Afghanistan 2019 Preliminary Results Analysis

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I - SUMMARY

This report summarizes preliminary election results released by the Afghanistan Independent Election Commission on December 22 2019.

- In total, 4,540 polling centers and 25,079 polling stations were included in the IEC's preliminary results report, or 84.8% of planned. (At least 1138 stations reported zero votes, and some open but invalidated stations may be missing from the preliminary results.)
- President Ashraf Ghani secured a **narrow 50.64% majority**, clearing the 50% threshold required to avoid a runoff election. Chief Executive Abdullah Abdullah received 39.52% of the preliminary vote, and third-party candidates 9.84%.
- While many factors, including tighter controls on participation and the criteria for determining a valid vote, contributed to restrictions on participation in the electoral process, the total preliminary vote total of 1.824 million represents a **record low 18.9% turnout** against voter registration.
- Afghanistan's provincial capitals comprise an estimated 32% of the national population, 35% of the 2019 voter registry, and 41.5% of the preliminary vote, making **urban centers overrepresented** both in the potential and actual electorate.
- Analysis of available data on the audit and recount process ordered by the IEC prior to the announcement of the preliminary results noted that:
 - 254 polling stations audited for missing biometric vote information added 27,641 new votes following the audit process.
 - In cases where the IEC provided pre-audit biometric vote totals, 16,810 votes were removed on net in the preliminary results. However, this includes 611 polling stations that reported increased vote totals following the audit, which added 14,865 votes.
 - Taking into account the addition and removal of votes in the audit, the removal of duplicate biometric vote records, another 29,537 votes were removed on net through other unaccounted for changes when comparing the preliminary results with previously reported (but not officially verified) biometric vote totals by province.
- Complaints adjudication and further decisions on vote validation or invalidation, which will be made in the coming weeks by the Electoral Complaints Commission prior to the certification of final results, will be extremely sensitive. The Abdullah campaign has rejected many of the IEC's decisions and have filed challenges to the reported results. At current margins, the invalidation of any further votes for Ghani in excess of 25,000 votes would force a runoff.

II - DATA SOURCES

This reporting and analysis is based on the author's collection of election results and other information related to the 2019 Afghan presidential election. This report is a work in progress and further updates will be forthcoming as investigation and analysis of the elections and available continues. Corrections and feedback is greatly appreciated.

For more information and the raw data used to generate this report, see: https://github.com/colincookman/afghanistan_presidential_election_2019

III - PRELIMINARY RESULTS

Reporting stations

The IEC's preparations for the 2019 elections were, with some exceptions, based on the same universe of polling centers generated for the 2018 parliamentary elections, which were reduced from the 2014 presidential elections following a security and operational review in January 2018. On August 19 2019, the IEC published a final polling center plan for the 2019 elections, which included details for **5373 polling centers** and **29,586 polling stations**. At a press conference on August 28 2019, Interior Minister Massoud Andarabi said that another 431 polling centers would be closed due to security threats, but these centers have not been publicly identified by either MOI or the IEC.

The IEC has not released an official report on which planned centers and stations were open or closed on election day, either due to deliberately planned or unplanned closures. Ommissions from the reported preliminary results may be due to election-day closure, but may also be due a station's invalidation during the audit and recount process, or due to ommission of zero votes being reported despite a station being open. 1138 stations included in the results reported zero votes for any candidates, although this may not be exhaustive of all such cases. 1627 polling stations previously identified for audit were ommitted from the reporting and are presumed to have been invalidated; of those, 1406 stations had been flagged for missing biometric data in the audit process (discussed further in Section IV).

In total, **4,540 polling centers** and **25,079 polling stations** were included in the IEC's preliminary results report. 529 centers did not report complete results at all of their originally planned stations (for example, five stations were planned, but only four included in the results data), either due to a station's invalidation and removal from the results or incomplete station openings at a given center.

