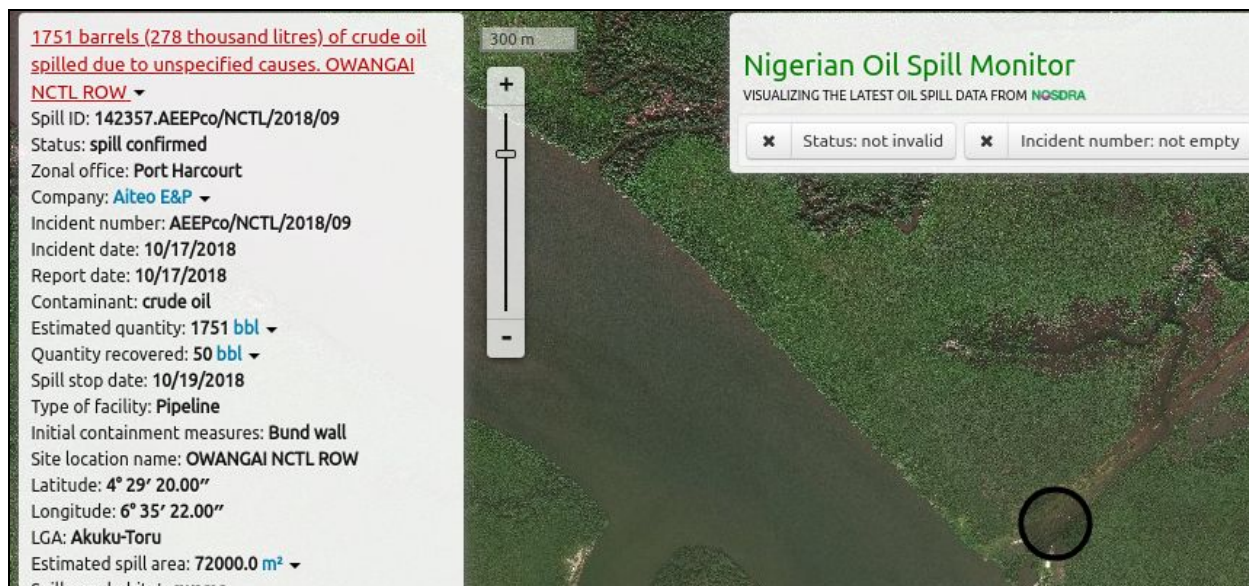


## Oil Spill Monitor - User guide



This user guide accompanies the Oil Spill Monitor application and video demonstrations of the application found at [nosdra.oilspillmonitor.ng](https://nosdra.oilspillmonitor.ng). More information about oil spills in Nigeria, and about NOSDRA's oil spill data can be found at [nosdra.oilspillmonitor.ng](https://nosdra.oilspillmonitor.ng).

This documentation is designed to be used in conjunction with the application as that the reading is carried out with practice at the same time. As such first we open the application 'full screen' to give us more room on the screen. This can also be achieved by going directly to the application at [oilspillmonitor.ng](https://oilspillmonitor.ng), instead of to the website at [nosdra.oilspillmonitor.ng](https://nosdra.oilspillmonitor.ng)

Oil Spill Monitor - User guide	0
The details, table and summary views	2
The details / map view	2
The table view	2
The summary view	3
Using the filters to isolate individual spills or subsets of oil spill records	4
The default filters explained	4
Searching for a spill incidents within a certain timeframe	5
Finding specific oil spill records when you know part of the incident number	6
Finding specific oil spill records when you know the area it took place	6
How to add and remove filters to search for oil spill records	8
Practical workshop activities	8
Checking and using the 'Data summary' feature to explore spill metrics	9

## The details, table and summary views

### The details / map view

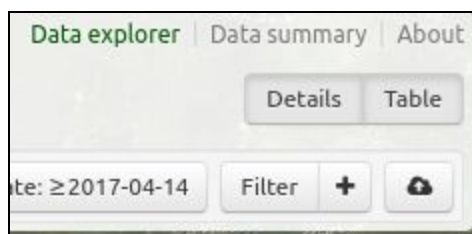
There are three main ways to view the data in the Oil Spill Monitor. The default one that loads initially on-screen is the map/details view. This displays a map of all spill records returned based on the current filters. By clicking on one of the circles on the map, the details of the spill record appear in the right-hand side of the screen.

The screenshot shows the Nigerian Oil Spill Monitor interface. On the left, a detailed information panel for a spill incident is displayed. The incident details include:

- 1751 barrels (278 thousand litres) of crude oil spilled due to unspecified causes. OWANGAI NCTL ROW
- Spill ID: 142357.AEEPco/NCTL/2018/09
- Status: spill confirmed
- Zonal office: Port Harcourt
- Company: Alteo E&P
- Incident number: AEEPco/NCTL/2018/09
- Incident date: 10/17/2018
- Report date: 10/19/2018
- Contaminant: crude oil
- Estimated quantity: 1751 bbl
- Quantity recovered: 50 bbl
- Spill stop date: 10/19/2018
- Type of facility: Pipeline
- Initial containment measures: Bund wall
- Site location name: OWANGAI NCTL ROW
- Latitude: 4° 29' 20.00"
- Longitude: 6° 35' 22.00"
- LGA: Akuku-Toru
- Estimated spill area: 72000.0 m<sup>2</sup>
- Spill area habitat: swamp
- Description of impact: leakage from the 8" valve installed on the NCTL by unknown persons.
- JIV date: 10/19/2018
- Present at JIV: Community, Company, DPR, State Ministry of Environment, NOSDRA
- Attachments:
  - picture
  - JIV FORM
- Form A date: 11/2/2018
- Form B date: 11/2/2018
- Last updated by: 2019-01-30 PH134

