Bird Tracking Information System
Help Manual

Environment Agency Abu Dhabi (EAD)

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1. Introduction

Bird Tracking Information system developed for the archiving, processing, mapping, visualization and sharing of telemetry data. System offers secure storage, multi-user support and analysis tools and are a step along the way to further improve data access, long-term data preservation, functionality, user experience and communication. While this software platform promotes finished tracking maps and animations for sharing, access to the majority of the data and to the software behind these systems remains restricted.

1.1 Purpose

The purpose of this document is to prepare Help Manual for business users to understand the functionality of the Bird Tracking Information System.

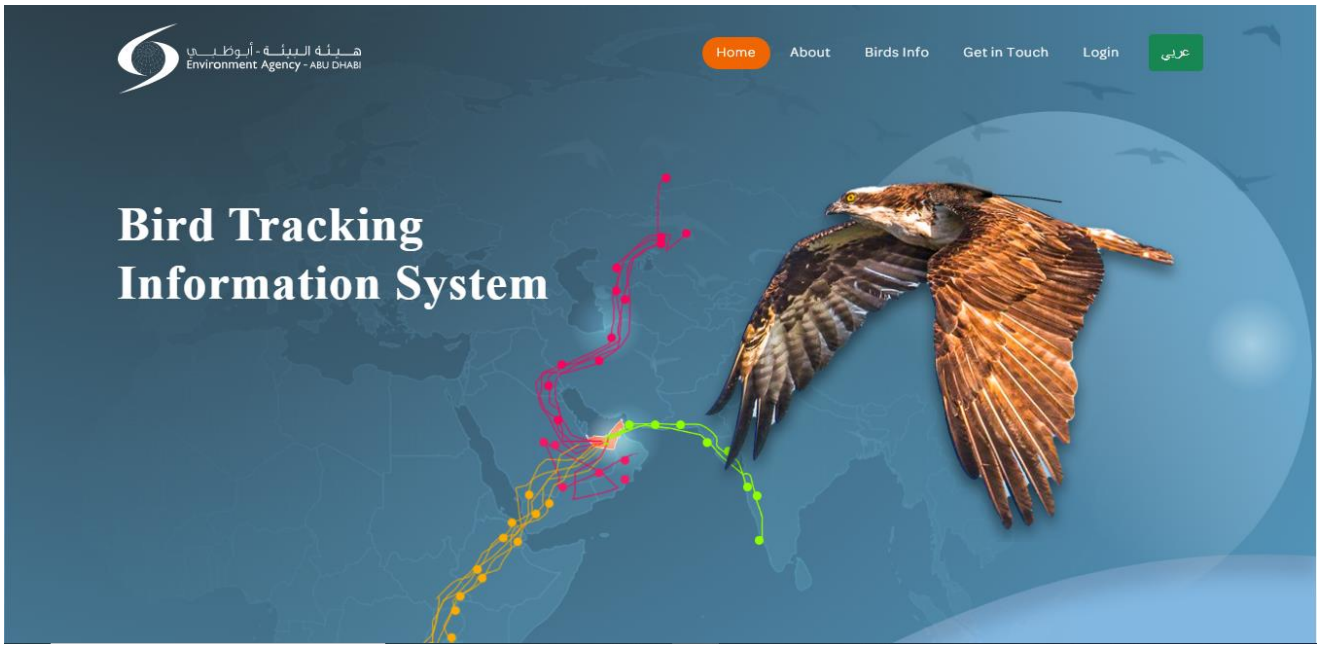
1.2 Definitions, Acronyms, and Abbreviations

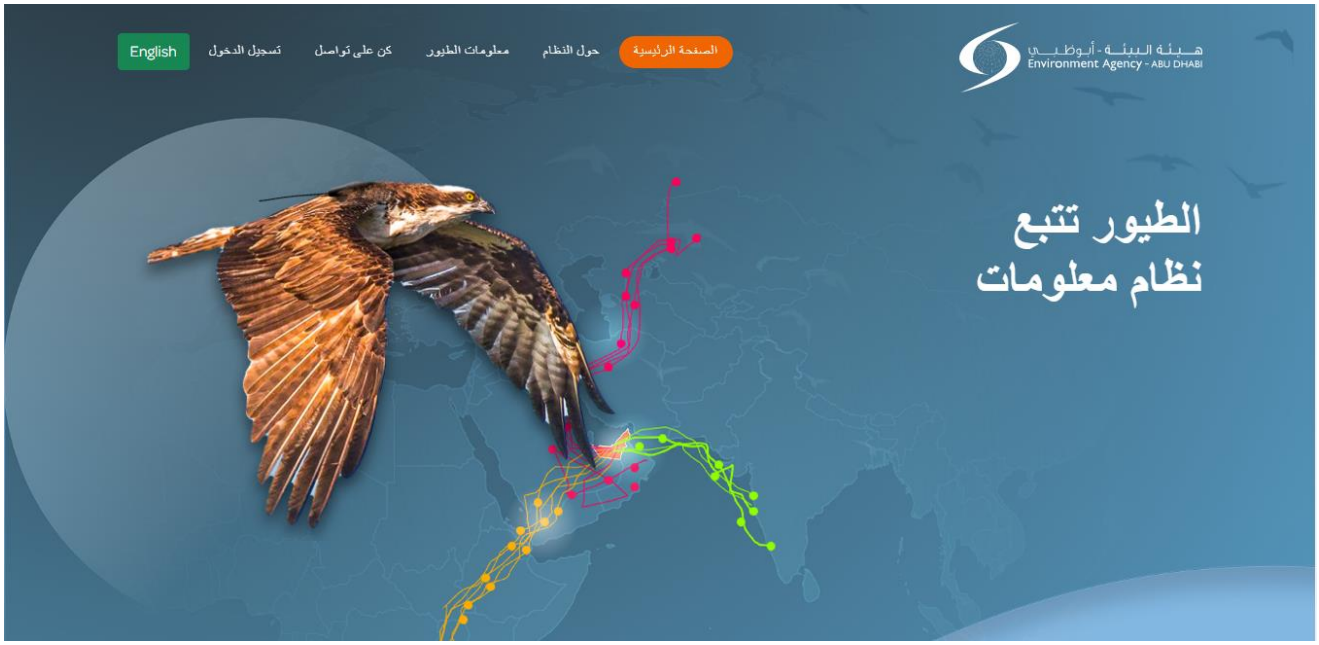
Following are the Definitions, Acronyms and Abbreviations that will be used throughout this document.

Acronym	Description
TOC	Table of Contents
URL	Uniform Resource Locator
HTML	Hyper Text Markup Language
CSS	Cascading Style Sheet
GIS	Geographic Information System
EAD	Environment Agency Abu Dhabi
DMS	Degrees, Minutes and Seconds
UI	User Interface

2. Initial Page

The initial page of the application shows the basic information of the EAD Bird Tracking Information System. Here, user can view the About Tracking Information System, Tracked Species information, Contact details of Environment Agency. Also, user can register themselves into the application and login by using Sign Up/Login options. User have the ability to change the password based on their need using Forgot Password option. With the help of Remember me option, user can save the login credentials of the application to the logged in browser. The application is developed to view the functionalities in both English and Arabic languages. User can select the required language for accessing the application.





3. Signup/Login

With the help of Sign up option, public users can register themselves by providing the valid credentials in all required fields.

Public Registration:

i. Open the required browser.

ii. Type the URL in the selected browser.

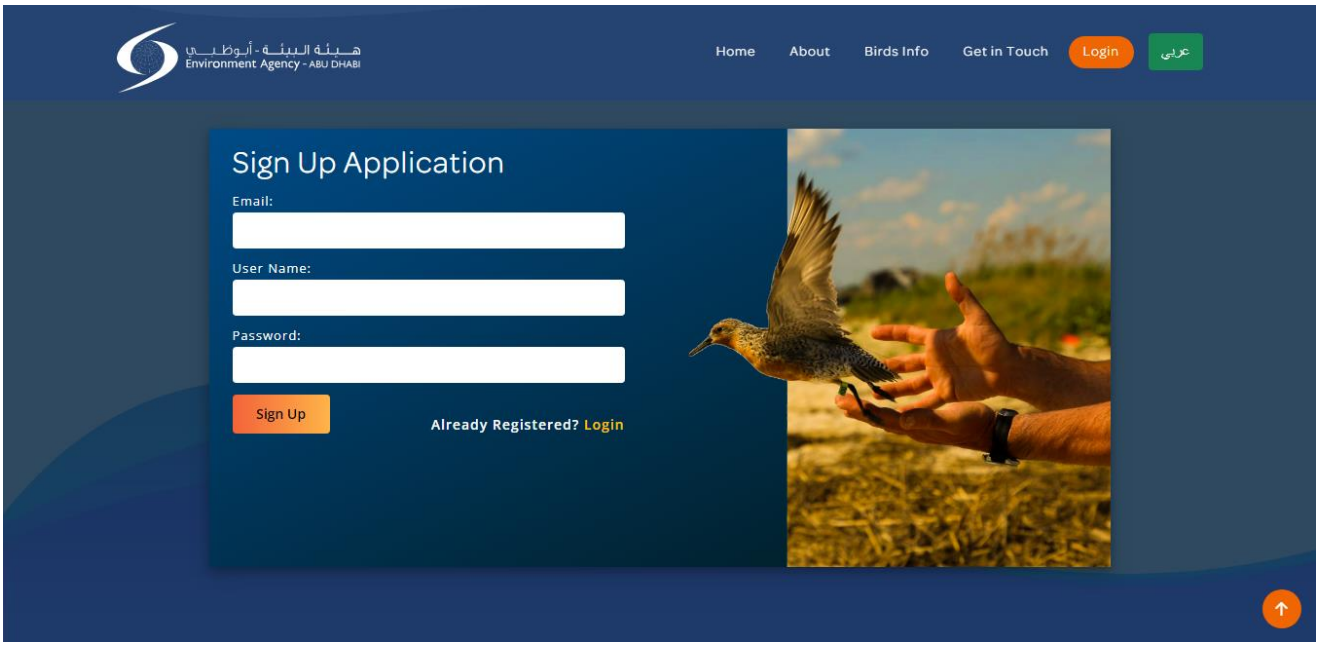
iii. Click on Enter button. User will be able to redirect the Bird Tracking Information System application initial page

iv. Click on Signup option.

v. Enter the valid credentials in all required fields

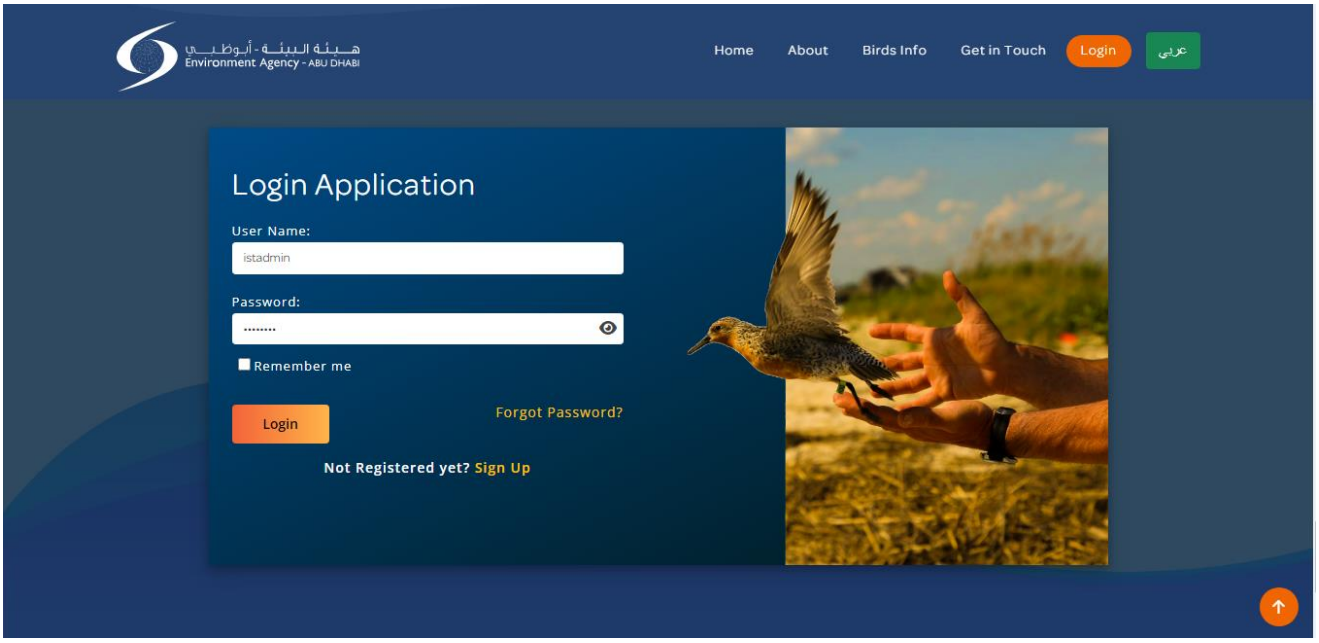
vi. Click on Signup button. Once the public user clicks on the Signup button, Admin will receive a notification for the public registration.

- Also, public will receive registration mail for the given mail id
- Once the Admin Verified the account then public will receive a notification message in given mail id with EAD email Template.
- Application will be provide forgot password option to public.
- Public can see the tracks/animation of the assigned Birds only.
- Selected bird tracking information will be displayed six months or one year or two years.
- Admin will assign birds to the public.



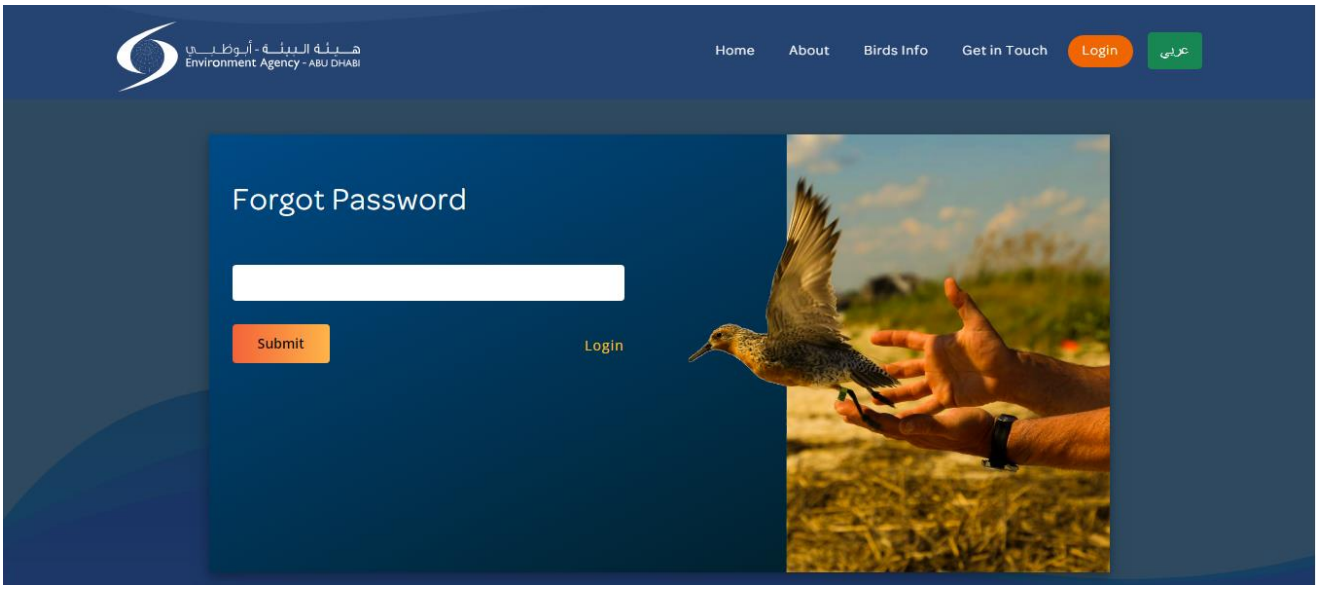
Login:

User will be able to login to the application with valid credentials.



Forgot Password:

With the help of Forgot Password option, user can have the ability to change the password if required. When user clicks on the Forgot Password link, application will allow the user to enter the valid email id. After clicking on the submit button with valid email id, user will have the ability to view the password in given emailed inbox.


هيئة البيئة - أبوظبي
Environment Agency - ABU DHABI
Home
About
Birds Info
Get in Touch
Login
عربي
Forgot Password
Submit
Login

4. Navigating Through Toolbar

The following navigation tools are presented as part of the Application.

4.1 Layers

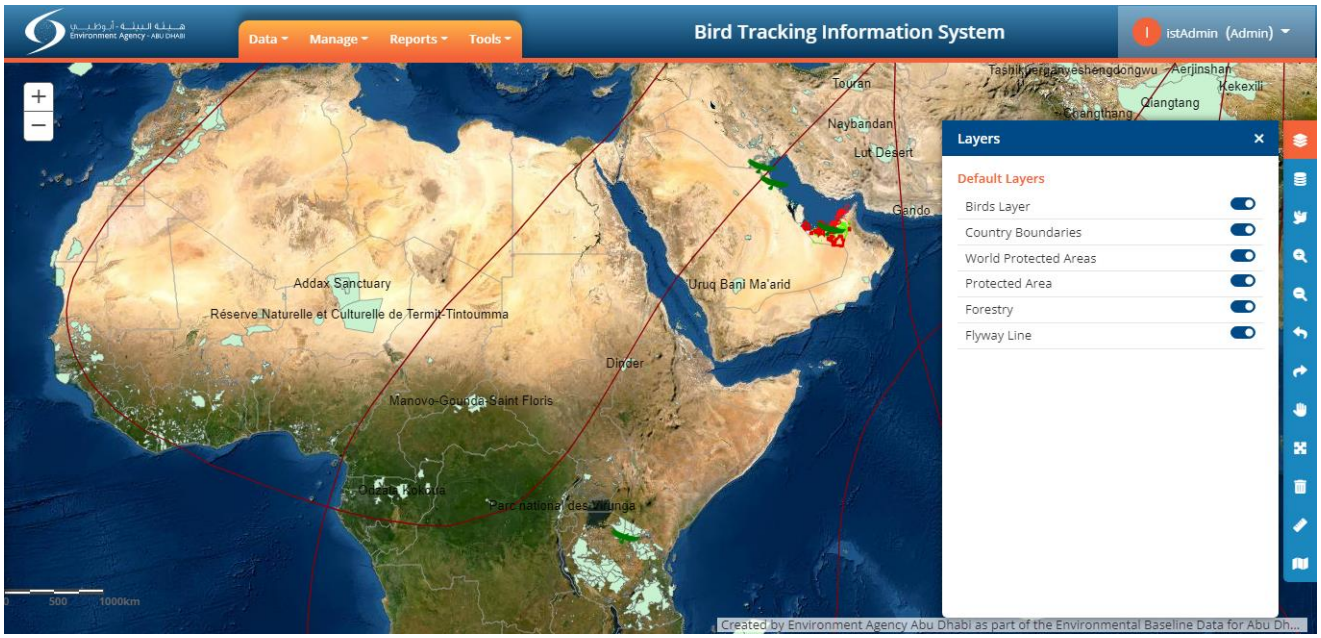
It contains various layers that can be viewed on the current map based on the user selection.

The following are the steps to define the usage of the layers Widget:

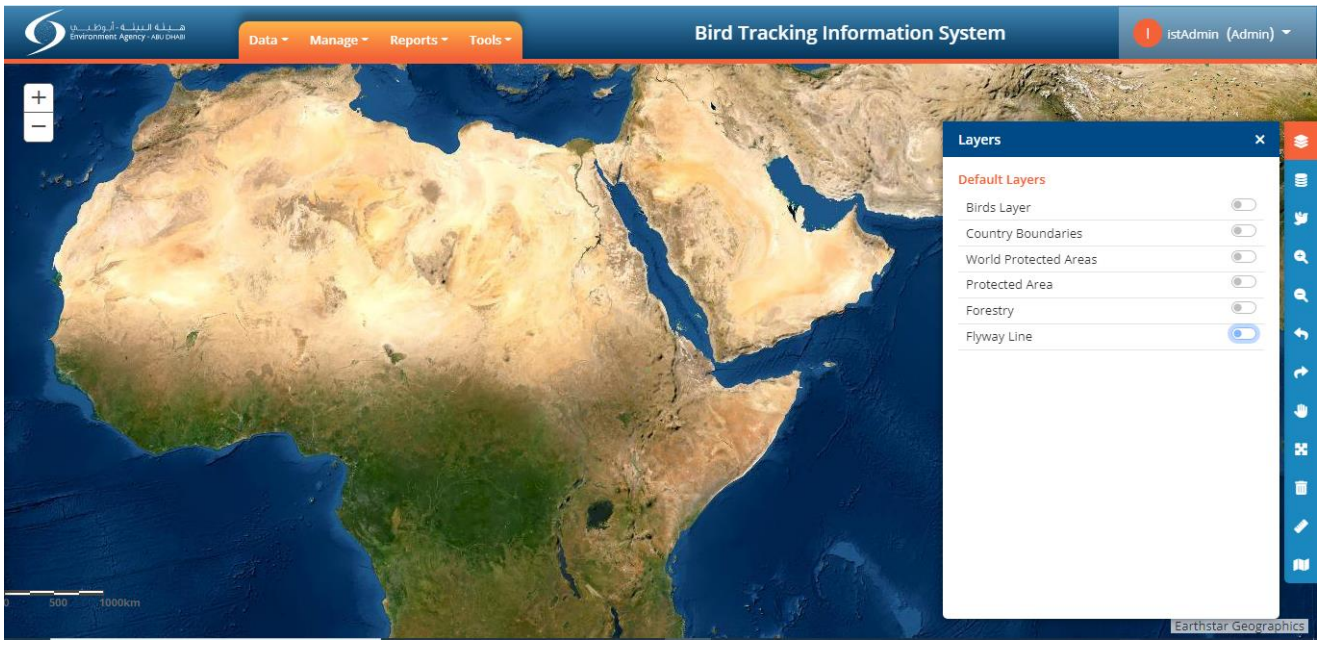
I. Click on Layers option. Available layers are Birds Layer(which means recent birds location area will be displayed on the map), World Protected Areas, Country Boundaries, Forestry and Protected Area, Flyway Line.

II. With the help of Layers tool, user will be able to turn layers ON / OFF as required.

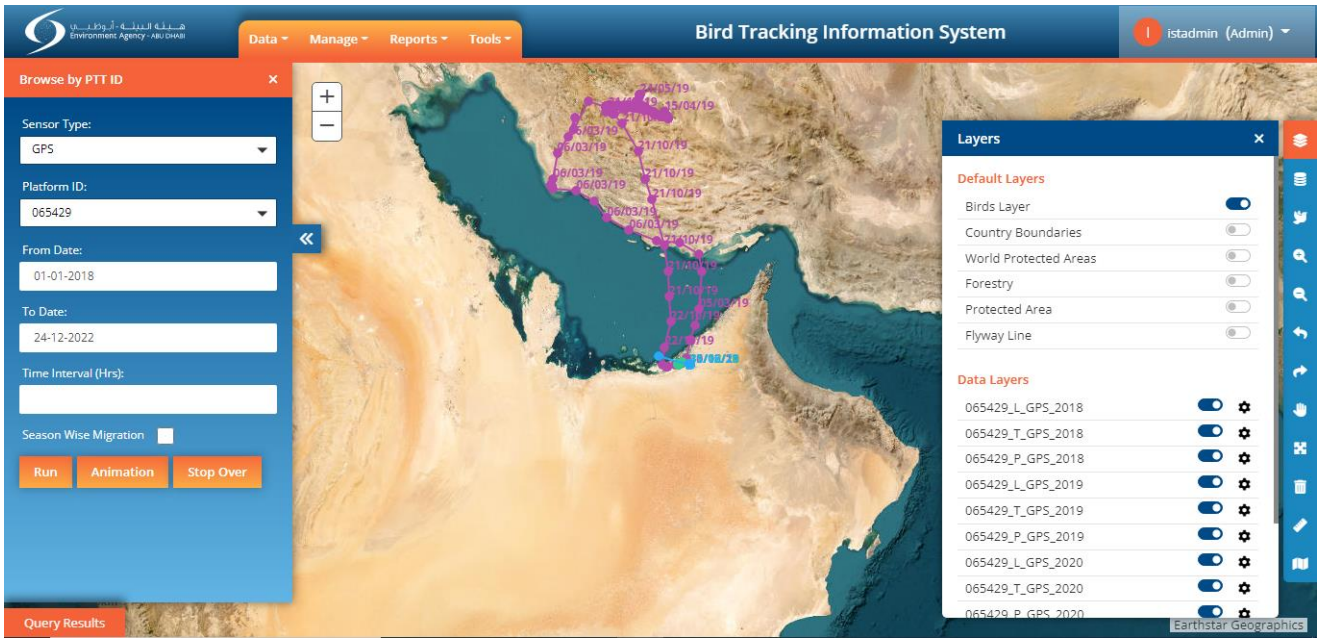
i) If the layers are Turned ON, the respective data will be displayed on map viewer.



ii) If the layers are Turned OFF, the respective data will get disappear automatically from the map display.



III. In addition to this, it will be allowing the user to change the color, arrow, size and font of the plotted data on the map



4.2 External Datasets

It contains various datasets that can be viewed on the current map based on the user selection.

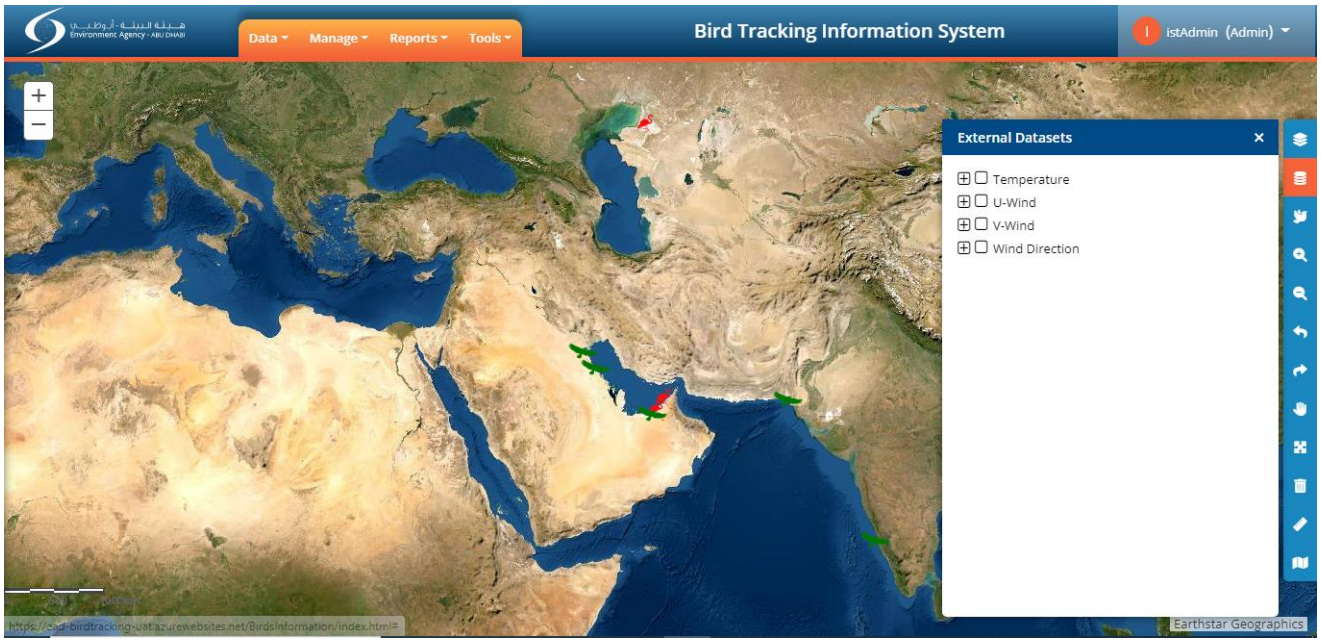
The following are the steps to define the usage of the external datasets widget:

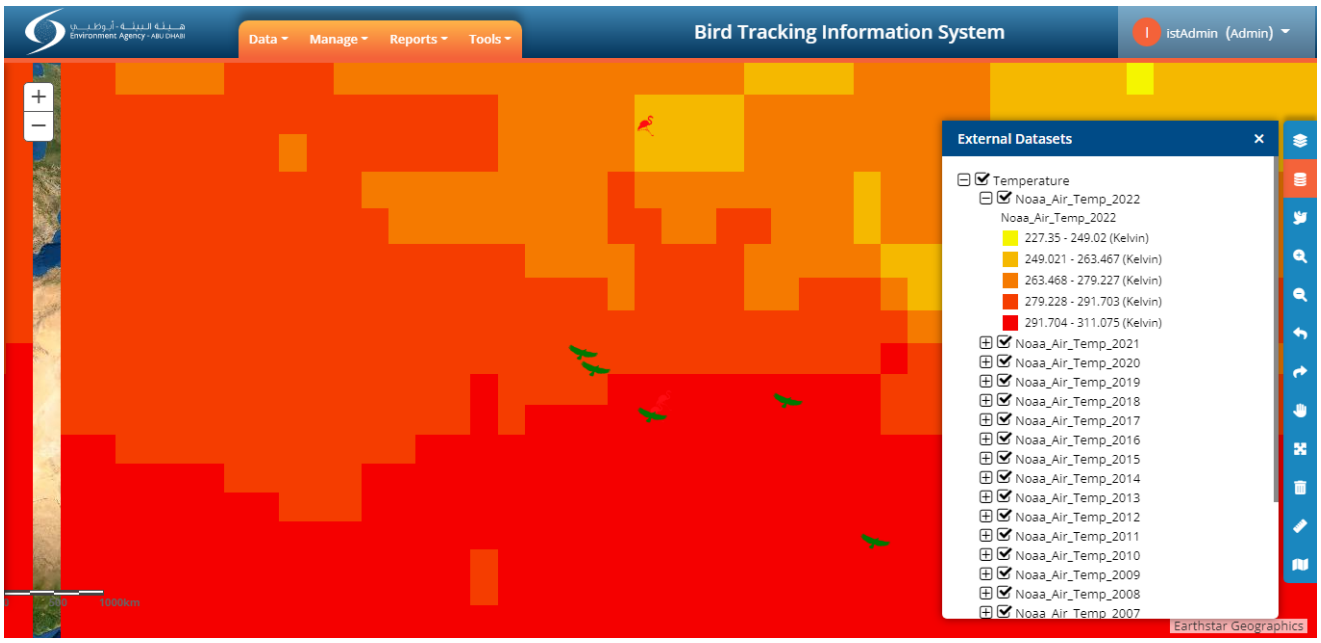
I. Click on External Datasets option. Available Datasets are Temperature, U-Wind, V-Wind, Wind Direction.

II. With the help of this tool, user will be able to turn datasets ON/OFF as required. If the datasets are Turned ON, the respective data will be displayed on map viewer.

