



Papua New Guinea's 2022 Electoral Boundaries Redistribution

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Papua New Guinea's parliament is elected from single-member electorates, which are meant to be regularly reviewed and redrawn, as they are in Australia, yet the current boundaries have not been significantly changed since the 1977 election. The Electoral Boundaries Commission (EBC) recently completed another redistribution, but the changes have limited relationship to the actual population imbalances and do little to resolve the severe malapportionment that tilts the balance of power towards some parts of Papua New Guinea over others. The redistribution was passed through parliament in March 2022, just months out from the June election, with little time to implement changes before votes are cast.

The EBC opted for modest changes, creating a small number of new electorates in some of the most under-represented areas, but also creating other electorates in large rural seats without the population numbers to justify extra representation, and have left the door open for further redrawing in future redistribution cycles.

Redistributions of electoral boundaries are essential because they are meant to ensure a fair distribution of political power between different parts of a country. Electorates are theoretically distributed on the basis of one person, one vote, but this assumes that each open electorate has roughly the same population. Population trends shift over time, with some areas growing faster than others, and other areas experiencing slower growth, or even a decline in population.

These effects add up over time, to the point where some members of parliament represent far fewer voters than others. This phenomenon is known as 'malapportionment', where the share of seats in parliament allocated to one part of a country is significantly out of proportion with that part's share of the population.

Malapportionment has greater importance in a country like Papua New Guinea, where some government spending (such as the District Services Improvement Program) is distributed via each open electorate. Malapportionment thus results in

greater per capita funding being available for some communities (Laveil and Wood 2019; Laveil 2021).

Members of Papua New Guinea's parliament represent two different types of electorate.

Eighty-nine members represent 'open' electorates, which cover the whole country. These electorates should, in principle, cover similar numbers of people, and are intended to be subjected to regular redrawing of boundaries to ensure equal population.

There are also 22 members who represent the 22 provincial electorates, covering the 20 provinces as well as the Autonomous Region of Bougainville and National Capital District. So every voter gets two votes: one for their local member and one for their provincial member. In some ways this resembles the parliamentary set-up in countries like Australia where there is one local member in the House of Representatives along with an equal number of senators per state, except they all sit in the one chamber.

The provincial seats are designed to give a seat to every province, regardless of population, so are not considered in calculations of electoral fairness. Instead, the focus in this Working Paper is on the level of malapportionment in the open seats, and the attempts to change that.

Papua New Guinea achieved independence in 1975. A significant redistribution was conducted prior to the 1977 election, the first since independence.¹ Numerous attempts have been made by the EBC to redraw the electoral map since 1977, with reviews held in 1981, 1985–86, 1991, 2005–06 and 2011, but ultimately they have failed to pass the parliament (Laveil and Wood 2019). A small change was made in 2012, when two new provinces were created. Hela split from Southern Highlands Province and Jiwaka split from Western Highlands Province, thus creating two extra provincial seats but not changing the open electorates (Per and Elapa 2012; Zurenuoc and Herbert 2017).

Section 125 of the Papua New Guinea constitution specifies that redistributions should take place once a decade, and they should be conducted by a boundaries commission. The Organic Law on National and Local

Table 1: Enrolment at 2017 election, population as of 2011, estimated population as of 2021 and number of open electorates per region of Papua New Guinea

Region	Number of seats (electorates)	Seats (%)	Enrolment (2017) (%)	Population (2011) (%)	Population (est. 2021) (%)
Highlands	34	38.2	46.7	39.2	40.6
Islands	12	13.5	11.9	15.1	15.7
Momase	25	28.1	22.9	25.7	23.9
Southern	18	20.2	18.5	20.0	19.8

Source: Created by the author using data from the 2011 PNG census, the 2022 Electoral Boundaries Commission report, and 2017 PNG election enrolment data from the [PNG Elections Database](#), Development Policy Centre, Australian National University.

Level Government Elections (OLNLLGE) provides more detail, requiring that each seat’s population should be within 20 per cent of the average population per seat (Section 36), and that there should be between 110 and 120 open electorates (Section 35). This would be a significant increase from the current 89 open electorates.