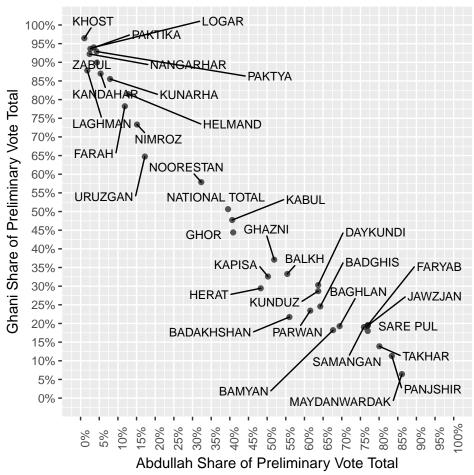
Table 1: Polling Station Report

Province Code	Province Name	Planned	e 1: Polling S	Polling	% of	% of	Polling	% of
		Polling	National	Stations in	National	Planned	Stations	Reporting
		Stations	Total	Prelimi-	Total		Reporting	Stations
				nary			Zero Votes	
				Results				
01	KABUL	4777	16.1%	4701	18.7%	98.4%	175	3.7%
02	KAPISA	481	1.6%	436	1.7%	90.6%	26	6.0%
03	PARWAN	704	2.4%	691	2.8%	98.2%	13	1.9%
04	MAYDANWARDAK	516	1.7%	243	1.0%	47.1%	19	7.8%
05	LOGAR	310	1.0%	264	1.1%	85.2%	17	6.4%
06	NANGARHAR	2534	8.6%	2456	9.8%	96.9%	53	2.2%
07	LAGHMAN	513	1.7%	442	1.8%	86.2%	6	1.4%
08	PANJSHIR	295	1.0%	293	1.2%	99.3%	4	1.4%
09	BAGHLAN	1295	4.4%	814	3.2%	62.9%	142	17.4%
10	BAMYAN	649	2.2%	644	2.6%	99.2%	4	0.6%
11	GHAZNI	828	2.8%	694	2.8%	83.8%	79	11.4%
12	PAKTIKA	773	2.6%	641	2.6%	82.9%	67	10.5%
13	PAKTYA	1194	4.0%	759	3.0%	63.6%	102	13.4%
14	KHOST	835	2.8%	789	3.1%	94.5%	34	4.3%
15	KUNARHA	586	2.0%	585	2.3%	99.8%	4	0.7%
16	NOORESTAN	286	1.0%	169	0.7%	59.1%	11	6.5%
17	BADAKHSHAN	1093	3.7%	964	3.8%	88.2%	14	1.5%
18	TAKHAR	1026	3.5%	781	3.1%	76.1%	3	0.4%
19	KUNDUZ	581	2.0%	375	1.5%	64.5%	8	2.1%
20	SAMANGAN	457	1.5%	362	1.4%	79.2%	2	0.6%
21	BALKH	1467	5.0%	969	3.9%	66.1%	7	0.7%
22	SARE PUL	436	1.5%	373	1.5%	85.6%	0	0.0%
23	GHOR	798	2.7%	462	1.8%	57.9%	28	6.1%
24	DAYKUNDI	658	2.2%	658	2.6%	100.0%	8	1.2%
25	URUZGAN	200	0.7%	185	0.7%	92.5%	5	2.7%
26	ZABUL	213	0.7%	168	0.7%	78.9%	18	10.7%
27	KANDAHAR	1584	5.4%	1446	5.8%	91.3%	141	9.8%
28	JAWZJAN	322	1.1%	296	1.2%	91.9%	0	0.0%
29	FARYAB	655	2.2%	373	1.5%	56.9%	24	6.4%
30	HELMAND	937	3.2%	910	3.6%	97.1%	68	7.5%
31	BADGHIS	335	1.1%	164	0.7%	49.0%	1	0.6%
32	HERAT	1738	5.9%	1541	6.1%	88.7%	37	2.4%
33	FARAH	226	0.8%	162	0.6%	71.7%	5	3.1%
34	NIMROZ	284	1.0%	269	1.1%	94.7%	13	4.8%
NATIONAL TOTAL	L NATIONAL TOTAL	29586	100.0%	25079	100.0%	84.8%	1138	4.5%

Vote summary

In total, 1,824,401 valid votes were reported in the preliminary results. Afghan election law mandates a runoff in the event that no candidate secures greater than fifty percent of the vote share; incumbent President Ashraf Ghani was reported to have won a narrow majority in the preliminary results, securing 923,868 votes or 50.64% of total. Chief Executive Abdullah Abdullah came in second place with 720,990 votes (39.52%).

Provincial Vote Share for Top Two Candidates in the 2019 Afghan Presidential Elections



Sixteen other candidates initially registered to contest the elections, but following their withdrawals the IEC invalidated votes for four of them and did not include any ballots cast for those four candidates in determining the overall pool of valid votes and the threshold required for a majority. Collectively, third-party candidates received 9.84% of the total vote. Gulbuddin Hekmatyar (70,242 votes, 3.85% of total) and Rahmatullah Nabil (33,921 votes, 1.86% of total) were third- and fourth- place finishers, respectively.