The main map area shows a satellite view of Nigeria with numerous red circles indicating spill locations. A legend on the right side of the map identifies the symbols: Oil company (red circle), Third party (purple circle), Not visited (grey circle), No quantity (black circle), and Cleaned up (white circle). The top of the interface includes navigation tabs for 'Data explorer', 'Data summary', and 'About', along with buttons for 'Details' and 'Table'. A filter bar at the top right shows the current filter: 'Incident date: ≥ 2017-04-14'. A notification indicates 'Located 939 of 987 incidents'.

### The table view



← The table view can be opened and closed by clicking on the [Table] button in the top-right of the screen.

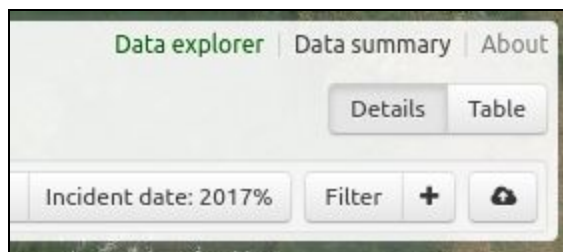
The table view shows the available data, as returned by the current filters, in a tabulated format. It has the benefit of listing spill records that do not have geo-coordinates and are therefore not visible on the map. The table view is just another way of seeing the same data available in the map/details view:

The screenshot displays the Nigerian Oil Spill Monitor interface. At the top, there's a map showing spill locations in Nigeria. A details panel on the left provides information for a specific spill: 1751 barrels (278 thousand litres) of crude oil spilled due to unspecified causes. OWANGAI NCTL ROW. Below the map is a table of spill records. The table has columns for ID, Status, Zonal office, Company, Incident number, Incident date, Report date, Contaminant, Estimated quantity, Quantity recovered, Spill stop date, Type of facility, Cause, Initial containment measures, and Site location name. The table shows 10 records per page, with a pagination control at the bottom.

ID	Status	Zonal office	Company	Incident number	Incident date	Report date	Contaminant	Estimated quantity	Quantity recovered	Spill stop date	Type of facility	Cause	Initial containment measures	Site location name
142369	reviewed	ph	ADDAX	HSE/IFS/1018/001	2018-10-17	2018-10-17					pl			10" IZOMBEN TO EBOCHA MAIN OIL DELIVERY LINE.
142368	reviewed	ph	ADDAX	HSE/IFS/1018/002	2018-10-17	2018-10-17	cr			2018-10-29	pl	sab		12" MAIN OIL LINE FROM NJABA TO IZOMBE FLOW ST
142357	confirmed	ph	Aiteo E&P	AEEPco/NCTL/2018/09	2018-10-17	2018-10-17	cr	1751	50	2018-10-19	pl		bw	OWANGAI NCTL ROW
142356	confirmed	ph	Aiteo E&P	AEEPcoNCTL/2018/09	2018-10-17	2018-10-17	cr	129.41	12	2018-10-17	pl	sab	bw	AWOBA
142534	confirmed	ph	SPDC	2185038	2018-10-15	2018-10-18	cr			2018-10-20	pl	sab	bw,pt	20" KOLO CREEK PIPELINE AT IMOGU-RUMUEKPE
142359	reviewed	ph	SPDC	2185038	2018-10-15	2018-10-18	cr	332	80	2018-10-20	pl	sab	dk	20" KOLO CREEK PIPELINE AT IMOGU-RUMUEKPE
141388	confirmed	ph	Eroton E&P	2018_EEP_ALAK000077	2018-10-14	2018-10-14	cr	84	52	2018-10-15	fl	sab	bm	ORUBIRI WELL 7L 4"FLOWLINE
141393	confirmed	ph	NAOC	2018/LAR/129/168	2018-10-13	2018-10-13	co	8.6			fl	sab		4" Oshie 15s Flowline At Akinima Community.
142410	reviewed	ph	PPMC	2018/NNPC/NPSC/JIV/AB/001	2018-10-12	2018-10-23	re			2018-10-17	pl	sab		12" Aba/Enugu 2EX pipeline at okpokoroala/umuaduru
142361	confirmed	wa	SEPLAT	SEPLAT/OS/06/2018	2018-10-10	2018-10-10	cr	0.5			pl	sab	bm	10" OBEN-AMUKPE ROW @ AMUKPE.

^^^^^^^^^^^^^^^^ Towards the bottom of the table view is pagination as shown here so you can browse through the spill data. There are 10 spill records to a page in the table view.