The OLNLLGE does give the EBC an exception to the requirement that open electorates fall within 20 per cent of the average population. Section 36(2)(a) allows electorates to be drawn above or below the 20 per cent range ‘in circumstances which in the opinion of the Boundaries Commission would otherwise lead to an unreasonable result’. This has been used to justify some of the new electorates not meeting the numerical requirements set down in legislation.

While an independent boundaries commission prepares a proposal, the proposal must be approved by parliament. Parliament can either accept or refuse the proposal in its entirety and cannot make amendments. Parliament must vote by a two-thirds majority to reject the redistribution report – if it does not do so within forty days the redistribution is approved.

In contrast to Papua New Guinea’s case, Australian federal redistributions that once required parliamentary approval to be implemented – which regularly led to redistributions not being approved – have not required parliamentary approval since 1984.

It is difficult to gather accurate information on the scale of malapportionment in Papua New Guinea. By law, electoral quotas are based on the number of people in each electorate, not the number of voters. Yet Papua New Guinea’s census, due to be held in 2021, has been delayed until 2024 due to the current COVID-19 outbreak (NSO 2021).

Although data on the number of enrolled voters from 2017 is available, it fails to count every person eligible to be a voter, let alone counting the non-voting population. Enrolment rates vary between electorates, with ‘roll inflation’ a problem, particularly in the Highlands region (Haley and Zubrinich 2018:13, 96; McKenzie 2020).

The last census was conducted back in 2011, and the EBC has published estimates of population as of 2021. The recent EBC report uses population data from the 2011 census, so that will be my primary method of analysis, but I will also examine estimates of population as of 2021 (at the provincial level) and enrolment numbers from 2017.

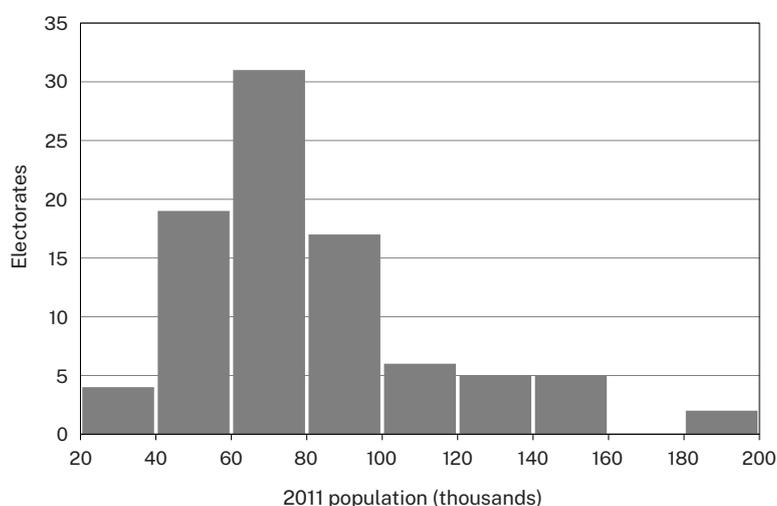
Table 1 shows the distribution of open electorates, enrolled voters (as of 2017), recorded population (as of 2011) and estimated population (as of 2021) for the four regions of Papua New Guinea.

While the Highlands region has more registered voters per (open) seat, that discrepancy is much smaller when you look at population totals, which is the relevant metric considered when redrawing electoral boundaries. Overall, each region has roughly the right number of open electorates for its population, although the Islands region is becoming more under-represented and Momase is becoming more over-represented.

Yet there is a great deal more diversity when you look at the provincial level, and at the electorate level (Figure 1).

The average population per electorate as of 2011 was 81,745, with the median at 74,139. Yet two seats had about 190,000 people (Anglimp-South Waghi in the highlands province of Jiwaka, and Talasea in West New

Figure 1: Population per open electorate, 2011 Papua New Guinea census



Source: Created by the author using data from the 2011 PNG census.

Britain) and ten others had over 120,000. By contrast, there was a population of just over 36,000 in Goilala in Central Province.

We can also look at average population per electorate for each province, to get a sense of the relative level of over- or under-representation per province. Figure 2 and Table 2 show the average population per open electorate for each province.

