FIXED REGIONS OF MALTA AND THE MALTA ELECTORAL SYSTEM

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This is an update note to previously published studies: "Proposals for An Improved Malta Electoral System" "Interrelated Regions and Districts for Malta and Gozo" "Local Government White Paper and Interrelated Regions and Districts"

This update note amplifies further the proposed system of defining Districts within the Fixed Regions of Malta and utilising them as Electoral Divisions. It also presents a verification exercice to show that the proposed system would stand the test of time and would yield the desired results.



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1. INTRODUCTION

1.1 Reference to other Study Papers

Reference is here made to previously published Study Papers, namely: "Proposals For An Inproved Malta Electoral System" dated April 2018; "Interrelated Regions and Districts for Malta and Gozo" dated September 2018;

"Local Government White Paper and Interrelated Regions and Districts" dated October 2018.

1.2 Newly Created Regions of Malta

The Local Government White Paper, published on 19th October 2018, had proposed a new set of Regions of Malta, namely, Region 1, Region2, Region 3, Region 4, Region 5 and Region 6. These are shown in Appendix 1. Act 19 of 2019, approved in parliament to amend the Local Councils Act, Cap. 363, substituted the principal title of the principal Act by the "Local Government Act". The newly created Regions for Malta are detailed in the "Eleventh Schedule" in Article 37 of the Local Government Act. The six new Regions of Malta are now defined as being the Northern Region, Eastern Region, Western Region, Port Region, Southern Region and Gozo Region.

1.3 Main Objectives of this Update Note

In the update note dated October 2018 it was stated that should the final format of Regions as approved in parliament be different from the one proposed in the White Paper, the proposed method would also be successful to define the districts format within the finally approved regions format as part of the Local Government organizational structure.

This update note tests the system of defining Districts within Fixed Regions and also tests the utilisation of such Districts as Electoral Divisions for holding general elections in Malta. This is done by testing three different fixed Region formats. It goes on to prove that the proposed system would stand the test of time and would yield the expected results.

1.4 Anomalies in the New Regions of Malta

The following are considered as "anomalies" that would not qualify as basic conditions concerning proximity of Localities when the Regions are utilised as basis structure for defining Electoral Divisions within them:

- a. Mtarfa is listed as making part of the Northern Region when it is located within the Western Region.
- b. San Ġwann is listed as making part of the Northern Region when it is located within the Eastern Region.
- c. Valletta and Floriana that form part of the Port Region are cut off from the other localities in the same Region.

1.5 Maps of Regions and Districts

The following maps are attached to this paper:

Appendix 1: Map of "White Paper" Six Regions of Malta;

Appendix 2: Map "Local Government Act 2019" Six Regions of Malta subdivided into Districts;

Appendix 3: Map of "Alternative" Six Regions of Malta subdivided into Districts;

Appendix 4: Map of "Statistical" Six Regions subdivided into Districts.

1.5 Effectivity of the Proposed Interrelated Regions and Districts System

This note presents three Verification Exercises to show the effectivity of utilising Districts within fixed Regions of Malta as Electoral Divisions. These Verification Exercises are here referred to as Verification Exercises 1, 2 and 3.

2. VERIFICATION EXERCISE 1 – Utilising the New Regions of Malta

Verification Exercise 1 utilises the newly created Regions of Malta as established by the Local Government Act 2019, subdivided into Disticts. These are shown in Appendix 2.

2.1 Mathematical Model of Future Registered Voter Numbers

This verification exercise is based on projected future figures of the registered voting population. This prediction is here based on the newly legislated Regions of Malta dubdivided into Districts. Following the publication of the first electoral register including the 16 year olds in April 2018, and the publication of the April 2019 electoral register, it was now possible to project a mathematical model of the pattern of the possible furture number of registered voters in Malta and Gozo. These figures were fed into the Regions and Districts format being tested, as shown in Table 2a below. Excerpts from the results obtained are presented here and discussed. In establishing the mathematical model of the number of registered voters, due consideration was given to the rate of growth of the voting population over recent years.

Table 2a also compares the average yearly changes in the number of registerd voters in the respective Districts and Regions. The yearly changes defined for the year April 2018 to April 2019 were used as basis to project the mathematical model for model years 2029 to 2109 at 10 year intervals.

