameter you want to be shown on the map colors indicator.
3. On the table, click ***Temperature*** for example, the water temperature of different locations is reflected on the map indicators as shown in the adjacent figure.
4. Thus, the area marked in red means that its temperature is high, and in green is normal.

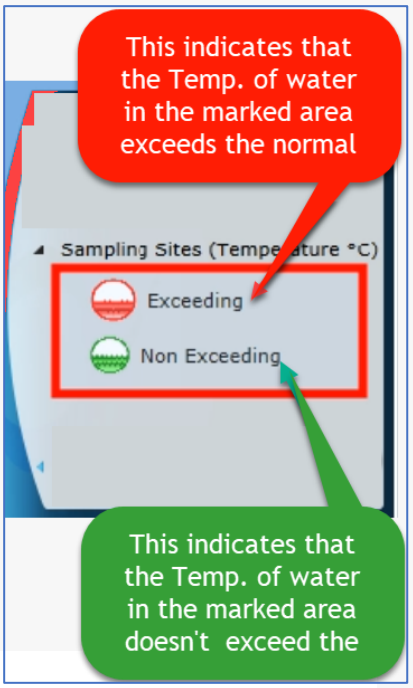


Figure 1-3 Temperature on Map

1.3.1 Water Quality Parameters

The Parameters in the Index table control what you can see on the map to detect marine water quality from this perspective. As explained in the previous section, you just select any parameter from the Index table, and voilà , its corresponding values are reflected on the map with symbolic colors according to the selected parameters.

Parameter	Values	Symbolic color	Indication
Temperature	Exceeding	Red	This indicates that the temperature of marine water in the regions marked in red exceeds the normal temperature.
	Non-Exceeding	Green	This indicates that the temperature of marine water in the regions marked in green is normal.
Conductivity			
Salinity			
PH			
Dissolved Oxygen			
Chlorophyll			
Secchi Disk Depth			

2 Chapter II - Charts

Area Charts [1]or charts based on Maps data are very useful to be able to analyze your data, and make good use of them besides being visualized to sum up figures, and information that may be complicated in themselves for different users. You can trace the water quality variation based on different parameters through charts for any sampling site you prefer.

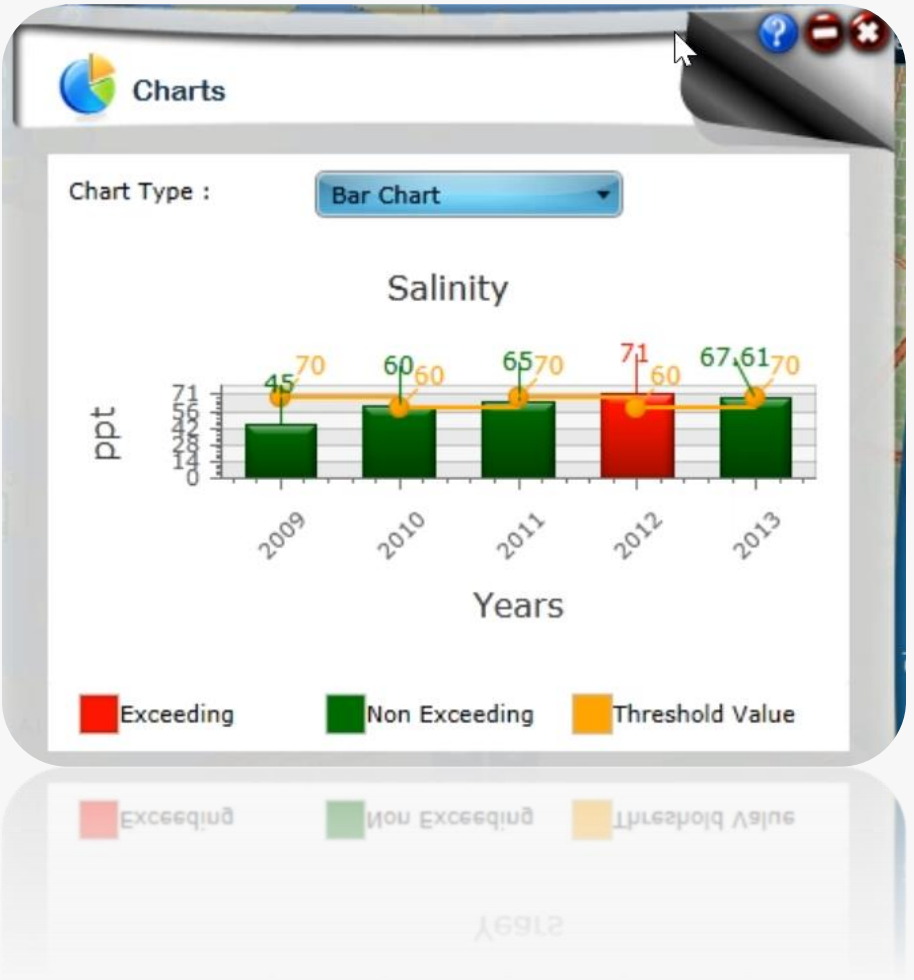


Figure 2-1 Charts on Map Sample

[1] [graphics map display] A chart that emphasizes the difference between two or more groups of data; for example, the changes in a population from one year to the next. The area of interest is usually shaded in a solid color. https://support.esri.com/en/other-resources/gis-dictionary/term

2.1 Creating Charts

You can create charts in a glimpse representing for any select sampling site you choose in your defined period according to preferences for whatever parameter you choose.

Figure 2-2 Charts Data Defining

➢ To create charts:

1. Select the *Sampling Site Category* required from the corresponding drop-down list. Then select the sampling site itself from the corresponding drop-down list as well.
2. Click the calendar icon to select the date range ***"From & To"***.
3. Click on the parameter you want to be shown on the chart.
4. Select *Show Threshold Value* [2]to show threshold values on the chart.
5. Select *Show Values* to show values on the chart.

2 Threshold Value means a **value or range of values that allows for an assessment of the quality level achieved** for a particular criterion, thereby contributing to the assessment of the extent to which **good environmental status** is being achieved.
https://www.lawinsider.com/dictionary/threshold-value

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