III. If the datasets are Turned OFF, the respective data will get disappear automatically from the map display.

IV. For each dataset, the legend will be display to the user.





4.3 Bird Information

With the help of Bird Information option, user can get the details of the selected bird from the list. Here, based on Release Date the species will be display.

<u>The following are the steps to define the usage of the Bird Information Tool:</u>

I. Click on “Bird Information” option

II. Select the “Species” from the dropdown list. It will be allow the user to select the species name from the list (It will be allow user for single selection).

III. Select the year from “Choose Year” dropdown. It will be allow the user to select the year from the list (It will be allow user for single selection). Based on the selected species the years will come.

IV. Select the Bird ID from the “Choose a Bird” list and click on OK. It will be allow the user to select the ID's from the list (It will be allow user for multi selection). Based on the selected Year the ID’s will display.

V. Click on “Get Bird Info” button. After clicking on the Get Bird Info button, based on the selection, user will be able to view the required information of Platform Id, Common Name, Latin Name, Site, Sensor Type, Age, Sex, Bird Weight, Band ID, Status, Species ID, Wings Length, Sensitive, Capture Date, Capture Time, Release Date, Release Time, Last Active Date, Lat and Long. Without selecting the filters and click on Get Bird Info button, the application will display the validation messages to user.

VI. Click on “Export” option. After clicking on the Export button, the system will be downloading the excel with the required information.

4.4 Zoom in Tool

This tool enables the user to get a more detailed view of the selected area on the map. To terminate the selected tool, user must click on another tool on the Application.

Zoom In tool usage:

I. Click on “Zoom In” tool from right hand side of the application.

II. Move mouse to the area you wish to zoom, then click and drag with left mouse button pressed down to draw a rectangle box on the area to be magnified, release the button when you are fine with the selected area.

III. A box will be drawn to outline the area that will be magnified and then the zoom in will take place, and the selected area will be displayed with more details.

IV. The Zoom In tool will remain selected, enabling you to repeat the action till you get the results you desire.

V. Click on any other tool to terminate attention from the existing tool.

VI. In addition to this, user can also use mouse wheel to perform Zoom In functionality on the map at required area. Roll the wheel towards you to zoom in. For that, you must need to click on the map display to set the focus before using the mouse wheel. Also, you can hold down Shift and draw the rectangle at required area to Zoom In.

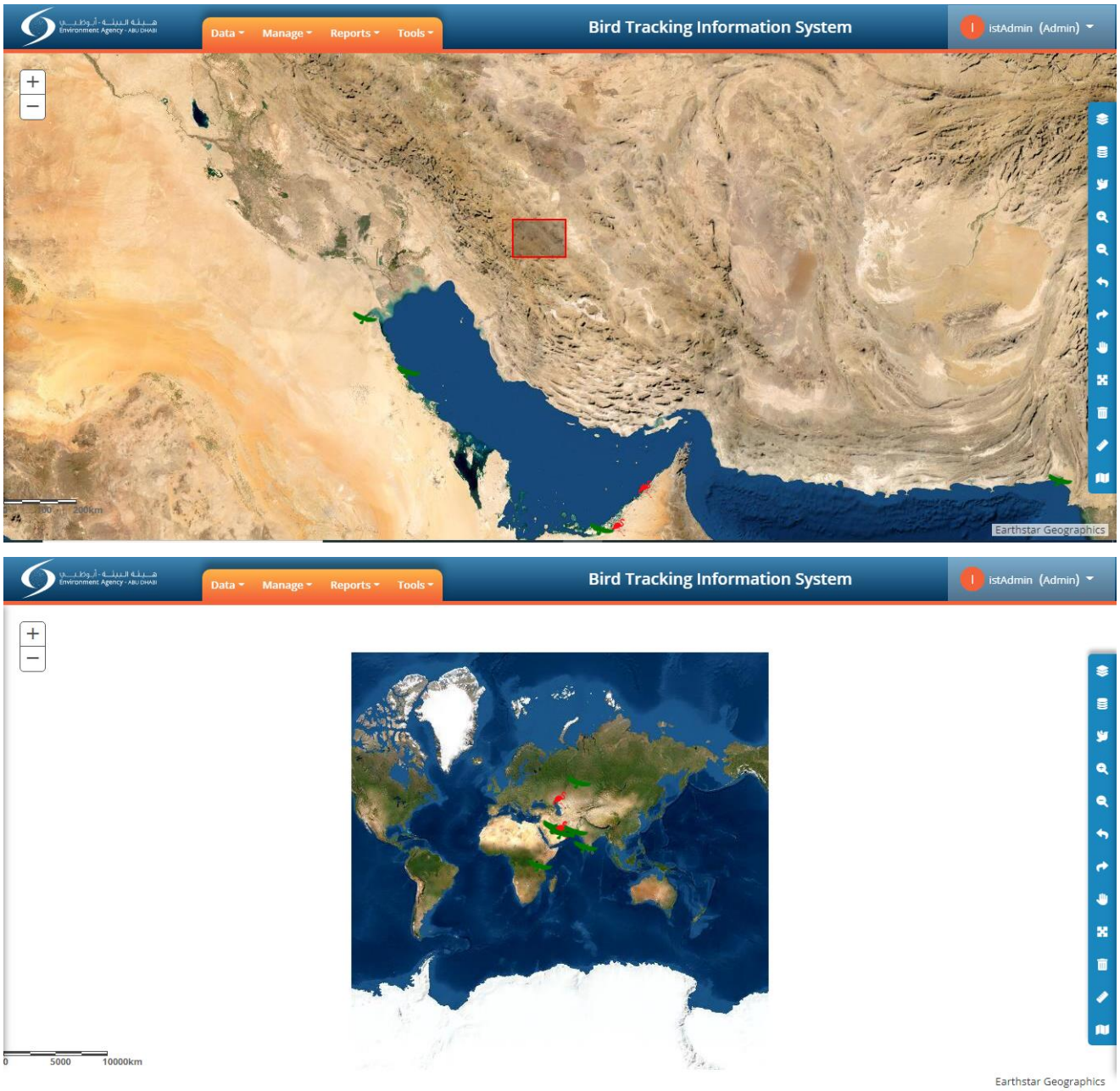
4.5 Zoom Out Tool

This tool enables the user to reduce the scale of the displayed map, so the user can view more areas with fewer details. To terminate the selected tool, user must click on other tool on the Application.

Zoom Out tool usage:

I. Click on “Zoom Out” tool present on right menu of the Application. Move the mouse to the area you wish to zoom out and then click & drag with the left mouse button pressed down to draw a rectangle box on the affected area, release the button when you are fine with the selected area.

II. A box will be drawn with a red border to indicate the area that will be magnified and then zoom out will take place, and the selected area will be displayed with less details.



III. The Zoom Out tool will remain selected, enabling to repeat the action till you get the results you desire.

IV. Click on any other tool to terminate attention from the existing tool.

V. In addition to this, user can also use mouse wheel to perform Zoom Out functionality on the map at required area. Roll the wheel away from you to zoom out. For that, user must need to click on the map display to set the focus before using the mouse wheel.

4.6 Zoom to Previous Extent Tool

This tool enables user to move back to the previous view while navigating the map. To use this tool, it is required that at least one navigation interaction took place on the map within the existing work session.

Previous Extent tool Usage:

I. The functional ability of “Previous Extent” tool changes the map extent to the previous extent.

II. The system will provide an option “Previous Extent” tool. This tool enables the user to move back to the previous view while navigating the map.

III. To use this tool, it is required that at least one navigation interaction took place on the map within the existing work session.

IV. Click on “Previous Extent” tool present on the top menu of the application to move back to the previous view.

4.7 Zoom to Next Extent Tool

This tool enables user to move forward to the next view while navigating the map. To use this tool, it is required that at least one “Previous Extent” action took place on the map within the existing work session.

Next Extent tool Usage:

I. The functional ability of “Next Extent” tool changes the map extent forward. The system will provide an option “Next Extent” tool.

II. User will need this tool if you have already used the Previous Extent tool. Next Extent tool enables you to move forward with the view while navigating the map.

III. Click on Next Extent tool present on the top side of the application to move back to the previous view.

4.8 Zoom to Full Extent Tool

This tool will enable the user to view the default map centered on the screen and displayed in the default map scale.

Full Extent tool Usage:

I. Click on “Full Extent” tool from top menu bar of the Application. System renders the initial extent of the map.

II. Click on any other tool to terminate the action.

4.9 Pan Tool

This tool will enable the user to navigate through the map to change the displayed area.

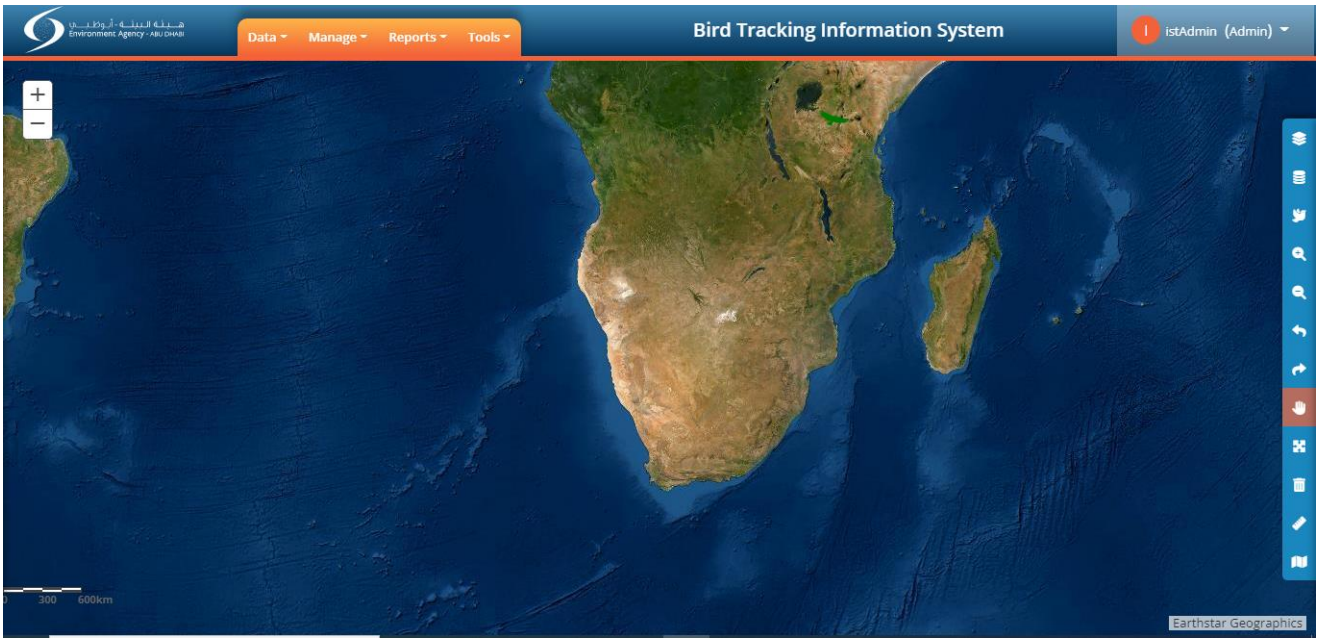
To Use Pan Tool:

I. The system will provide an option “Pan” tool. This tool will be used to navigate through the map to change the displayed area.

II. Click on the Pan Tool present on the top menu of the application.

III. Move the map based on the need by clicking and holding the mouse left button.

IV. Release the mouse and repeat the operation until the required view is on the map.



V. Also, move the mouse pointer over the map display then click and drag the pointer to pan the map.

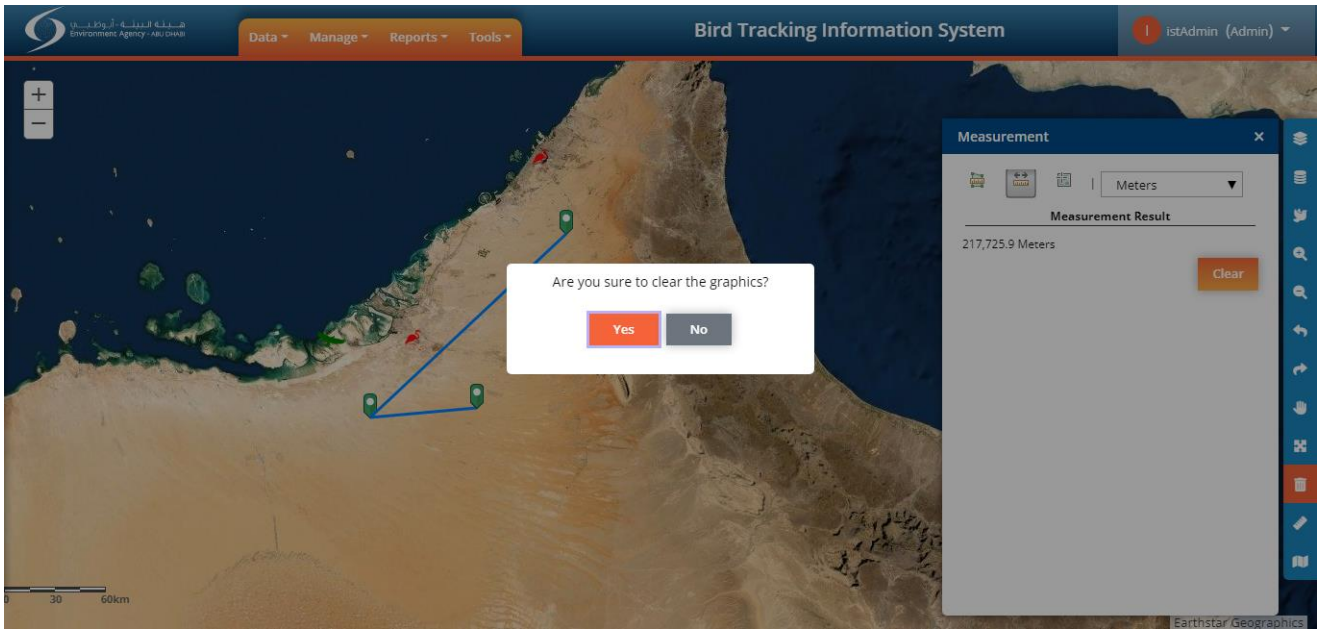
4.10 Clear Graphics

With the help of Clear Graphics option, user can have the ability to clear the drawn graphics on the current map.

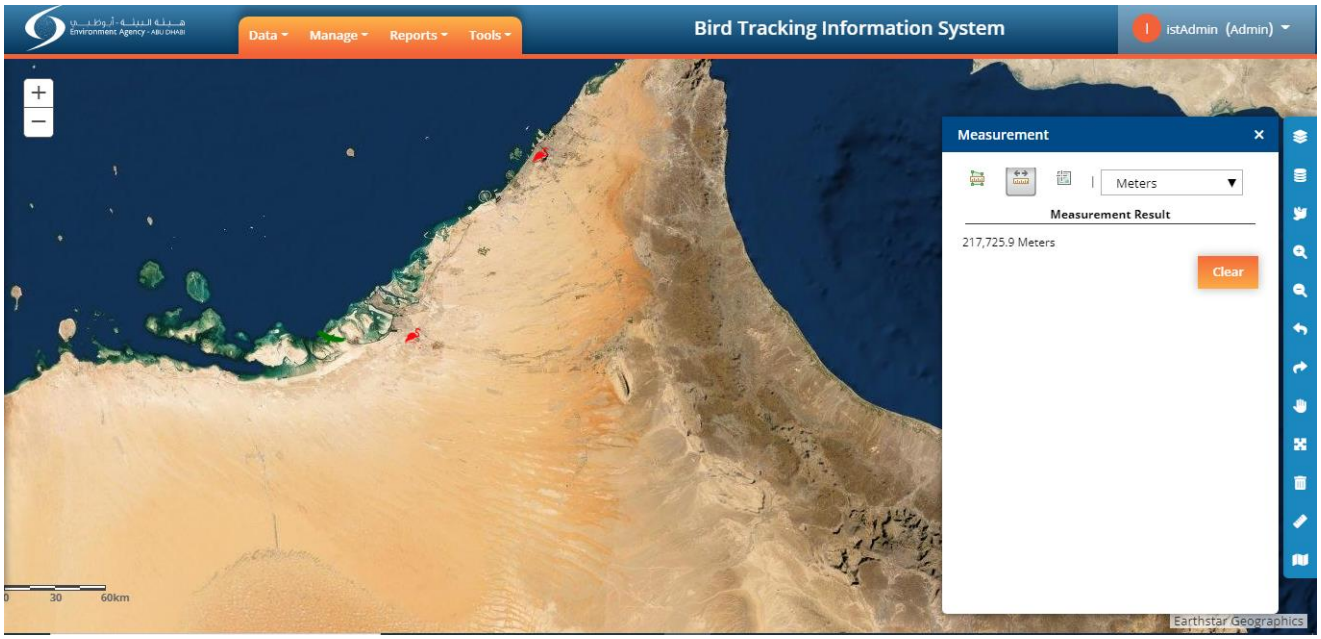
The following are the steps to define the usage of the Clear Graphics functionality:

i. Use “Query Options” or “Measure Tools” to view the graphics on map.

ii. Click on “Clear Graphics” option. After clicking on the clear graphics option, application should display one confirmation alert to user for clearing the graphics.



iii. Click on the confirmation text. After clicking on the confirmation text, the drawn graphics on the map should clear



iv. Click on close ✕ icon

4.11 Measure

After plotting data, user may need to measure either the distance/area or the user wants to know the coordinates of a tracking point. Measure Tool enable the user to get measurement information about coordinates of any point, distances of line or path, radius of the circle and areas of any polygon on the map.

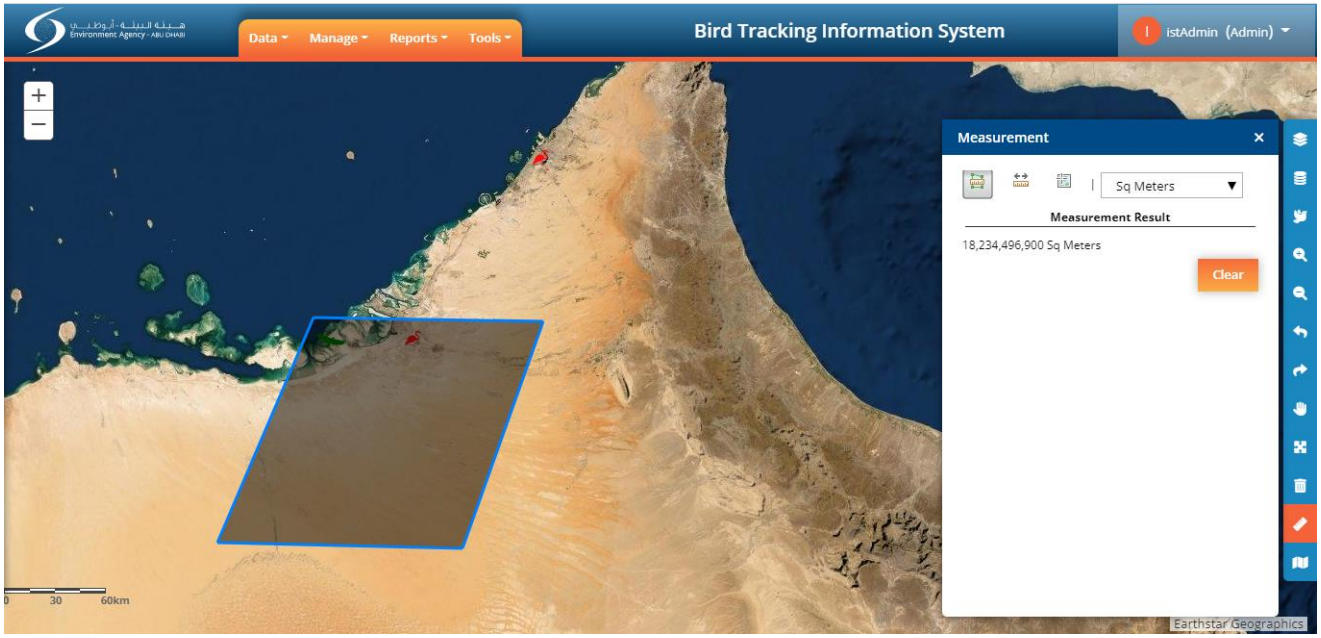
4.11.1 Area

With the help of Measure Area option in Measure tool, user can calculate the area of a polygon graphic drawn on the map.

The following are the steps to calculate the area of the drawn polygon:

i. To get the area of a polygon graphic drawn on the map, select Measure Area icon from Measure tool and draw a polygon by placing multiple points with the help of a mouse (click & drag).

ii. After placing the last point on the map, double click the mouse to deselect the polygon option.



iii. The closed polygon graphic is displayed on the map.

iv. Now, the area of the polygon drawn on the map is displayed in the selected UOM.

v. Here, the desired UOM can be chosen from Select Unit dropdown which is available adjacent to the Measure options.

vi. The area of a polygon graphic drawn on the map, in selected UOM, is displayed as shown in the above screen.

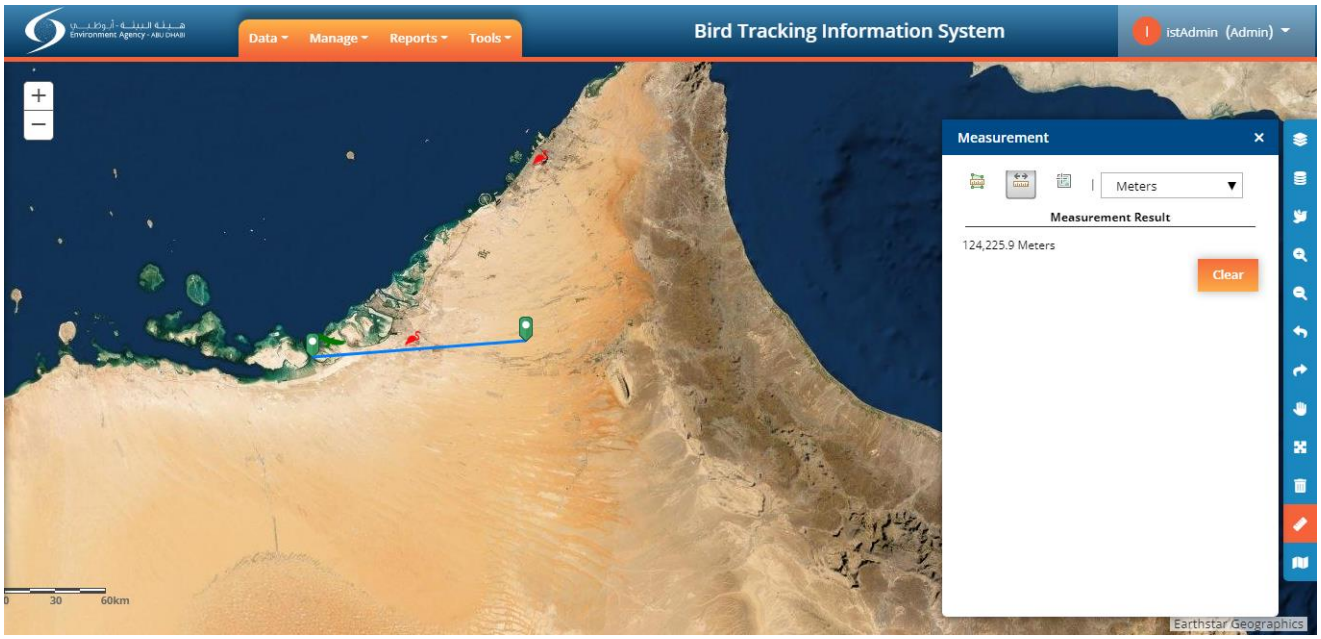
4.11.2 Distance

With the help of Measure Distance option in Measure tool, user can calculate the distance for a line drawn on the map.

The following are the steps to calculate the distance of the drawn lines:

i. To get the distance of a line drawn on the map, select Measure Distance icon from Measure tool and draw a line with the help of mouse (click & drag).

ii. After placing second point on the map, the line option will get deselected automatically.



iii. The line is displayed on the map. Now, the distance of the line drawn on map is displayed in the selected UOM.

iv. Here, desired UOM can be chosen from “Select Unit” dropdown which is available adjacent to the Measure options.

v. The distance of line drawn on map, in selected UOM, is displayed as shown in the below screen.

4.11.3 Location

With the help of Point option in Measure tool, user can get the coordinates information of a point placed on the map. To get the coordinates of a point on the map, select Point icon from Measure tool and do single click at the required position on the map.

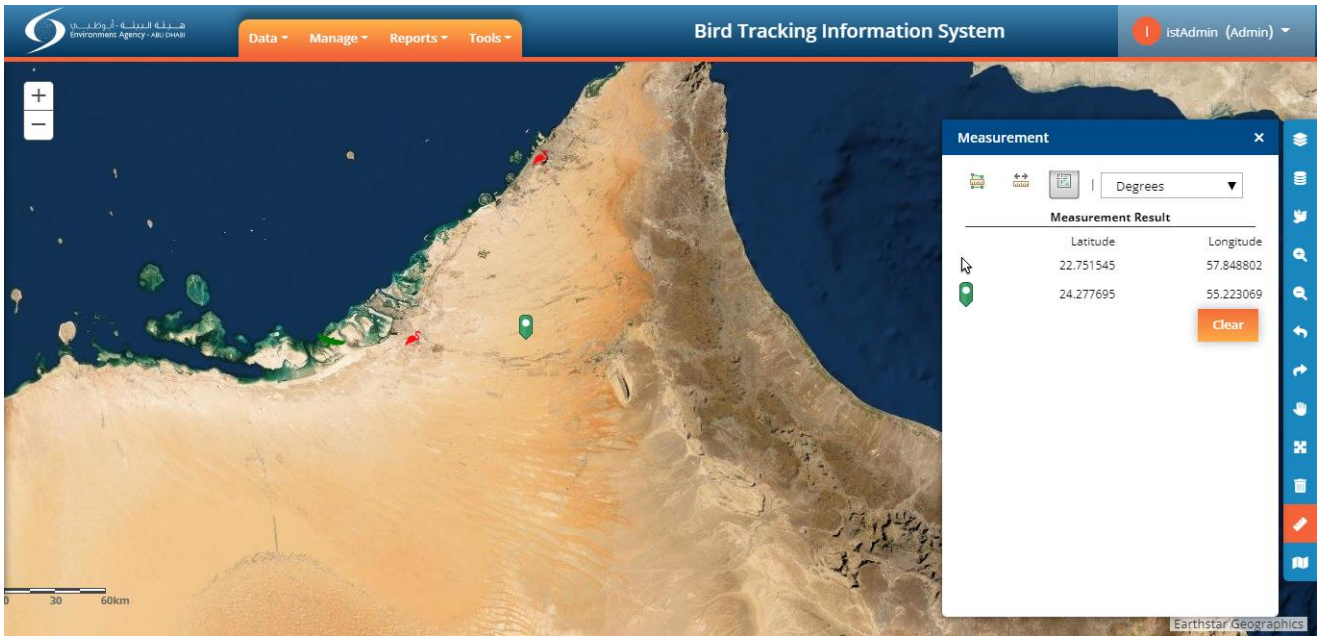
The following are the steps to view the co-ordinates of a point:

i. Click on “Measure Tool” present in the Application.

ii. Select the “Location” option from Measure Tool.

iii. Click on the map at required location using mouse

iv. Select the required unit from Units Dropdown



4.12 Basemaps Gallery

Basemaps gallery tool from right side menu bar enables switching among different Basemaps views.

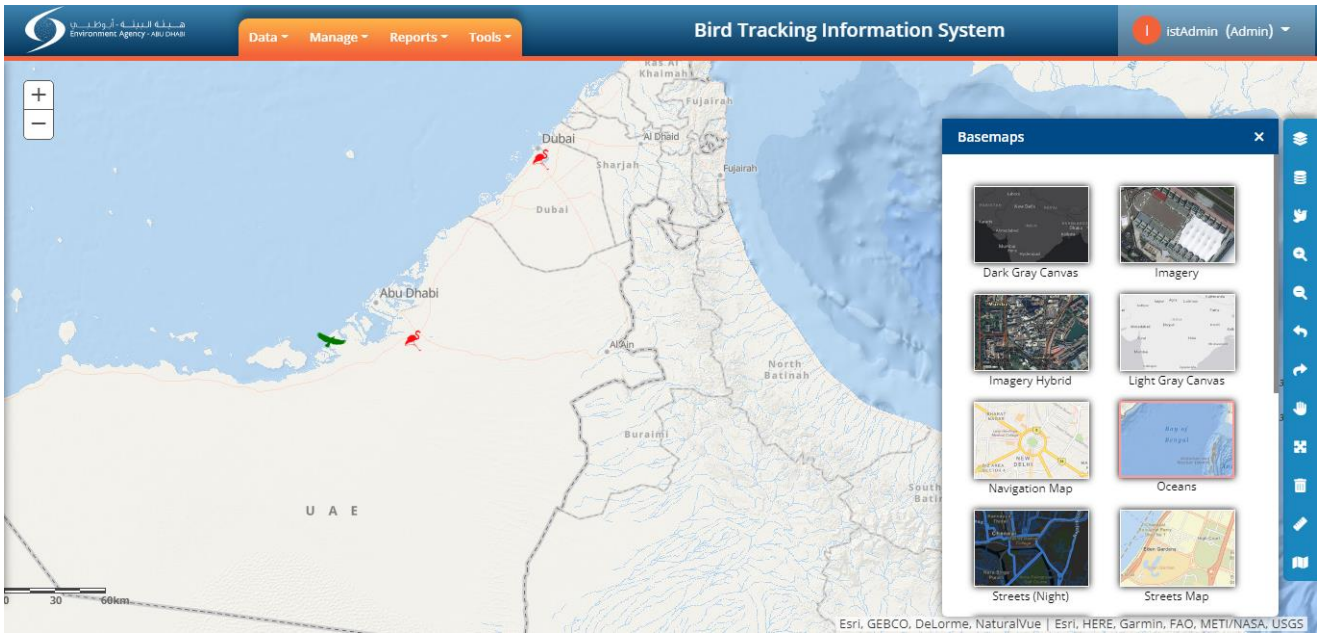
The following are the steps to change the selected Basemaps:

I. In the application, there will be an option of Basemaps Gallery on right side of map viewer panel.

II. Basemaps Gallery option will be represented as part of map navigation tools and user will be able to view Basemaps on the Current Map view.

III. Click on Basemaps Gallery tool available on right-side menu bar of the Application and select the required view from gallery to represent the current map based on the need.