LOCAL GOVERNMENT ACT 2019 REGIONS OF MALTA - TYPICAL YEARLY REGISTERED VOTER CHANGES												
Region	District	Localities	Oct '07	Jan '13	Apr '18							
negion	District		to Jan '13	to Oct '17	to Apr '19							
	1	Fgura, Floriana, Paola, Tarxien, Valletta	+ 0.13%	- 0.41%	+ 0.02%							
Port	2	Birgu, Bormla, Isla, Kalkara, Xgħajra, Żabbar	+ 0.53%	+ 0.04%	+ 0.11%							
	Mean	Port Region	+ 0.31%	- 0.21%	+ 0.06%							
	3	Birżebbuġa, Gudja, Għaxaq, Marsaskala, Marsaxlokk, Żejtun	+ 1.65%	+ 1.35%	+ 1.07%							
Southern	4	Ħamrun, Luqa, Marsa, Qormi, Santa luċija, Santa Venera	+ 0.23%	- 0.35%	+ 0.30%							
	Mean	Southern Region	+ 0.86%	+ 0.44%	+ 0.67%							
	5	Kirkop, Mqabba, Qrendi, Safi, Sigʻgiewi, Żurrieq	+ 1.47%	+ 1.46%	+ 1.04%							
Western	6	Dingli, Mdina, Rabat, Żebbuġ	+ 0.77%	+ 0.62%	+ 1.22%							
	Mean	Western Region	+ 1.13%	+ 1.05%	+ 1.13%							
	7	Birkirkara, Iklin, Lija, Msida, Pietà, Ta' Xbiex	+ 0.63%	- 0.01%	- 0.23%							
Eastern	8	Gżira, Għargħur, Pembroke, San Ġiljan, Sliema, Swieqi	+ 1.00%	- 0.18%	- 0.52%							
	Mean	Eastern Region	+ 0.82%	- 0.10%	- 0.37%							
	9	Attard, Balzan, Mosta, San Ġwann	+ 1.58%	+ 1.20%	+ 0.27%							
Northern	10	Mellieħa, Mġarr, Mtarfa, Naxxar, San Pawl il-Baħar	+ 2.87%	+ 2.10%	+ 1.32%							
	Mean	Northern Region	+ 2.16%	+ 1.63%	+ 0.80%							
Gozo	Gozo 11 All Localities in Gozo and Comino		+ 1.11%	+ 0.83%	+ 0.99%							
	National	Mean	+ 1.07%	+ 0.59%	+ 0.49%							

In establishing the Districts within each Region, the localities were not split-up in any way but were always left as one whole unit. The number of "Seats" to be elected from each district are to be of a minimum number of 4 and of a maximum number of 8. These are the basic conditions that govern the setting up of the Districts.

2.2 Actual Year 2019 to Model Year 2049

The details presented in the tables below are excerpts taken from the Verification Exercise and are included to specifically highlight certain scenarios that may arise whilst operating the proposed system. As shown, the proposed system reacts effectively to the various situations and eventually establishes the number of Districts in each Region and also defines the number of Seats to be elected to parliament from each District respectively.

ACTUAL Y	EAR 2019								
Region	Registered	Region	Projected	Proposed	District	Registered	Seats	Round-up	Final
	Voters	Size	Number	Number		Voters		Seats	Seats
		Factor	of Districts	of Districts					
Port	EE 124	10 170	1 70	2	1	29,834	5.503	5	6
PUIL	55,154	10.170	1.70	Z	2	25,300	4.667	5	5
Southorn	75 625	12 052	2 2 2	۰ ۲	3	36,817	6.792	7	7
Southern	75,055	12.922	2.55	Z	4	38,818	7.161	7	7
Western	10 765	8 006	1 50	ſ	5	25,535	4.710	5	5
western	48,705	8.990	1.50	Z	6	23,230	4.285	4	4
Fastara	CC 402	12.200	2.04	2	7	33,296	6.142	6	6
Eastern	66,492	12.266	2.04	2	8	33,196	6.124	6	6
Nouthous		11120	2.25	2	9	39,569	7.299	7	7
Northern	/6,59/	14.130	2.35	2	10	37,028	6.830	7	7
Gozo	29,800	5.497	0.92	1	11	29,800	5.497	5	5
TOTAL	352,423			11		352,423		64	65
(Electoral C	Quota = 352,4	23 ÷ 65 =	5,421)	(Number of	Seats = D	istrict Regist	ered Vo	ters ÷ 5,421)	•

Table 2b

Table 2b shows the proposed mathematical method to be used to establish the number of Districts within the fixed Regions and also to determine the number of Seats to be elected from each District. As will be seen, these two elements in the system are to be considered together. Different solutions are considered where necessary and the best solution is adopted. It is the calculation method that proposes the number of "Districts" and "Seats", as these are not pre-determined at the beginning of the exercise as is the norm today when establishing Electoral Divisions for Malta ans Gozo.