¹Shaida Abdali, Ibrahim Alokozai, Zalmay Rasoul, and Noorul Haq Ulomi were invalidated. Candidate Hanif Atmar also withdrew but did not file the necessary paperwork with the IEC to officialize his action, and his votes were included in the valid vote pool.

Table 2: Candidate Votes by Province

						e Votes by							
Province Code	Province Name	Total Pre- liminary Votes	% of National Total	Ghani	%	Abdullah	%	Hekmatyar	%	Nabil	%	Other Candidates	%
01	KABUL	349082	19.1%	166619	47.7%	141881	40.6%	14904		9056	2.59%	16622	4.8%
02	KAPISA	14114	0.8%	4599	32.6%	7089	50.2%	1814		56	0.40%	556	
03	PARWAN	33211	1.8%	7783	23.4%	20448	61.6%	3324	10.0%	257	0.77%	1399	4.2%
04	MAYDANWARDAK	19901	1.1%	1279	6.4%	17139	86.1%	274	1.4%	248	1.25%	961	4.8%
05	LOGAR	14196	0.8%	13344	94.0%	503	3.5%	216	1.5%	10	0.07%	123	0.9%
06	NANGARHAR	204356	11.2%	188462	92.2%	4949	2.4%	9515	4.7%	221	0.11%	1209	0.6%
07	LAGHMAN	25930	1.4%	22769	87.8%	469	1.8%	2360	9.1%	46	0.18%	286	1.1%
08	PANJSHIR	18393	1.0%	2079	11.3%	15343	83.4%	110	0.6%	92	0.50%	769	4.2%
09	BAGHLAN	30268	1.7%	5834	19.3%	21011	69.4%	1648	5.4%	311	1.03%	1464	4.8%
10	BAMYAN	82452	4.5%	15021	18.2%	55795	67.7%	1859	2.3%	4120	5.00%	5657	6.9%
11	GHAZNI	51923	2.8%	19259	37.1%	26946	51.9%	685	1.3%	2941	5.66%	2092	4.0%
12	PAKTIKA	31512	1.7%	29499	93.6%	828	2.6%	794	2.5%	121	0.38%	270	0.9%
13	PAKTYA	38386	2.1%	35657	92.9%	1643	4.3%	727	1.9%	81	0.21%	278	0.7%
14	KHOST	77866	4.3%	75109	96.5%	787	1.0%	1625	2.1%	72	0.09%	273	0.4%
15	KUNARHA	64205	3.5%	54907	85.5%	5072	7.9%	3417	5.3%	498	0.78%	311	0.5%
16	NOORESTAN	10869	0.6%	6290	57.9%	3516	32.3%	932	8.6%	31	0.29%	100	0.9%
17	BADAKHSHAN	70127	3.8%	15234	21.7%	39246	56.0%	6368	9.1%	432	0.62%	8847	12.6%
18	TAKHAR	61835	3.4%	8583	13.9%	49516	80.1%	1407	2.3%	303	0.49%	2026	3.3%
19	KUNDUZ	12676	0.7%	3636	28.7%	8074	63.7%	290	2.3%	70	0.55%	606	4.8%
20	SAMANGAN	37393	2.0%	7123	19.0%	28392	75.9%	687	1.8%	264	0.71%	927	2.5%
21	BALKH	72345	4.0%	24073	33.3%	40078	55.4%	1448	2.0%	3163	4.37%	3583	5.0%
22	SARE PUL	34202	1.9%	6154	18.0%	26323	77.0%	219	0.6%	581	1.70%	925	2.7%
23	GHOR	48540	2.7%	21553	44.4%	19849	40.9%	1127	2.3%	3449	7.11%	2562	5.3%
24	DAYKUNDI	98170	5.4%	29742	30.3%	62521	63.7%	303	0.3%	3122	3.18%	2482	2.5%
25	URUZGAN	5434	0.3%	3518	64.7%	936	17.2%	525	9.7%	135	2.48%	320	5.9%
26	ZABUL	5983	0.3%	5380	89.9%	262	4.4%	194	3.2%	37	0.62%	110	1.8%
27	KANDAHAR	68373	3.7%	59467	87.0%	3667	5.4%	3207	4.7%	373	0.55%	1659	2.4%
28	JAWZJAN	37710	2.1%	7305	19.4%	29006	76.9%	248	0.7%	225	0.60%	926	2.5%
29	FARYAB	26596	1.5%	5207	19.6%	20476	77.0%	175	0.7%	181	0.68%	557	2.1%
30	HELMAND	38137	2.1%	31072	81.5%	4878	12.8%	1139	3.0%	279	0.73%	769	2.0%
31	BADGHIS	9664	0.5%	2374	24.6%	6209	64.2%	336	3.5%	80	0.83%	665	6.9%
32	HERAT	116210	6.4%	34199	29.4%	56117	48.3%	7504	6.5%	2968	2.55%	15422	13.3%
33	FARAH	4541	0.2%	3552	78.2%	539	11.9%	220	4.8%	21	0.46%	209	4.6%
34	NIMROZ	9801	0.5%	7186	73.3%	1482	15.1%	641	6.5%	77	0.79%	415	4.2%
NATIONAL TOTAL	NATIONAL TOTAL	1824401	100.0%	923868	50.6%	720990	39.5%	70242	3.9%	33921	1.86%	75380	4.1%