Data
Manage
Reports
Tools
Bird Tracking Information System
istAdmin (Admin)
Basemaps
Dark Gray Canvas
Imagery
Imagery Hybrid
Light Gray Canvas
Navigation Map
Oceans
Streets (Night)
Streets Map
Earthstar Geographics


Data
Manage
Reports
Tools
Bird Tracking Information System
istAdmin (Admin)
Basemaps
Dark Gray Canvas
Imagery
Imagery Hybrid
Light Gray Canvas
Navigation Map
Oceans
Streets (Night)
Streets Map
Dubai
Abu Dhabi
Sharjah
Fujairah
Al Ain
U A E
Esri, GEBCO, DeLorme, NaturalVue | Esri, HERE, Garmin, FAO, METI/NASA, USGS

5. Data

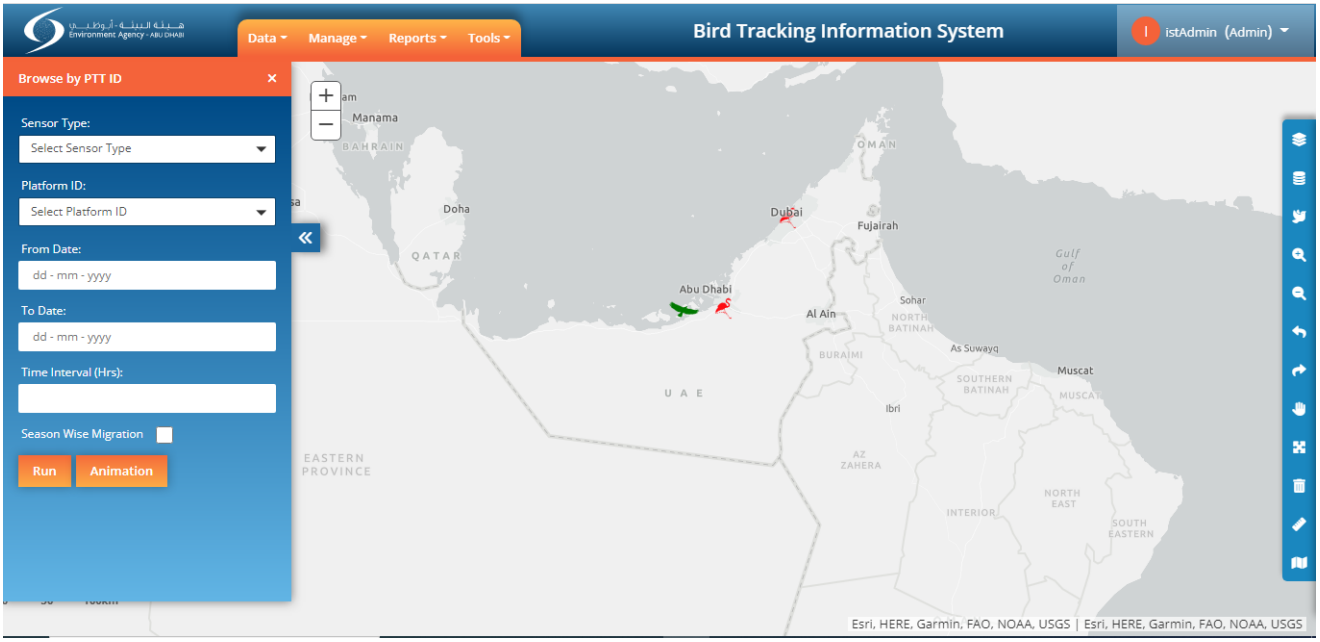
The User can query and plot tracking records in different ways.

5.1 Browse by PTT ID

For data review and analysis, users may need to plot tracking records based on sensor type. This tool provides the facility to restrict the number of records plotting based on time period and time interval in the available records.

The following are the steps to view the data by selected PTT ID:

i. Click on the “Data” module. The available query filters will be display



ii. Select and click on the PTT ID's (Query Filter) option. After clicking on the Query Filter option, it will display the filters available in it

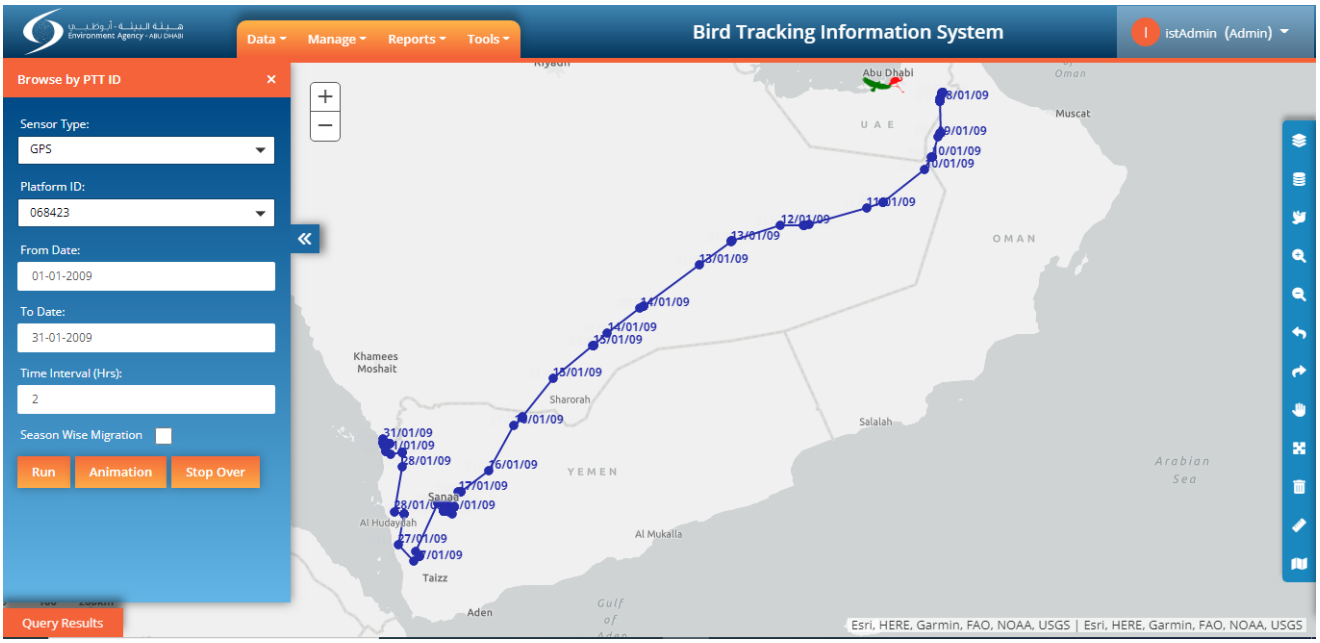
iii. Select the “Sensor Type”. It will be allow the user to select the required Sensor Type. Here three types are available Argos (for Argos, Location classes field will be display), GPS and GSM

iv. Select the “Platform ID”. It will be allow the user to select the platform ID based on the selected sensor type. Here, the Platform ID dropdown allows single selection.

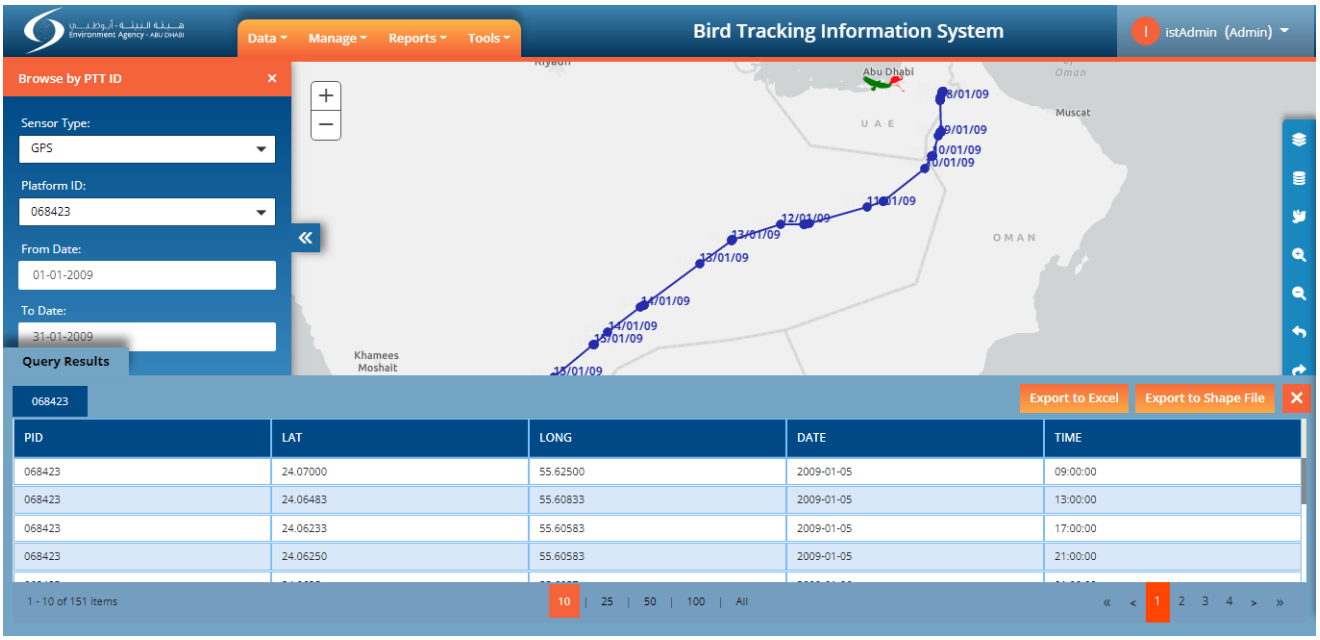
v. Select “From” and “To” dates

vi. Enter the “Time Interval”. It will be allow the user to enter time interval. Also, with the help of up/down arrows user will be able to select the intervals

vii. Click on “Run” button, the application shall load and display the plotting data on the map based on the criteria selected.



viii. Click on the "Query Results" button at bottom left side to view the Query results in tabular format



ix. Click on close icon in the current window.

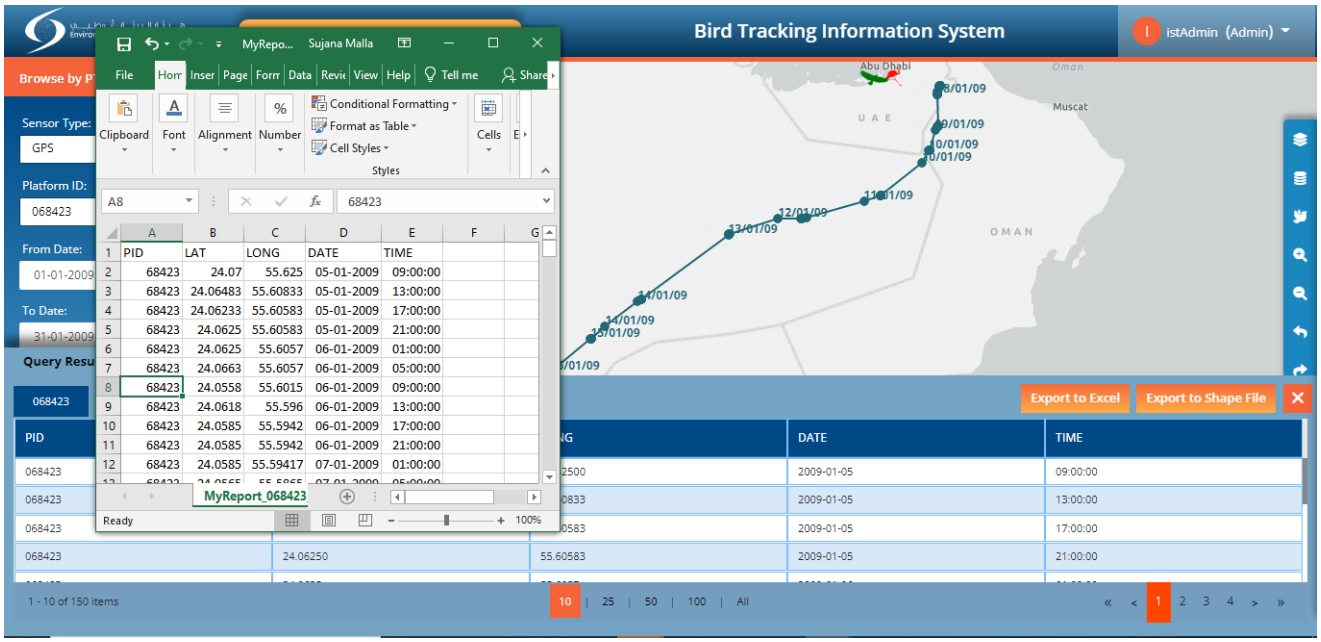
To Use Export Excel:

I. The system will provide an option "Export Excel" option. This option will be used to export the tracking records into an excel format.

II. Plot the tracking data as required.

III. Click on the Query Results and click Export to Excel option.

IV. Data will download as CSV.



V. Open and Browse to the location where you want to save the file.

VI. In the File name text box, type the file name

VII. Click on “Save” button.

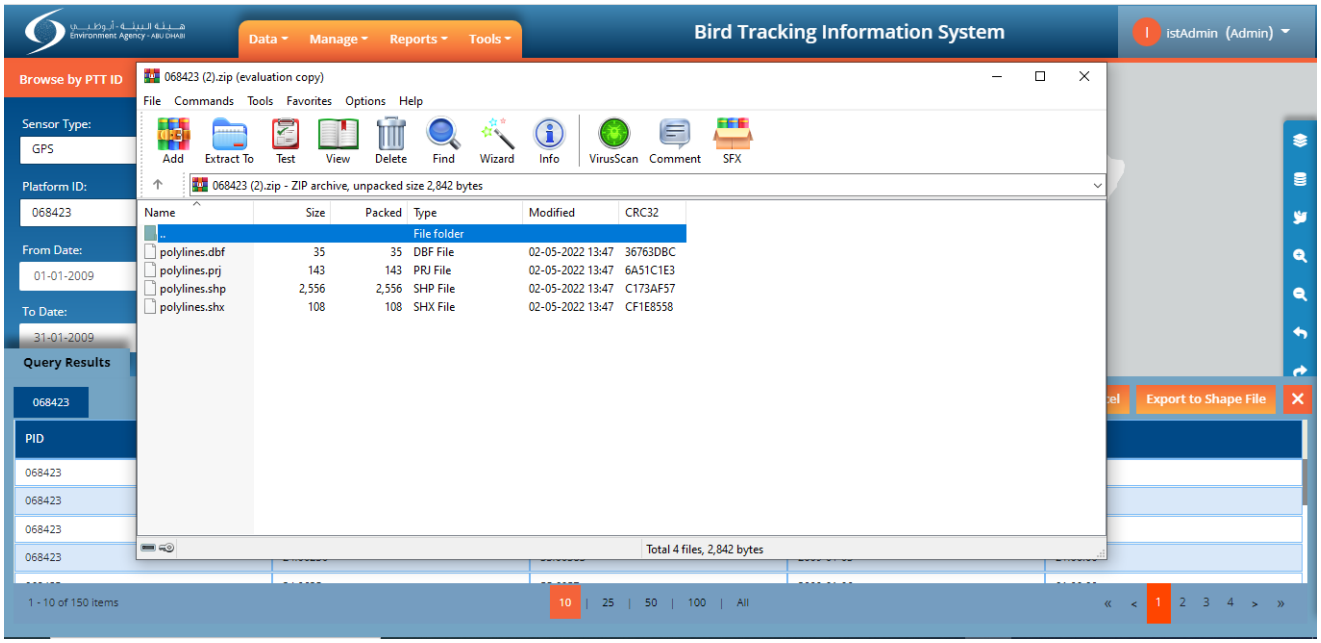
To Use Export Shape:

I. The system will provide an option “Export Shape” option. This option will be used to export the tracking records into shapefile format.

II. Plot the tracking data as required.

III. Click on the Query Results and click Export to Shape option.

IV. Data will download as a Shapefile.



V. Open and Browse to the location where you want to save the file.

VI. In the File name text box, type the file name

VII. Click on Save" button.

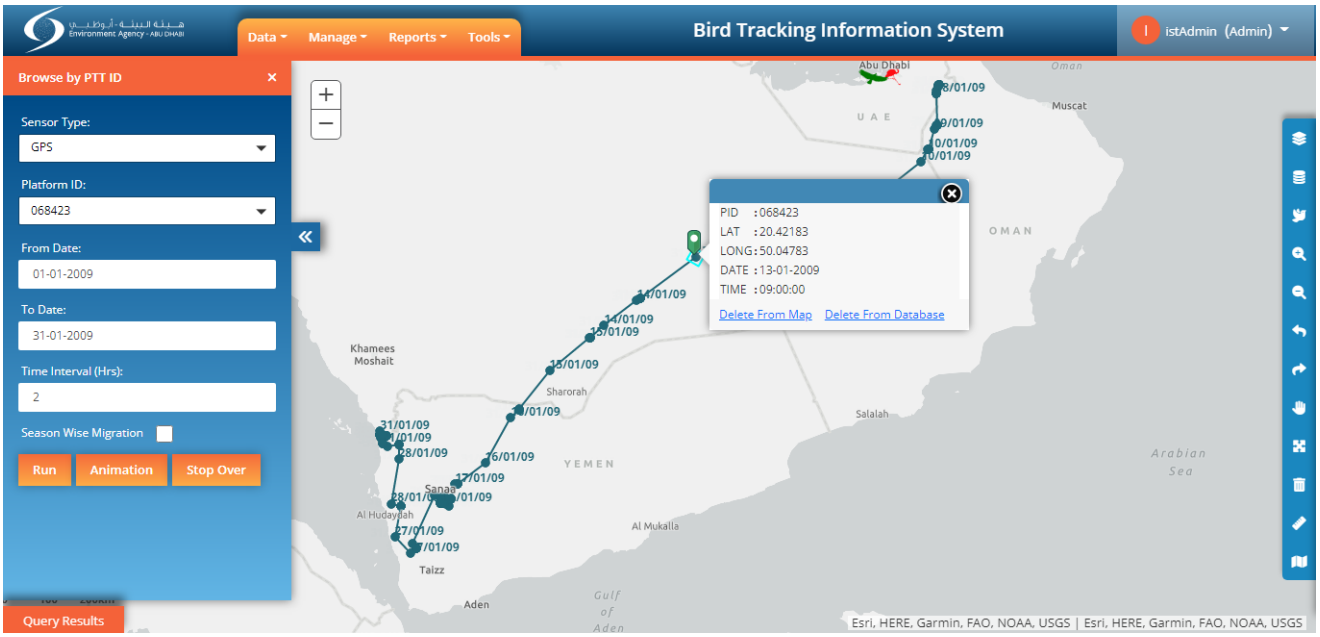
Delete from Map

i. Click on the Data module

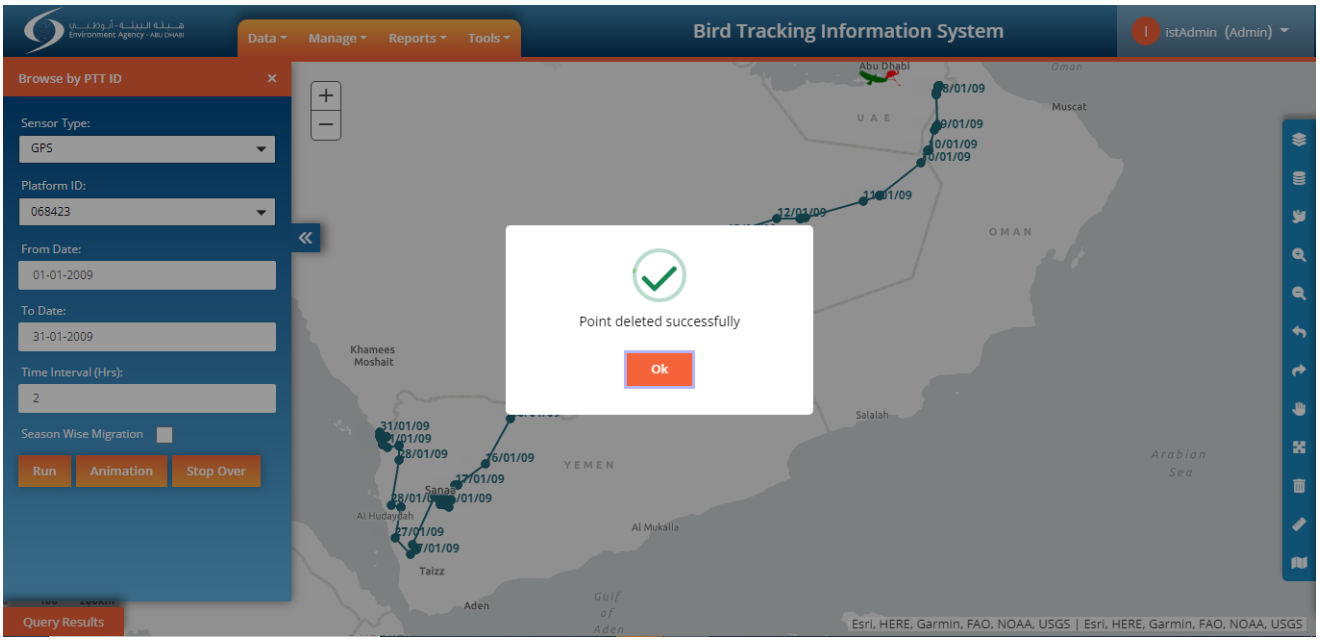
ii. Select and click on the any of the Data options

iii. Select the options and click on Run button

iv. Click on map at required location of the plotted data. It will be allow the user to select the point on the map



v. Click on Delete from Map option. After clicking on Delete from Map option, application will be delete the selected point from the map



Delete from Database

i. Click on the "Data" module

ii. Select and click on the any of the Data options

iii. Select the options and click on Run button

iv. Click on map at required location of the plotted data

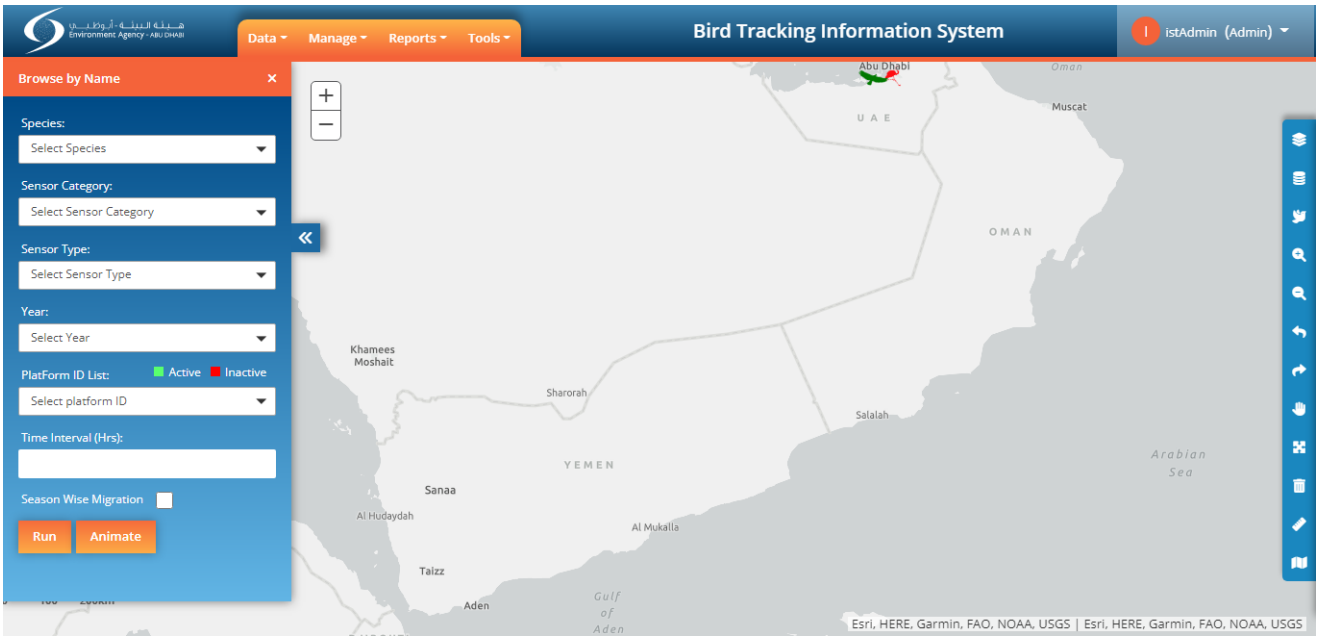
v. Click on Delete from Database option. After clicking on Delete from Database option, application will be delete the selected point from the Database

5.2 Browse by Name

For data review and analysis, users may need to plot tracking records based on Species. This tool provides the facility to restrict the number of records plotting based on time period and time interval in the available records.

The following are the steps to view the data browse by Name:

I. Click on the Data module. The available query filters will be display



II. Select and click on the Browse by Name option. After clicking on this option, it will be display the filters available in it

III. Select the Species Name. It will be allow the user to select the required Species Name from the list.

IV. Select the Sensor Category. For each species name, there will be All, Main and Secondary sensor category will display. It will be allow the user to select the sensor category based on the business need

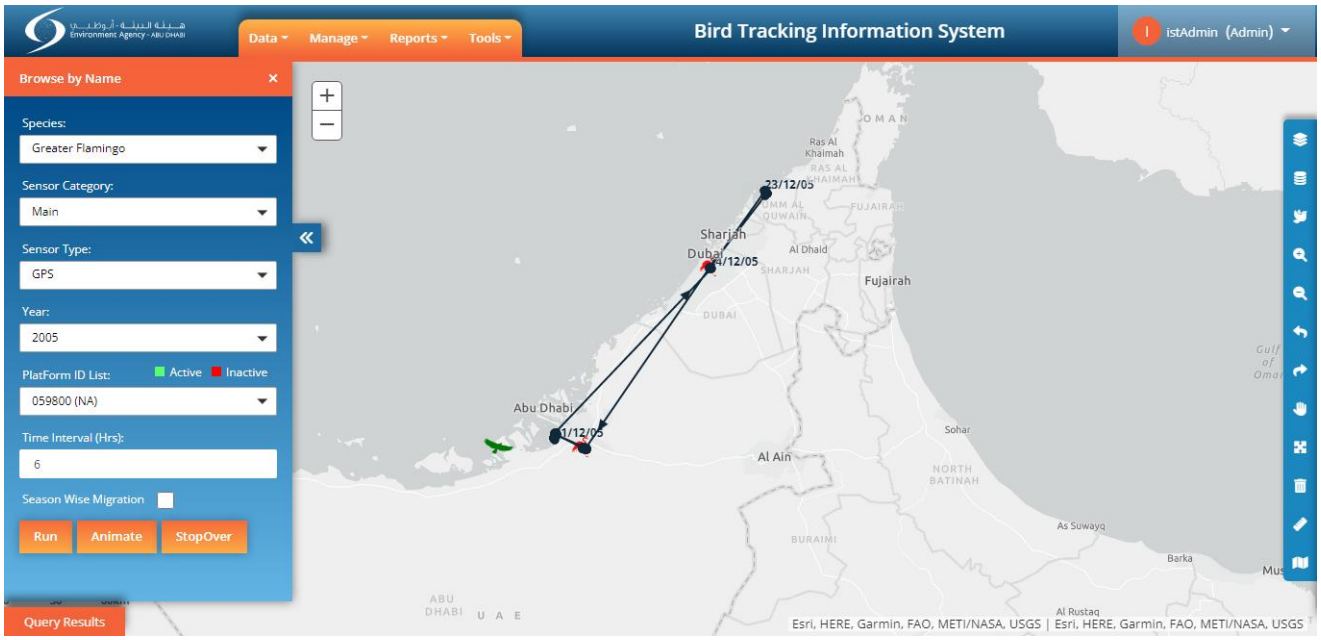
V. Select the Sensor Type. Based on the sensor category selection, sensor type shall display and it will be allow the user to select the required sensor type

VI. Select the Year. It will be allow the user to select the required from the list

VII. Select the Time Interval (Hrs.). It will be allow the user to enter time interval. Also, with the help of up/down arrows user will be able to select the intervals.

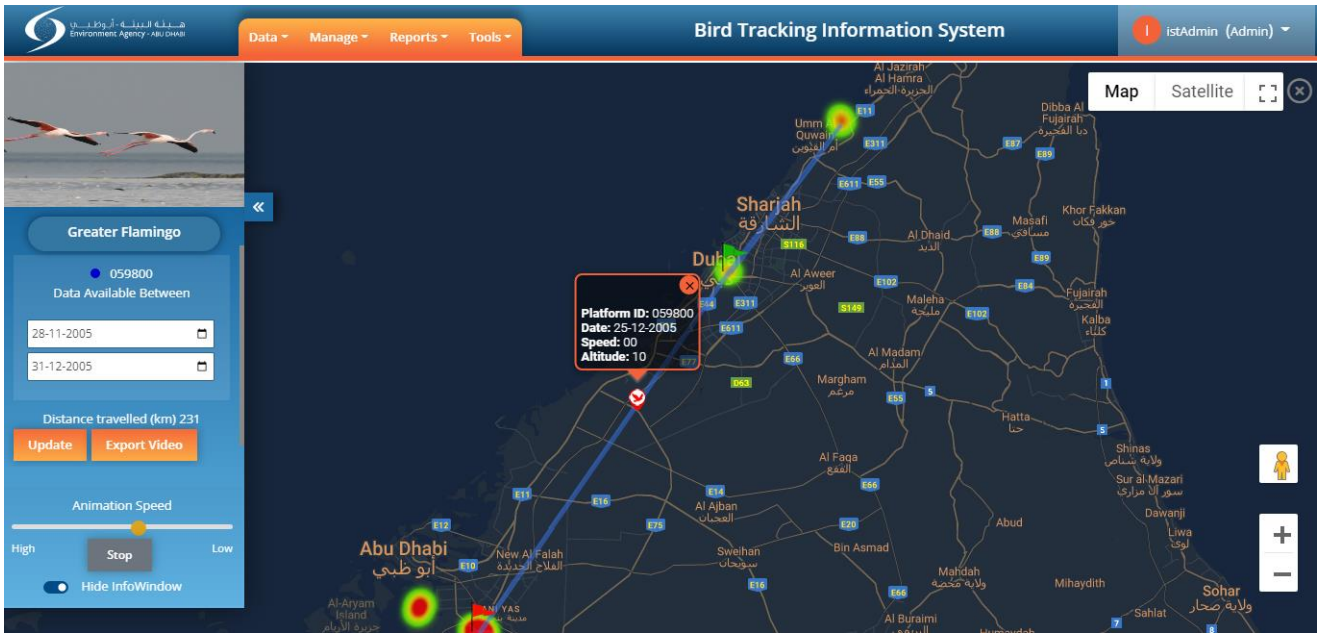
VIII. Select the Platform ID's from the list. Based on the year selection, the platform ID's will be display. Here, user will be able to select single ID/multi selection or select all ID's at a time. Both Active and Inactive ID;s will be display in the list.