The "regional size factor" in Table 2b is determined for each Region by dividing the number of registered voters in each Region by the national Electoral Quota. The respective factors are then divided by the average number of seats allowed in each district: $(4 + 8) \div 2 = 6$, so as to define the proposed number of Districts to be allocated to each Region. The other part of Table 2b indicates the number of Seats to be allocated to each District. The two parts of the table are to be analysed together so as to be able to decide on the best possible solution to be adopted. In this case, the five Regions in mainland Malta are being proposed to be subdivided into 2 Districts each and Gozo being defined as 1 District, making the total number of Districts at 11. The second part of Table 2b shows that the Seats allocated to each defined District are within the set limits of 4 to 8 Seats. This solution is adopted for Actual Year 2019 and Model Years 2029, 2039 and 2049.

2.3 Model Year 2059 to Model Year 2069

This is the second set of Model Years being considered. A different scenario is encountered here and a different solution is adopted. Table 2c below is similar to Table 2b above. In the first part of the table, an 11 District format is proposed, whilst in the second part, the Seats to be allocated to each previously proposed District (as in Model Year 2019) are detailed. It is to be noted that a problem arises in District 10 where it qualifies for 9 Seats. This is beyond the allowed permissible range of Seats of 4 to 8.

MATHEMATICAL MODEL YEAR 2059												
Region	Registered Voters	Region Size Factor	Projected Number of Districts	Proposed Number of Districts	District	Registered Voters	Seats	Round-up Seats	Final Seats			
Port	E7 71E	0 0 7 7	1 47	1	1	30,522	4.666	5	5			
PUIL	57,715	0.022	1.47	Т	2	27,193	4.157	4	4			
Southorn	05 262	14 577	2 4 2	ſ	3	51,994	7.948	8	8			
Southern	95,303	14.577	2.43	Ζ	4	43,369	6.629	7	7			
Mastara	CO 900	10 000	1 70	ſ	5	35,758	5.466	5	6			
western	69,890	10.683	1.78	Z	6	34,132	5.217	5	5			
Fastara	60 102	0 1 9 7	1 5 2	2	7	31,331	4.789	5	5			
Eastern	60,102	9.187	1.53	Z	8	28,771	4.398	4	4			
Nouthous	100.000	15 410	2 5 7	ſ	9	44,371	6.782	7	7			
Northern	100,826	15.412	2.57	3	10	56,455	8.630	9	8			
Gozo	41,368	6.323	1.05	1	11	41,368	6.323	6	6			
TOTAL	425,264			11		425,264		65	65			
(Electoral C	(Electoral Quota = $425, 264 \div 65 = 6, 542$) (Number of Seats = District Registered Voters ÷ 6, 542)											

Table 2c

As shown in Tables 2d & 2e, two other situations are considered here. Table 2d considers Northern Region to be subdivided into 3 Districts, whilst Port Region is considered to be 1 District. The solution here meets another difficulty, with 9 Seats being projected for District 1. Table 2e considers another solution subdividing the Regions of Malta into 12 Districts. It is to be noted that this solution is arrived at by solving the problem in one of the Districts in Northern Region, which solution at the same time does not impose other changes in the other Districts as well. This solution solves the situation and is considered to be the best one and is adopted for the Model Years 2059 and 2069.

Table 2d	Table 2d Table 2e												
MATHEM	ATICAL M	ODEL YEAR 2	2059				MATHE	MATICAL M	ODEL YE	AR 2059			
Region	District	Registered	Seats	Round-up	Final		District	Registered	Seats	Round-up	Final		
		Voters		Seats	Seats			Voters		Seats	Seats		
Port	1	57 715	0 011	0	0		1	30,522	4.666	5	5		
POIL	Ŧ	57,715	0.022	5	0		2	27,193	4.157	4	4		
Southorn	2	51,994	7.948	8	8		3	51,994	7.948	8	8		
Southern	3	43,369	6.629	7	7		4	43,369	6.629	7	7		
Western	4	35,758	5.466	5	6		5	35,758	5.466	5	5		
	5	34,132	5.217	5	5		6	34,132	5.217	5	5		
Eastorn	6	31,331	4.789	5	5		7	31,331	4.789	5	5		
Lastern	7	28,771	4.398	4	4		8	28,771	4.398	4	4		
	8	36, 330	5.553	5	6		9	36, 330	5.553	5	6		
Northern	9	30,138	4.607	5	5		10	30,138	4.607	5	5		
	10	34,358	5.252	5	5		11	34,358	5.252	5	5		
Gozo	11	41,368	6.323	6	6		12	41,368	6.323	6	6		
TOTAL	64	65 425,264 64 6					65						
(Electoral C	(Electoral Quota = 425,264 ÷ 65 = 6,542) (Number of Seats = District Registered Voters ÷ 6,542)												

