

## **User Guide Manual**

---

### **KIEIN Web Based Application** *Kuwait Institute for Scientific Research*

#### **Ownership**

This Document and all its contents are the sole property of KISR. Any distribution, reprint, copy or reproduction of this document, fully or partially, is only allowed for the intended readers and purpose.

ESRI product names and training courses are trademarks and copyrights of ESRI, Redlands, USA. Any other mentioned trademarks are copyright of their respective owner.

Printed: November 2007 in Kuwait

## Table of Contents

Introduction .....	iii
Tool bar Items .....	2
Tools Menu.....	4
Draw Graphics.....	4
Delete All Graphics .....	5
Map Scale .....	6
Print Current View .....	6
View Menu .....	6
Zoom To Active Layer .....	6
Show Layer Manager .....	7
Show Legend.....	7
Recently opened maps.....	7
Overview .....	8
Query Menu.....	9
Find Features .....	9
Select by Attributes .....	9
Select by Location .....	10
Clear Selected Features .....	11
Open Attribute Table.....	11
Analysis Menu.....	12
Buffer.....	12
Multiple Buffer.....	12
Buffered Intersection.....	13
Indicators Menu.....	14
Air Quality.....	14
Seawater Quality .....	15
Socio Economic.....	15

## List of plates

Plate 1. Tools menu in KIEIN-III Web based Applications.....	4
Plate 2. Draw graphics and text tool in Tools Menu.....	5
Plate 3. Map scale bar.....	6
Plate 4. Print current view in Tools menu.....	6
Plate 5. View menu in KIEIN-III Web based Applications.....	6
Plate 6. Layer manager in View menu.....	7
Plate 7. Map legend in View menu.....	7
Plate 8. Recently opened maps tool in View menu.....	8
Plate 9. Overview tool in View menu.....	8
Plate 10. Query menu in KIEIN-III Web based Applications.....	9
Plate 11. Find features tool in Query menu.....	9
Plate 12. Select by attributes tool in Query menu.....	10
Plate 13. Select by location tool in Query menu.....	11
Plate 14. Open attribute table tool in Query menu.....	11
Plate 15. Analysis menu in KIEIN-III Web based Applications.....	12
Plate 16. Buffer tool in analysis menu.....	12
Plate 17. Multiple buffer tool in analysis menu.....	13
Plate 18. Buffered intersection tool in analysis menu.....	14
Plate 19. Analysis menu in KIEIN-III Web based Applications.....	14
Plate 20. Air quality indicators in indicator menu.....	15
Plate 21. Sea water quality indicators in indicator menu.....	15
Plate 22. Socioeconomic indicators in indicator menu.....	15

## Introduction

The KIEIN-III Web Based Application provides the user with the capabilities to display, search, analyze, and present the geo-environmental database. A set of GIS interfaces were built to provide the user with such capabilities. The different interfaces that compose the KIEIN-III Web Based application are listed as follows:




- Metadata Search
- Visitors Counter Report
- GIS map
  - Tools
    - Draw Graphics.
    - Delete Graphics.
    - Map Scale.
    - Print Current View.
  - View
    - Zoom To Active Layer.
    - Show Layer Manager.
    - Show Legend.
    - Recently Opened Maps.
    - Overview.
  - Query
    - Find Features.
    - Select By Attributes.
    - Select By Location.
    - Clear Selected Features.
    - Open Attribute Table.
  - Analysis
    - Buffer.
    - Multiple Buffer.
    - Buffered Intersection.
  - Indicators
    - Air Quality.
    - Seawater Quality.
    - Socio Economic.










## Tool bar Items




(1). The tool bar contains browsing map and some functionality as shown in table

- Zoom-in.
- Zoom-out.
- Pan.
- Whole view extent.
- Go back to previous extent.
- Go to next extent.
- Select.
- Identify features.
- Measure distance.
- Add point.
- Activate a layer.
- Restore map.

**Table 1. Tool Bar Functions in KIEIN-III Web based Applications**

	
	<b>Zoom-In</b>
	Magnifies an area on the map area, by dragging a rectangle over the area of interest.
	<b>Zoom-Out</b>
	Displays a larger portion on the map area, by dragging a rectangle over the area of interest, zooms out to an extent twice the area of the rectangle.