IX. Click on Run button. After clicking on the Run button, the application shall load and display the plotting data on the map based on the criteria selected



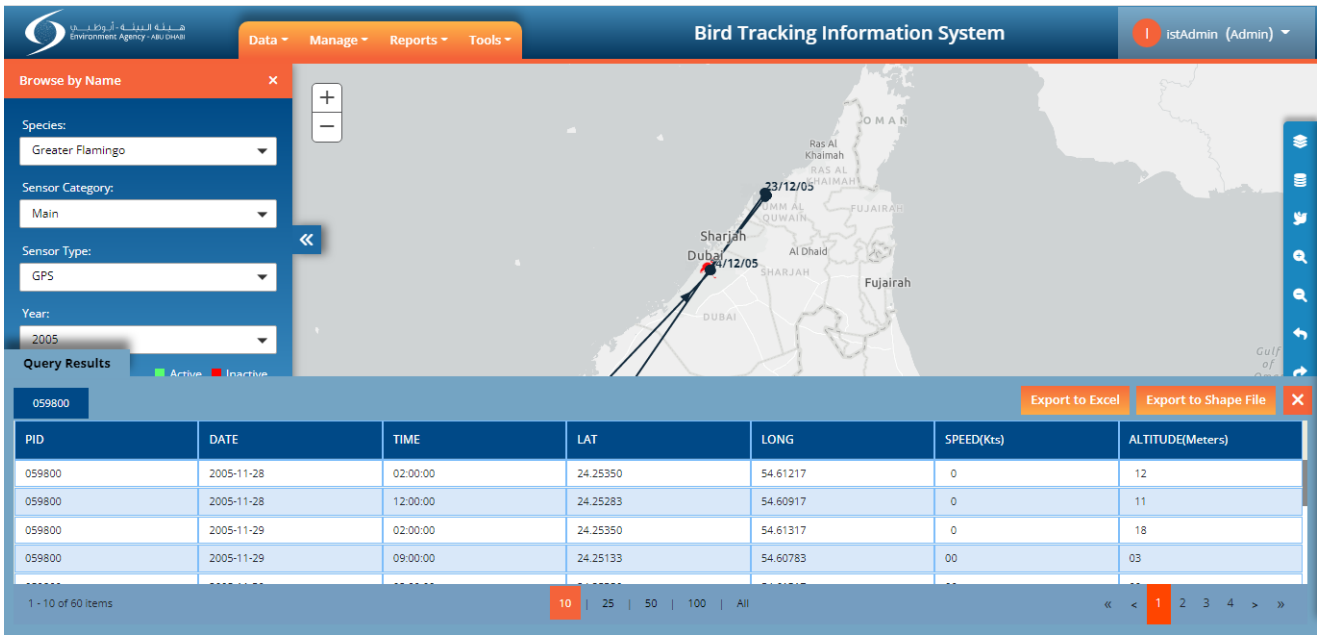
X. Click on Animate button. After clicking on Animate button, it will be display the animations of the selected Species in separate window along with dates in which the data available.

- Animation shows the bird movement from starting date to ending date with a bird icon in animated view
- Also, it will be display the animation Start/Stop button
- In addition to this, here user will be have the control on the animation speed from slower to faster.
- With the help of Update button, user will be able to change the animation duration.
- Export Video helps the user to save the Animation



XI. Click on close icon in the current window. The Animation window will be get closed

XII. Click on the Query Results at bottom side. User will be able to view the Query results in tabular format



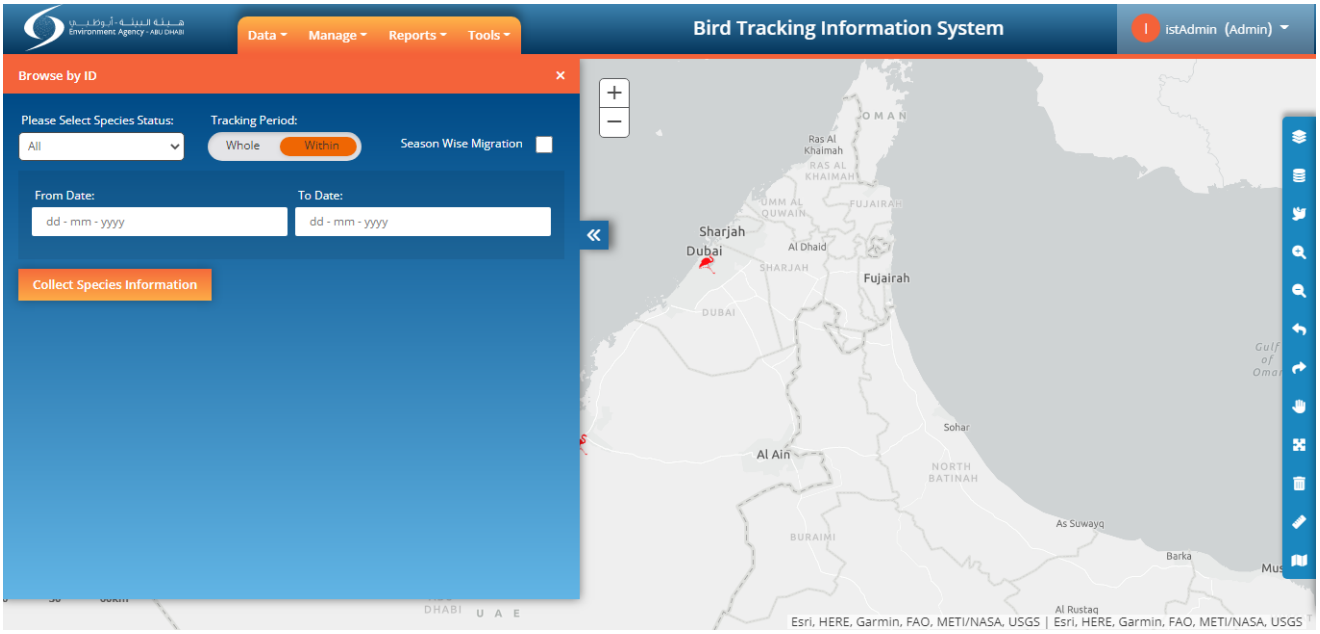
XIII. Click on close icon in Species Names Filter query window

5.3 Browse by ID

For data review and analysis, users may need to plot tracking records based on Species Status. This tool provides the facility to restrict the number of records plotting based on time period and time interval in the available records.

<u>The following are the steps to view the data by species status:</u>

I. Click on the Data module. The available query filters will be display



II. Select and click on the Browse by Id's option. After clicking on this option, it will be display the filters available in it

III. Select the Species Status. The species status dropdown will be display All, Active and Non-Active options for the selection to user. Based on the need user will be able to select the status.

IV. Select the Tracking Period. Tracking period filter is displayed with two options like Whole (Complete data) and Within (Based on the date selection).

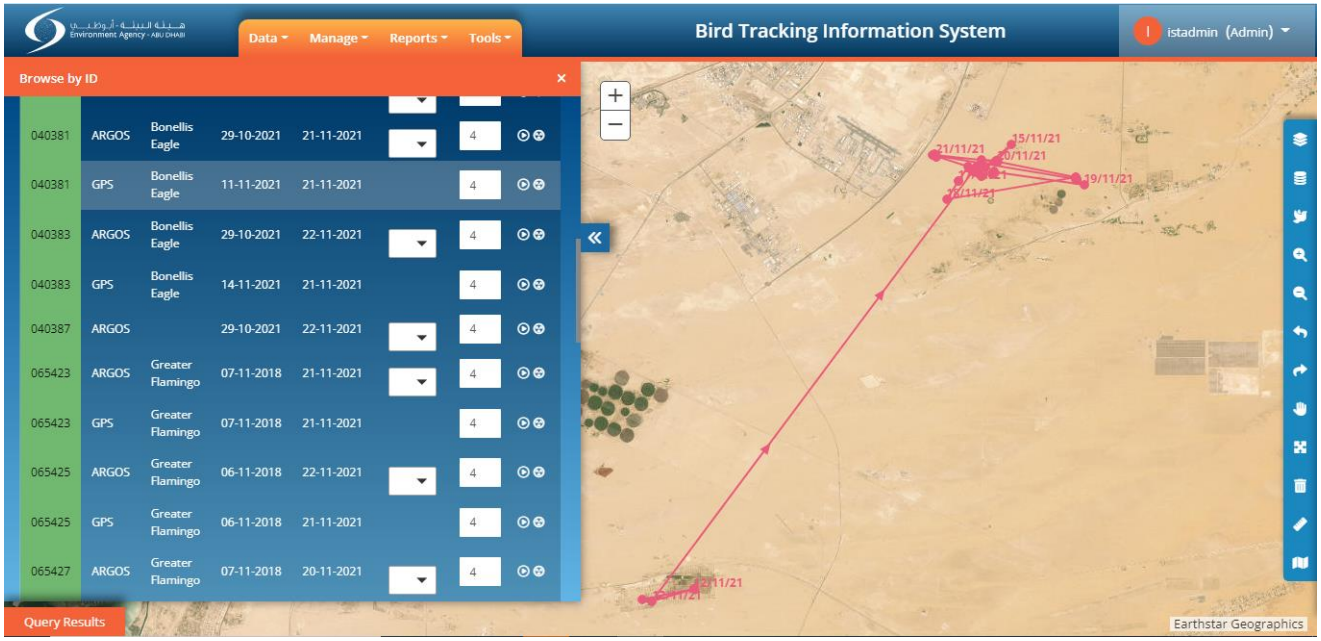
V. Select/Enter from and to dates. It will be allowing the user to select/enter the From and to dates.

VI. Click on Collect Species Information button. Application shall load and display the species information based on the applied filters.

VII. Enter the Time Interval. It will be allow the user to enter time interval. Also, with the help of up/down arrows user will be able to select the intervals.

VIII. For Argos, Enter LOC values. For Argos, user will be able to enter LOC values.

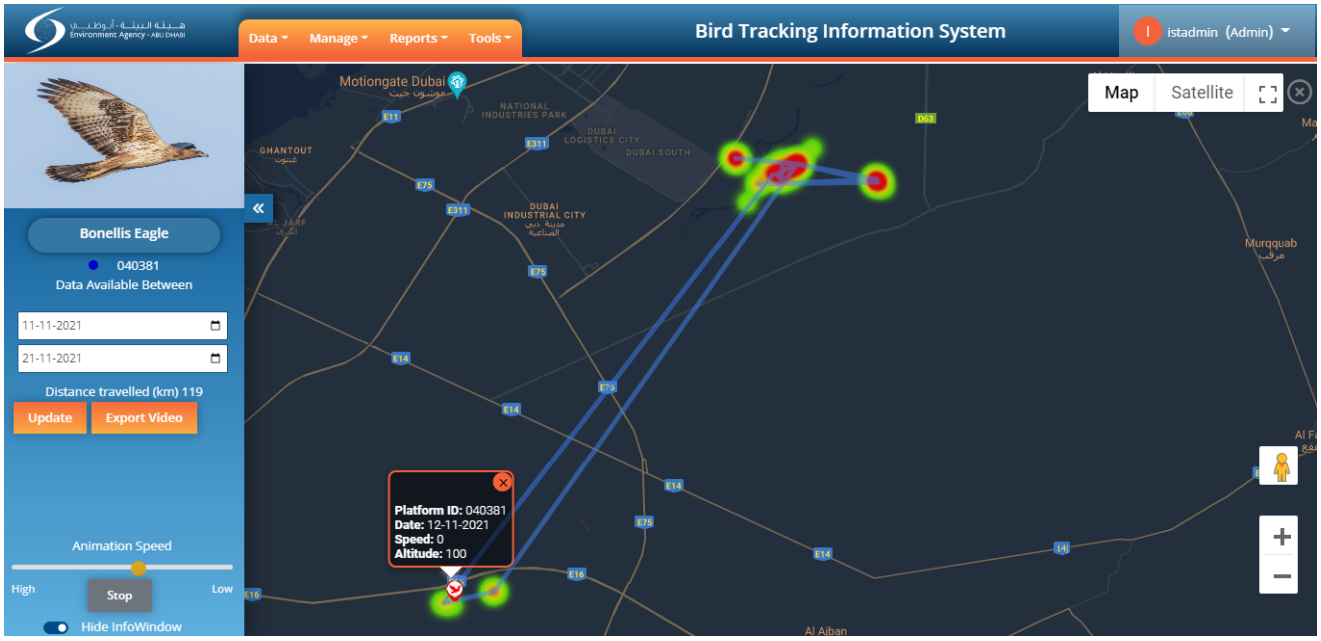
IX. Click on Run button. After clicking on the Run button, the application shall load and display the plotting data on the map based on the criteria selected.



X. Click on Animate button. After clicking on Animate button, it will be display the animations of the selected Species in separate window along with dates in which the data available.

- Also, it will be display the animation Start/Stop button

- In addition to this, here user will be have the control on the animation speed from slower to faster.



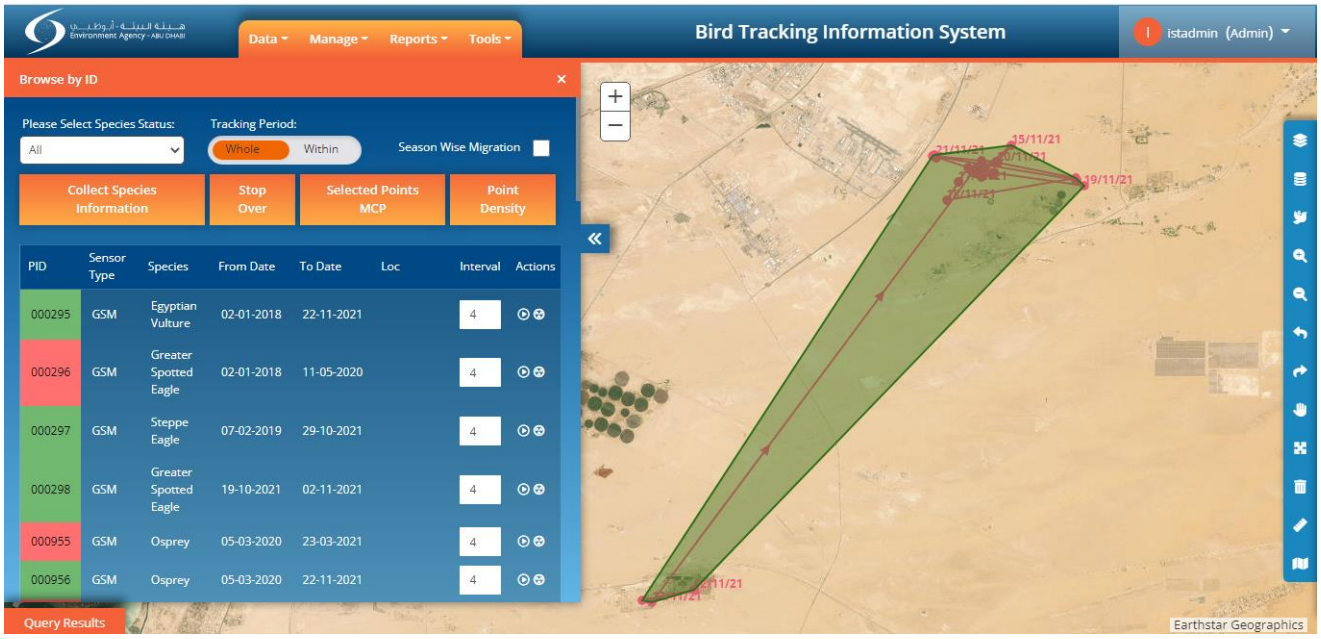
XI. Click on close icon in the current window. The Animation window will be get closed

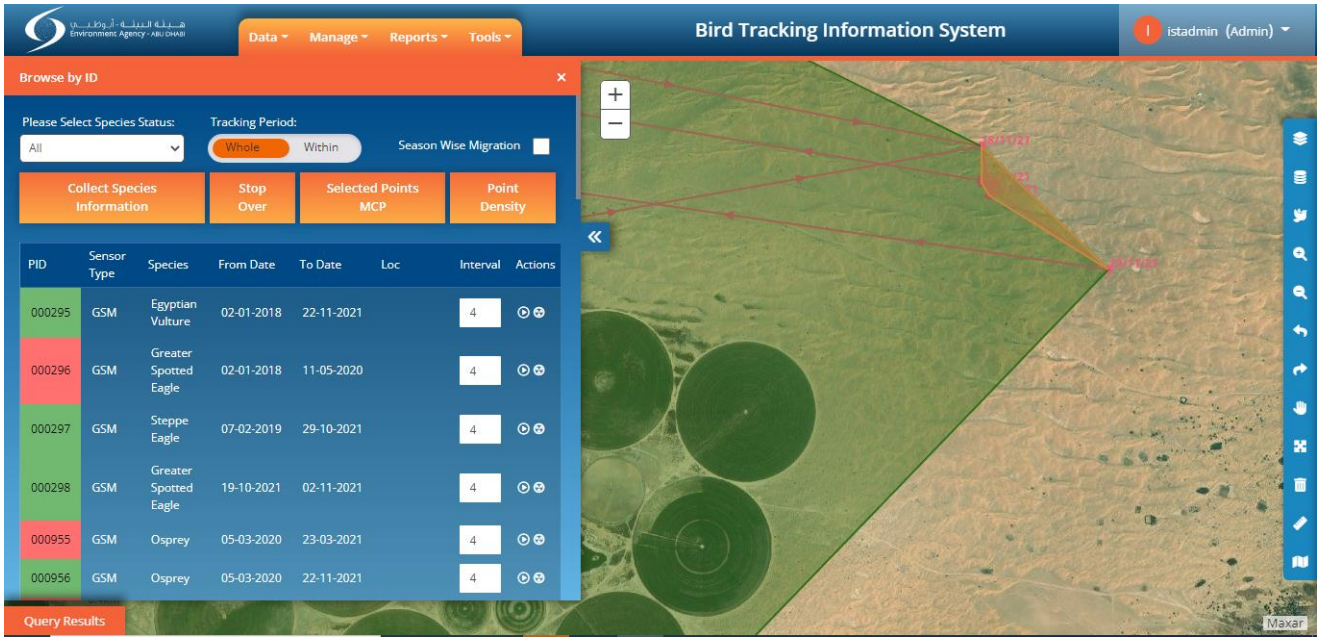
XII. Click on the Query Results at bottom side. User will be able to view the Query results in tabular format

XIII. Click on close icon in Species Status query window

5.3.1 MCP

Click on MCP option for the plotted data. It will be display the minimum convex polygons on map. There will be an option to export MCP area as shape file with attached attributes of bird ID, sensor, start date, end date. Also, user will be able to view the Selected points MCP.





5.3.2 Point Density

Click on Density option for the plotted data. It will be display the density graphics on map. Point density results will be come in print outputs.

5.3.3 Season Wise Migration

Here, user can view the species data with respect to the season on the map. Each season will represent with a different color. It has four stages wintering, breeding, autumn and spring migration. Based on the bird type and behaviour the plotting data will shown in different color for each season.

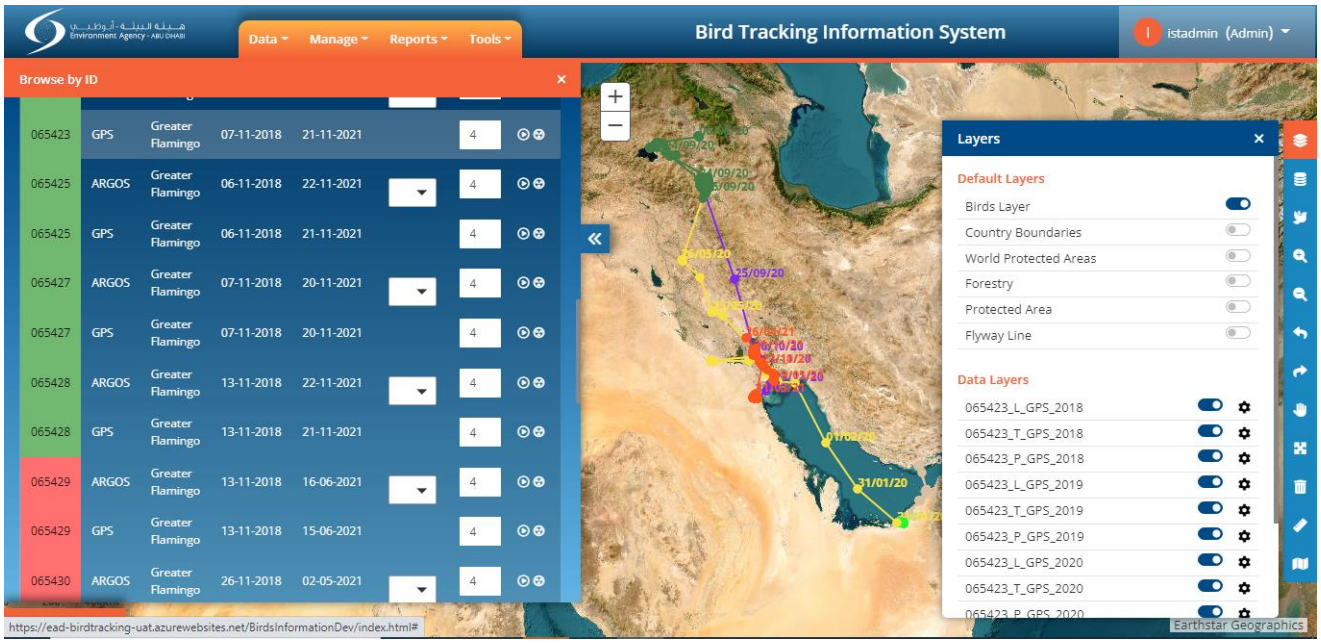
The following are the steps to view the Season wise Migration is as follows:

i. Click on the Data module. Apply filters on the selected option to view the plotting on map.

ii. Use any of the Data options to plot data.

iii. Click on season wise migration option after data plotting on map. It will be allowed to select season wise migration option.

iv. Click on run button. It will be display the plotting with different colors for different years. (here, the plotting may differ based on migrations).



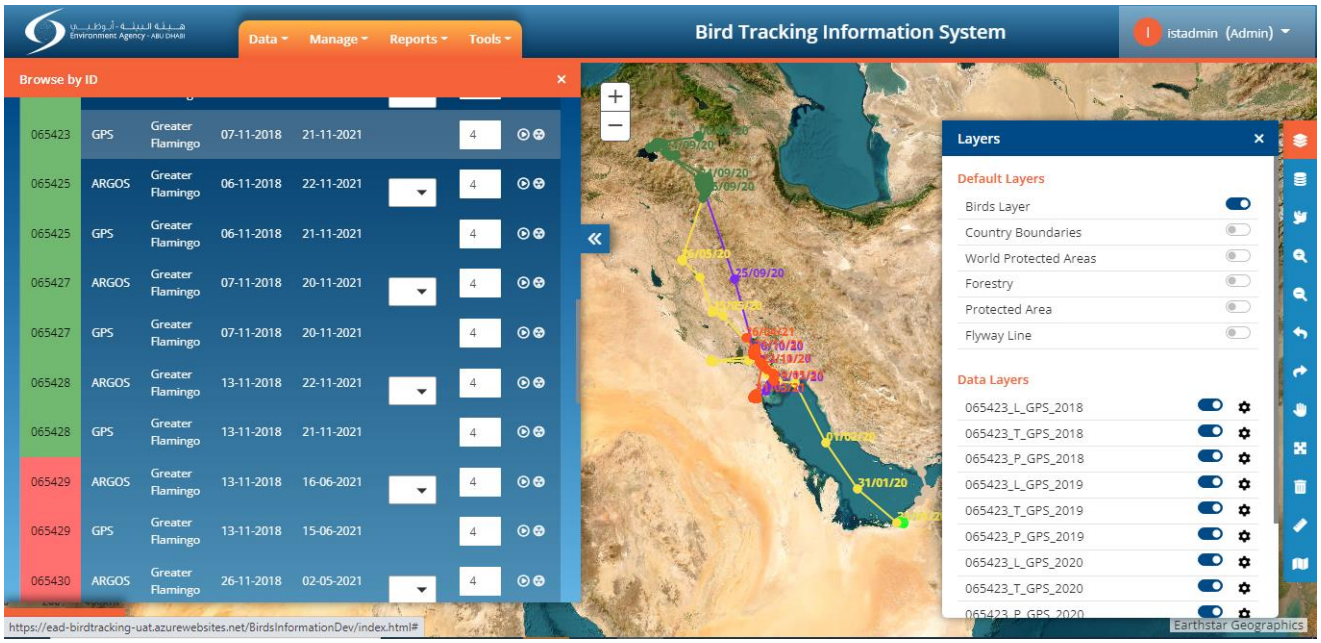
6. Animation

Here, user can view the selected bird movements in visualization view along with the required attribute information.

The following are the steps to view the Animation of the selected bird:

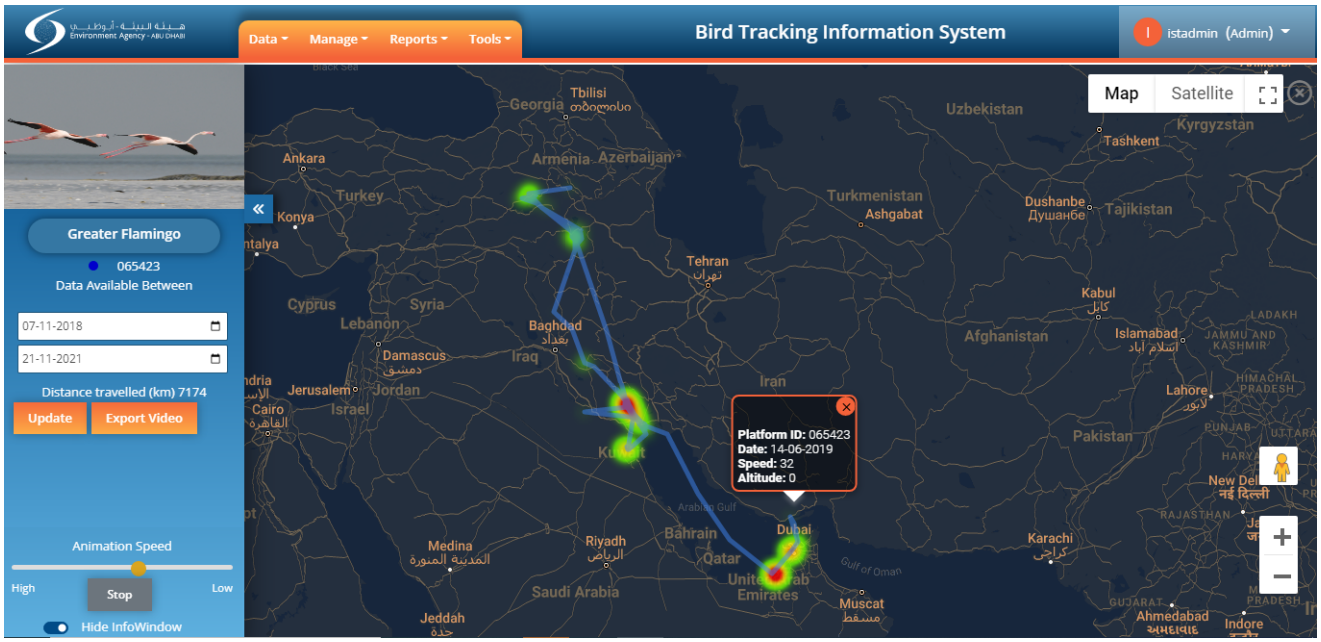
i. Click on the Data module. The available query filters will be displayed.

ii. Use any of the Data options to plot data. Apply filters on the selected option to view the plotting on map.



iii. Click on Animation option. After clicking on Animate button, it will be display the visualization of the selected Species in separate window along with dates in which the data available.

- Animation shows the bird movement from starting date to ending date with a bird icon in animated view.
- Also, it will display the animation Start/Stop button.
- In addition to this, here user will be having the control on the animation speed from slower to faster.



iv. Click on Hide Info Window to hide the attributes info popup on map.

v. Click on the Export Video to export the animation.

vi. Also, here user can have the ability to change the map to satellite view.

7. Stop Over Calculations

Here, user can have the ability to view the Stop Overs of the selected ID in the selected time duration.

