

Uganda Elections Data Portal (UEDP)

Methodology

Background

The Uganda Elections Data Portal (UEDP) is a project of the [International Republican Institute \(IRI\)](#), designed to increase transparency and understanding of voter registration and results data made publicly available by the Uganda Electoral Commission (EC). UEDP allows users to visualize, analyze and download voter registration and other election related data from the 2006, 2011 and 2016 presidential elections, enabling Uganda's electoral stakeholders to conduct more effective civic and voter education efforts.

The Uganda Electoral Commission (EC) collected and published the data that is available on the Uganda Elections Data Portal, which was first publicly available on their website. Over the past three elections, Uganda's EC has expanded their data collection to include more details, including the age and gender of registered voters. IRI commends the EC for making this election-related information available to the public. The EC's actions in this regard can serve as an example to other Election Commissions around the world and demonstrates the fulfillment of its vision statement which is to be a *Centre for Excellence for Election Management Bodies* in the region and the continent.

Disclaimer: While IRI and [Keshif](#) aim to make the information on this website as timely and accurate as possible, we make no claims nor guarantees about the accuracy and completeness of the data in our verification process, and expressly disclaim liability for errors and omissions in the contents of this site.

The Election System in Uganda

The [Ugandan electoral system](#) has undergone significant changes over the past two decades. In the July 2005 referendum, Ugandans voted to adopt a multiparty system of governance. In February 2006, the Election Commission organized the first multi-party General Elections in Uganda since 1980.

The president is elected for a five-year term by absolute majority popular vote through a two-round system. The Parliament is composed of members directly elected to represent constituencies, and one-woman representative for every district; as well representatives of special interest groups, including the army, youth, workers, and persons with disabilities.

The [Electoral Commission](#) was set up under Article 60(I) of the 1995 Constitution of The Republic of Uganda with the **Mission** to organize and conduct regular free and fair elections and referenda professionally, impartially, and efficiently, the **Vision** to be a model Institution and center of excellence in election management, and finally the **Goal** to promote participatory democracy and good governance for the country's prosperity.

Official Data Sources

The UEDP datasets come from the official election publications of the EC of Uganda. The exact number of documents that IRI used to put together the UEDP datasets depends on what the EC published for each presidential election. However, the backbone of the UEDP database and analyses are the *polling-station-level results* files that are published for each election by the EC, including the 2016, 2011, and 2006 elections.

Apart from these files, the *National Voters' Register* as well as the *2016 Polling Stations List* were also used to create UEDP's 2016 dataset and analyses. These two documents contained extra demographic information on registered voter demographics and allowed UEDP to include both age and gender data on registered voters.

All the original EC publications used were originally PDF documents. Even the *2016 National Voters' Register* was originally 28,010 different PDF documents that could be downloaded through the EC's *Voter Information* portal. Links to these source documents are provided in the table below, as well as links to machine-readable versions of the original documents.

Data Sources for <i>Uganda Election Database Portal</i>– Uganda			
Year	Original EC Documents	Citation	UEDP Versions
2016	EC: 2016 Polling Stations Results • Internet Archive Copy	1	2016 Polling Stations Results .csv file UEDP Github PDF Copy
	EC: 2016 National Voters' Register	2	Summary of converted 2016 National Voters Register .csv file
	EC: 2016 Polling Stations List • Internet Archive Copy	3	Converted 2016 Polling Stations List .csv file UEDP Github PDF Copy
2011	EC: 2011 Polling Stations Results • Internet Archive Copy	4	Converted 2011 Polling Stations Results .csv file UEDP Github PDF Copy
2006	EC: 2006 Polling Stations Results • Internet Archive Copy	5	Converted 2006 Polling Stations Results .csv file UEDP PDF Github Copy

Project-specific Data Methodology

Data Processing

IRI took three primary steps with the EC's election data: **data aggregation**, **data analysis**, and **geographic representation**. Each step is detailed below:

- 1. Aggregation:** EC election data exists in various PDF documents. For example, the 2016 election results are published in one large PDF document, while registered voter demographics such as gender and age are published in two documents. IRI helps solve this challenge by merging all available information into a single database.

¹ Electoral Commission of Uganda, *Presidential Elections, 2016: Final Results*, created Feb. 22, 2016, last modified Feb. 24, 2016, https://ec.or.ug/ecresults/0-Final_Presidential_Results_Polling%20Station.pdf.

² Electoral Commission of Uganda, *National Voters' Register: NVR TEXT REGISTER FOR GENERAL ELECTIONS 2015/2016*, accessed Aug. 2020, <https://ec.or.ug/ps/list>.

³ Electoral Commission of Uganda, *Polling Stations in the Country: 2016 General Elections*, created Feb 12, 2016, last modified Feb. 24, 2016, <https://www.ec.or.ug/sites/VoterCount/Statistics%20by%20Polling%20Station.pdf>.

⁴ Electoral Commission of Uganda, *2011 Presidential Election Results by Polling Station*, created Feb. 22, 2011, last modified Feb. 22, 2011, https://www.ec.or.ug/sites/Elec_results/2011_Pres_Pstn.pdf.