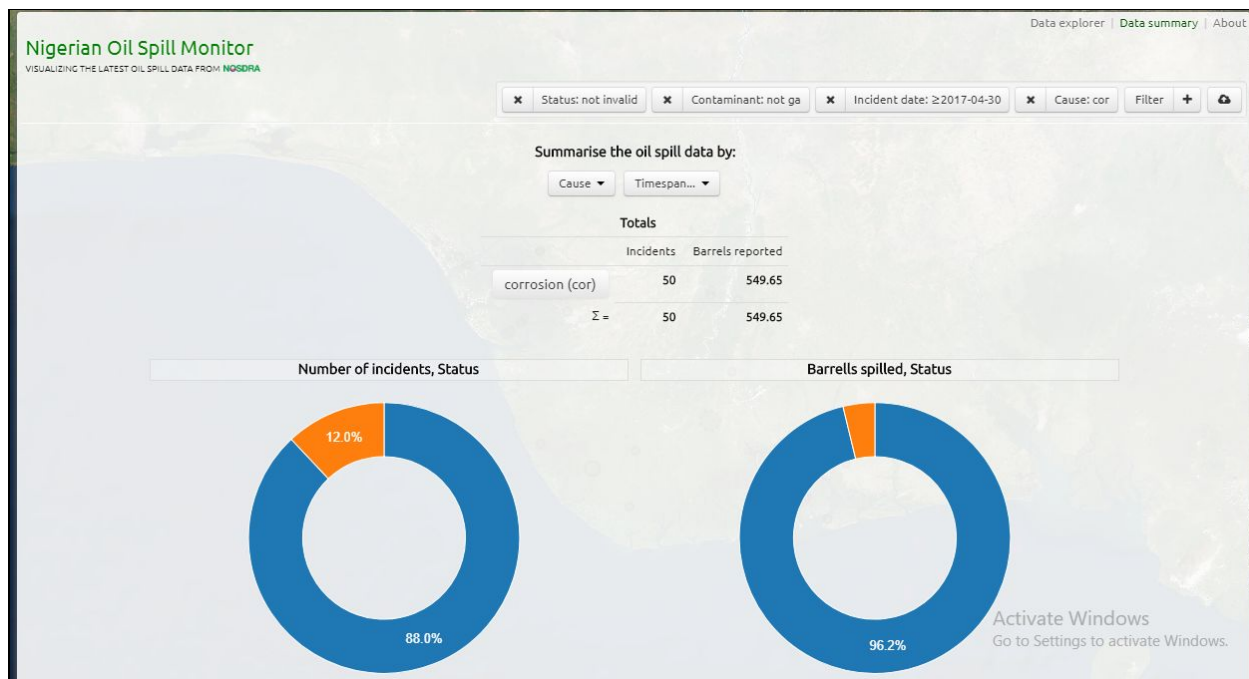
### The summary view



← The summary view can be accessed by clicking on the 'Data Summary' link at the top-right corner of the screen.

← Note that in this image the [Incident date:] filter is set to show all spill records in 2017

The 'Data summary' view shows exactly the same data that is visible using the map/details and table views. No extra information is available here but the information is more easy to visualise and gain insight from, due to its drill-down options and graph displays:

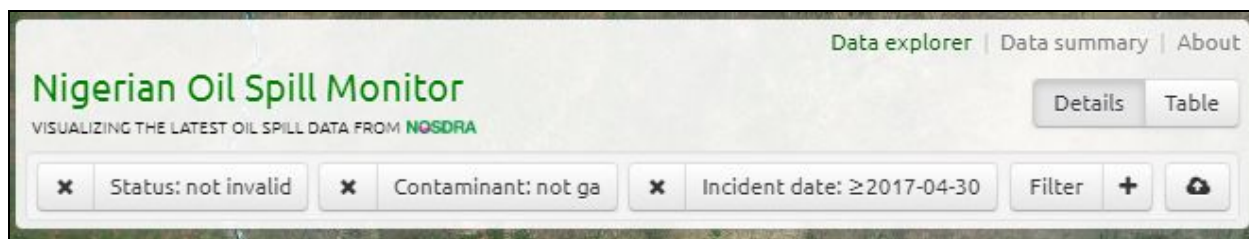


There will be more information about how to use the Data summary feature in a separate part of the documentation dedicated to this below.

## Using the filters to isolate individual spills or subsets of oil spill records

### The default filters explained

When the Oil Spill Monitor first loads, it comes with a number of default filters applied in the main filter toolbar. These are displayed and explained below:



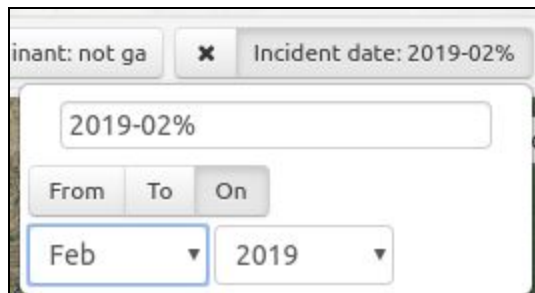
- [Status: not invalid] - This filter is applied initially to remove invalid oil spill records from view. (Invalid records are those entered in error) It is usually a good idea to leave this filter in position.
- [Contaminant: not gas] - This filter removes any gas leak incidents (which NOSDRA also deal with) from the initial view. This is helpful as NOSDRA's main

priority is with oil spills. To see all gas leaks within the period we can simply remove the '!/not' part of the filter. Note that the exclamation mark [!] implies 'not' when used in the Oil Spill Monitor filter system.

- [Incident date: xxxxxx] - This is set by default to display all spill records from the past two years (two years from today's date). If you are looking for spill records from other time-periods the Incident date filter will need to be changed.