 <span style="float: right;">Active Layer: Gulf <input type="button" value="Restore Map"/></span>	
	<b>Pan</b>
Moves the center of the display of the map area by the magnitude and direction specified by the user.	
	<b>Whole View Extent</b>
Resets the display of the map area into the extent of all layers.	
	<b>Go Back to Previous Extent</b>
Goes back to the previous display of the map area.	
	<b>Go to Next Extent</b>
Goes to the next display of the map area.	
	<b>Select Tool</b>
Enables the user to select one or more features (click/drag a rectangle) from the selectable layer.	
	<b>Identify Features</b>
Enables the user to click on any feature of the selectable layer and display the data related to the chosen feature. If the user clicks away from any feature of the selectable layer, no result will be displayed.	
	<b>Measure Distance</b>
Measures distances on the map area.	
	<b>Add point</b>
Enables the user to click on the map to add point(s).	

	Active Layer Gulf <span>Restore Map</span>
	<b>Activate a layer</b>
Enables the user to select a layer to be the active layer that is used in all the functions of the application.	
	<b>Restore map</b>
Enables the user to restore the application to its start point.	

### Tools Menu

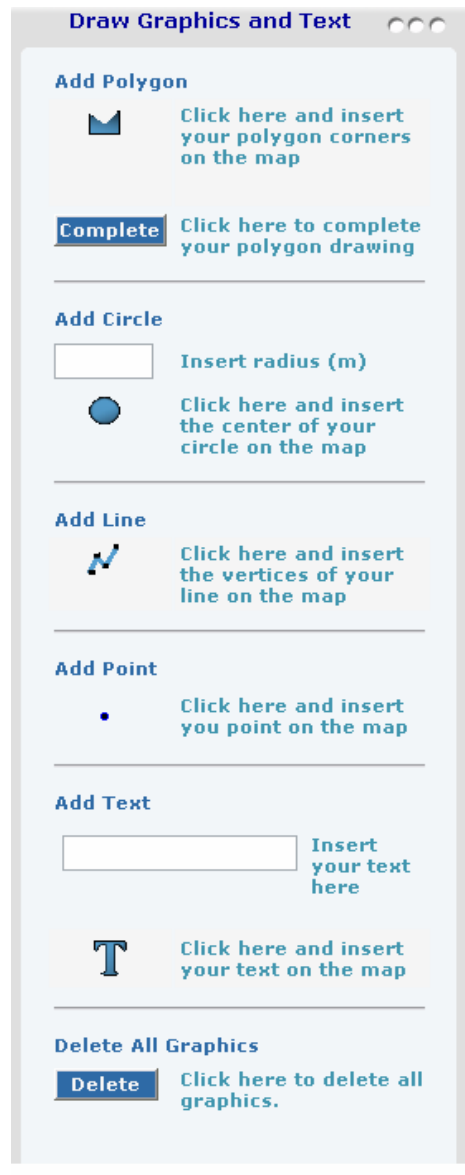


**Plate 1. Tools menu in KIEIN-III Web based Applications.**

#### Draw Graphics

- Add polygon:
  - Insert your polygon corners on the map.
  - Complete your polygon drawing.
- Add circle:
  - Insert radius (m).
  - Click and insert the center of your circle on the map.
- Add Line:
  - Insert the vertices of your line on the map.
- Add Point:
  - Insert your point on the map.
- Add Text:

- Type the text.
- Insert your text on the map.
- Delete All Graphics:
  - Delete All Graphics.



**Plate 2. Draw graphics and text tool in Tools Menu.**

### **Delete All Graphics**

Deletes all graphics drawn by the user on the map area.

## Map Scale

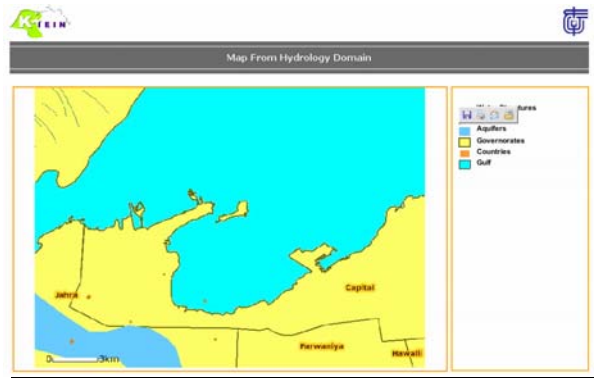
Views map scale bar on the map.