Voter registration and turnout

Political uncertainty about whether elections would be held as planned, limited campaign activity by the major candidates until the final weeks of the pre-election period, the absence of parallel local-level elections as an additional motivating factor for turnout, and serious security threats from the Taliban insurgency all contributed to a marked decline in nominal vote totals in the 2019 elections when compared to prior years. Additionally, **controls on participation in the election process have tightened** with the introduction of new polling center-specific voter registration lists and biometric voter verification measures that were implemented as a means of preventing fraud.

Initial election-day reports from the IEC suggested approximately 2.69 million votes had been tallied, but approximately 871,000 of these votes were invalidated prior to the announcement of preliminary results as a result of the IEC's decision to only accept biometrically verified votes and the subsequent audit and recount process (discussed further in Section IV). These restrictions on what qualifies as a valid vote are important to keep in mind when interpreting differences in raw vote totals between the 2019 presidential election and past polls in which there were fewer controls on casting a vote. However, the total pool of valid votes in the preliminary results is a **record low turnout of 18.9% against total registration**.

Table 3: Turnout by Province

Province Code	Province Name	Total	% of	Total Valid	% of	% of Reg-
		Voter Reg-	National	Prelimi-	National	istration
		istration	VR	nary	Vote	
				Votes		
01	KABUL	1696341	17.6%	349082	19.1%	20.6%
02	KAPISA	160818	1.7%	14114	0.8%	8.8%
03	PARWAN	218935	2.3%	33211	1.8%	15.2%
04	MAYDANWARDAK	162244	1.7%	19901	1.1%	12.3%
05	LOGAR	107559	1.1%	14196	0.8%	13.2%
06	NANGARHAR	856243	8.9%	204356	11.2%	23.9%
07	LAGHMAN	173286	1.8%	25930	1.4%	15.0%
08	PANJSHIR	77305	0.8%	18393	1.0%	23.8%
09	BAGHLAN	437008	4.5%	30268	1.7%	6.9%
10	BAMYAN	171475	1.8%	82452	4.5%	48.1%
11	GHAZNI	235213	2.4%	51923	2.8%	22.1%
12	PAKTIKA	235727	2.4%	31512	1.7%	13.4%
13	PAKTYA	400809	4.1%	38386	2.1%	9.6%
14	KHOST	258116	2.7%	77866	4.3%	30.2%
15	KUNARHA	190880	2.0%	64205	3.5%	33.6%
16	NOORESTAN	91068	0.9%	10869	0.6%	11.9%
17	BADAKHSHAN	325327	3.4%	70127	3.8%	21.6%
18	TAKHAR	316568	3.3%	61835	3.4%	19.5%
19	KUNDUZ	192546	2.0%	12676	0.7%	6.6%
20	SAMANGAN	141504	1.5%	37393	2.0%	26.4%
21	BALKH	471967	4.9%	72345	4.0%	15.3%
22	SARE PUL	140948	1.5%	34202	1.9%	24.3%
23	GHOR	250233	2.6%	48540	2.7%	19.4%
24	DAYKUNDI	173158	1.8%	98170	5.4%	56.7%
25	URUZGAN	63645	0.7%	5434	0.3%	8.5%
26	ZABUL	66489	0.7%	5983	0.3%	9.0%
27	KANDAHAR	558567	5.8%	68373	3.7%	12.2%
28	JAWZJAN	103386	1.1%	37710	2.1%	36.5%
29	FARYAB	220210	2.3%	26596	1.5%	12.1%
30	HELMAND	332166	3.4%	38137	2.1%	11.5%
31	BADGHIS	101371	1.0%	9664	0.5%	9.5%
32	HERAT	574055	5.9%	116210	6.4%	20.2%
33	FARAH	68638	0.7%	4541	0.2%	6.6%
34	NIMROZ	91940	1.0%	9801	0.5%	10.7%
NATIONAL TOTAL	NATIONAL TOTAL	9665745	100.0%	1824401	100.0%	18.9%