## Searching for a spill incidents within a certain timeframe

Using the [Incident date:] or [JIV date:] filter options it is possible to search the Oil Spill Monitor and refine your results to within a set time period. For example if we are searching for an oil spill record and we know the spill occurred sometime in February 2019, we can search for this as follows:



← First click on the [Incident date:] filter

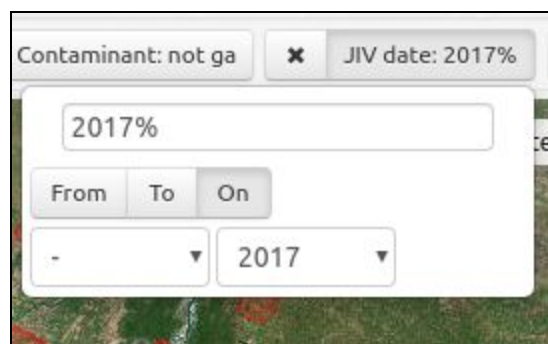
← This is the longhand filter. It says, as is outlined below:

← Show me spills records with [Incident date] that fall on...

← February 2019

Once the date filter is set, the system will return all spills within the time period specified.

In a similar way, if we know when a JIV took place (The Joint Investigative Visit or JIV is where oil spill incidents are investigated by NOSDRA, communities, and oil companies), it is possible to search for spill records using the [JIV date:] instead of the [Incident date:]



← Here we are using the [JIV date:] filter instead

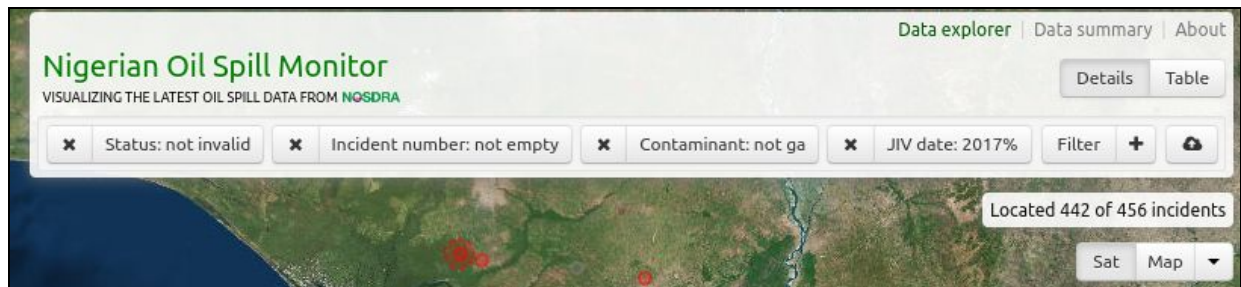
← This is the longhand filter. It says, as is outlined below:

← Show me spills records with [JIV date] of

← Any month in 2017

**BE CAREFUL NOT TO COMBINE A [JIV date:] WITH A [Incident date:] FILTER UNLESS YOU ARE SURE THAT BOTH ARE CORRECT. IF YOU DO THIS BOTH WILL NEED TO RETURN A MATCH. IT IS BETTER TO USE EITHER A [JIV date:] OR A [Incident date:] FILTER.**

The filters in the screenshot below read: Show me spill records that have a valid status, that have an incident number, that are not gas leaks and where a JIV took place in 2017.



The system finds 456 incidents, of which 442 can be located on the map ^^^^^^^^^^^^^^^

### Finding specific oil spill records when you know part of the incident number

If you know all or part of a spill record incident number, or you have an incident number that you think might be incorrect, you can search for it using the [Incident number:] filter. You can either enter the full incident number in the [Incident number:] filter, but if you only have part of the incident number you can also use wildcards (indicated by the % symbol) to look for spill records containing only a part of the incident number:



By checking for spill records containing LAR/016/025 in the [incident number:], that are [contaminant: not gas] leaks and have a [JIV date:] of 2017 we are returned 1 incident record.

### Finding specific oil spill records when you know the area it took place

If you know which LGA a spill took place in, it is possible to refine your search for it using the [LGA] filter.

To do this it is first wise to check out the correct spelling of LGA's by turning on the LGA map layer. The LGA map layer can be clicked on the map to see the name and correct spelling of the LGA:



← The LGA layer selector



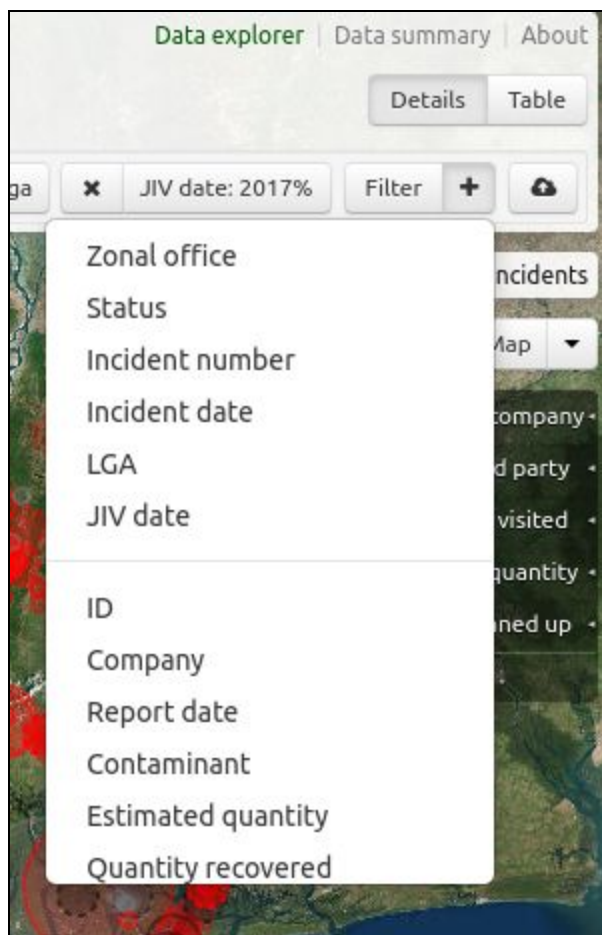
←- In this filter we are using the [LGA] filter to search for records in an LGA containing the text 'aku' [LGA:%aku%]. Akuku-Toru is the LGA name that matches.