Table 2 shows that, using average population data, there is not as much variety among the provinces, but some still vary quite a lot from the average. The average provincial population per seat as of 2011 was 84,494. No provinces fall too far below that level – the smallest are Chimbu, Manus and West Sepik, which have about 60,000–63,000 people for each of their seats. But West New Britain had 132,000 people per seat, and National Capital District had more than 120,000 people per seat.

Section 35 of the OLNLLGE specifies that each province will have at least one open electorate, and Section 36(2)(b) prohibits electoral boundaries from cutting across provincial boundaries. This means that, while specific electoral boundaries can be modified within provinces, whole numbers of seats must be allocated to each province.

With this rule in place, it makes sense to first allocate a whole number of open electorates to each province to determine the fair allocation of seats per province.

It is always tricky to achieve agreement on new electoral boundaries when members of parliament have such a direct interest in the outcome. New boundaries may affect their chances of re-election. Abolition of seats would see some of them lose their seats or be forced to run against other incumbents in new areas, and the creation of new seats dilutes local power and reduces the share of resources that members of parliament can distribute. Papua New Guinea's weak party system also makes it hard to achieve an outcome that is seen as good overall, even if it may not be advantageous to that individual.

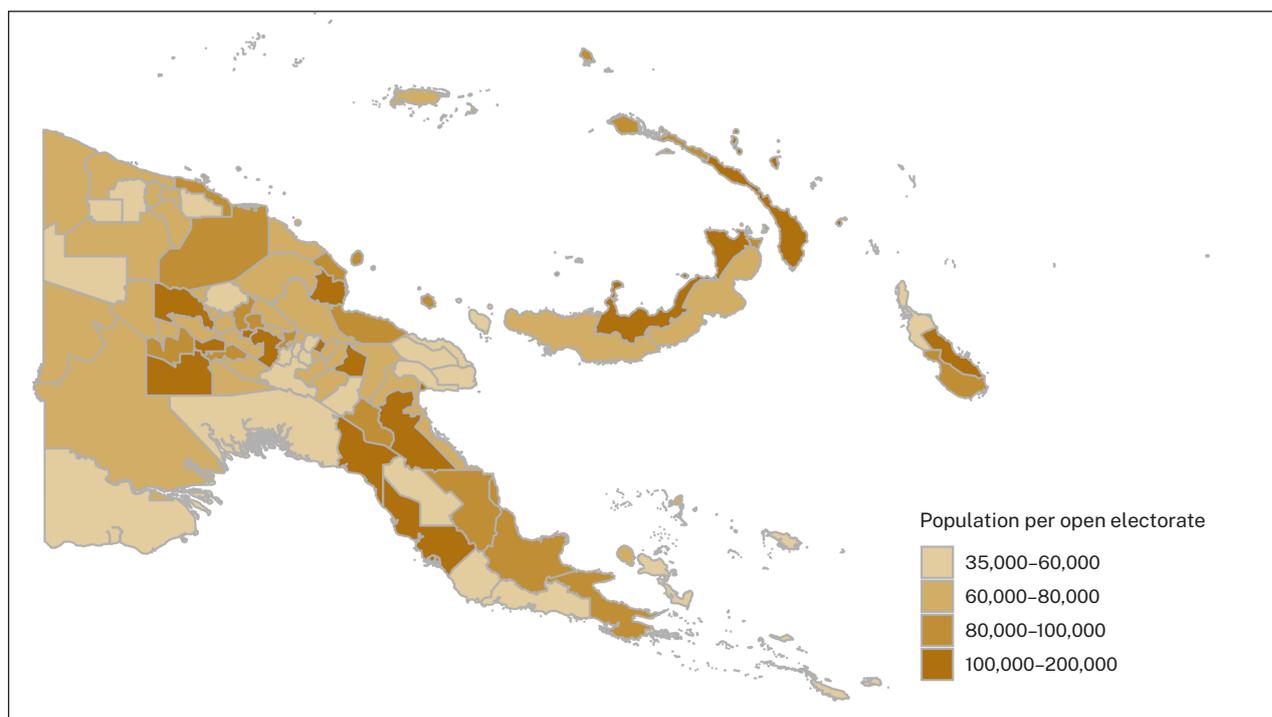
If the current number of 89 open electorates was maintained, with the electorates reallocated among provinces in proportion to their populations, West New Britain, Jiwaka, Southern Highlands and Western Highlands would each be entitled to one extra seat, with National Capital District entitled to two. Six other provinces would be entitled to one less than their current number.