2.4 Model Year 2079 to Model Year 2099

This is the third set of Model Years being considered. Here, a still different scenario is encountered and a different solution is adopted. Table 2f below is similar to Table 2b above. In the first part of the table, an 11 District format is proposed, were Port Region and Eastern Region are proposed to be defined as 1 District each respectively and Southern Region and Northern Region are each indicated to be possibly subdivided into 3 Districts respectively. The other part of Table 2f defines the Seats to be allocated relative to each District in the originally defined Model Year 2019 format. It is to be noted that here a problem arises again in District 10 where it qualifies for 9 Seats. This is beyond the allowed permissible range of Seats of 4 to 8.

Table 2f

MATHEMATICAL MODEL YEAR 2079												
Region	Registered	Region	Projected	Proposed	District	Registered	Seats	Round-up	Final			
	Voters	Size	Number	Number		Voters		Seats	Seats			
		Factor	of Districts	of Districts								
Port	50 775	<u>8 108</u>	1 40	1	1	31,167	4.384	4	5			
POIL	55,775	0.400	1.40	Ţ	2	28,608	4.024	4	4			
Southorn	hern 104 433 14 690 2 45		2	3	58 <i>,</i> 956	8.293	8	8				
Southern	104,455	14.090	2.45	3	4	45,477	6.397	6	6			
Western	70 5 2 7	11 107	1 96	2	5	40,413	5.685	6	6			
western	79,527	11.107	1.00	Z	6	39,114	5.502	5	6			
Eastarn	F0 222	0.246	1 20	1	7	31,127	4.379	4	4			
Eastern	59,33Z	8.340	1.39	T	8	28,205	3.968	4	4			
Northorn	112 240	15 700	2 6 2	n	9	46,944	6.603	7	7			
Northern	112,249	15.790	2.03	5	10	65,305	9.186	9	8			
Gozo	46,776	6.580	1.10	1	11	46,776	5.580	7	7			
TOTAL	462,092			11		462,092		64	65			
(Electoral C	Electoral Quota = 462,092 ÷ 65 = 7,109) (Number of Seats = District Registered Voters ÷ 7,109)											

As shown in Tables 2g & 2h, two other situations are considered here. Table 2g considers the allocation of Seats to each District, following the format of the Regional structure as propsed in Table 2f. As can be seen, this solution holds. But it is observed that the total number of Seats within Southern Region is 14, which number could be achieved by subdividing Southern Region into 2 Districts only. So another solution is here considered as shown in Table 2h where Port Region, Southern Region and Western Region are each made up of 2 Districts, Northern Region is made up of 3 Districts, and Eastern Region and Gozo Region are each defined as 1 District respectively. This solution also holds. So the choice is between the solution defined in Table 2g and the solution defined in Table 2h.

The solution chosen is the one shown in Table 2h as it is considered to be more reasonable and as it does not force changes in other Districts except where absolutily necessary. This solution is adopted for Model Years 2079, 2089 and 2099.

Table 2g	Table 2g Table 2h												
MATHEM	ATICAL M	ODEL YEAR 2	2079				MATHE	EMATICAL N	MODEL	YEAR 2079			
Region	District	Registered	Seats	Round-up	Final		District	Registere	Seats	Round-up	Final		
		Voters		Seats	Seats			Voters		Seats	Seats		
Dout	1		0 400	0	0		1	31,167	4.384	4	4		
Port	1	59,775	8.408	ŏ	ð		2	28,608	4.024	4	4		
	2	31,836	4.478	4	4		2		0 202	0	0		
Southern	3	37,192	5.232	5	5		3	58,950	8.293	ð	ð		
	4	35,405	4.980	5	5		4	45,477	6.397	6	6		
Western	5	40,413	5.685	6	6		5	40,413	5.685	6	6		
western	6	39,114	5.502	5	5		6	39,114	5.502	5	5		
Eastern	7	59,332	8.346	8	8		7	59 <i>,</i> 332	8.346	8	8		
	8	39,595	5.570	6	6		8	39 <i>,</i> 595	5.570	6	6		
Northern	9	32,845	4.620	5	5		9	32 <i>,</i> 845	4.620	5	5		
	10	39,809	5.600	6	6		10	39,809	5.600	6	6		
Gozo	11	46,776	6.580	7	7		11	46,776	5.580	7	7		
TOTAL	TOTAL 462,092 65							462,092		65	65		
(Electoral C	Quota = 46	52,092 ÷ 65 =	7,109)		(Numb	er	of Seats =	District Reg	gistered	Voters ÷ 7,1	09)		