NOTE THAT NOT ALL SPILL RECORDS HAVE AN ENTRY IN THE [LGA ] FIELD. AS SUCH THERE MAY BE SPILLS IN AN LGA THAT ARE NOT RETURNED EVEN THOUGH THEY ARE IN THE AREA.

LIKEWISE IF THE [LGA] FILTER IS SET TO EMPTY [LGA: empty] THIS WILL LIMIT YOUR RESULTS MASSIVELY AS IT IS ASKING ONLY FOR SPILL RECORDS THAT HAVE NO VALUE IN THE [LGA] DATA FIELD.



## How to add and remove filters to search for oil spill records



← To add new filters to the filter bar, we click the [Filter [+]] Icon shown here

← This opens a dropdown menu of all the filters we can use to search for spill records by, which includes every field in the data structure.

In this way powerful search queries can be built and spill incidents looked up quickly with limited information known.

It also allows to limit the results displayed to specific Companies, LGA's, Habitats, etc so that the nature of spills can be explored and cross referenced in detail.

PLEASE TAKE CARE WHEN ADDING FILTERS THAT THEY ARE ALSO REMOVED WHEN YOU START LOOKING FOR SOMETHING ELSE.

IF YOU ARE NOT GETTING EXPECTED RESULTS RETURNED MAYBE CHECK THAT YOU DO NOT HAVE INCORRECT OR EXTRA FILTERS APPLIED THAT YOU DO NOT NEED.

ALSO PLEASE TAKE NOTE THAT TOO MANY FILTERS MAY HINDER YOUR SEARCH. EACH NEW FILTER ADDED IS ADDING EXTRA CRITERIA TO YOUR SEARCH WHICH MEANS ALL OF THEM MUST MATCH TO GET A RESULT.

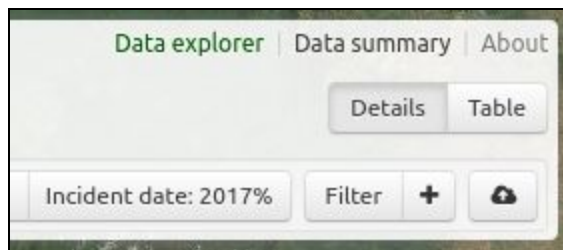
AS SUCH LESS FILTERS CAN OFTEN BE MORE HELPFUL THAN MORE.

## Practical workshop activities

In order to familiarise yourself with using the filter toolbar, spend a few minutes practicing using the filters by answering the following questions:

1. Use the main filters to find a spill where you only have the spill ID part .2019/NL/005/ - TIP: use the %% wildcards
2. Use the filters to isolate spill records in April 2017 in Delta State. TIP: use the [States affected:] filter combined with a date filter
3. Use the filters to isolate all gas leaks during 2018. TIP: ! signifies not, so a [contaminant:! Ga] filter is looking for spills that are NOT gas.
4. Use the filters to find out how many spills recorded in 2019 by the Warri Zonal Office. TIP: [Zonal office: Wa] combined with a date filter

## Checking and using the 'Data summary' feature to explore spill metrics

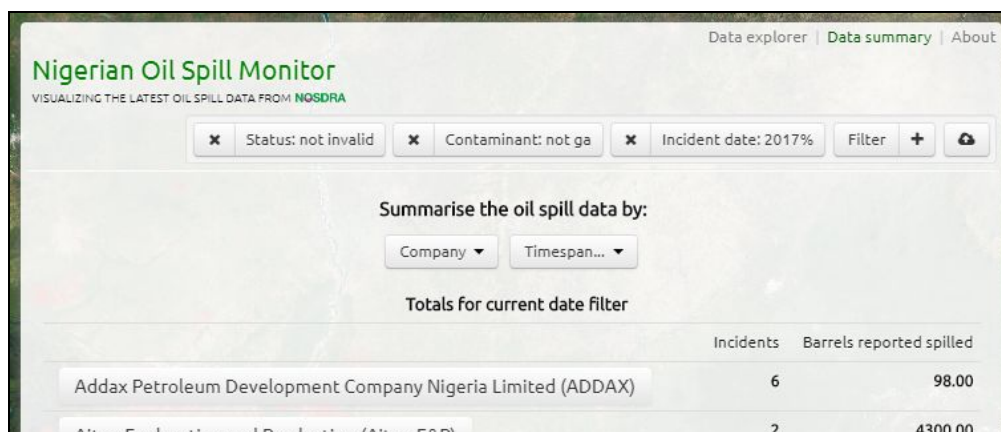


← The summary view can be accessed by clicking on the 'Data Summary' link at the top-right corner of the screen.