Table 2: Average population per open electorate by province, 2011

Province	Region	Open Electorates	Population (2011)	Population per open electorate	Quotas (89 seats)	Quotas (111 seats)
Bougainville	Islands	3	249,358	83,119	3.05	3.77
Central	Southern	4	269,756	67,439	3.30	4.08
Chimbu	Highlands	6	376,473	62,746	4.61	5.69
East New Britain	Islands	4	328,369	82,092	4.02	4.96
East Sepik	Momase	6	450,530	75,088	5.51	6.81
Eastern Highlands	Highlands	8	579,825	72,478	7.09	8.77
Enga	Highlands	5	432,045	86,409	5.29	6.53
Gulf	Southern	2	158,197	79,099	1.94	2.39
Hela	Highlands	3	249,449	83,150	3.05	3.77
Jiwaka	Highlands	3	343,987	114,662	4.21	5.20
Madang	Momase	6	493,906	82,318	6.04	7.47
Manus	Islands	1	60,485	60,485	0.74	0.91
Milne Bay	Southern	4	276,512	69,128	3.38	4.18
Morobe	Momase	9	674,810	74,979	8.26	10.20
National Capital District	Southern	3	364,125	121,375	4.45	5.51
New Ireland	Islands	2	194,067	97,034	2.37	2.93
Northern (Oro)	Southern	2	186,309	93,155	2.28	2.82
Southern Highlands	Highlands	5	510,245	102,049	6.24	7.71
West New Britain	Islands	2	264,264	132,132	3.23	4.00
West Sepik	Momase	4	248,411	62,103	3.04	3.76
Western	Southern	3	201,351	67,117	2.46	3.04
Western Highlands	Highlands	4	362,850	90,713	4.44	5.49

Source: Created by the author using data from the 2011 PNG census.

Figure 2: Average population per open electorate by province, 2011



Source: Created by the author using data from the 2011 PNG census.

Legislation currently specifies that the number of open electorates should lie between 110 and 120. If the number of open electorates was increased to 110, no province would lose an electorate. Seven provinces retain their existing seats, ten provinces gain a single extra seat, three gain two seats, and two provinces gain three. Those two provinces are National Capital District, which would go from three seats to six, and Southern Highlands, which would go from five to eight. This would actually result in 111 open electorates, despite a quota aiming to create 110.

Most provinces would see an increase in the number of electorates under this model (Figure 3), although it would shift political power towards faster-growing provinces in all parts of the country.

The EBC consulted extensively and presented its report to Prime Minister James Marape in early 2022 (Mou 2022). Parliament agreed to the creation of 13 new electorates in March 2022 (Elapa 2022), as proposed by the EBC.

The plan will see seven electorates split in half for the 2022 election, with a further six split in time for the 2027 election. The changes would leave most electorates alone, thus minimising the cost and effort involved in moving voters into new electorates and providing information on new electoral boundaries.

The electorates to be split in 2022 are:

- Bulolo in Morobe Province
- Ijivitari in Northern (Oro) Province
- Kairuku-Hiri in Central Province
- Komo-Magarima in Hela Province
- Lagaip-Porgera in Enga Province
- Middle Fly in Western Province
- Talasea in West New Britain Province

The electorates to be split in 2027 are:

- Alotau in Milne Bay Province
- Anglimp-South Waghi in Jiwaka Province
- Angoram in East Sepik Province
- Gazelle in East New Britain Province
- Imbonggu in Southern Highlands Province
- Moresby North-West in National Capital District.