2.5 Model Year 2109

As for Model Year 2109 a clearer scenarion is encountered. Table 2i shows very evidently that the regional structure here defined as having Port Region, Eastern Region and Gozo Region defined as being 1 District each respectively, Western Region as having 2 Districts and Southern Region and Northern Region both being both subdivided into 3 Districts each respectively. The second part of Table 2i shows that the Seats allocated to each defined District are within the set limits of 4 to 8 Seats. This solution is adopted for Model Year 2109.

Table 2i

MATHEMATICAL MODEL YEAR 2109												
Region	Registered	Region	Projected	Proposed	District	Registered	Seats	Round-up	Final			
	Voters	Size	Number	Number		Voters		Seats	Seats			
		Factor	of Districts	of Districts								
Port	63,197	7.975	1.33	1	1	63,197	7.975	8	8			
					2	36,890	4.655	5	5			
Southern	116,957	14.760	2.46	3	3	42,863	5.409	5	5			
					4	37,204	4.695	5	5			
Western	02 769	11 707	1 05	ſ	5	46,804	5.907	6	6			
western	92,708	11.707	1.95	Z	6	45,964	5.801	6	6			
Eastern	59 <i>,</i> 638	7.526	1.25	1	7	59,638	7.526	7	7			
					8	44,259	5.585	6	5			
Northern	128,209	16.180	2.70	3	9	36,657	4.626	5	5			
					10	47,293	5.968	6	6			
Gozo	54,291	6.851	1.14	1	11	54,291	6.851	7	7			
TOTAL	515,060			11		515,060		66	65			
(Electoral C	Quota = 515,0)60 ÷ 65 =	7,924)	(Number of Seats = District Registered Voters ÷ 7,924)								

It has been shown that all scenarios encountered in Verification Exercise 1 were all reasonably solved. The Districts defined within the fixed Regions only required to be revised three times over the 90 year period covered by this Verification Exercise.

2.6 Summary of Number of Seats Allocated

Table 2j summerises all the Seats allocated to the Dstricts in the different scenarios encountered in Verification Exercise 1 for Actual Year 2019 and for Model Years 2029 to 2109. As can be seen, there is a progressive flow from one year to another in the number of Seats allocated.

SUMMARY OF DISTRIBUTION OF SEATS IN VERIFICATION EXERCISE 1												
SUIVIIVIART			N OF SE	Mat	hemati		el Year	1				
Region	Year 2019	2029	2039	2049	2059	2069	2079	2089	2099	2109		
Dort	6	5	5	5	5	5	4	4	4	0		
Port	5	4	4	4	4	4	4	4	4	8		
	7	7	8	8	8	8	8	8	8	5		
Southern	7	7	7	7	7	6	6	6	6	5		
		-	-		-	Ŭ	Ŭ	Ŭ	Ű	5		
Western	5	5	5	5	5	6	6	6	6	6		
Western	4	5	5	5	5	5	5	6	6	6		
Fastern	6	6	5	5	5	5	8	8	8	7		
Lastern	6	6	5	5	4	4	0	0	0	,		
	7	7	7	7	6	6	6	5	5	5		
Northern	-	7	0	0	5	5	5	5	5	5		
	/	/	8	8	5	5	6	6	6	6		
Gozo	5	6	6	6	6	6	7	7	7	7		
TOTAL	65	65	65	65	65	65	65	65	65	65		
		11 DIST	RICTS		12 DISTRICTS 11 DISTRICTS				TRICTS			

2.7 District Quota Value

Table 2k is considered to be the most important table in Verification Exercise 1. It shows that the percentage deviation of the District Quota values from the Mean District Quota value are reasonanly controlled. They vary between + 0.37% to + 12.40% and - 0.31% to - 9.68%. When comparing these figures with the + 9.07% figure, this being the % Deviation Value for the District of Gozo in the last general election in 2017, it can be concluded that such figures should be considered as being reasonable figures. In the coming general elections, the figure for the % Deviation for the presently only fixed District (Gozo) would be expected to rise again nearing more to the resultant figures from Valuation Exercise 1 that are listed in Table 2k.