The following are the steps to view the Stop Overs of the selected bird ID:

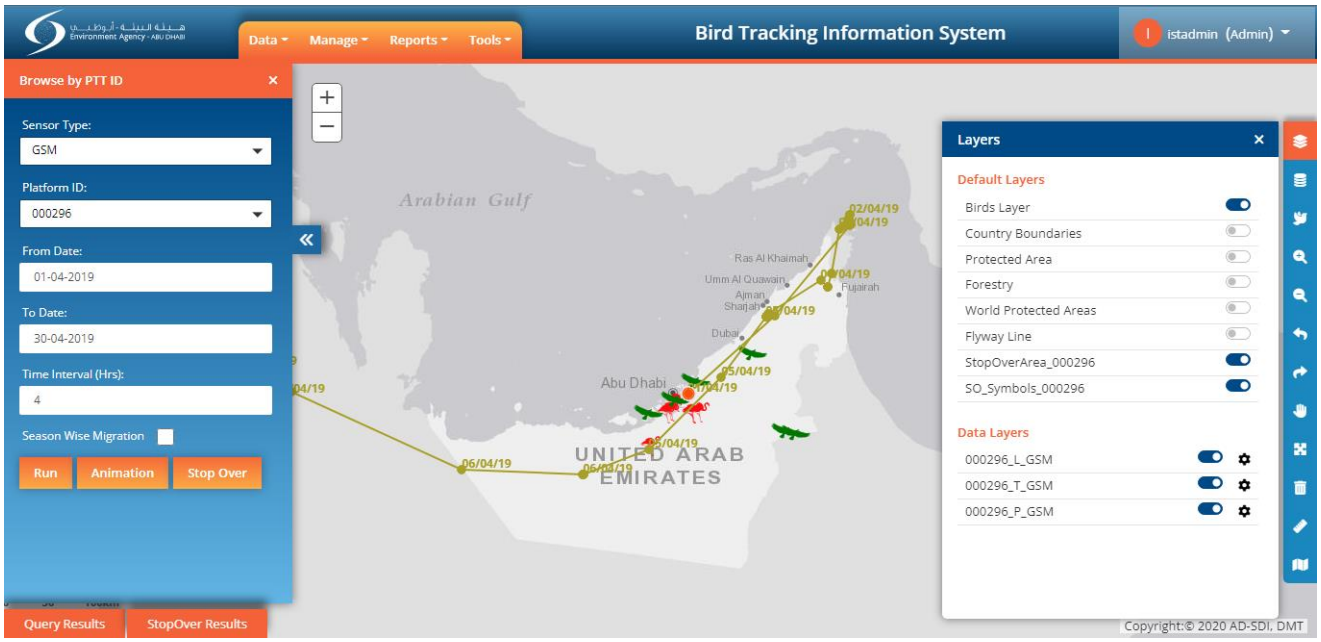
i. Use any of the Data options to plot data. Apply filters on the selected option to view the plotting on map.

ii. Click on the Stop Over option for the selected ID.

iii. Enter the Distance and Time Period values

iv. Click on Run button. After clicking on run button, the Stop Overs will be display on the plotting data

v. Click on the Stop Over Results at bottom side. User will be able to view the Stop Over results in tabular format



vi. Click on Export option in Stop Over Results. User will be able to export the Stop Over results

vii. Click on close icon in the current window

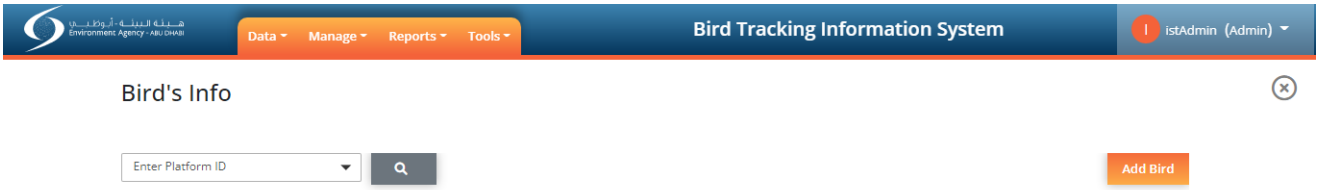
8. Manage Options

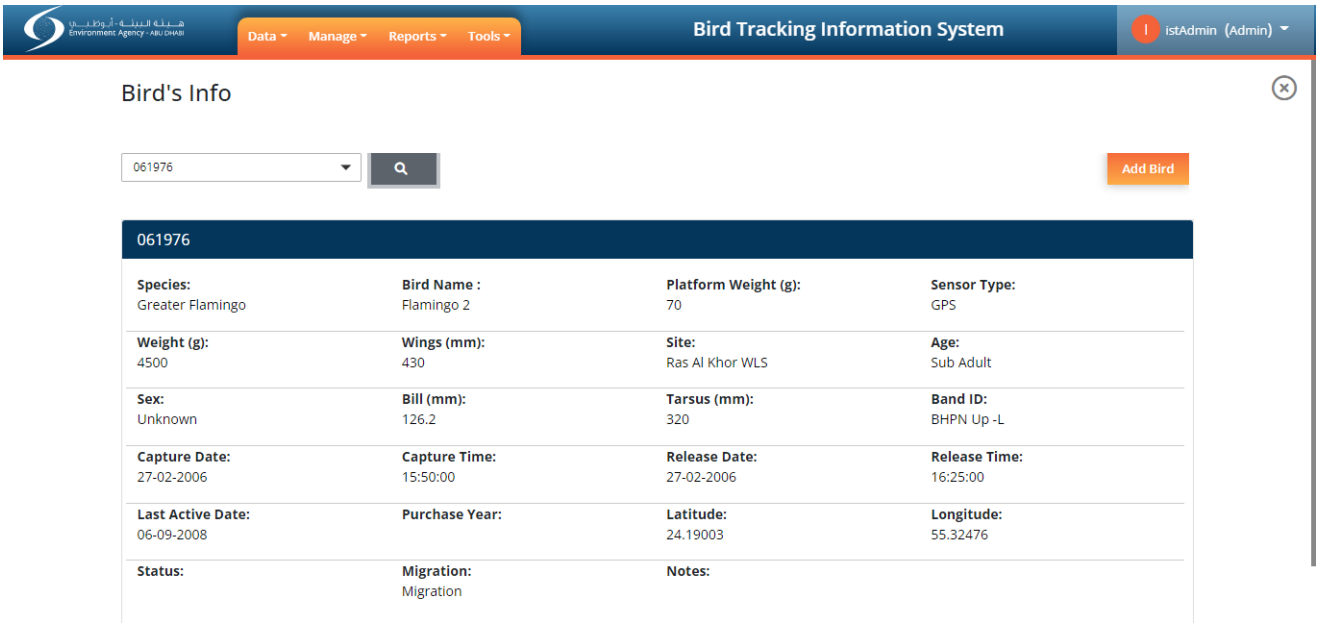
With the help of Manage Options, user can have the ability to add the new bird into the application, Search the required ID to view the information, Edit the Bird Information, Create Sponsor, Edit the users, Assign birds to users. Each functionality will be described in the following sections.

The following are the steps to access the Manage Options:

8.1 Manage Birds

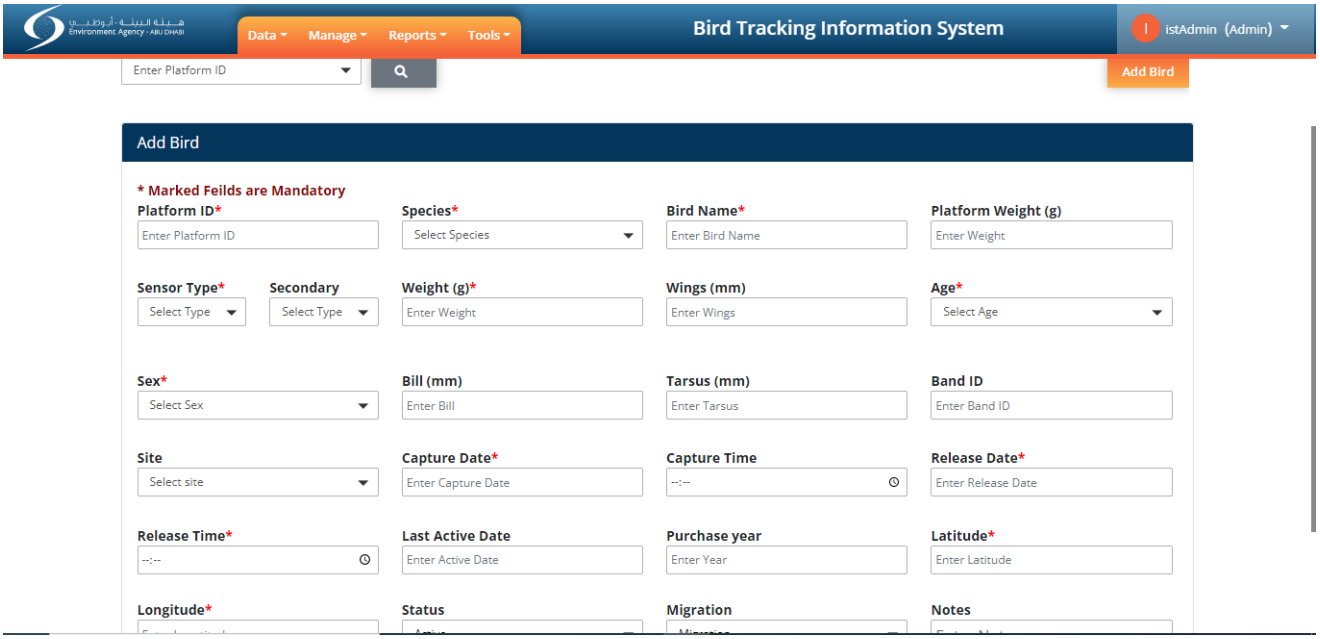
i. Click on “Manage” section and do click on “Manage Birds” module. It will be displaying the Manage Birds screen with ADD Bird option and Search option.





ii. Select/Enter the required ID in search field to view the attribute information based on the given inputs.

iii. Click on ADD Bird option. With the help of this option, user will be able to add new bird details.



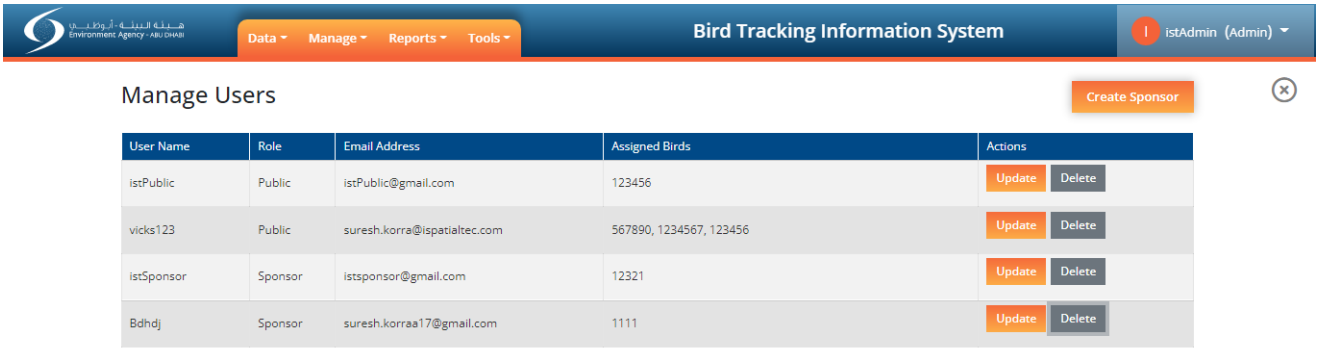
iv. Enter the values in all required fields and click on Save button.

v. Also, it will have the ability to edit the required bird information.

8.2 Manage Users

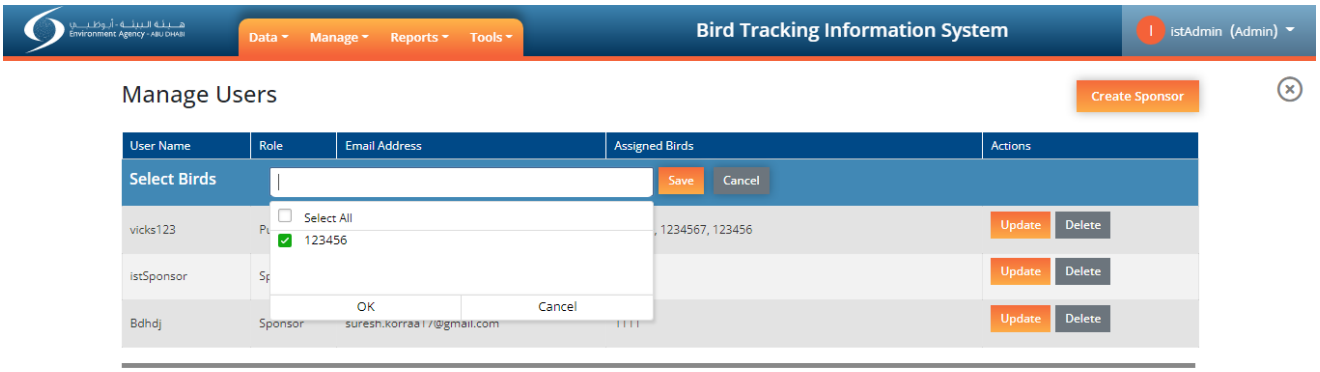
vi. Click on Manage section and do click on Manage Users module. With the help of this module, admin will be able to create sponsors, update the assigned birds and delete the sponsors and public users from the list.

vii. Admin have the ability to verify the newly created public users login (Like Approve functionality)

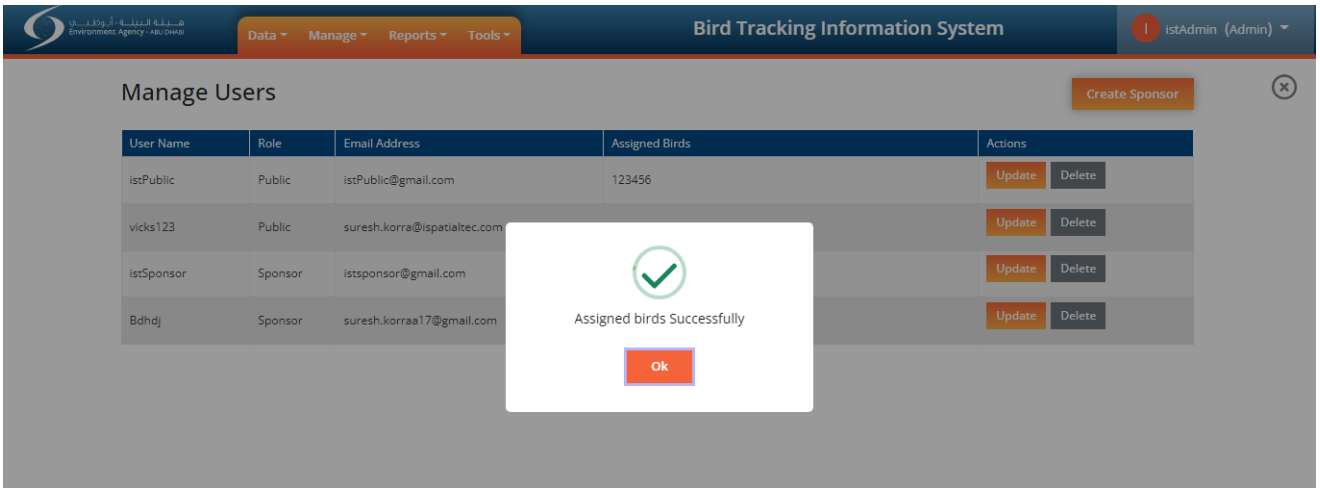


viii. Click on “Update” option. It will be display the ID's dropdown

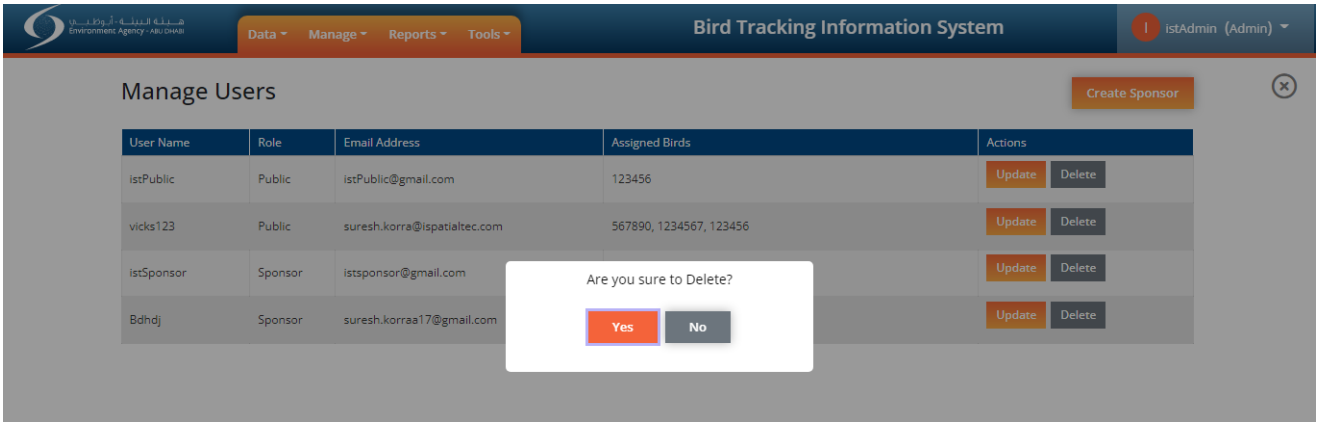
ix. Select the ID's from the list and click on OK. It will be allow the user to select the ID's

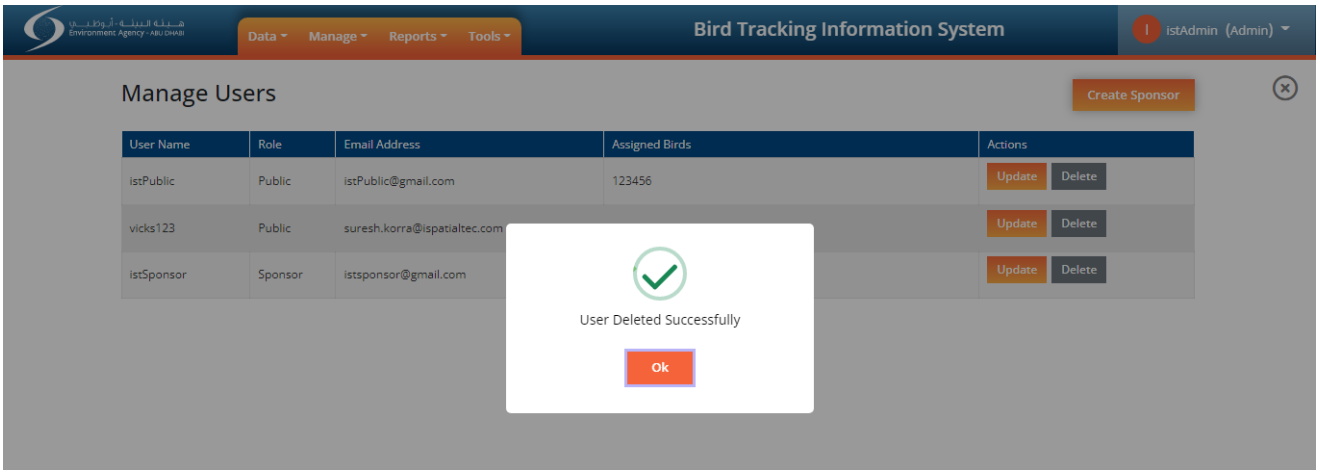


x. Click on Save button. Selected birds will be assigned to particular Public/Sponsor.



xi. Click on Delete option. With the help of delete option, user will be able to delete the selected Public/Sponsor from the list.

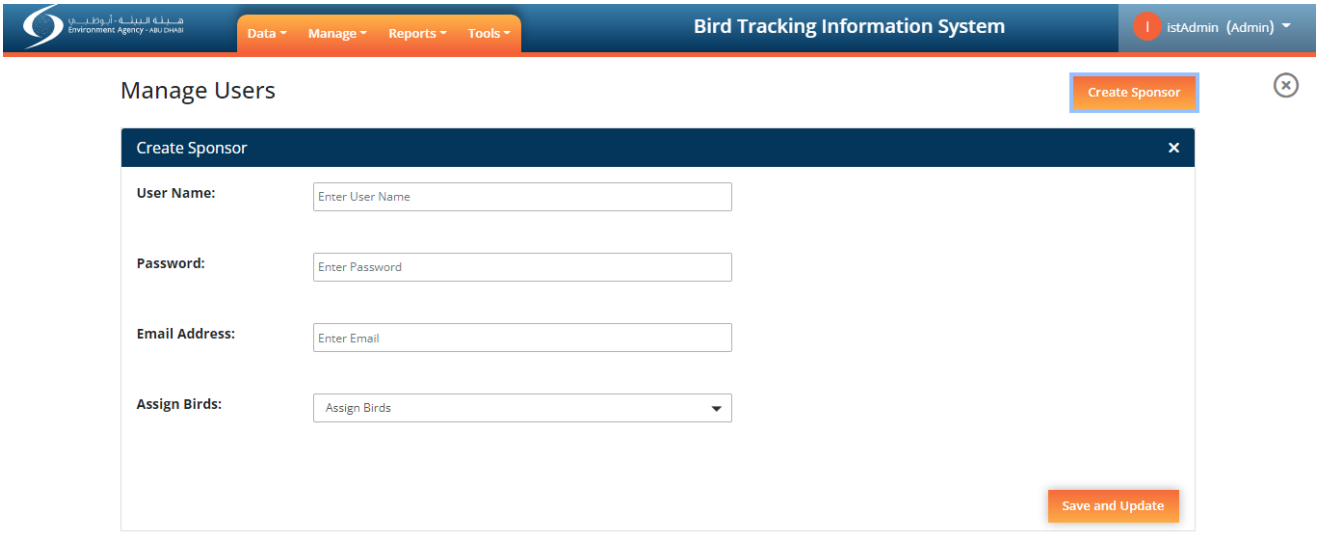




8.3 Create Sponsor

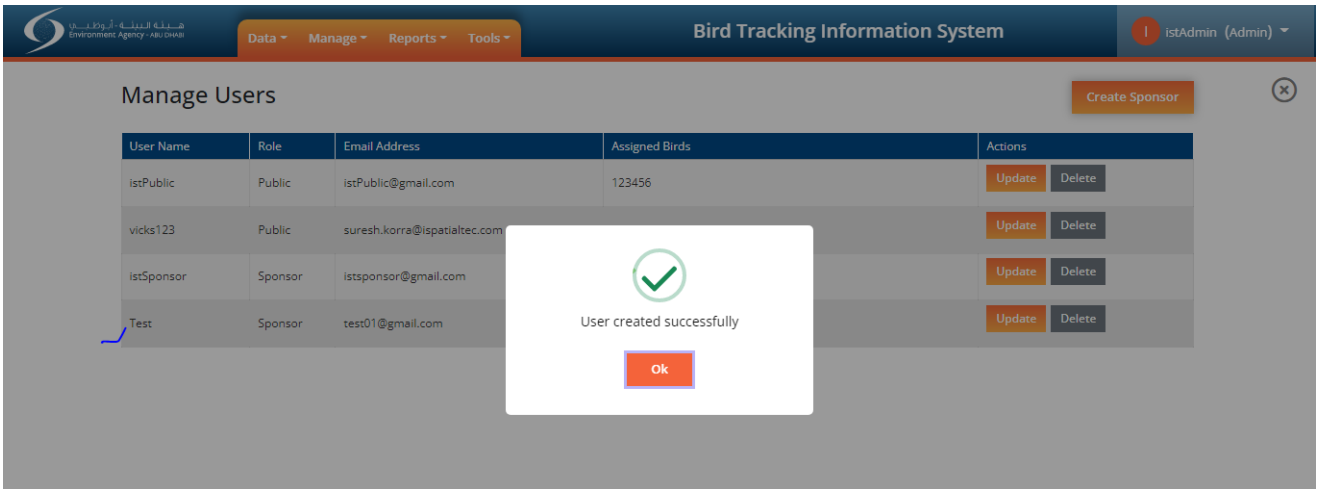
xii. Click on Manage section and do click on Manage Users module. With the help of this module, admin will be able to create sponsors, update the assigned birds and delete the Sponsors and public users from the list.

xiii. Click on Create Sponsor option.



xiv. Enter the required valid details in fields and click on Save button. It will allow the user to create Sponsors with valid details.

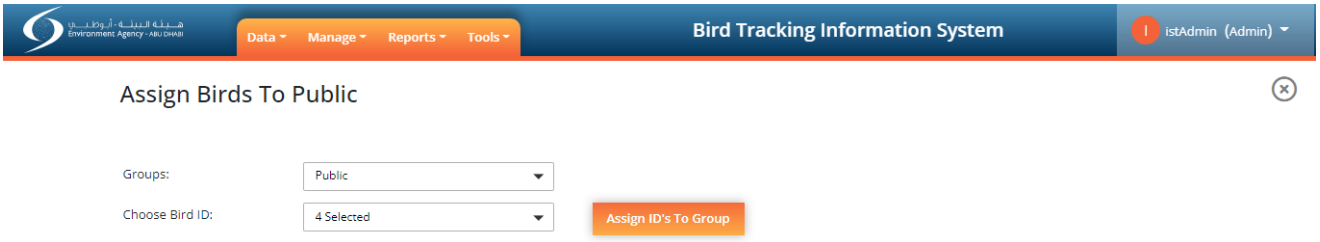
xv. For Sponsor, admin will assign birds and able to add or delete bird's ids. Sponsor able to see only assigned birds.



8.4 Assign Birds to Public

xvi. Click on Manage section and do click on Assign Birds to Public option.

xvii. Select the Group and IDs & click on Assign IDs to group button. Predefined set (public group) of bird's ids will be to assigned to public by default, which will be automatically assigned. Admin has privilege to add/delete bird ids from public group and also add/delete bird ids from public members.

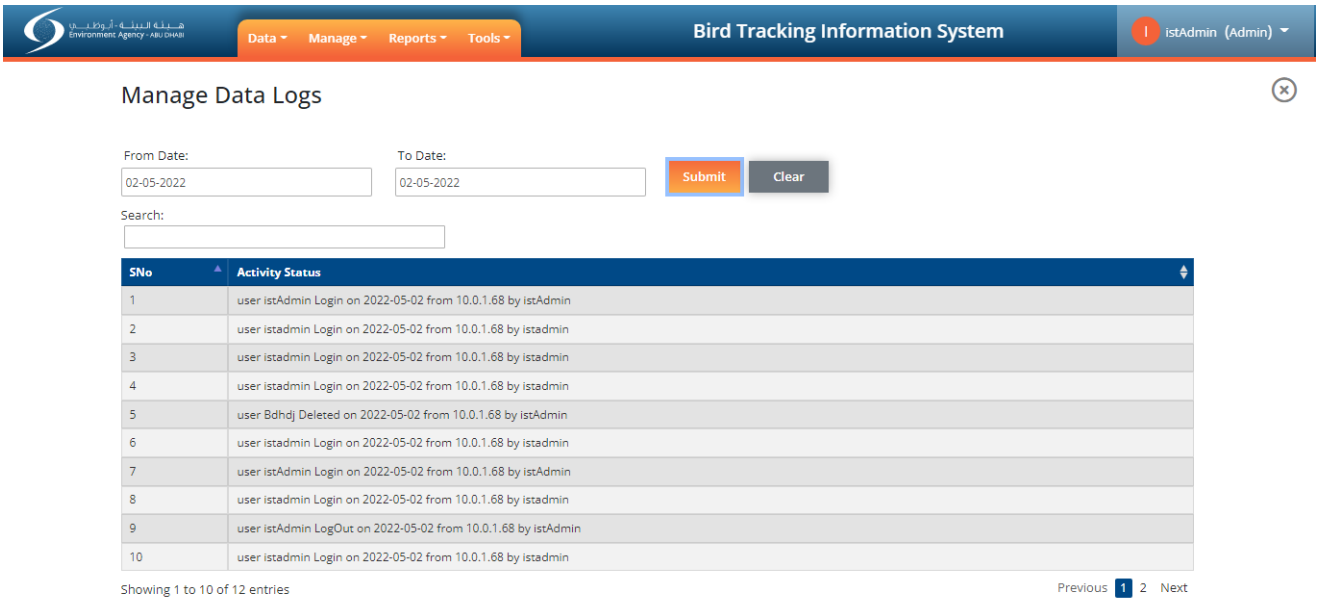


8.5 Manage Data Logs

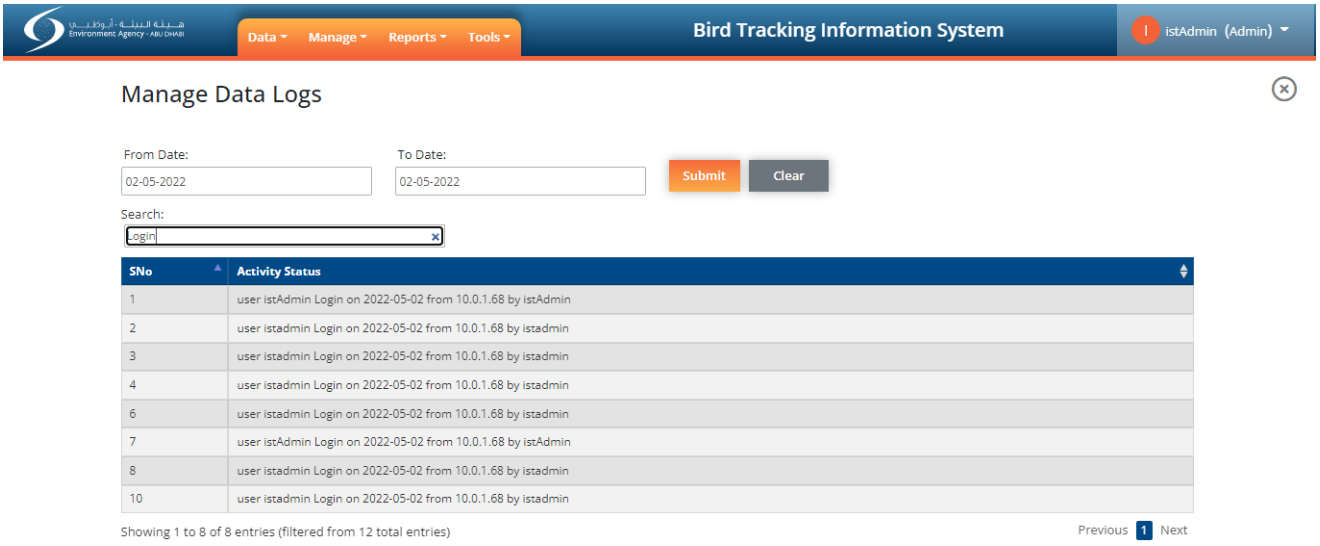
xviii. Click on "Manage" section and click on "Manage Data Logs" option.

xix. Select the "From" and "To" dates.

xx. Click on submit button. After clicking on submit button, application will display the information such as when user logged in/out, which user logged in/out, also which user deleted by whom along with date, user creation date and username details.

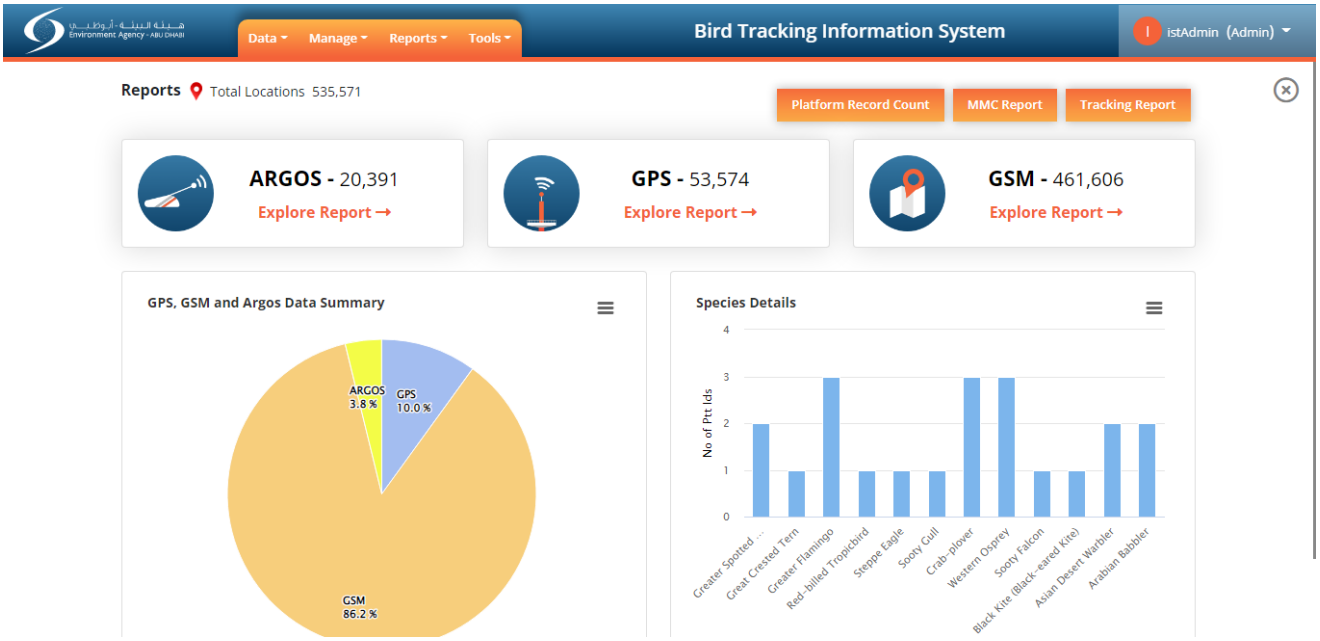


xxi. Enter the inputs in “search” option. It will display the records based on the given inputs.



9. Reports

Reports module helps the user to view the required information in graphical representation. It helps the user to analyze the data in much easier way. There are different types of reports available in the application. Each report and their usage will be described in the following sections.