**Plate 3. Map scale bar.**

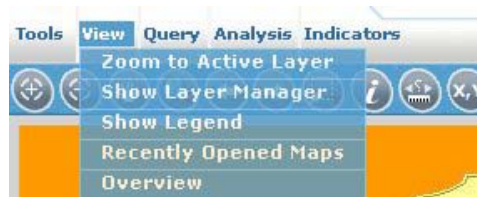
## Print Current View

Creates a ready-to-print page containing the map, map title, legend, KISR and KIEIN logos as shown in plate 4.



**Plate 4. Print current view in Tools menu.**

## View Menu



**Plate 5. View menu in KIEIN-III Web based Applications.**

## Zoom To Active Layer

Zoom to the selected active layer.

## Show Layer Manager

It changes the information area into the Layers interface, enabling the user to manage the visibility of all layers, as in plate 6.



**Plate 6. Layer manager in View menu.**

## Show Legend

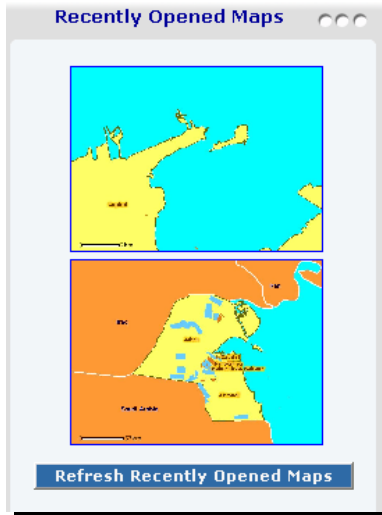
It changes the Information area into the Legend interface, enabling the user to view the legend of the all the visible layers, as in plate 7.



**Plate 7. Map legend in View menu.**

## Recently opened maps

Changes the Information area into the Recently Opened Maps interface, enabling the user to preview his recently opened maps as presented in plate 8.



**Plate 8. Recently opened maps tool in View menu.**

### **Overview**

Changes the Information area into the Overview interface, enabling the user to display the current extent of his map area over the full extent of Kuwait, shown in plate 9.



**Plate 9. Overview tool in View menu.**

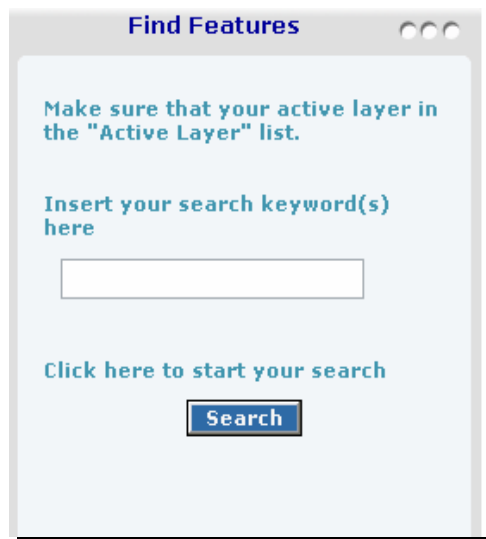
## Query Menu



**Plate 10. Query menu in KIEIN-III Web based Applications.**

### Find Features

Changes the Information area into the Find Features interface, enabling the user to select features from the selectable layer based on Field Value as in plate 11.



**Plate 11. Find features tool in Query menu.**

### Select by Attributes

Changes the Information area into the Select By Attributes interface, enabling the user to select features from the selectable layer based on certain criteria (user defined) for the attributes as in plate 12.

- Choose layer.
- Choose field
- Choose operator.
- Insert value.
- Apply the selection criteria.
- Clear selection results.