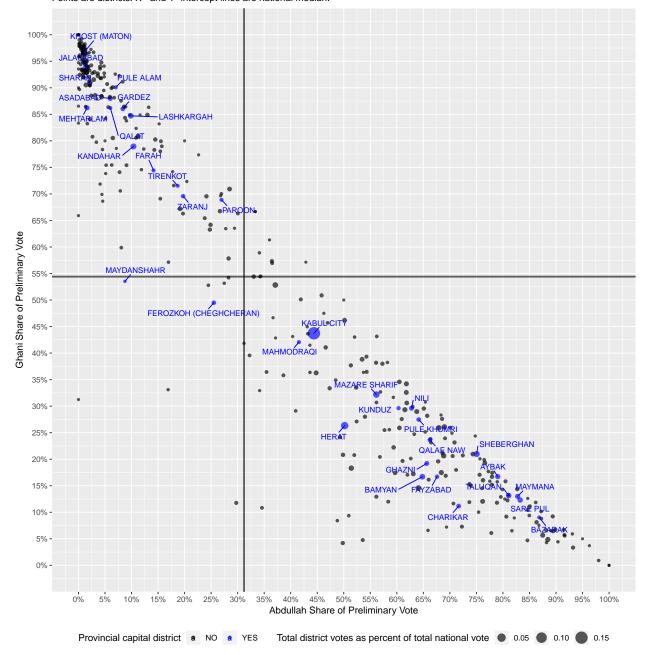
One effect of the reduction of the size of the electorate and the restriction of access to the franchise is

the increasing overrepresentation of Afghanistan's urban centers in the electorate. Although Afghanistan does not have reliable census estimates, the Afghan Central Statistics Organization estimates that the provincial capital centers collectively comprise around 32% of the national population, and Kabul city around 14% of the national total.² However, the provincial capitals comprise approximately 35% of the 2019 voter registry, and 41.5% of the preliminary vote, making them overrepresented both in the potential and actual electorate. (By comparison, votes from provincial capitals comprised 30.3% of the preliminary 2014 first round presidential vote, and 38% of the total preliminary 2018 parliamentary vote.)

Ghani won a greater share of votes cast in provincial capitals (46.6% of total votes in these centers, compared to 42.4% for Abdullah). However, his greater share of the remaining vote relative to Abdullah meant that 38.2% of Ghani's total national vote came from provincial capitals (13.4% from Kabul), as compared to 44.5% of Abdullah Abdullah's (smaller) total national vote coming from provincial capitals (17.5% from Kabul).

 $^{^2}$ Out of a total estimated population of 30.48 million as of solary year 1398 / 2019-2020, CSO estimates 9.68 million residents in all 34 provincial capitals and 4.27 million in Kabul city district.

District Vote Share for Top Two Candidates in the 2019 Afghan Presidential Elections Points are districts. X- and Y-intercept lines are national median.



IV - AUDIT AND RECOUNT OUTCOMES

Initial provisional vote totals

Election results were transmitted to the IEC through at least two separate reporting streams: physical tally sheets prepared by polling station workers and transmitted (both physically and digitally) to the National Tally Center in Kabul, and digital records from biometric voter verification (BVV) devices provided by the German company Dermalog, which polling staff were instructed to use to check in voters, to generate unique QR code stickers to affix to ballots after votes were cast, and to transmit a summary report of the results sheet as well.

Discrepancies between these reporting streams quickly emerged. Ultimately, the IEC affirmed that it would only accept votes where the voter had been biometrically verified as valid for inclusion in the preliminary results. However, because the biometric data did not include candidate choice, any polling station where there was a discrepancy between the vote totals on the physical tally sheet (which records individual candidate vote totals) and the BVV device (which did not) would have to undergo a recount or audit in order to identify ballots with verified QR code stickers in order to produce an updated and reconciled candidate vote total.³

³In most cases, the IEC set the threshold for scrutiny at a discrepancy of five or more votes.