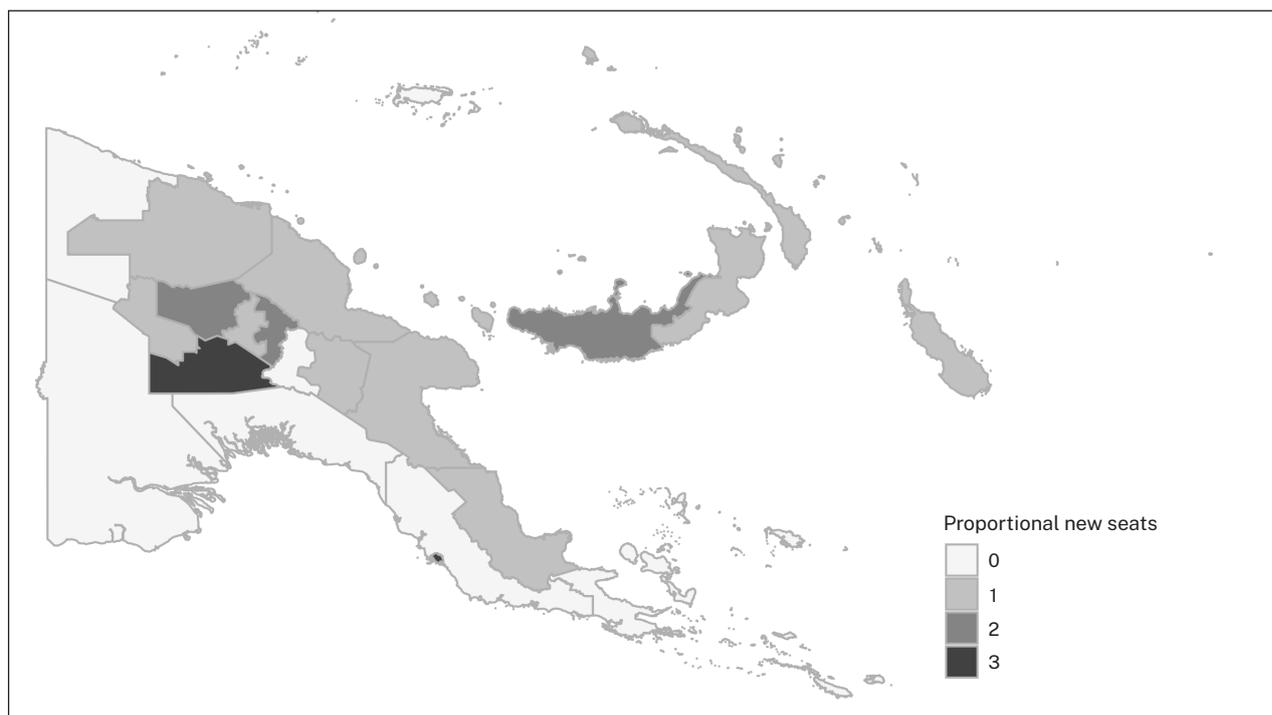
The list does not match up with the list of provinces that are currently the most under-represented, nor does it match up with lists of individual electorates with the largest population.

Some of the seats with very high populations are on the list — four of the eight most populous seats are proposed for duplication by 2027. But not all of them are on the list. Two out of three Port Moresby electorates rank in the top eight electorates for total population, yet only one is earmarked for redistribution, and not until 2027. Port Moresby has a large population of migrants from other parts of the country, many of whom maintain connections with their home village and vote in their home electorate, but the average numbers of enrolled voters in National Capital District is still higher than in any province.

Meanwhile, the other seats marked for redistribution are scattered all over the list. Middle Fly ranked 38th in the country for population in 2011, yet is due to be split in half at this year's election.

No province receives more than one electorate, with some of the most under-represented provinces left untouched while over-represented provinces are due to gain a seat. New Ireland Province ranks fifth-highest in terms of average population per open electorate, but it will not gain any new electorates. National Capital District and Southern Highlands will need to wait until

Figure 3: Number of new open electorates needed in each province of Papua New Guinea to produce an equal number of open electorates per capita, with a total of 111 open electorates



Source: Created by the author using data from the 2011 PNG census.

2027 for a new electorate while much more over-represented provinces like Central Province will gain a new seat in 2022.