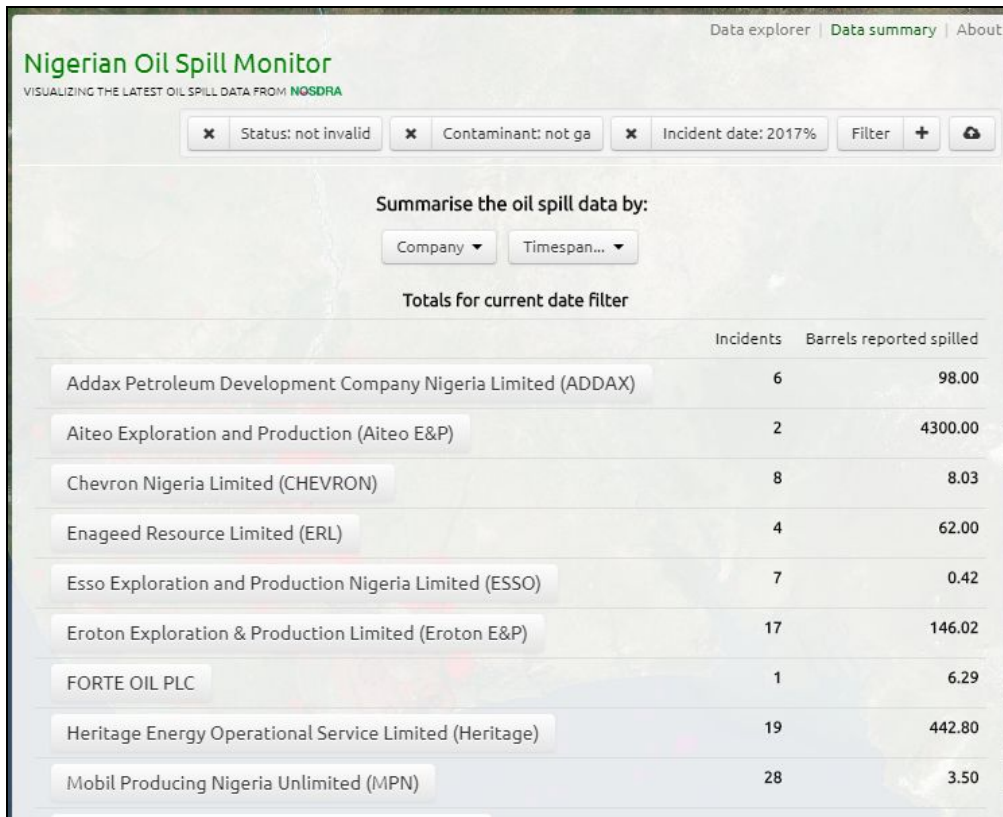
← Note that in this image the [Incident date:] filter is set to show all spill records in 2017

The first thing to note about the summary view is that the same filters apply to it and the map and table views. For the sake of this demonstration we are going to explore data from 2017. To do this we set the main filter to 2017.

By default the 'Data summary' display shows summary data by Company, showing the totals for the current date filter.:

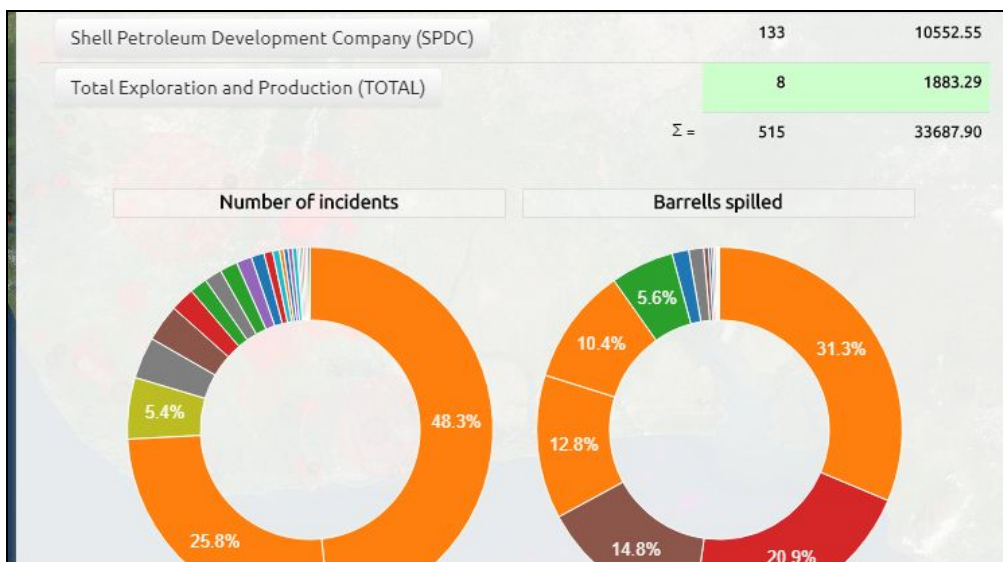


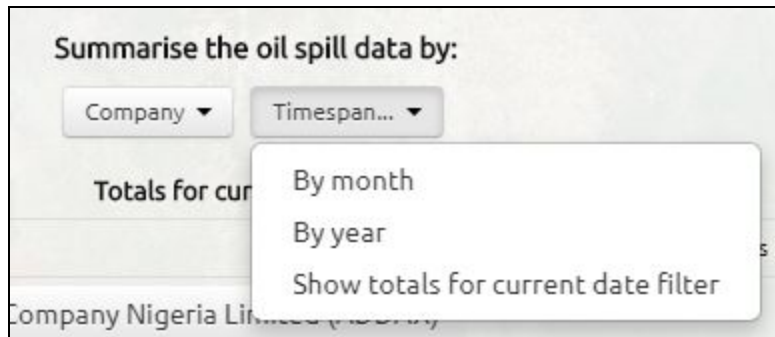
← It is important to note that the main filters always apply to everything displayed below.



← Each company is listed separately with the number of incident and barrels reported spilled

At the bottom of the list are the numbers represented as pie charts:





← By clicking on the 'Timespan' drop-down we can select to display all the data in this period by individual months or years.

This also draws a graph which is useful when we want to drill down into the details of a specific

company:

Summarise the oil spill data by:

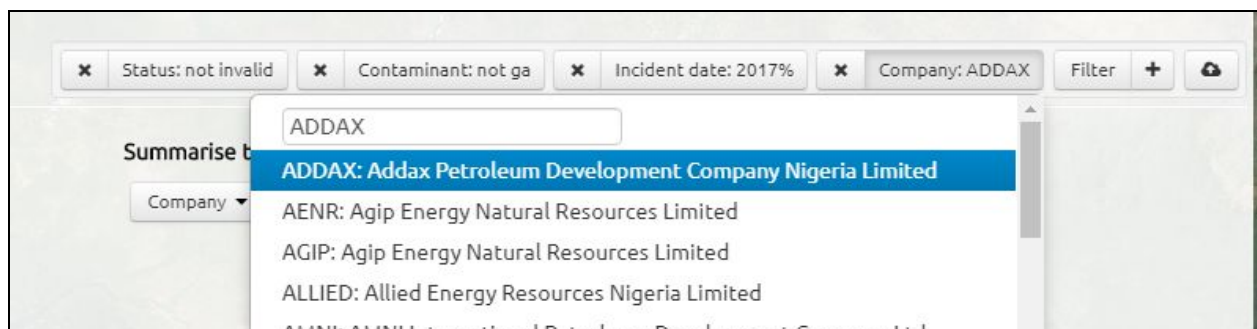
Company Timespan...

Totals for current date filter

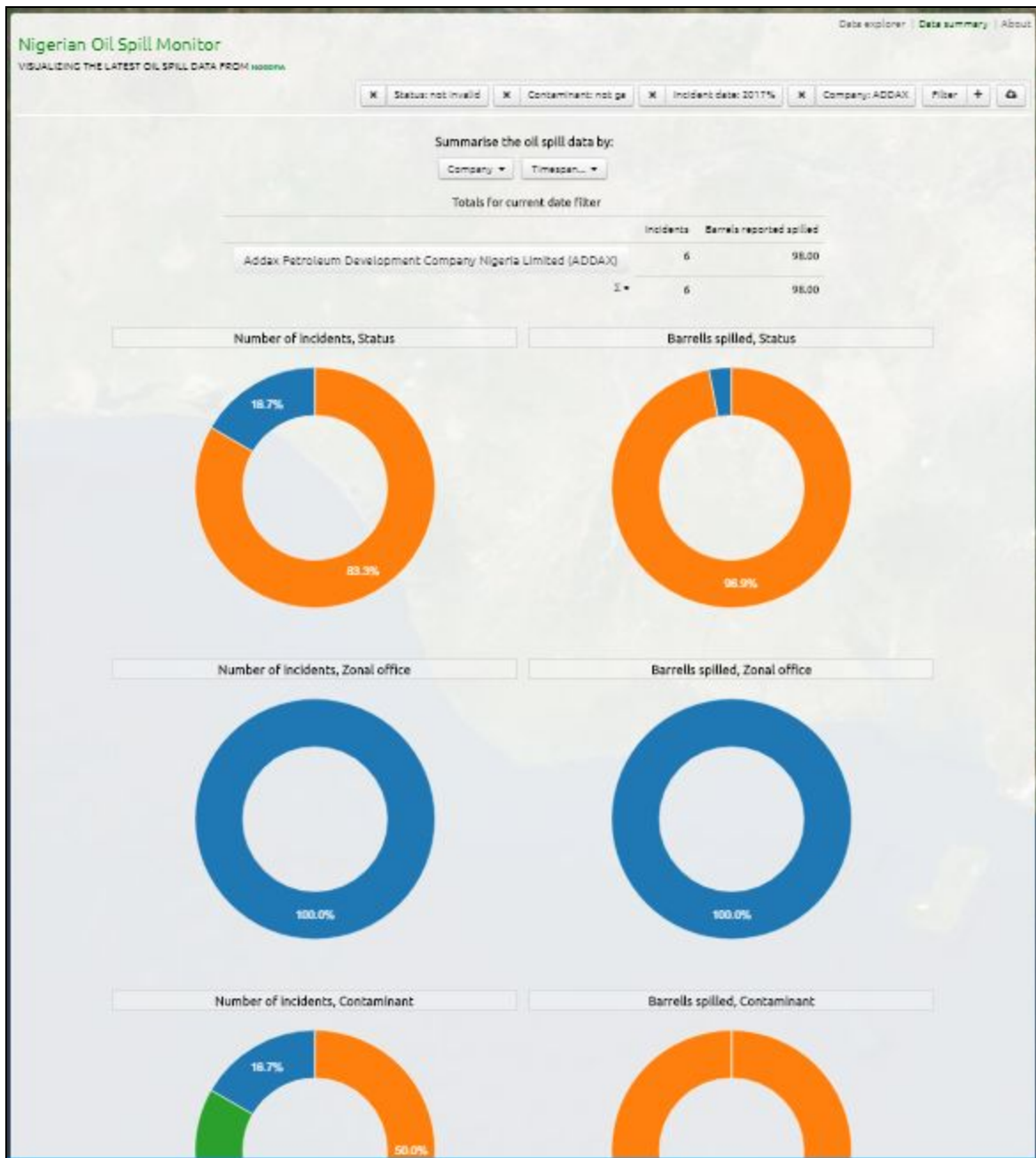
	Incidents	Barrels reported spilled
Addax Petroleum Development Company Nigeria Limited (ADDAX)	6	98.00
Aiteo Exploration and Production (Aiteo E&P)	2	4300.00
Chevron Nigeria Limited (CHEVRON)	8	8.03
Enageed Resource Limited (ERL)	4	62.00