Table 4: Provisional and Preliminary Votes

Province Code	Province Name	Provisional	Total Valid	Net	% Change
		Votes as of	Prelimi-	Change	
		10-03-19	nary		
			Votes		
01	KABUL	459473	349082	-110391	-24.0%
02	KAPISA	34435	14114	-20321	-59.0%
03	PARWAN	42257	33211	-9046	-21.4%
04	MAYDANWARDAK	20560	19901	-659	-3.2%
05	LOGAR	22939	14196	-8743	-38.1%
06	NANGARHAR	255052	204356	-50696	-19.9%
07	LAGHMAN	27537	25930	-1607	-5.8%
08	PANJSHIR	19205	18393	-812	-4.2%
09	BAGHLAN	187340	30268	-157072	-83.8%
10	BAMYAN	84124	82452	-1672	-2.0%
11	GHAZNI	72705	51923	-20782	-28.6%
12	PAKTIKA	48852	31512	-17340	-35.5%
13	PAKTYA	161655	38386	-123269	-76.3%
14	KHOST	94485	77866	-16619	-17.6%
15	KUNARHA	67383	64205	-3178	-4.7%
16	NOORESTAN	23742	10869	-12873	-54.2%
17	BADAKHSHAN	68038	70127	2089	3.1%
18	TAKHAR	64055	61835	-2220	-3.5%
19	KUNDUZ	12881	12676	-205	-1.6%
20	SAMANGAN	39255	37393	-1862	-4.7%
21	BALKH	74701	72345	-2356	-3.2%
22	SARE PUL	35509	34202	-1307	-3.7%
23	GHOR	71603	48540	-23063	-32.2%
24	DAYKUNDI	117506	98170	-19336	-16.5%
25	URUZGAN	6005	5434	-571	-9.5%
26	ZABUL	18378	5983	-12395	-67.4%
27	KANDAHAR	193741	68373	-125368	-64.7%
28	JAWZJAN	38009	37710	-299	-0.8%
29	FARYAB	43464	26596	-16868	-38.8%
30	HELMAND	115333	38137	-77196	-66.9%
31	BADGHIS	9961	9664	-297	-3.0%
32	HERAT	129993	116210	-13783	-10.6%
33	FARAH	22975	4541	-18434	-80.2%
34	NIMROZ	12739	9801	-2938	-23.1%
NATIONAL TOTA		2695890	1824401	-871489	-32.3%

The IEC did not release detailed information on the initial pre-audit provisional vote totals. In press statements and through personal social media accounts, however, IEC commissioners provided provincial aggregate vote totals, which may be compared to the final prelimnary results. Badakhshan province was the only province to report a net increase after the audit process when compared to the initial unverified provisional results, although this appears likely to be due to incomplete or faulty provisional vote totals.

Audit and recount categories

Following the decision to recount and audit stations with apparent discrepancies between tally sheet and biometric voter records, the IEC identified 8,268 polling stations selected for audit or recount, based on:

⁴See Afghan Analyst Network report on the IEC's statements regarding provisional vote totals: https://www.afghanistan-analysts.org/afghanistans-2019-election-17-iec-tally-process-underway-but-figures-remain-murky/

- **Decision 104** of November 4 2019 (covering the selection of polling stations for audit for which biometric data was available; partially available in English or in full in Dari),
- Decision 105 of November 7 2019 (covering the selection of polling stations for audit for which biometric data was missing but for which physical tally sheet results had been transmitted or which the IEC believed the station to be open in English / Dari),
- **Decision 112** of November 21 2019 (covering an additional 22 polling stations referred for audit from stations reporting votes with biometric timestamps outside of official voting hours; available in Dari only).

The IEC additionally released:

- **Decision 108** of November 14 2019 (detailing 137,630 biometrically verified votes which were initially quarantined for a variety of criteria but which the IEC ultimately accepted for inclusion in English / Dari), and
- Decision 109 of November 15 2019 (detailing 102,012 biometrically verified votes with timestamp data outside of official voting hours, the majority of which the IEC also accepted, but 262 stations of which were selected for audit in English / Dari).

However, the specific stations selected for audit under Decision 109 were **not** publicly identified by the IEC in its official list of audit targets, released on November 28 2019.⁵ Election observer sources have reported to the author that in total, 8368 unique polling stations were selected for audit or recount on the basis of one or more criteria, but a full detailed list to confirm this has not been released.

Vote signature de-duplication

On November 2 2019 the IEC announced that Dermalog had identified **86,225 duplicate biometric votes** through a process of comparing digital biometric signatures, providing a new total of approximately 1.84 million total verified votes (prior to audit and recount). No detailed breakdown of the duplicated votes or the polling stations at which they were recorded has been released, but the Afghan Analysts Network reported a provincial breakdown, which was verified by the author with another election observer source. ⁶

The IEC did not publically clarify a procedure for removing duplicate votes or list the presence of duplicate biometric signatures as a criteria for audit or recount. An election observer source told this author that all of the duplicate votes fell within polling stations already selected for audit under other criteria, and would be removed as part of the audit and recount process there; however, this account is presently unverified.