The proposed changes are relatively modest, which is partly explained in the EBC report:

The EBC acknowledges that while the right to equal representation is there by creating new electorates, we cannot easily ignore or dismiss the clear inability on the part of the Electoral Commission to conduct elections for these electorates. (EBC 2022: 51)

Forty-five years without a redistribution has built up an accumulated debt of malapportionment, and the EBC appears to be arguing that this cannot all be resolved in one round of redistribution, particularly when the election is due so soon.

But the proposed splitting of the nominated electorates has in some cases worsened the malapportionment.

In the case of Middle Fly, the creation of a new electorate named Delta Fly cannot be justified on numerical grounds. The EBC instead argues that the electorate, with the largest land mass of any open electorate, is difficult to cover, and also argues that it is ‘extremely difficult to effectively deliver services to the scattered population’ (EBC 2022: 50). So despite the electorate being roughly the right size, it has been split in two.

While every other duplicated electorate has an above-average population, the EBC has prioritised electorates covering larger rural areas. It does not propose an additional seat for National Capital District

until 2027. The second-largest city of Lae is populous enough for two full electorates, but is left untouched, while Bulolo electorate in the same province will be duplicated in 2022 despite having less than 70 per cent of the population of Lae.

The new boundaries do increase the proportion of electorates that fall within 20 per cent of the average population, but still leave many electorates outside the acceptable range (Table 3).

Just over 40 per cent of existing electorates fall within 20 per cent of the quota. The new 2022 boundaries bring that proportion up to almost 48 per cent, and it reaches 53 per cent in 2027. It is worth noting this is all based on 2011 census data. It is likely that fresh population data from the next census will worsen the discrepancy again, increasing the need for redistribution.

At the provincial level, these changes leave five provinces with an average seat size above the quota, and another three below the quota (assuming the 2027

Table 3: Number of open electorates within 20% of the average population

Quota	Electorates		
	2017	2022	2027
>20% above	21	18	20
Compliant	36	46	54
>20% below	32	32	28

Source: Created by the author based on population figures from the 2011 PNG census as recorded in the 2022 EBC report.

seat distribution and 2011 population estimates). These seven provinces contain over 30 per cent of the total population as of 2011.

The EBC acknowledges its job is unfinished:

The task undertaken by the EBC was affected by both the COVID-19 environment and the short time frame to achieve its mandate. Whilst the EBC is grateful for the funding provided to undertake this mammoth responsibility, much more remains to be done. (EBC 2022: 52)

Expanding the number of open electorates to 110 or more could resolve the imbalance between provinces without stripping any province of an electorate, but not if extra electorates are created in provinces that are already over-represented. Three of the 13 new electorates have been created in provinces that would not be allocated a new seat if the number of open seats was expanded to 111 in proportion to each province's 2011 population.

While it is possible to resolve the current malapportionment simply by adding extra seats to provinces, and no province needs to lose an electorate, that does not mean that the current imbalance can be resolved by simply splitting in half the biggest electorates. Some electorates are far under quota and are in desperate need of expansion to cover surrounding areas. For instance, the electorate of Rabaul makes up just 12 per cent of the population in East New Britain Province, which contains four electorates. Even with the addition of a fifth seat to the province, Rabaul would still need to expand to take in a larger area to bring it up to quota. This is a relic of boundaries drawn in the 1970s, long before a volcanic eruption devastated Rabaul in 1994 and resulted in the town having a smaller population today.

Malapportionment will continue to be an issue unless electorate boundaries within some provinces are completely redrawn — splitting under-represented electorates in half will only go so far.

Electoral redistributions are always difficult affairs — shifting power from some voters to others, and shifting power between different political elites who may represent particular electorates. This task is made more difficult due to a 45-year gap between redistributions, and Papua New Guinea has opted for a modest redistribution to slightly reduce discrepancies. This is progress, but is just the beginning.

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Author notes

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Endnote

1. Among its recommendations in 1977, the EBC included an extra electorate in Southern Highlands Province, recommending a total of 89 open electorates. The commission 'gave deep thought to the requests for extra electorates in other provinces but did not feel justified in recommending them' (EBC 1977: 3).

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