-->  
If we click on the name of a company we can drilldown to explore its spill records in more detail

It is important to note that when drilling down to explore a metric like a specific company, that this is added to the main filter bar. Below we see that the filter [Company: ADDAX] has now been added to the main filter. We will want to remove this filter before we explore other companies or metrics:

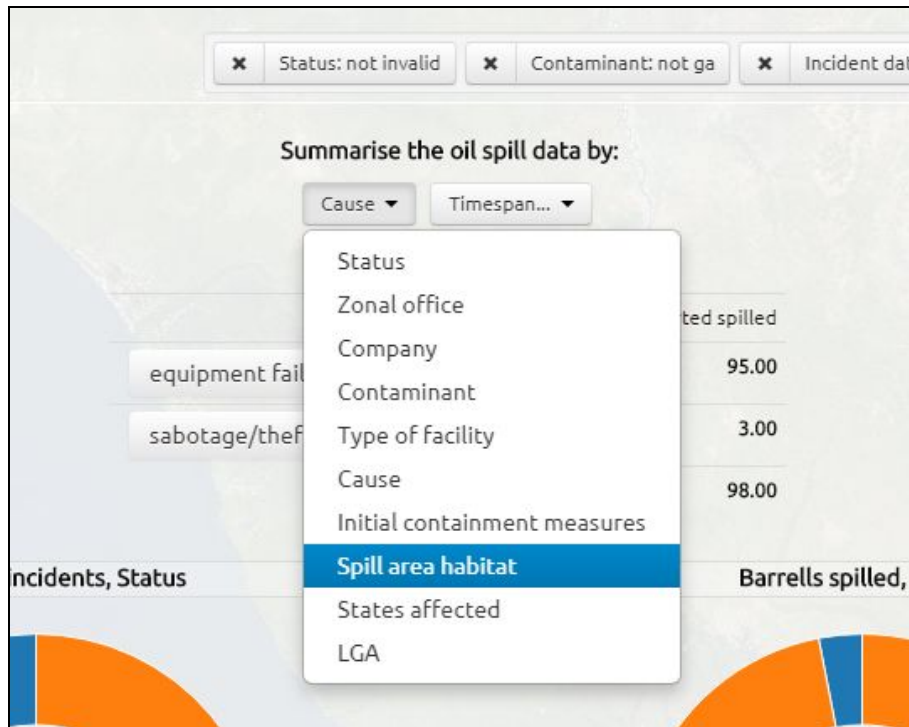


Toward the bottom of the 'Data summary' screen there are a number of pie charts that show a breakdown of the available information.



By using the 'Data summary' drill-down feature more detailed understanding and insight can be ascertained from the data available within the Oil Spill Monitor system.

Further drilldown is then possible by selecting other metrics from the drop-down list:



The default metric displayed in the summary view, is 'Company', but this can be changed by selecting any of the other options in the list.

This will then redraw the graphs, charts and data using the new metric instead.

REMEMBER THAT YOU WILL NEED TO REMOVE PREVIOUSLY SET FILTERS TO RESET THE SUMMARY AND START A NEW DRILL-DOWN INTO THE DATA.

The geographical States and LGA summary information is very informative to indicate which states and LGA's are most impacted and in which ways.

The 'Spill area habitat' is also very telling, particularly when explored within the 'States affected' or 'Zonal Office' metrics. Here we can quickly see that in Bayelsa and Rivers a majority of spills occur in swamp areas, whereas in Rivers most are on Land.

The combination of top-level filters and metrics available in the summary view are very powerful, and when used correctly can give very useful comparisons and insights.

For more information on how to use the filters and the summary features of the Oil Spill Monitor please check out the training videos on [nosdra.oilspillmonitor.ng/oilspillmonitor.html#training](https://nosdra.oilspillmonitor.ng/oilspillmonitor.html#training)