⁵ Electoral Commission of Uganda, *PRESIDENTIAL ELECTIONS, 2006: RESULTS TALLY SHEET*, created Aug. 8, 2007, last modified Feb. 2, 2010, https://www.ec.or.ug/sites/Elec_results/2006_pres_polling.pdf.

- 2. Analysis:** In their current form, the EC's election documents are difficult to analyze as the data is statically presented in large PDF files that are not machine-readable. IRI helps solve this challenge by converting the original PDF documents into machine-readable files that can be displayed on an interactive web portal.
- 3. Geographical Representation:** Since the start of Uganda's multi-party presidential elections in 2006, Uganda's number of districts, parishes, and polling stations has increased. Most recently, the number of districts increased to 134 under a 2015 Act of Parliament that reorganized the districts at the outset of 2019.⁶ Because of this, the original election results publications over the three election years are hard to compare as each year shows different geographical breakdowns. IRI solves this challenge by re-sorting the election data for these three years into a common set of geographical units that aligns with the 2019 reorganization. These standardized 2019 units include regions, districts, and parishes.

Data Mapping

Uganda's electoral districts underwent geographic changes between 2006 and the present. For example, in 2006, the EC presented election results across 69 districts while, in the 2016 presidential election, the EC reported results for 112 districts, and as of 2019 there are 134 districts. Meanwhile, the number of polling stations and parishes also increased. In 2006, there were 19,876 polling stations spread across 5,438 parishes. As of 2016, there were 28,010 polling stations spread across 7,431 parishes. Because of these changes, IRI addressed geographical differences in the original 2006, 2011, and 2016 EC data – and then addressed geographical differences between this EC data and the administrative geography of Uganda after the completion of the 2019 reorganization.

To address these changes and allow for consistent trending across districts and parishes as they existed in 2019, UEDP reorganized the EC's original data in four steps:

- 1. Adjusting to current Districts:** IRI re-sorted EC's original 2006, 2011, and 2016 election data so that it could be grouped into the largest administrative divisions. This includes regions, subregions, and then districts.
- 2. Adjusting to locations below Districts:** IRI used an 'approximate matching' algorithm to match administrative units below the district level from the 2016 election with administrative units from a high quality 2019 map of Uganda's parishes.⁷ IRI began this matching with the 2016 election data first since 2016 contains more administrative units than either the 2011 or 2006 datasets. Therefore, the 2016 administrative geography most closely resembles the complex geography described in 2019. After matching the 2016 election data with this 2019 parish map of Uganda, IRI then matched the 2011 election datasets so that it could also be mapped in terms of parishes as they appear in 2019. IRI did not match the 2006 parishes with the 2019 parish map due to greater uncertainty on the reorganization of parishes between 2006 and later election cycles.
- 3. Checking the reorganization and fixing disagreements:** IRI reviewed all matches and investigated disagreements by comparing administrative reorganization information, older parish maps of Uganda, and also satellite imagery of Uganda to look for common landmarks that could explain disagreements such as hospitals, roads, schools, etc. Whenever UEDP had to aggregate data, a code was given to the corresponding parish to explain what this aggregation meant – and these

⁶ Ministry of Local Government, *Fact Sheet 2019*, created Feb. 17, 2019, last modified Feb. 17, 2017, <https://molg.go.ug/sites/default/files/Fact%20Sheet%202019.pdf>.

⁷ Uganda Red Cross Society, "UGANDA BOUNDARIES SHAPEFILES AS OF 17 08 2018: PARISHES," published Aug. 17, 2018, last updated Jan. 15, 2019, <https://data.humdata.org/dataset/uganda-administrative-boundaries-as-of-17-08-2018>.

codes are contained in the variable *Map11.16_agg_code*. These codes are explained in the table below:

EC Data & Parish Map Aggregations (Map11.16_agg_code)	
Code	Code Meaning
0	No aggregation needed for this parish – there was agreement between the EC data and the 2019 parish map of Uganda.
1	The parish map of Uganda contained an extra parish that did not exist in the EC's election data. To fix this disagreement, UEDP aggregated one or more of the 2019 map's parishes into a single parish that was described in the EC data.
2	The EC data described a parish that did not exist in the 2019 map of Ugandan parishes. To fix this disagreement, UEDP merged one or more of the EC data's parishes into a single parish that was described in the 2019 map.
3	Both the 2019 parish map of Uganda and the EC data described parishes that did not agree with each other. To fix this disagreement, UEDP aggregated one or more parishes from both the 2019 map and the EC data into a commonly shared parish or subcounty unit.

- 4. Finalizing the 2011 and 2006 data:** IRI used the same algorithm to match the 2011 EC data's sub-district units with the re-organized 2016 EC data (as per step 1). IRI also matched the 2016 dataset's original administrative unit names and polling station names with those from the 2011 dataset and compared consistent location names across region, subregion, district, county, subcounty and parish units in terms of 2019 administrative units. For the 2006 data, UEDP was not able to standardize data below the district level with data from 2011 and 2016.