Summary of % Deviation of District Ouota Value from Mean District Ouota											
Summary	OT % Dev	lation of I	District Q	uota vai	ue from	iviean Di	strict Quo	ta			
- ·	Actual		<u>г</u>	Vathema	tical Mod	el Year	1	1	1	1	
Region	Year 2019	2029	2039	2049	2059	2069	2079	2089	2099	2109	
	2015										
Port	-8.28%	+5.05%	+0.62%	-3.28%	-6.69%	-9.68%	+5.10%	+3.05%	+1.26%	0.21%	
	-6.66%	+12.40%	+8.95%	+6.16%	+3.92%	+2.09%	+3.66%	+5.38%	+6.86%	-0.31%	
	-2.98%	+2.24%	-6.65%	-3.40%	-0.65%	+1.68%	+6.62%	+4.89%	+3.29%	-6.89%	
Southern				-3.48%						+8.19%	
	-2.98%	+0.37%	-1.57%		-5.30%	+8.49%	-5.25%	-3.82%	-2.60%	-6.10%	
Western	-5.79%	-0.96%	+3.12%	+6.50%	+9.32%	-6.93%	+10.04%	-6.40%	-4.75%	-1.56%	
western	+7.13%	-8.47%	-3.46%	+0.76%	+4.35%	+7.41%	+9.46%	+5.38%	+1.83%	-3.32%	
Fastara	+2.37%	-4.73%	+7.09%	+0.97%	-4.22%	-8.64%					
Eastern	+2.06%	-7.72%	+1.35%	-6.11%	+9.95%	+4.00%	-0.81%	-4.72%	-7.92%	+7.52%	
	+4.27%	+2.10%	+0.16%	-1.57%	-7.44%	-7.29%	-7.17%	+11.53%	+11.63%	+11.71%	
Northern					-7.86%	-7.70%	-7.60%	-7.53%	-7.49%	-7.48%	
	-2.42%	+5.57%	-1.60%	+3.51%	+5.04%	+8.77%	-6.67%	-4.33%	-2.30%	-0.53%	
Gozo	+9.94%	-4.12%	-0.42%	+2.71%	+5.39%	+7.69%	-6.00%	-4.52%	-3.24%	-2.12%	

Table 2k

3. VERIFICATION EXERCISE 2 – Utilising the Proposed Alternative Regions of Malta

A Verification exercise was also run on the here proposed "Alternative" Six Regions of Malta subdivided into Districts that are shown in Appendix 3. The "Alternative" fixed Regions have a similar basic structure as the new Regions of Malta defined in the Local Government Act. The main purpose of this proposal is to remove the anomalies (mentioned in section 2 of this paper) in the new Regions of Malta so as to be able to utilise the Districts defined within the Regions as Electoral Divisions.

3.1 Mathematical Model of Future Registered Voter Numbers

Similar to Verification Exercise 1, Verification Exercise 2 is based on projected future figures of the registered voting population. These figures were fed into the above mentioned Alternative Regions which are in turn subdivided into Districts as indicated in Table 3a below.

Table 3a compares also the average yearly changes in the number of registerd voters in the respective Districts and Regions. The yearly changes defined for the year April 2018 to April 2019 were used as basis to project the mathematical model for model years 2029 to 2129 at 10 year intervals.

Table 3a

ALTERNATIVE REGIONS AND DISTRICTS - TYPICAL YEARLY REGISTERED VOTER CHANGES Region District Localities Oct '07 Jan '13 Apr '18													
Region	District	Localities	Oct '07	Jan '13	Apr '18								
			to Jan '13	to Oct '17	to Apr '19								
	1	Floriana, Ħamrun, Marsa, Paola, Santa Venera, Valletta	- 0.45%	- 0.78%	+ 0.02%								
Port	2	Birgu, Bormla, Fgura, Isla, Kalkara, Xgħajra, Żabbar	+ 0.70%	+ 0.13%	+ 0.22%								
	Mean	Port Region	+ 0.14%	- 0.30%	+ 0.13%								
	3	Birżebbuġa, Gudja, Għaxaq, Marsaskala, Marsaxlokk	+ 2.18%	+ 1.75%	+ 0.94%								
Southern	4	Luqa, Santa Luċija, Tarxien, Żejtun	+ 0.56%	+ 0.01%	+ 0.86%								
	Mean	Southern Region	+ 1.34%	+ 0.88%	+ 0.91%								
	5	Dingli, Kirkop, Mqabba, Qrendi, Safi, Sigʻgiewi, Żurrieq	+ 1.51%	+ 1.45%	+ 1.11%								
Western	6	Mdina, Mtarfa, Qormi, Rabat, Żebbuġ	+ 0.67%	+ 0.29%	+ 0.66%								
	Mean	Western Region	+ 1.02%	+ 0.79%	+ 0.86%								
	7	Birkirkara, Gżira, Msida, Pietà, Ta' Xbiex	+ 0.43%	- 0.32%	- 0.66%								
Eastern	8	Għargħur, Pembroke, San Ġiljan, San Ġwann, Sliema, Swieqi	+ 1.15%	+ 0.07%	- 0.33%								
	Mean	Eastern Region	+ 0.80%	- 0.11%	- 0.48%								
	9	Attard, Balzan, Iklin, Lija, Mosta	+ 1.73%	+ 1.44%	+ 0.59%								
Northern	10	Mellieħa, Mġarr, Naxxar, San Pawl il-Baħar	+ 2.92%	+ 2.15%	+ 1.40%								
	Mean	Northern Region	+ 2.30%	+ 1.78%	+ 1.00%								
Gozo	11 All Localities in Gozo and Comino		+ 1.11%	+ 0.83%	+ 0.99%								
	National	Mean	+ 1.07%	+ 0.59%	+ 0.49%								