9.1 GPS, GSM and Argos Data Summary report

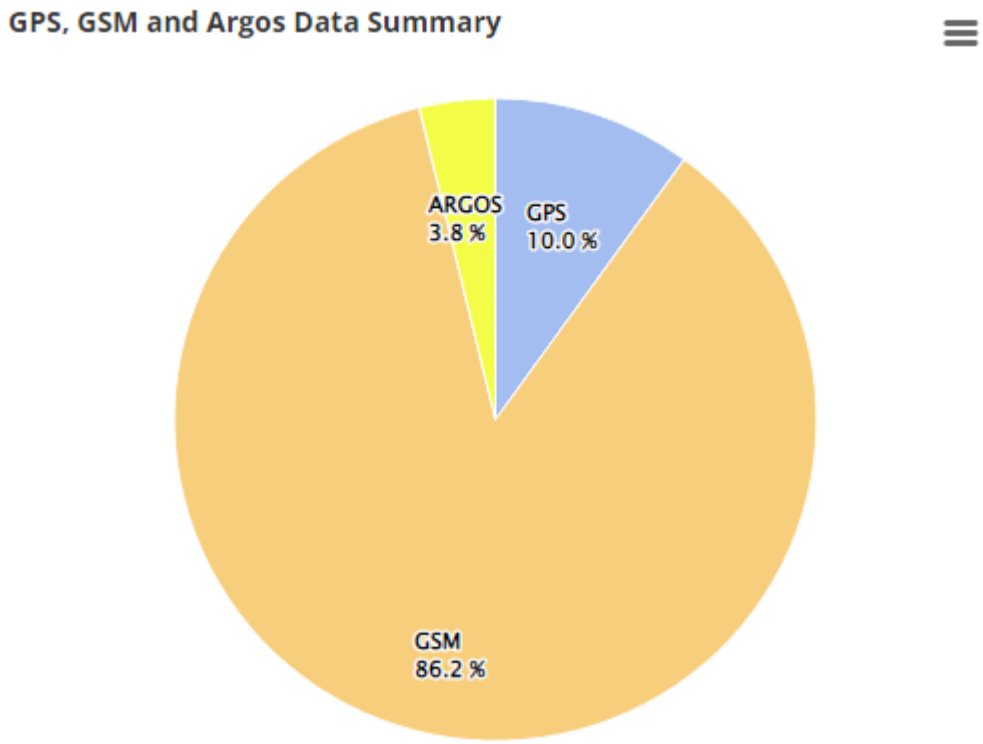
This report helps the user to view the Data summary of the GPS, GSM and ARGOS sensor types. Here, the report will be represented on Pie Chart and the data will display in percentages.

The following are the steps to access the Data Summary Report:

i. Click on “Reports”.

ii. Click on the hamburger symbol of the summary report.

iii. Click on the required option to view the result. It will display the list of options for the generated report (View in full screen, Download the Report into PNG, JPEG, PDF, XLS, CSV).



9.2 Species details report

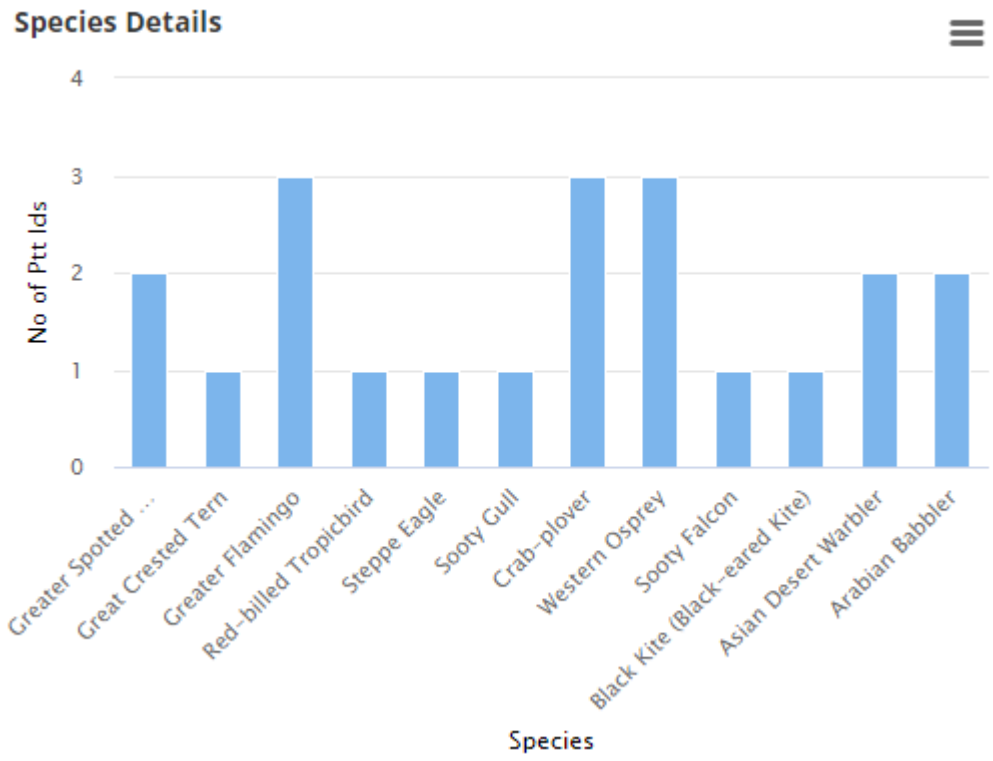
Species details report shows the full information of all the species available in the application and the chart will be Bar chart.

The following are the steps to access the Species details Report:

i. Click on “Reports”.

ii. Click on the hamburger symbol of the summary report. Here, all the species details will be display in Bar chart.

iii. Click on the required option to view the result. It will be display the list of options for the generated report (View in full screen, Download the Report into PNG, JPEG, PDF, XLS, CSV).



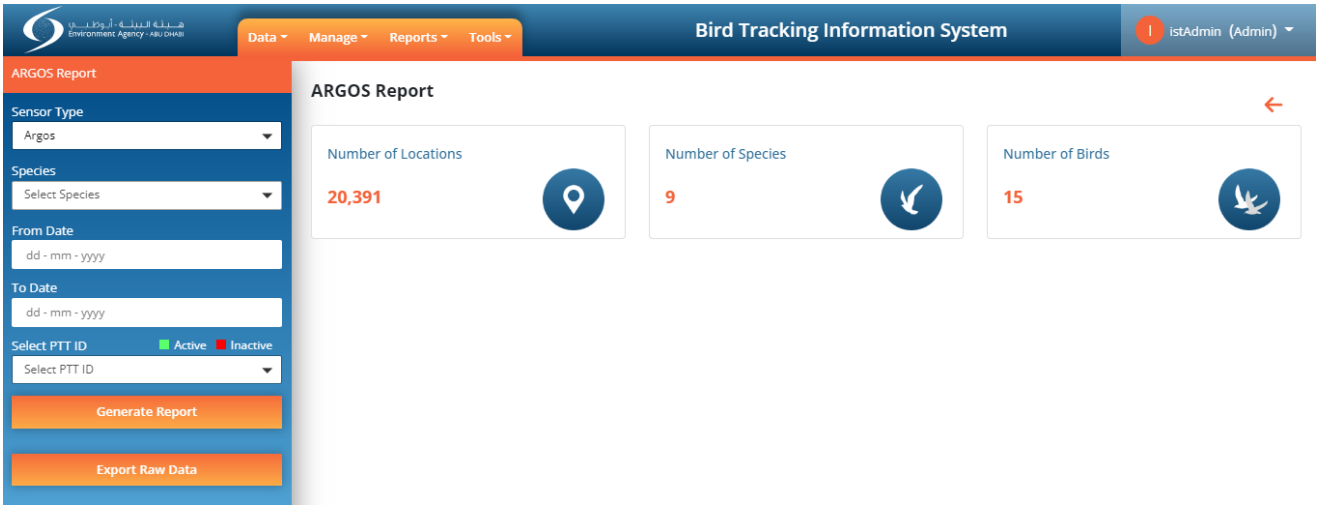
9.3 ARGOS Report

ARGOS Report can help the users to view the ARGOS data based on the applied filters.

<u>The following are the steps to access the ARGOS Report:</u>

i. Click on Reports. In initial page of the reports, the Total locations count will be displayed. Also, for an individual sensor type, the count will be displayed.

ii. Click on the ARGOS Report. After clicking on the required Report, user will be navigated to the ARGOS Report page. Here, user will be able to view the Number of Locations, Species and Birds details of the ARGOS data.

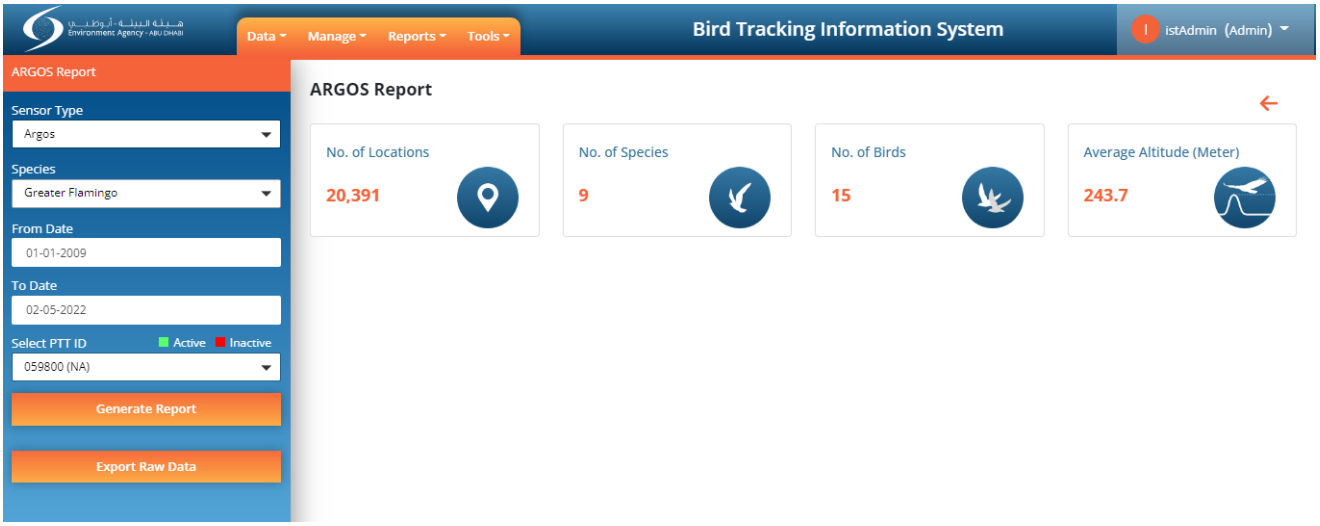


iii. Select the Sensor Type which allows single selection

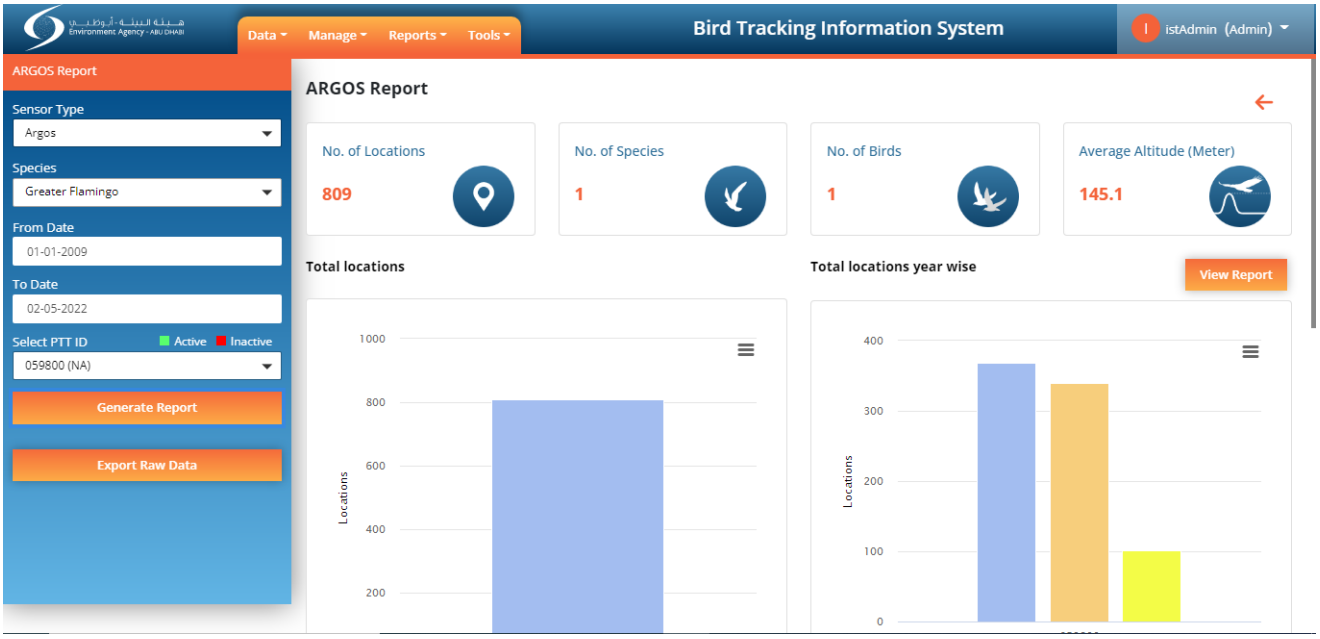
iv. Select the species and it Allows single selection. Based on the selection of sensor type, the species names will be displayed.

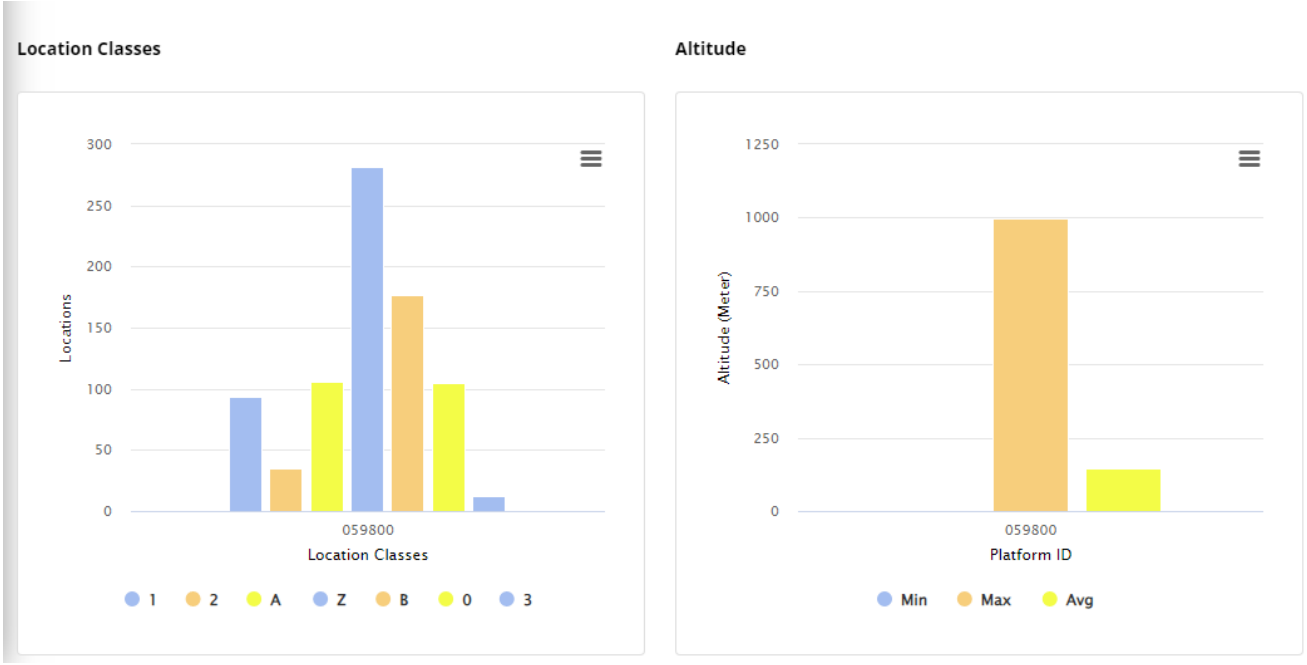
v. Select From/To dates.

vi. Select the PTT ID. Based on the species selection the PTT IDs will be display. It will be allow the user to select the ID from list (Allows multi selection). Here, both Active and Inactive IDs will be displayed to the user. Only for single ID, the Average Altitude count will be displayed.



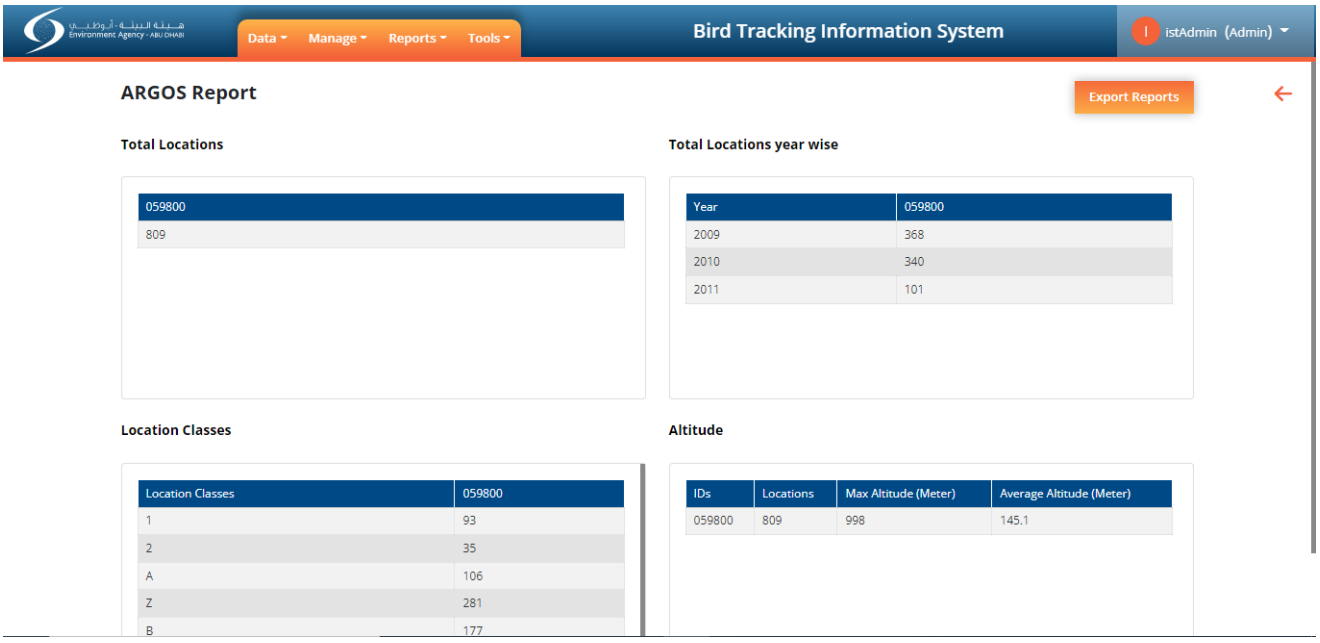
vii. Click on Generate Report button. After clicking on the Generate Report button, user will be able to view the Total Locations, Total Locations Year Wise, Location Classes and Altitude Reports. On mouse hover, user will be able to view the values





viii. Click on Export Raw data. It will allow the user to download the data into excel format.

ix. Click on the View Report button. After clicking on it, user will be able to view the data charts in table format



x. Click on Export Reports button. It will allow the user to download the data in excel format.

xi. Click on the redirection arrow, which will redirect to charts page.

xii. Click on the hamburger symbol of the report. It will display the list of options for the generated report (View in full screen, Download the Report into PNG, JPEG, PDF, XLS, CSV).

xiii. Click on the required option to view the result.

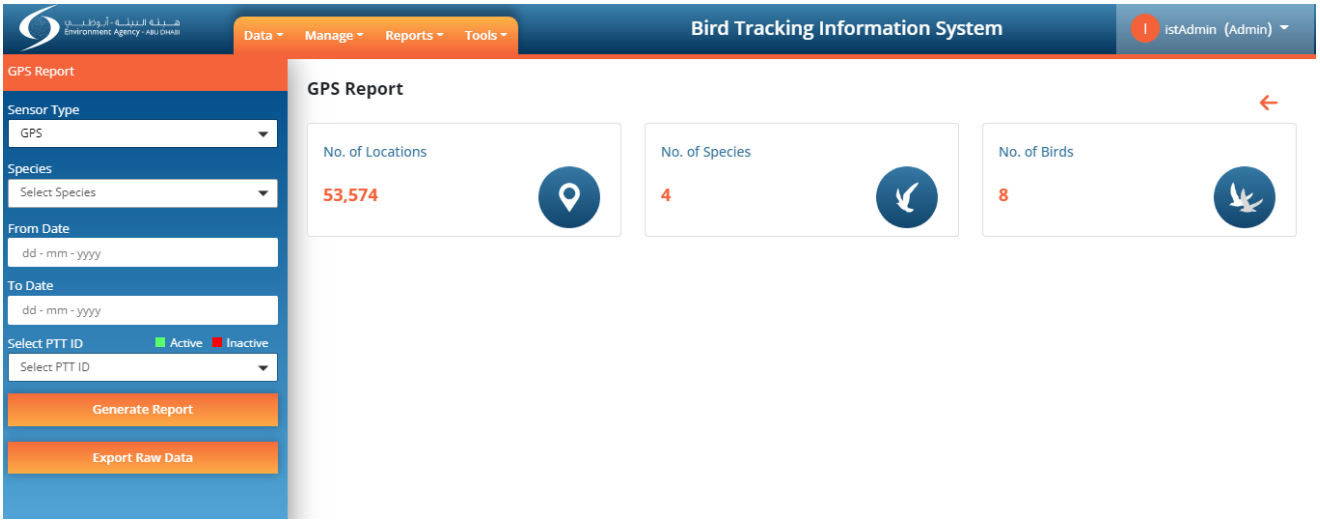
9.4 GPS Report

GPS Report can help the users to view the GPS data based on the applied filters.

The following are the steps to access the GPS Report:

i. Click on Reports. In initial page of the reports, the Total locations count will be displayed. Also, for an individual sensor type, the count will be displayed.

ii. Click on the GPS Report. After clicking on the required Report, user will be navigated to the GPS Report page. Here, user will be able to view the Number of Locations, Species and Birds details of the ARGOS data.

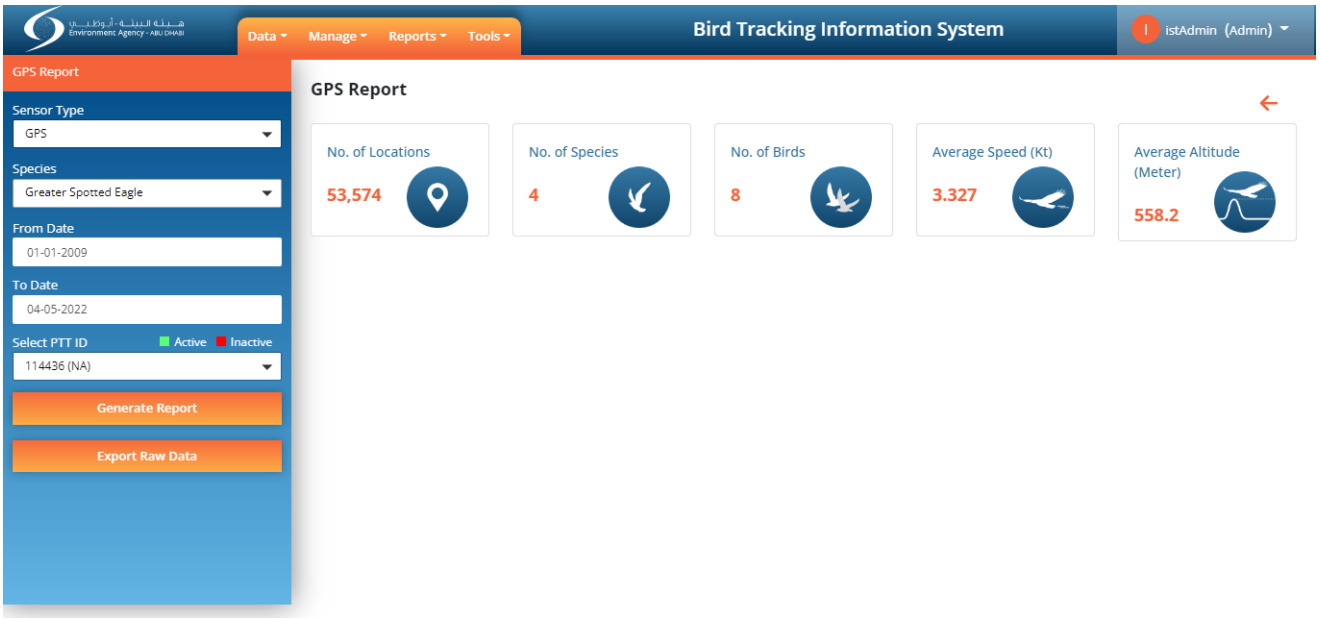


iii. Select the Sensor Type and it allows single selection.

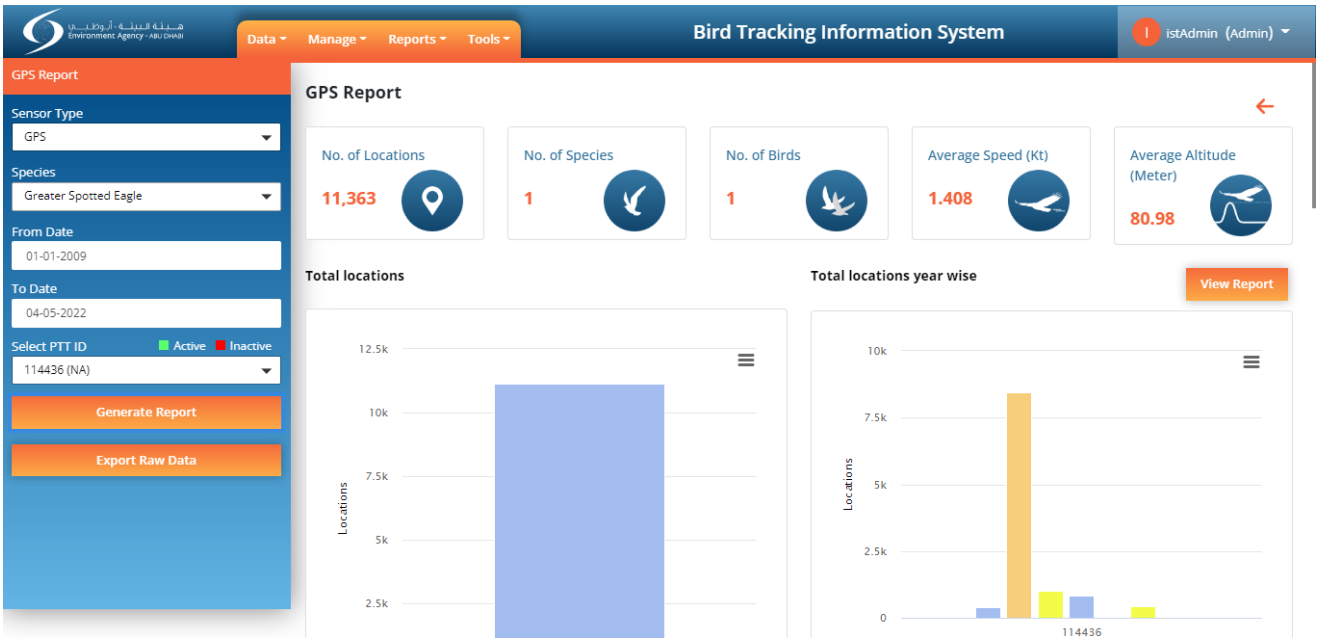
iv. Select the species which allows single selection. Based on the selection of sensor type, the species names will be display.

v. Select From/To dates.

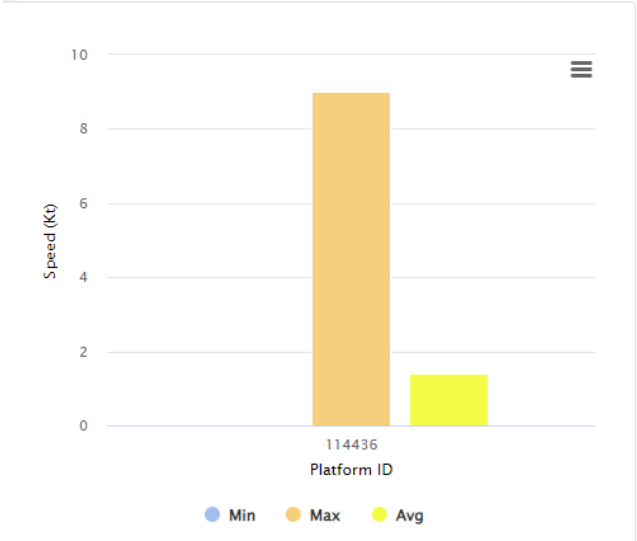
vi. Select the PTT ID. Based on the species selection the PTT ID's will be displayed. It will allow the user to select the ID from list (Allows multi selection). Here, both Active and Inactive IDs will be displayed to the user. Only for single ID, the Average Speed and Average Altitude count will be displayed.



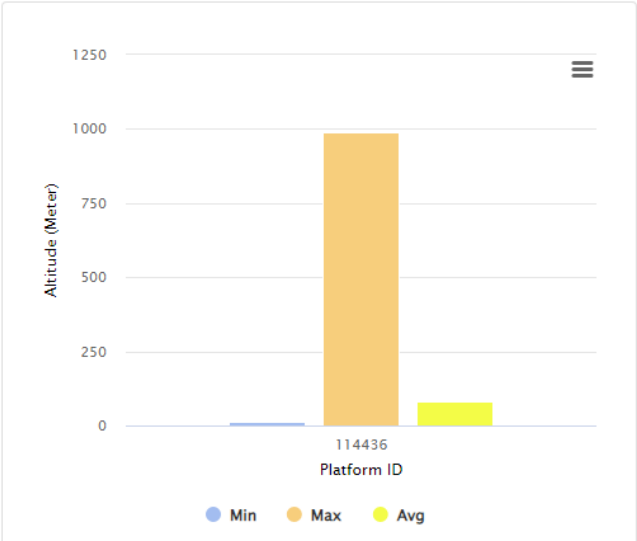
vii. Click on Generate Report button. After clicking on the Generate Report button, user will be able to view the Total Locations, Total Locations Year Wise, Location Classes and Altitude Reports. On mouse hover, user will be able to view the values.