**Select By Attributes**

Choose your layer from the list

Choose the field to be used in the selection

Choose an operator from the list

Insert the value to be used in the selection statement

Click here to start your search

**Apply**

Click here to clear selection

**Clear**

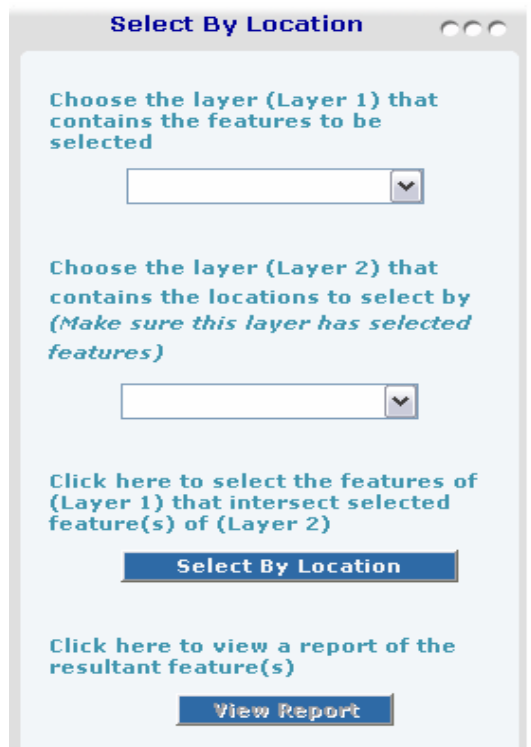
0 Resulted

**Plate 12. Select by attributes tool in Query menu.**

### **Select by Location**

- Select the Features from a layer that intersect with another layer.
- Choose layer that contains the features to be selected.
- Choose the layer that contains the locations to select by.

- Apply the selections that intersect selected features.
- View report of the result.



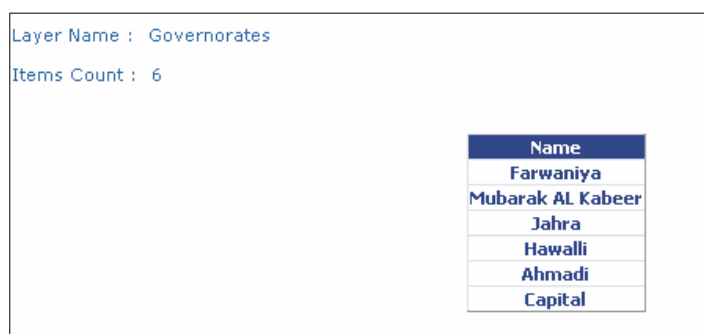
**Plate 13. Select by location tool in Query menu.**

### **Clear Selected Features**

Clears the selected features of the selectable layer.

### **Open Attribute Table**

Opens the attribute table of the selectable layer, in a pop-up window, highlighting the records representing the selected features, as in plate 14.



**Plate 14. Open attribute table tool in Query menu.**

## Analysis Menu



Plate 15. Analysis menu in KIEIN-III Web based Applications.

### Buffer

Create a buffer around some points.

- Insert points on the map
- Insert radius by meters
- Create by click on Buffer button

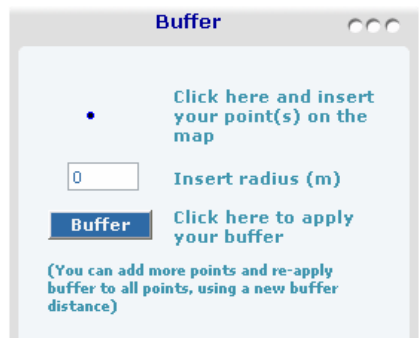
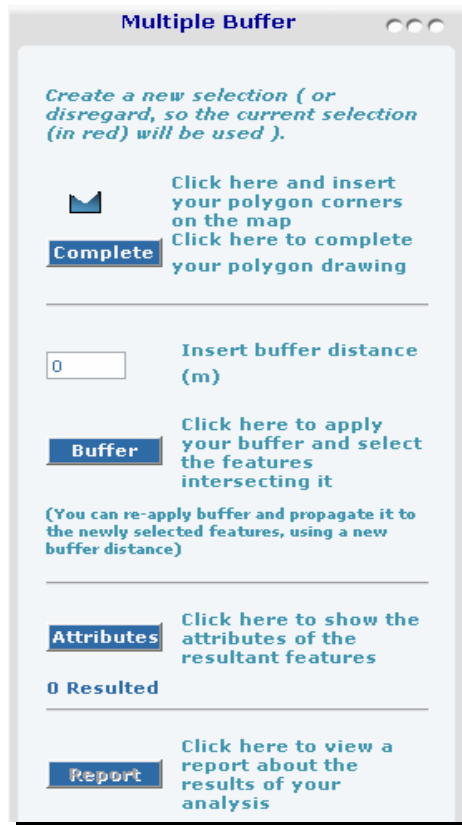


Plate 16. Buffer tool in analysis menu.