Stations missing biometric data in preliminary results

Under Decision 105, the IEC identified 1261 polling stations that transmitted a physical tally sheet report but did not include associated biometric records for validation, and 1162 stations that did not transmit any results data but which IEC staff or other officials reported had opened on election day. The Abdullah campaign objected to the inclusion of these stations in the IEC audit target list and argued that they should be automatically invalidated, but the IEC held that it must first investigate polling station boxes to confirm the absence of any biometric records as part of the audit and recount process before deciding to invalidate a station.

In total, 730 stations in the first category were included in the preliminary results, of which 207 reported non-zero vote totals. In the second category, 287 stations were included in the preliminary results, of which 47 reported non-zero vote totals. In sum, stations under Decision 105 previously found to be missing biometric records added 27,641 new votes following the audit process.

 $^{^5}$ Mirrored in csv file format here: https://github.com/colincookman/afghanistan_presidential_election_2019/blob/master/audit_data/ps_audit_target_list.csv

⁶In the absence of an official statement from the IEC on the pre-audit biometric vote totals per province, it is unclear whether the AAN and observer sources may be the same, and if so whether that source is in fact authoritative.

⁷The IEC did not provide any details on the votes associated with the physical tally sheet reports for the former category.

While Ghani's vote share in a polling station does not appear to be significantly statistically correlated with that station falling into this category of missing biometrics now reporting votes (these stations fall within with a range comparable to those Ghani won elsewhere), the overwhelming majority of these stations were won by Ghani, in many cases by significant margins. Collectively, Ghani received approximately 24,000 votes from these stations (2.64% of his national total), versus around 2100 votes for Abdullah.

Known changes in audit

For the stations listed under Decision 104, the IEC's audit target list included a reported total number of biometric votes prior to audit. The IEC did not clarify whether this figure represented a pre- or post- vote deduplication figure, and did not provide details on votes per candidate. However, for the stations for which these details were reported it is possible to calculate the overall net change in the audit as a result of vote verification or invalidations. On net, 16,810 votes were removed when compared to the known pre-audit figures at these stations.

While the overall result of the audit was a decrease in the number of valid votes, **611 polling stations** notably reported net increases in votes when compared to the pre-audit biometric vote total previously reported by the IEC. In total, **14,865 votes were added** in these stations. While it is not possible to determine for which candidates, all affected stations were won overwhelmingly by Ghani (with a median Ghani vote share of 92.3%). The IEC has not offered an explanation for this apparent increase.

Net change in results

In sum, taking the AAN-reported breakdown of biometric votes per province prior to any other changes in audit, removing votes from duplicate biometric signatures, adding votes from stations previously flagged for missing biometric data, and adding the net change in known votes from the audit, produces a **remaining unaccounted-for net change** for each province when compared against the preliminary vote totals ultimately reported by the IEC. (In total, this appears to be another 29,537 additional votes removed.) This discrepancy may be due to unobserved audit changes at the stations audited under Decisions 109 and 112, for which the IEC did not specify pre-audit biometric totals, or may be due to other changes; the IEC has not clarified the discrepancy.