3.2 Actual Year 2019 to Model Year 2069

The details presented in the tables below are excerpts taken from the Verification Exercise and are included to specifically highlight certain scenarios that may arise whilst operating the proposed system. As shown, the proposed system reacts effectively to the various situations and eventually establishes the number of Districts in each Region and also defines the number of Seats to be elected to parliament from each District respectively.

Table 3b

ACTUAL YEAR 2019												
Region	Registered	Region	Projected	Proposed	District	Registered	Seats	Round-up	Final			
	Voters	Size	Number	Number		Voters		Seats	Seats			
		Factor	of Districts	of Districts								
Port	65 250	12 055	2 01	2	1	30,360	5.600	6	6			
PUIL	05,550	12.055	2.01	Z	2	34,990	6.455	6	6			
Southorn	E1 470	0.406	1 50	n	3	26,831	4.949	5	5			
Southern	51,479	9.490	1.50	۷	4	24,648	4.547	4	5			
Western	64.969	11 066	1 00	r	5	28,670	5.289	5	5			
western	04,808	11.900	1.99	Z	6	36,198	6.677	7	7			
Eastern	71 1 4 2	12 124	2 10	r	7	33,116	6.109	6	6			
	/1,143	13.124	2.19	Z	8	38,027	7.015	7	7			
Northorn	CO 702	12 072	2.45	ſ	9	34,918	6.441	6	6			
Northern	09,783	12.873	2.15	Z	10	34,865	6.431	6	6			
Gozo	29,800	5.497	0.92	1	11	29,800	5.497	5	6			
TOTAL	352,423			11		352,423		63	65			
(Electoral Quota = 352,423 ÷ 65 = 5,421) (Number of Seats = District Registered Voters ÷ 5,421)												

As for Verification Exercice 1, Table 3b above shows the proposed mathematical method to be used to establish the number of Districts within the fixed Regions and also to determine the number of Seats to be elected from each District.

The "regional size factor" in Table 3b is determined for each Region by dividing the number of registered voters in each Region by the national Electoral Quota. These respective factors are then divided by the average number of Seats allowed in each district: $(4 + 8) \div 2 = 6$, so as to define the proposed number of Districts to be allocated to each Region. The other part of Table 3b indicates the number of Seats to be allocated to each District. The two parts of the table are to be analysed together so as to be able to decide on the best possible structure to be adopted. In this case, the Regions are being proposed to be divided into 11 Districts, where Regions in mainland Malta are all subdivided into 2 Districts each and Gozo is defined as being 1 District. The second part of Table 3b shows that the Seats allocated to each defined District are within the set limits of 4 to 8 Seats. This solution is adopted for Actual Year 2019 and Model Years 2029 to 2069.

3.3 Model Year 2079 to Model Year 2109

This is the second set of Model Years being considered. A different scenario is encountered here and a different solution is adopted. In the first part of the Table 3c, an 11 District format is proposed, where Eastern Region is to be defined as 1 District and Northern Region to be subdivided into 3 Districts. Table 3c also shows that the Seats allocated to each defined District are within the set limits of 4 to 8 Seats. This solution is adopted for Model Years 2079 to 2109.