### Multiple Buffer

Create a buffer to selected features.

- Create a new selection or use the current
- Insert buffer distance
- Apply buffer and select the features intersecting it.
- View the attributes of the result
- Make a report from the result

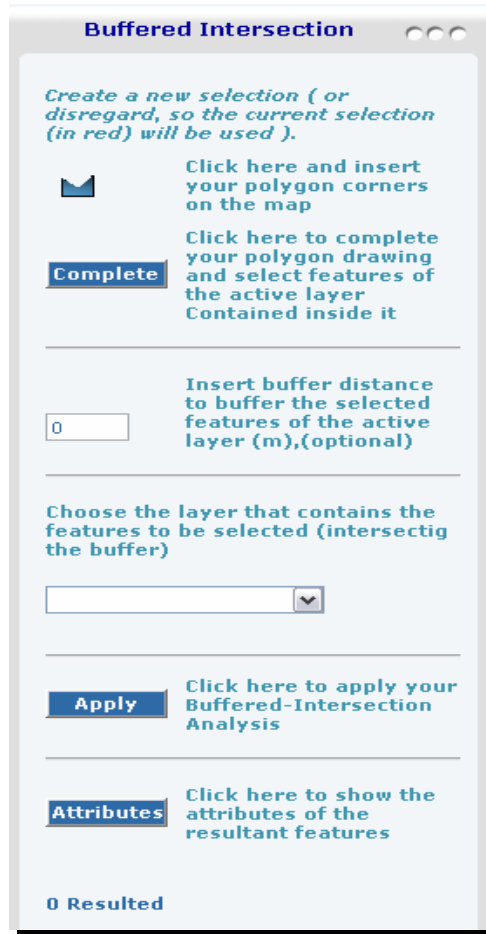


**Plate 17. Multiple buffer tool in analysis menu.**

### **Buffered Intersection**

Select features from the layer that intersected with buffered selected features in another layer.

- Create a new selection or use the selected on the active layer.
- Insert buffer distance to buffer the selected features of the active layer.
- Select the layer that contains the features to be selected (intersecting the buffer).
- Apply buffer intersection analysis.
- Show the selected attributes.
- View report.



**Plate 18. Buffered intersection tool in analysis menu.**

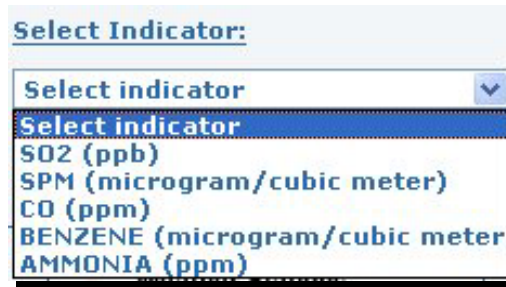
### Indicators Menu



**Plate 19. Analysis menu in KIEIN-III Web based Applications.**

### Air Quality

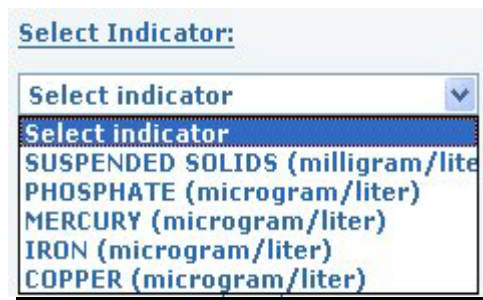
Select Air Quality domain and open the left information part to view its layers.



**Plate 20. Air quality indicators in indicator menu.**

### **Seawater Quality**

Select Seawater Quality domain and open the left information part to view its layers.



**Plate 21. Sea water quality indicators in indicator menu.**

### **Socio Economic**

Select Socio Economic domain and open the left information part to view its layers.



**Plate 22. Socioeconomic indicators in indicator menu.**