Data Contents

The UEDP database contains election datasets for 2016, 2011, and 2006. Each dataset contains information extracted from the various EC source documents, the EC's original geographical data and IRI's unified geographical data that allows for consistent trending across Uganda's various levels of administrative units. The contents of each year's dataset vary depending on the amount of information available through the EC's website – as well as variables that are specific in each election; for example, the candidates running in a particular election. The table below describes the contents of each dataset.

Dataset Contents		
LEGEND: ✓ = Contained in 2016 ✓ = Contained in 2011 ✓ = Contained in 2006		
Variable Name	Variable Description	Year Offered (Downloadable)
Year	Year of presidential election	✓✓✓
Dist_name_previous	Original district name at the time of the election	✓✓✓
Const_name_previous	Original constituency / electoral area name at the time of the election	✓✓✓

Sub_cty_name_previous	Original subcounty name at the time of the election	✓✓✓
Par_name_previous	Original parish name at the time of the election	✓✓✓
Station_string_previous	Original polling station name at the time of the election	✓✓✓
Original_Station_ID_previous	Original polling station ID with codes for district, constituency, subcounty, and parish included	✓✓✓
Reg.Voters	Count of registered voters	✓✓✓
M_18.30	Count of male registered voters aged 18 to 30	✓
M_31.up	Count of male registered voters aged 31 or older	✓
F_18.30	Count of female registered voters aged 18 to 30	✓
F_31.up	Count of female registered voters aged 31	✓
A.Bwanika	Count of valid votes for Abed Bwanika	✓✓✓
A.Mbabazi	Count of valid votes for Amama Mbabazi	✓
V.Baryamureeba	Count of valid votes for Venansius Baryamureeba	✓
B. Biraaro	Count of valid votes for Benon Buta Biraaro	✓
K.Besigye	Count of valid votes for Kizza Besigye Kifefe	✓✓✓
J.Mabirizi	Count of valid votes for Joseph Mabirizi	✓
M.Kyalya	Count of valid votes for Maureen Faith Kyalya Waluube	✓
Y.Museveni	Count of valid votes for Yoweri Kaguta Museveni	✓✓✓
B.Namisango	Count of valid votes for Beti Olive Kamya Namisango	✓
B.Ssali	Count of valid Votes for Bidandi Ssali Jaberi	✓
N.Mao	Count of valid votes for Norbert Mao	✓
O.Otunnu	Count of valid votes for Olara Otunnu	✓
S.Lubega	Count of valid votes for Samuel Lubega Mukaku Walta	✓
M.K.Obote	Count of valid votes for Maria Obote Kalule	✓
S.Kizito	Count of valid votes for John Ssebaana Kizito	✓
V.Votes	Count of valid votes	✓✓✓

Inv.Votes	Count of invalid votes	✓✓✓
T.Votes	Count of total votes	✓✓✓
NON_REP	0 = Reporting polling station 1 = Non-reporting polling station	✓✓✓
Map11.16_reg_name	Region name according to 2011-2016 unified map.	✓✓✓
Map11.16_subreg_name	Subregion name according to 2011-2016 unified map.	✓✓✓
Map11.16_dist_name	District name according to 2011-2016 unified map.	✓✓✓
Map11.16_cty_name	County name according to 2011-2016 map.	✓✓
Map11.16_subcty_name	Subcounty name according to 2011-2016 map.	✓✓
Map11.16_par_name	Parish name according to 2011-2016 map.	✓✓
ID	Identification number for unified datasets.	✓✓✓
Map11.16_agg_code	Aggregation code for 2011-2016 unified map's parish-level administrative units.	✓✓

Data Downloads

All of the full UEDP datasets, maps, and original EC files used to build the portal are available for download on the [UEDP's Github Repository](#).

UEDP Limitations

Please consider the following limitations when using the portal:

- × **Polling Station Analysis:** IRI's data analysis does not offer cross-election analysis at the polling station level. This is due to a level of uncertainty on the division and proliferation of polling stations across election cycles. However, if users are confident about their exact polling station across election years, users may be able to make cross-election comparisons on a case-by-case basis.
- × **2006 Parish Analysis:** IRI's data analysis does not offer cross-election analysis of parishes for 2006. At the time of the portal and dataset creation, IRI had not standardized the 2006 parishes in a way that would allow for trending against later elections. This is due to the uncertainty on the reorganization of parishes between 2006 and both the 2011 and 2016 election cycles.
- × **Demographic Data Limitations:** At the time of the portal and dataset creation, registered voters' gender and age were not available for 2011 and 2006. This information is not offered for these years.
- × **Trend analysis using Sub-counties:** The portal does not allow for cross-election analysis using sub-counties. Sub-county lines are at times unclear when comparing the UEDP 2019 map and, for this reason, subcounty-level aggregates are not shown.

Contact

To provide commentary on the UEDP, please visit the portal and use the feedback page.