Flight Speed

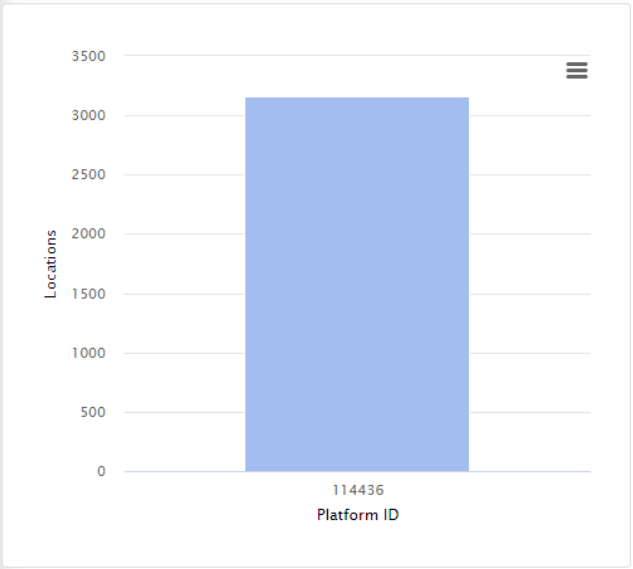


Altitude

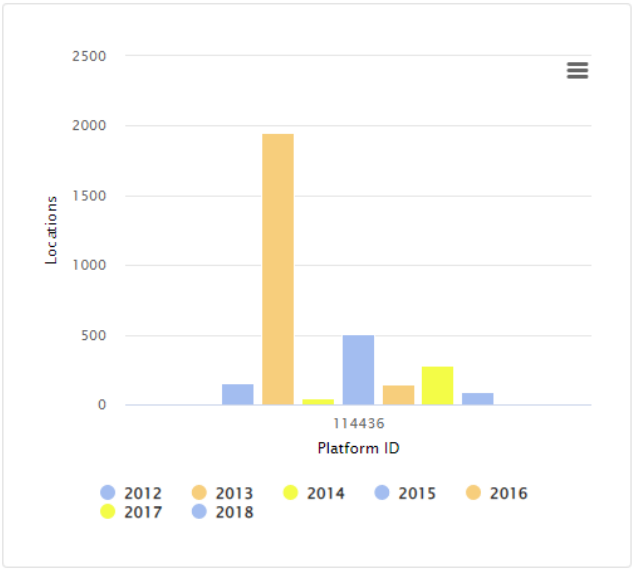


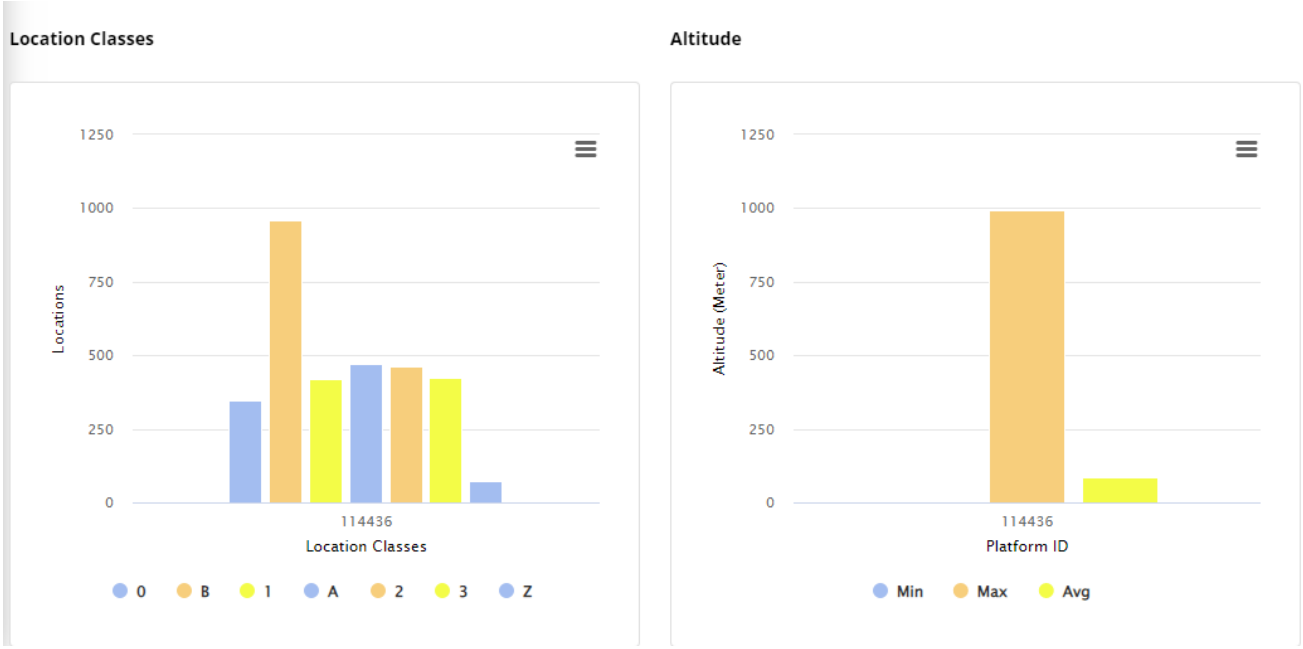
Report With ARGOS IDs

Total locations



Total locations year wise





viii. Click on Export Raw data. It will allow the user to download the data in excel format.

ix. Click on the View Report button. After clicking on the View report button, user will be able to view the data charts in table format.

x. Click on Export Reports button. It will allow the user to download the data in excel format.

xi. Click on the redirection arrow. It will be redirected to charts page.

xii. Click on the hamburger symbol of the report. It will display the list of options for the generated report (View in full screen, Download the Report into PNG, JPEG, PDF, XLS, CSV).

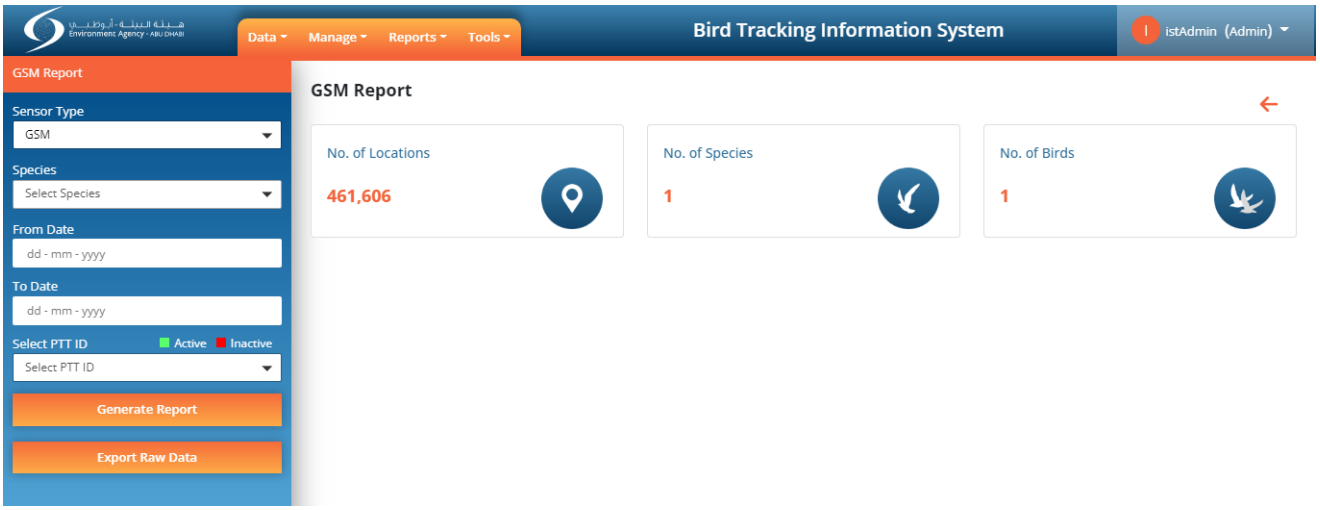
xiii. Click on the required option to view the result.

9.5 GSM Report

GSM Report can helps the user to view the GSM data based on the applied filters.

The following are the steps to access the GSM Report:

i. Click on Reports. In initial page of the reports, the Total locations count will be displayed. Also, for an individual sensor type, the count will be displayed.



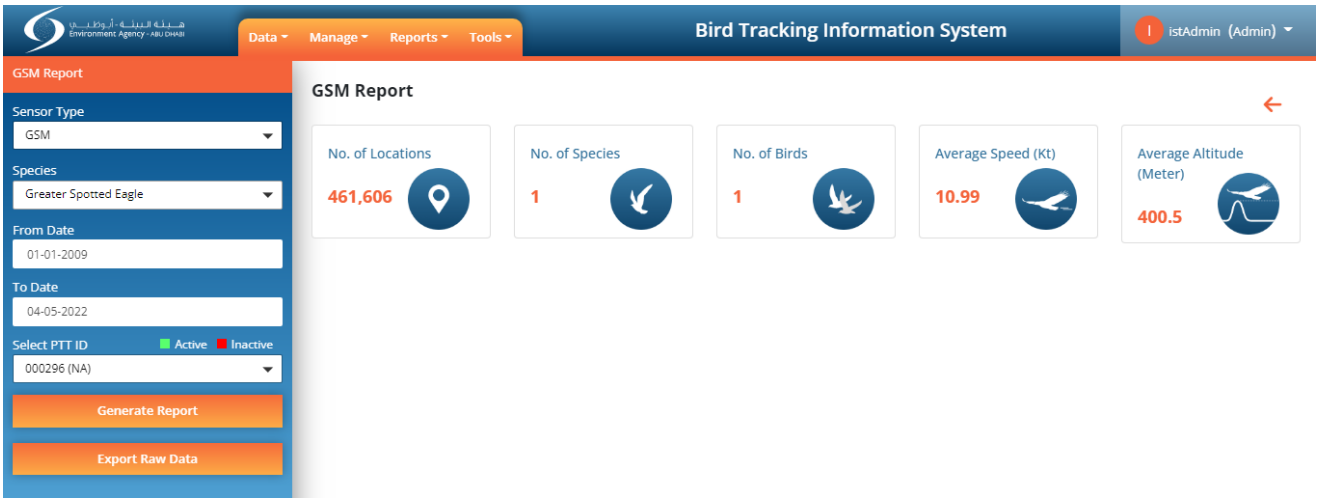
ii. Click on the GSM Report. After clicking on the required Report, user will be navigated to the GSM Report page. Here, user will be able to view the Number of Locations, Species and Birds details of the GSM data.

iii. Select the Sensor Type which allows single selection.

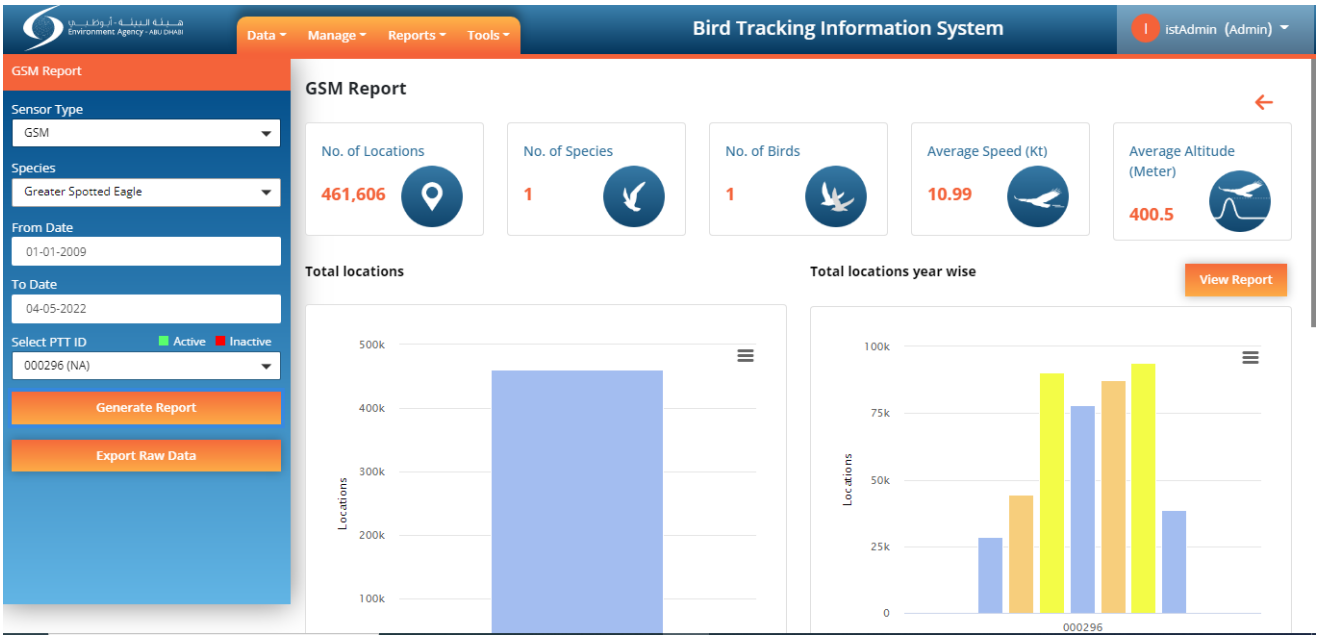
iv. Select the species and it allows single selection. Based on the selection of sensor type, the species names will be displayed.

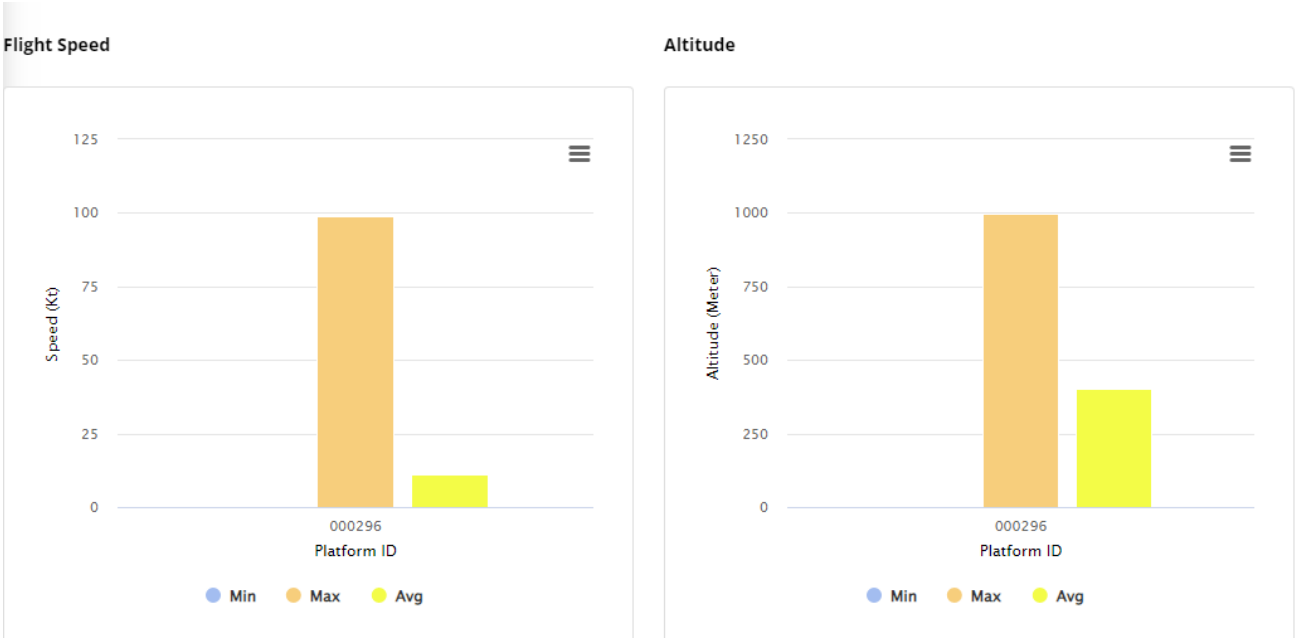
v. Select From/To dates.

vi. Select the PTT ID. Based on the species selection the PTT IDs will be displayed. It will allow the user to select the ID from list (Allows multi selection). Here, both Active and Inactive IDs will be displayed to the user. Only for single ID, the Average Speed and Average Altitude count will be displayed.



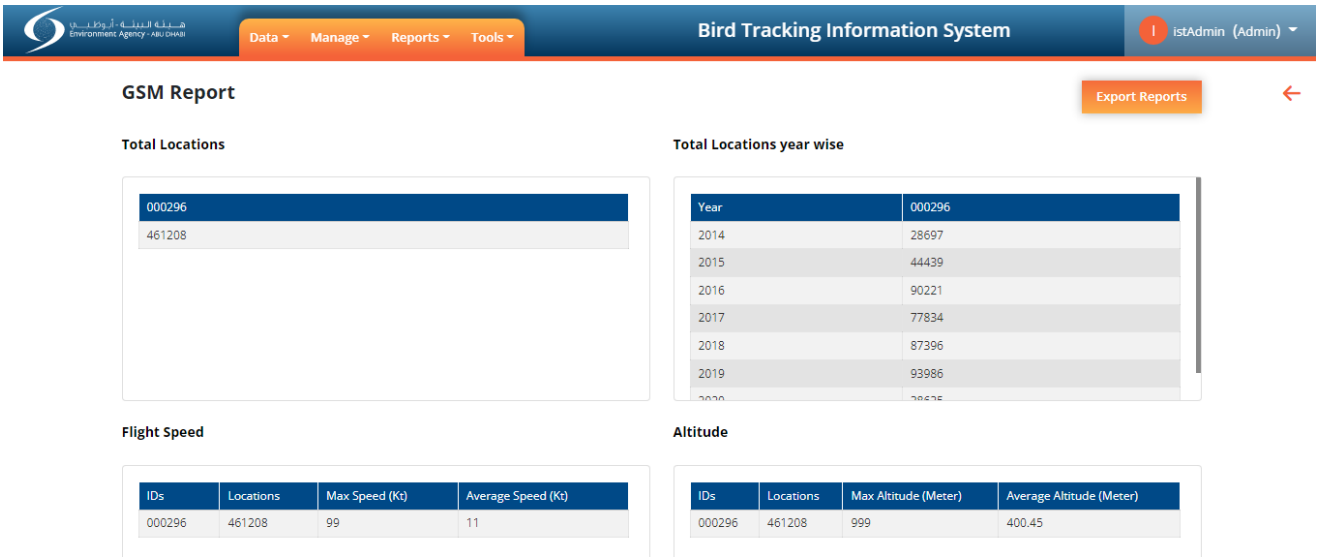
vii. Click on Generate Report button. After clicking on the Generate Report button, user will be able to view the Total Locations, Total Locations Year Wise, Location Classes and Altitude Reports. On mouse hover, user will be able to view the values.





viii. Click on Export Raw data. It will allow the user to download the data in excel format.

ix. Click on the View Report button. After clicking on the View report button, user will be able to view the data of charts into table format.



x. Click on Export Reports button. It will allow the user to download the data in excel format.

xi. Click on the redirection arrow. It will be redirect to charts page.

xii. Click on the hamburger symbol of the report. It will be displaying the list of options for the generated report (View in full screen, Download the Report into PNG, JPEG, PDF, XLS, CSV).

xiii. Click on the required option to view the result.

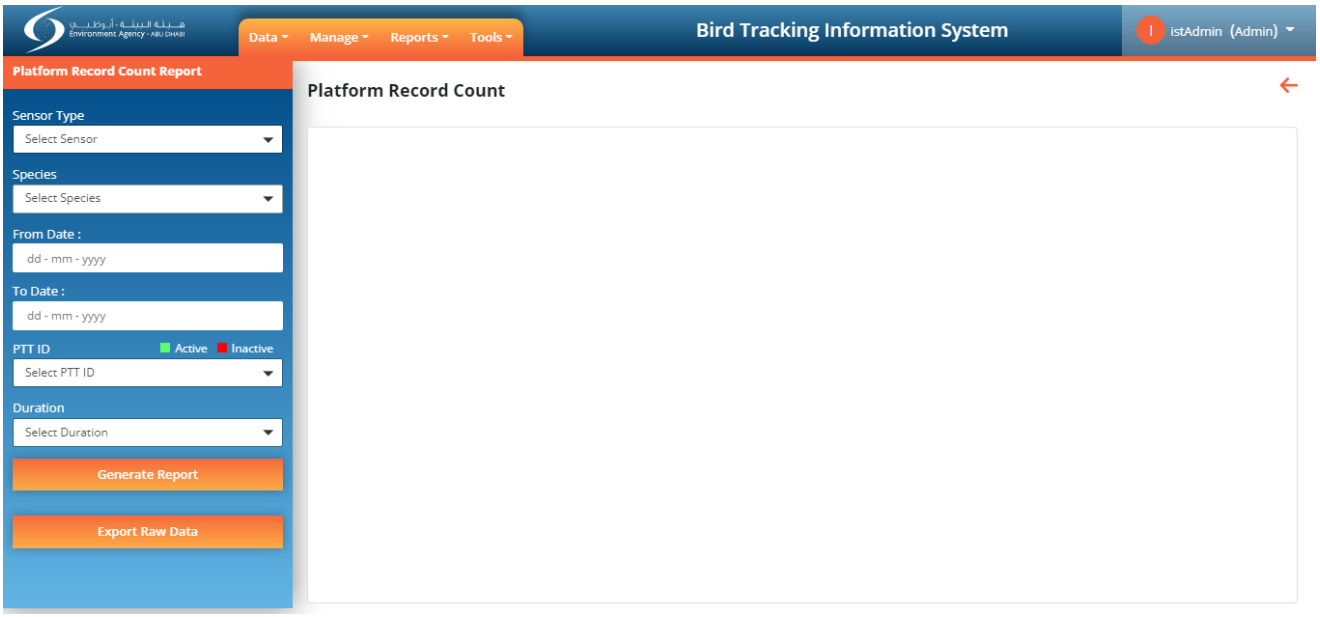
9.6 Platform Record Count

With the help of Platform Record Count Report, user can view the locations count of the selected PTT ID in the selected Duration.

The following are the steps to access the Platform Record Count Report:

i. Click on Reports

ii. Click on the Platform Record Count Report. After clicking on the Platform Report Count Report, application will be redirected to selected Report page.



iii. Select the Sensor Type. It will allow the user to select the sensor type from the list. (It will be allow single selection)

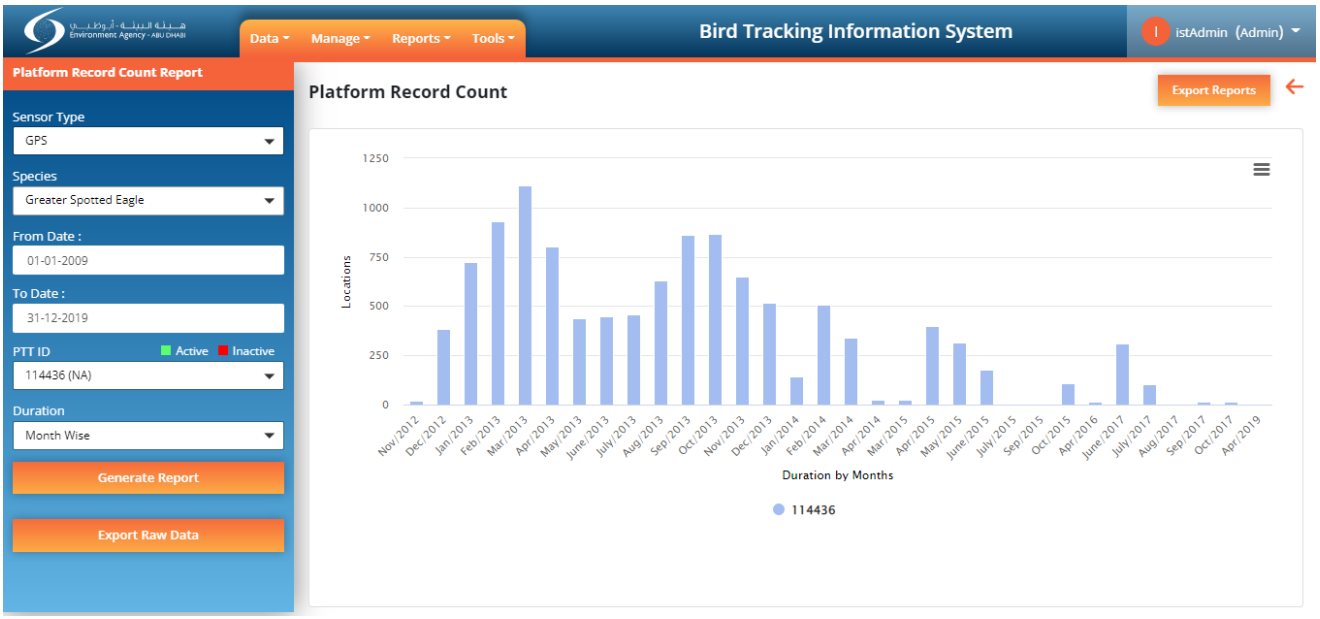
iv. Select the Species. It will allow the user to select the Species name. Here, based on the sensor type, the species names will be display. Without the selection of species name, user will be able to generate the report.

v. Select From/To dates.

vi. Select the PTT ID and click on OK button. Based on the species selection the PTT IDs will be displayed. It will allow the user to select the ID from list (Allows multi selection). Here, both Active and Inactive IDs will be displayed to the user.

vii. Select the Duration. The Duration dropdown options will be Day Wise, Week Wise and Month Wise

viii. Click on the Generate Report button. After clicking on it, user will be able to view the reports based on the applied filters. Here, the X-axis represents the Locations count and Y-axis represents the Duration.



ix. Click on the Export Reports button. User will be able to download the report data in excel format.

x. Click on the hamburger symbol of the generated report. It will be displaying the list of options for the generated report (View in full screen, Download the Report into PNG, JPEG, PDF, XLS, CSV).

xi. Click on the required option to view the result.

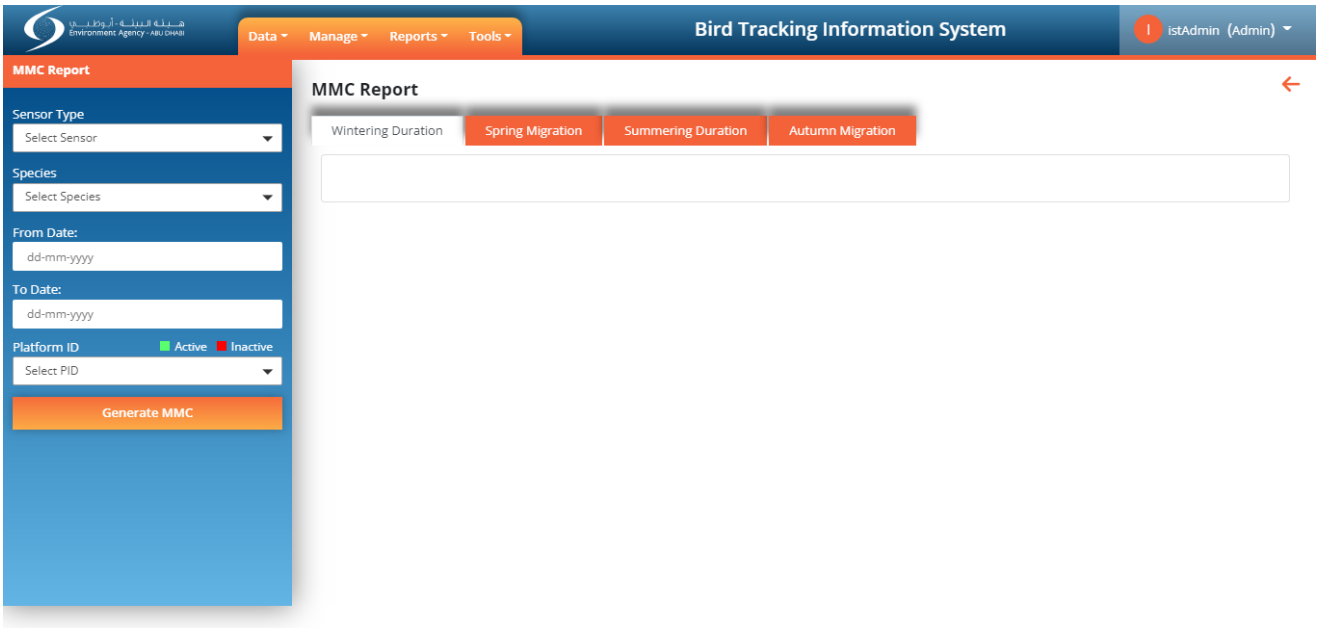
xii. Click on the Export Raw Data option to view the complete details of the selected species.

9.7 MMC Report

Here, user can have the ability to view the Movement Metrics Calculations for the selected Platform ID with respect to the applied filters.

<u>The following are the steps to access the MMC Report:</u>

i. Click on Reports and click on the MMC Report. It will display the MMC page with required options.



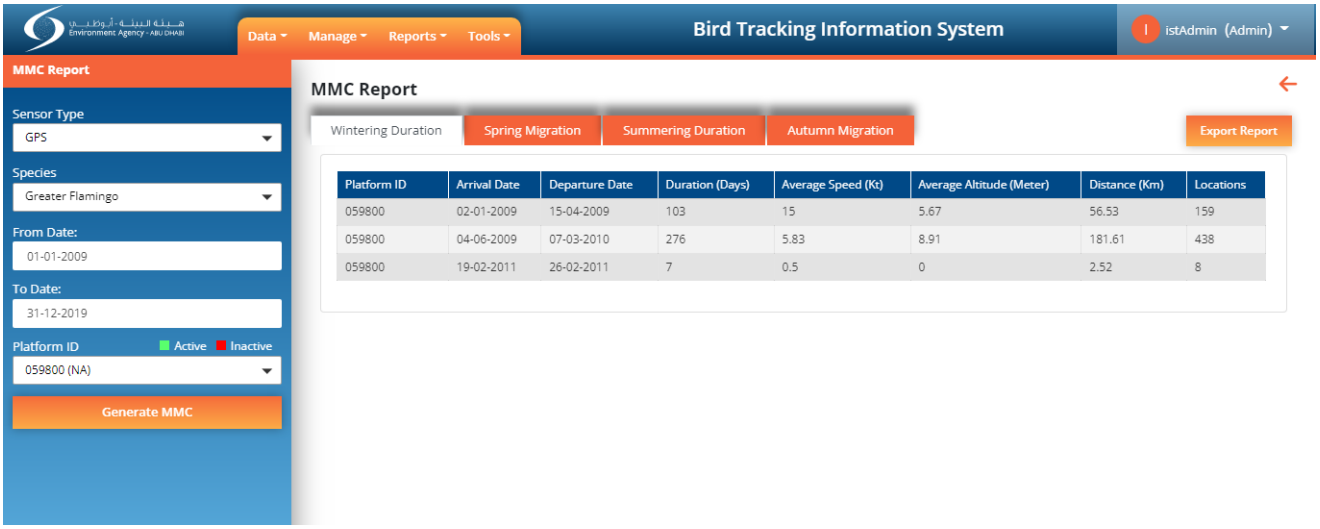
ii. Select Species Name.