Table 5: Net Changes in Audit

Province Code	Province Name	Provisional	Pre-Audit	Net	Votes	Known	Other Un-	Total Valid	Net	% Change
		(Non-	Biometric	Change	Added	Net	accounted	Prelimi-	Change	Pre-Audit
		Biometric)	Vote (via	$_{ m from}$	from	Change	Net	nary	Pre-Audit	Biometric
		Votes as of	AAN)	Deduplica-	Stations	from Audit	Change	Votes	Biometric	to Prelimi-
		10-03-19		tion	Missing				to Prelimi-	nary
					Biometrics				nary	
01	KABUL	459473	372343	-17419	448	-3326	-2964	349082	-23261	-6.2%
02	KAPISA	34435	14998	-426	0	-347	-111	14114	-884	-5.9%
03	PARWAN	42257	34778	-399	0	-275	-893	33211	-1567	-4.5%
04	MAYDANWARDAK	20560	20754	-597	0	-269	13	19901	-853	-4.1%
05	LOGAR	22939	15700	-1650	0	141	5	14196	-1504	-9.6%
06	NANGARHAR	255052	205819	-4118	5069	-1141	-1273	204356	-1463	-0.7%
07	LAGHMAN	27537	26469	-391	0	-49	-99	25930	-539	-2.0%
08	PANJSHIR	19205	19035	-123	0	-3	-516	18393	-642	-3.4%
09	BAGHLAN	187340	34326	-1721	0	-1949	-388	30268	-4058	-11.8%
10	BAMYAN	84124	84773	-399	0	129	-2051	82452	-2321	-2.7%
11	GHAZNI	72705	57532	-2141	27	-1991	-1504	51923	-5609	-9.7%
12	PAKTIKA	48852	46098	-7058	0	-1414	-6114	31512	-14586	-31.6%
13	PAKTYA	161655	36399	-2999	0	-588	5574	38386	1987	5.5%
14	KHOST	94485	82573	-6225	0	1302	216	77866	-4707	-5.7%
15	KUNARHA	67383	67143	-2829	0	-185	76	64205	-2938	-4.4%
16	NOORESTAN	23742	13961	-2274	0	-810	-8	10869	-3092	-22.1%
17	BADAKHSHAN	68038	74483	-2927	174	-567	-1036	70127	-4356	-5.8%
18	TAKHAR	64055	63577	-296	430	-281	-1595	61835	-1742	-2.7%
19	KUNDUZ	12881	13012	-36	0	-54	-246	12676	-336	-2.6%
20	SAMANGAN	39255	39044	-574	0	-89	-988	37393	-1651	-4.2%
21	BALKH	74701	75751	-1406	0	-53	-1947	72345	-3406	-4.5%
22	SARE PUL	35509	35015	-602	503	-64	-650	34202	-813	-2.3%
23	GHOR	71603	56431	-3255	0	-4289	-347	48540	-7891	-14.0%
24	DAYKUNDI	117506	102053	-1315	0	-133	-2435	98170	-3883	-3.8%
25	URUZGAN	6005	6301	-24	0	-27	-816	5434	-867	-13.8%
26	ZABUL	18378	11031	-4003	0	-1013	-32	5983	-5048	-45.8%
27	KANDAHAR	193741	64494	-9115	17130	-925	-3211	68373	3879	6.0%
28	JAWZJAN	38009	38708	-134	0	-32	-832	37710	-998	-2.6%
29	FARYAB	43464	26833	-1046	1034	22	-247	26596	-237	-0.9%
30	HELMAND	115333	38233	-3706	2826	1129	-345	38137	-96	-0.3%
31	BADGHIS	9961	10027	-81	0	-1	-281	9664	-363	-3.6%
32	HERAT	129993	119270	-1063	0	447	-2444	116210	-3060	-2.6%
33	FARAH	22975	12055	-5825	0	-80	-1609	4541	-7514	-62.3%
34	NIMROZ	12739	10314	-49	0	-25	-439	9801	-513	-5.0%
NATIONAL TOTA	L NATIONAL TOTAL	2695890	1929333	-86226	27641	-16810	-29537	1824401	-104932	-5.4%

Other potentially disputed votes

IEC Decision 108 covers a batch of 137,630 votes where there appear to be discrepancies between voters processed by a biometric voter verification device and individual biometric voter data for those stations. These were initially flagged by Dermalog based on discrepancies between a "processed voters" figure that is automatically generated and linked to a specific BVV device, and individual biometric voter signatures that are linked to a specific polling station on a digital SD card. Switching SD cards due to device malfunction (recording multiple station results on a single device, or using multiple devices to submit a single station) appears to be the primary cause of these discrepancies.

In total, 4563 stations were reportedly affected, but no detailed list of which ones has been released; at 1466 polling stations there were 30,608 more voters in the device count than the SD voter count (so votes appeared to be "missing"), and at 3097 polling stations there were 168,238 fewer voters in the device count than the SD card voter count (so "extra" votes). The IEC has broadly decided not to invalidate or audit votes under this criteria, concluding that most of the discrepancies were due to technical problems with the use of biometric devices and not evidence of wrongdoing. The Abdullah campaign has objected to this decision and called for all votes under this category to be eliminated.

No detailed information has been released by the IEC on any of the polling stations covered under IEC Decision 109 where out of hours votes were reported, either those selected for audit or those cleared for processing.

Although not selected as a criteria for audit or invalidation by the IEC and ECC, the preliminary results data includes 40 polling stations that reported total votes in excess of 100% turnout as compared to voter registration. (In 29 of those stations, total voter registration was less than 100 voters.)