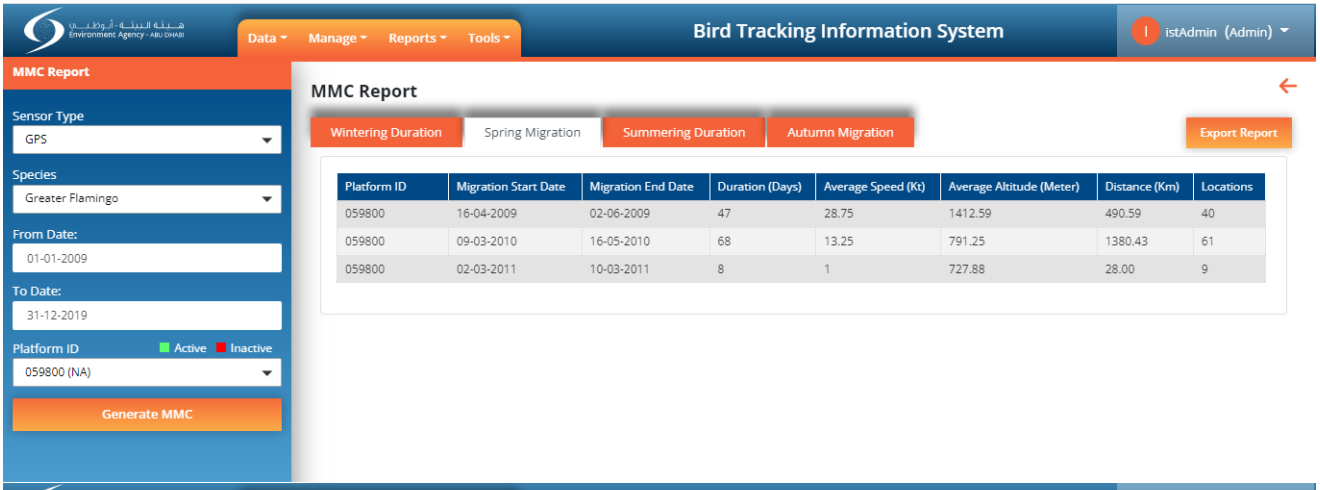
iii. Select Sensor Type.

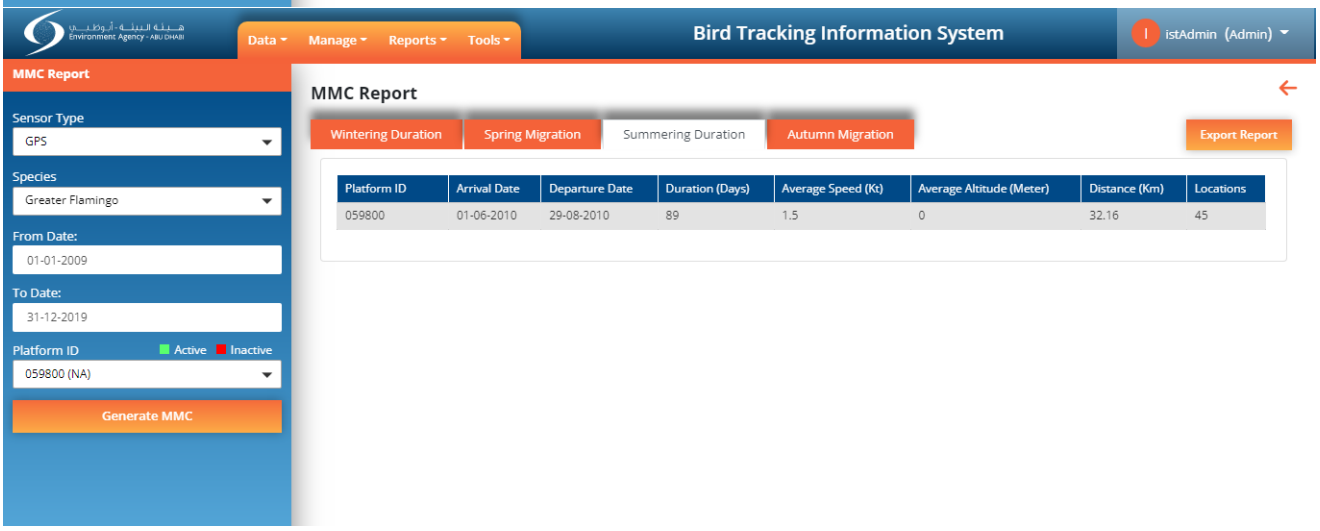
iv. Select from and to dates.

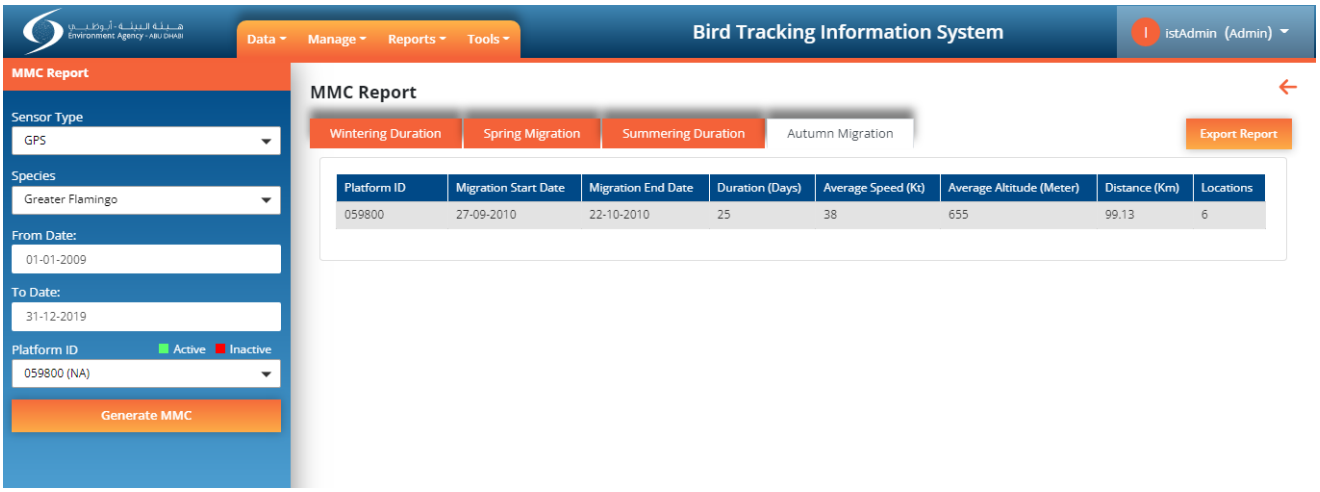
v. Select Platform ID.

vi. Click on Generate MMC button. After clicking on generate MMC button, application will display Platform ID, Arrival Date, Departure Date, Duration (days), Average Speed (Kt), Average Altitude (Meter), Distance(Km) and Locations data in grid format.









vii. Select the required option to view the data among Wintering Duration, Spring Migration, Summering Duration and Autumn Migration. It will allow the user to select the other tabs to view the information. By default, the tab will be in Wintering Area.

viii. Click on Export Report option. It will allow the user to export the data into excel format.

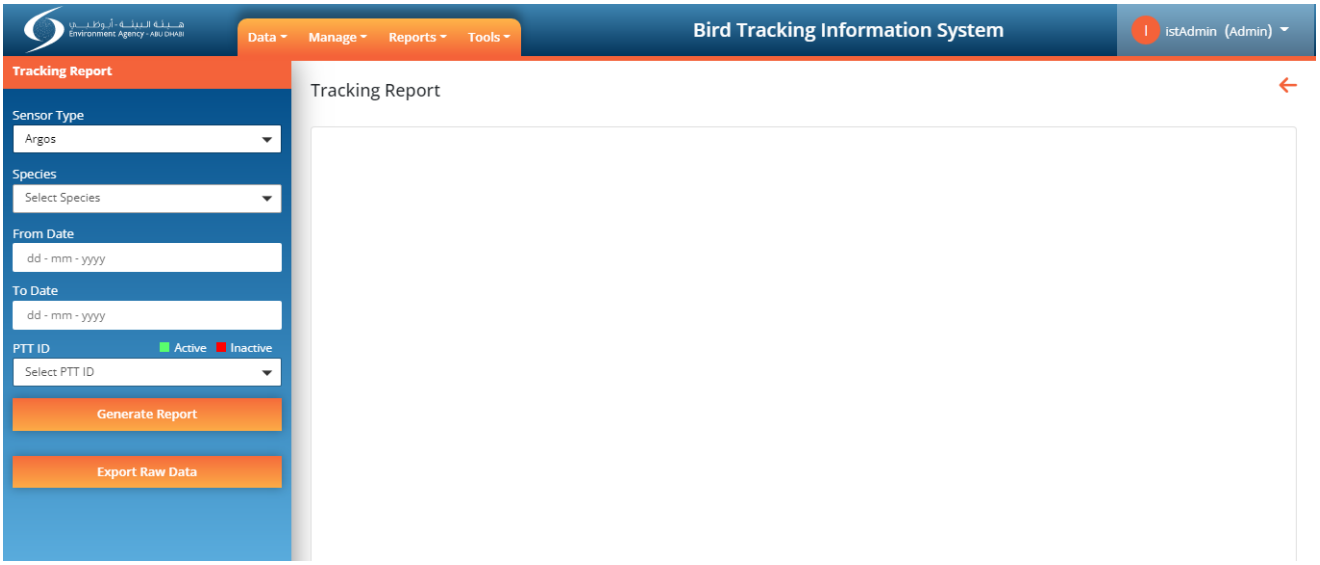
9.8 Tracking Report

Tracking Report helps the user to view the Locations count of the selected platform Id.

The following are the steps to access the Platform Record Count Report:

i. Click on Reports

ii. Click on the Tracking Report



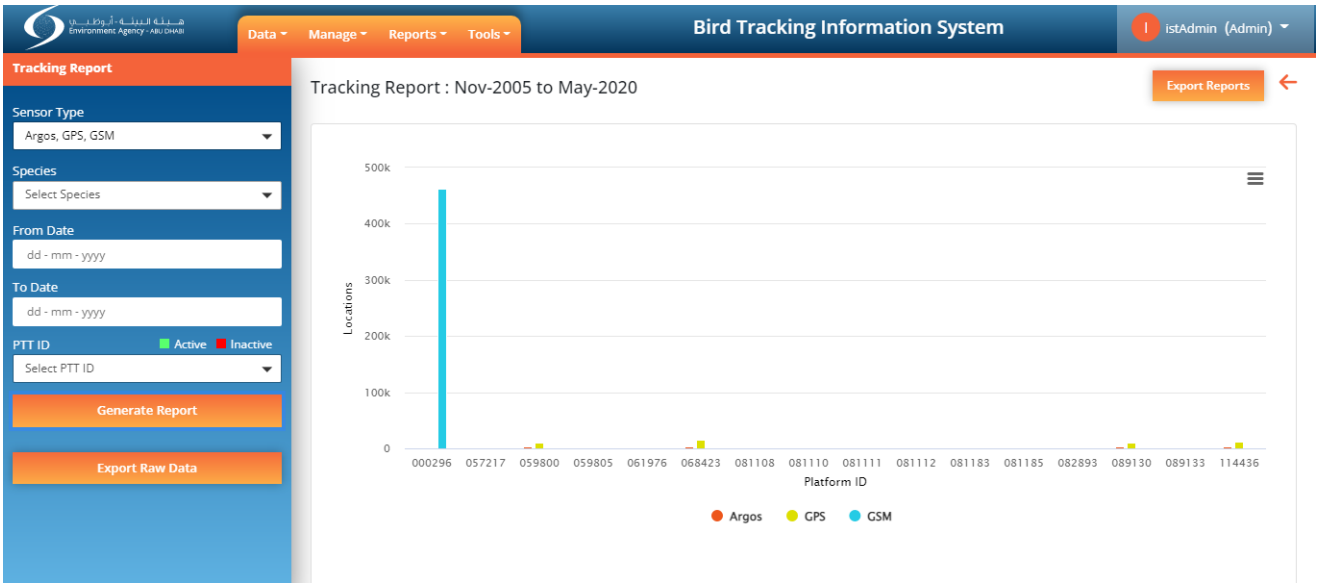
iii. Select the Sensor Type. It will allow the user to select the sensor type from the list. (It will allow multi selection).

iv. Select the Species. It will allow the user to select the Species name. Here, based on the sensor type, the species names will be displayed. Without the selection of species name, user will be able to generate the report.

v. Select From/To dates. It will allow the user to select the from/To dates. Without the selection of dates, user will be able to generate the report

vi. Select the PTT ID and click on OK button. Based on the species selection the PTT IDs will be displayed. It will be allow the user to select the ID from list (Allows multi selection). Here, both Active and Inactive IDs will be displayed to the user. Without the selection of dates, user will be able to generate the report.

vii. Click on the Generate Report button. After clicking on it, user will be able to view the reports based on the applied filters.



viii. Click on the Export Reports button. User will be able to download the report data into excel format.

ix. Click on the hamburger symbol of the generated report. It will display the list of options for the generated report (View in full screen, Download the Report into PNG, JPEG, PDF, XLS, CSV).

x. Click on the required option to view the result.

xi. Click on the Export Raw Data option to view the complete details of the selected species.

10.Tools

In Tools Module, user can have the ability to print the maps in required format and layout, export the video on the map and update the MMC records by using season correction tool.

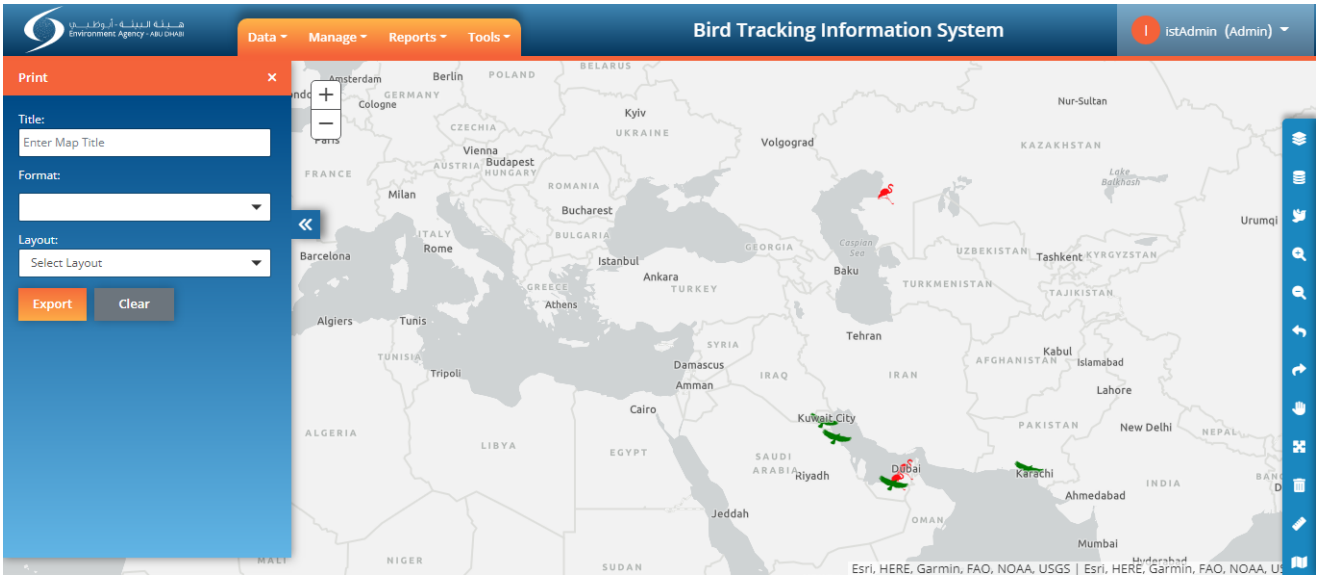
10.1 Print

With the help of Print function, user can have the ability to take the prints of the current map with selected format and layout.

The following are the steps to access the Print functionality:

i. Click on the Tools

ii. Click on the Print Option



iii. Enter the Title. It will allow the user to enter the Title in the text box field

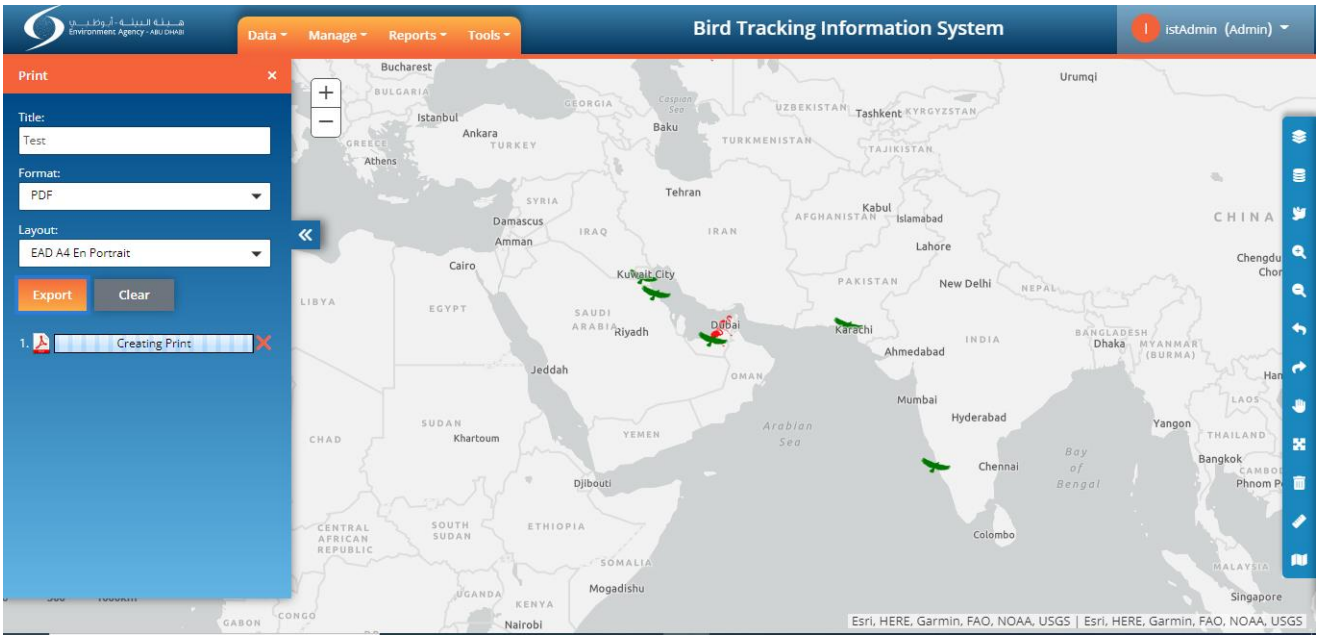
iv. Select the Format from the available list. It will allow the user to select the required format from the list

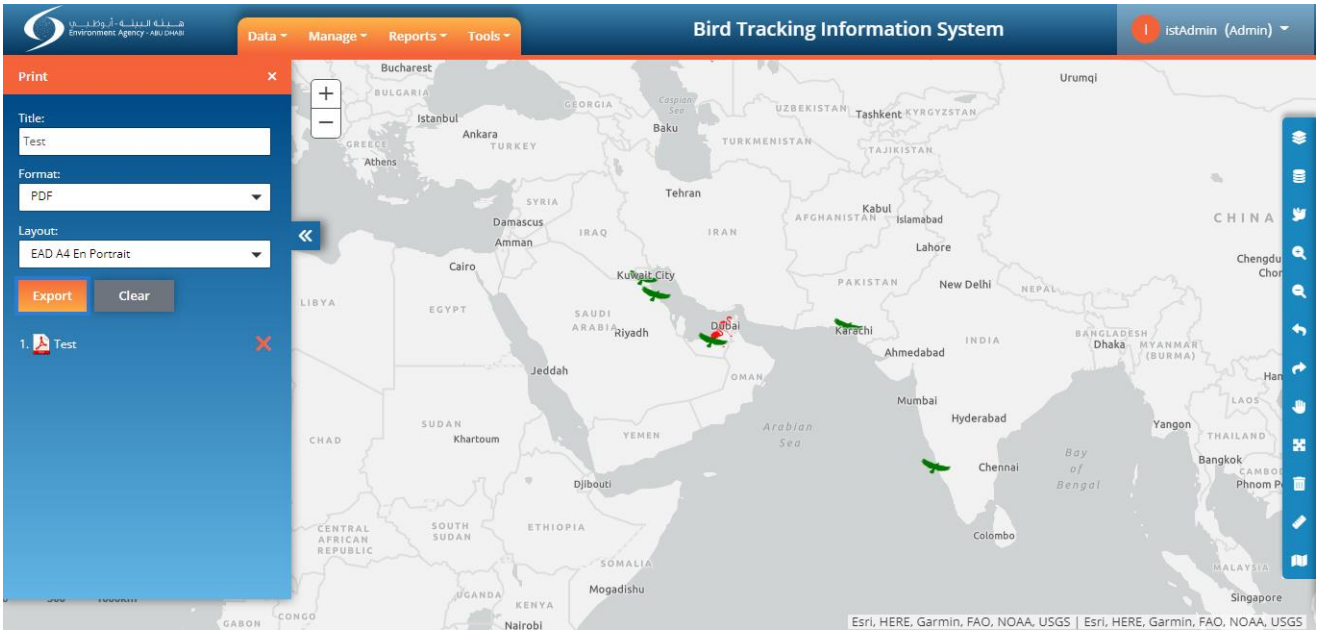
- The available formats are PDF and JPG

v. Select the Layout from the available list. It will allow the user to select the Layout from the list

- The available Layouts are EAD A0 Ar L, EAD A0 En L, EAD A3 Ar L, EAD A3 En L, EAD A4 Ar P, EAD A4 En P, MAP_A3_Landscape_EN, MAP_A3_Portratit_EN and MAP_ONLY.

vi. Click on the Export button. After clicking on the Export button, application will load and create the print based on the selected inputs.





vii. Click on Clear option. After clicking on the clear option, created prints will be clear

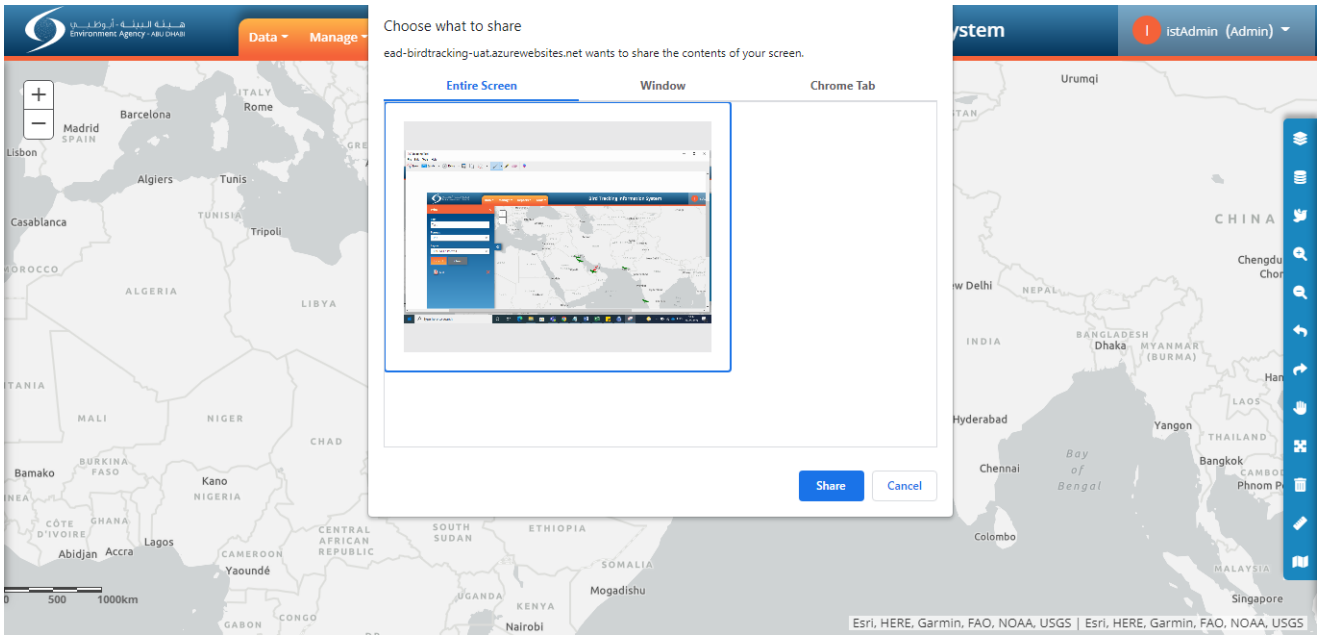
10.2 Export Video

By using Export Video option, user can be able to create the video of the current functionality.

The following are the steps to access the Platform Record Count Report:

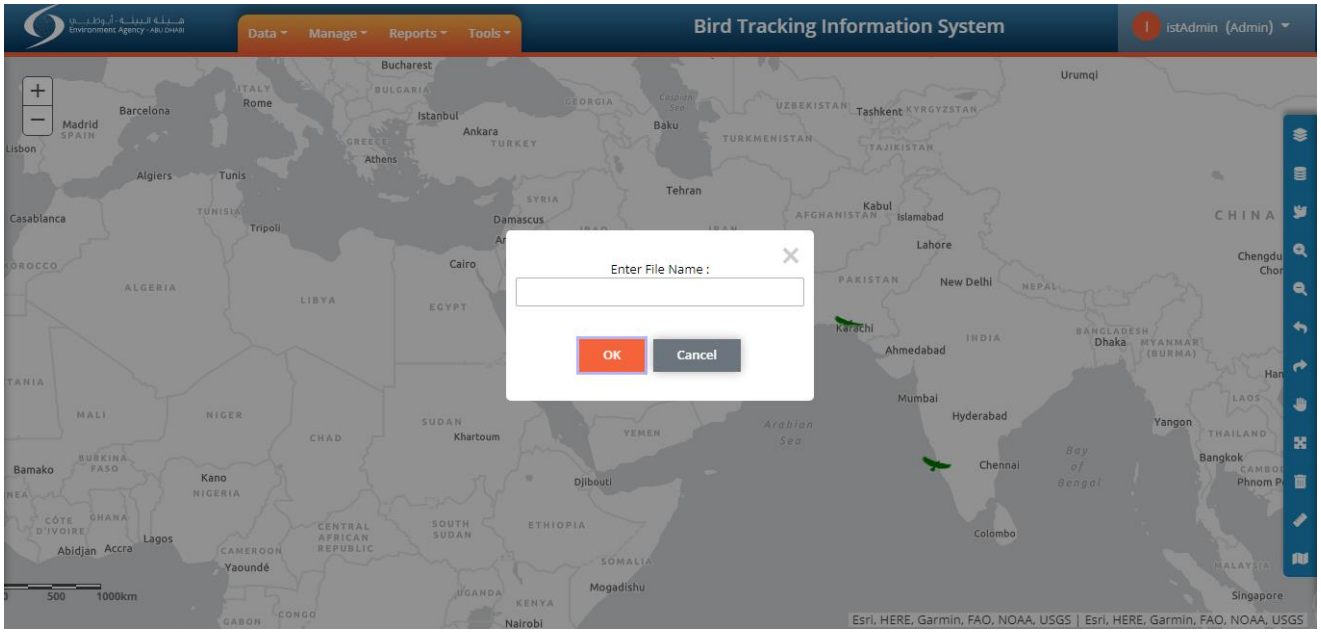
i. Click on Export Video option. it will display one window to select the screen.

ii. Select the share option. it will allow to select the share option.



iii. Click on share option. Once user clicks on the share option, the system will start recording the screen.

iv. Click on Stop Sharing. After clicking on the stop sharing, system will display the window to enter the file name.



v. Enter the file name. it will allow to enter the valid file name.

vi. Click on OK button. After then, system will download the screen recording in mp4 file format.

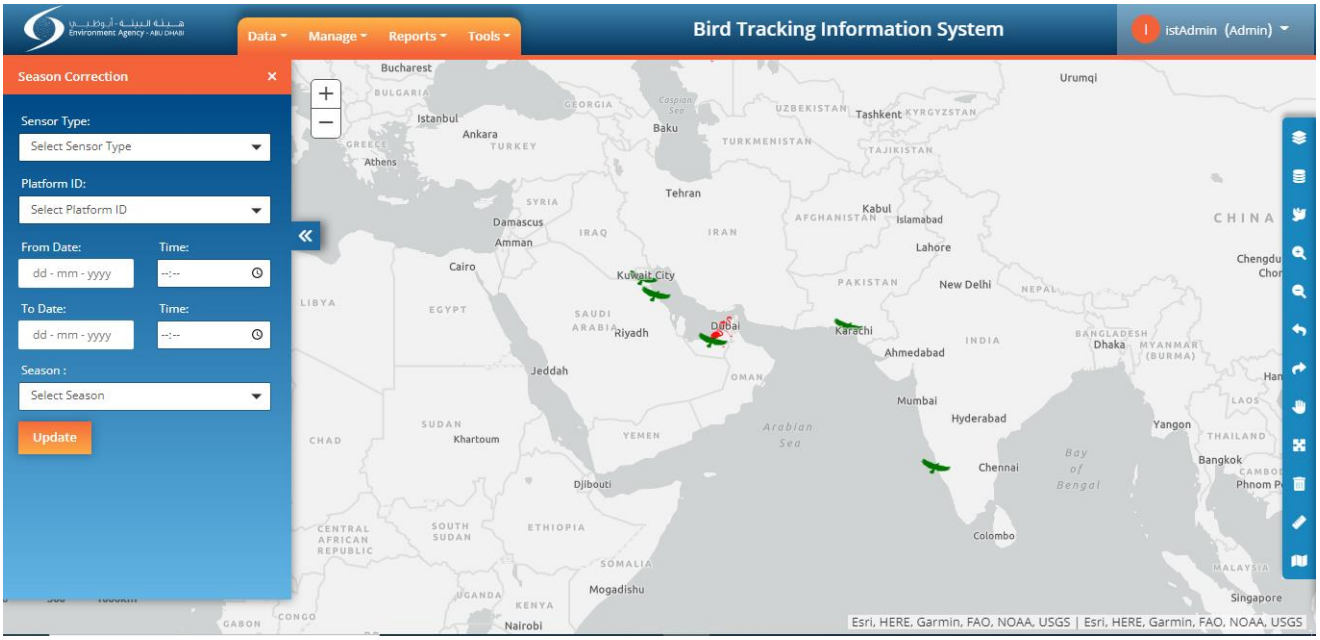
10.3 Season Correction

With the help of this option, the admin will have the ability to update the MMC records based on the need.

The following are the steps to access the Season Correction tool:

i. Click on the Tools

ii. Click on the Season Correction Option.



iii. Select the Sensor Type. It will allow the user to select the required sensor type.

iv. Select Platform ID, it will allow the user to select the required platform ID.

v. Select from Date and Time which will allow to select the from date and time.

vi. Select to Date and Time. It will allow to select the End date and time.

vii. Select the season. It will allow the user to select the season from the list.

viii. Click on Update button. After clicking on the update button, the records in MMC will be updated based on the applied filters. The selected PTT Id data will be changed to the selected season for the selected period.