Table 3d	;
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MATHEMATICAL MODEL YEAR 2079													
Region	Registered	Region	Projected	Proposed	District	Registered	Seats	Round-up	Final				
	Voters	Size	Number	Number		Voters		Seats	Seats				
		Factor	of Districts	of Districts									
Port	72 004	10 255	1 71	2	1	31,835	4.478	4	4				
PUIL	72,904	10.255	1./1	Z	2	41,069	5.777	6	6				
Couthorn	77 766	10.020	1 0 0	ſ	3	41,165	5.791	6	6				
Southern	11,155	10.956	1.82	Ζ	4	36,590	5.147	5	5				
Western	06.200	12 522	2.26	ſ	5	46,545	6.547	6	7				
western	96,200	13.552	2.20	2	6	49,655	6.985	7	7				
Eastern	58,871	8.281	1.38	1	7	58,871	8.281	8	8				
			2.57						8	38,645	5.436	5	5
Northern	109,586	15.415		3	9	34,257	4.819	5	5				
					10	36,684	5.160	5	5				
Gozo	46,776	6.580	1.10	1	11	46,776	6.580	7	7				
TOTAL	462,092			11		462,092		64	65				
(Electoral C	Quota = 462,0	92 ÷ 65 =	7,109)	(Number of	(Number of Seats = District Registered Voters ÷ 7,109)								

It has been shown that all scenarios encountered in Verification Exercise 2 were all reasonably solved. The Districts defined within the fixed Regions only required to be revised once over the 90 year period covered by this Verification Exercise.

3.4 Summary of Number of Seats Allocated

Table 3d summerises all the Seats allocated to the Dstricts in the two different scenarios encountered in Verification Exercise 2 for Actual Year 2019 and for Model Years 2029 to 2109. As can be seen, there is a progressive flow from one year to another in the number of Seats allocated.

Table 3

SUMMARY OF DISTRIBUTION OF SEATS IN VERIFICATION EXERCISE 1											
	Actual			Mat	hemati	al Mod	el Year				
Region	Year 2019	2029	2039	2049	2059	2069	2079	2089	2099	2109	
Port	6	5	5	5	5	5	4	4	4	4	
FUIL	6	6	6	6	6	6	6	6	6	6	
Southorn	5	5	5	5	6	6	6	6	6	6	
Southern	5	5	5	5	5	5	5	5	5	5	
Wostorn	5	6	6	6	6	6	7	7	7	7	
western	7	7	7	7	7	7	7	7	7	7	
Factorn	6	5	5	4	4	4	0	0	7	7	
Edstern	7	6	6	6	5	5	0	0	/		
	6	7	7	7	7	7	5	5	6	6	
Northern	6	7	7	0	0	0	5	5	5	5	
	0	/	/	0	0	0	5	5	5	5	
Gozo	6	6	6	6	6	6	7	7	7	7	
TOTAL	65	65	65	65	65	65	65	65	65	65	
					11 DIS	TRICTS					

3.5 District Quota Value

Table 3e is considered to be the most important table in Verification Exercise 2. It shows that the percentage deviation of the District Quota values from the Mean District Quota value are reasonably controlled. They vary between + 0.00% to + 11.95% and - 0.01% to - 9.06%. When comparing these figures with the + 9.07% figure, this being the % Deviation Value for the District of Gozo in the last general election in 2017, it can be concluded that such figures should be considered as being reasonable figures. In the coming general elections, the figure for the % Deviation for the presently only fixed District (Gozo) would be expected to rise again nearing more to the resultant figures from Valuation Exercise 2 that are listed in Table 3e.

Summary	Summary of % Deviation of District Quota Value from Mean District Quota										
Summary			District	Mathoma	tical Mod			ld			
Region	Year 2019	2029	2039	2049	2059	2069	2079	2089	2099	2109	
Port	-6.66%	+6.94%	+2.47%	-1.44%	-4.85%	-7.83%	+11.95%	+9.09%	+6.57%	+4.33%	
FOIL	+7.58%	+4.76%	+2.41%	+0.45%	-1.18%	-2.56%	-3.72%	-4.69%	-5.53%	-6.26%	
	-1.01%	+3.17%	+6.69%	+9.60%	-6.64%	-4.93%	-3.49%	-2.25%	-1.19%	-0.28%	
Southern	-9.06%	-5.93%	-3.34%	-1.26%	+0.43%	+1.80%	+2.94%	+3.89%	+4.67%	+5.32%	
Western	+5.77%	-6.72%	-2.36%	+1.27% +4.33	+4.33%	+6.92%	-6.47%	-4.84%	-3.45%	-2.24%	
western	-4.61%	-3.15%	-2.07%	-1.32%	-0.79%	-0.44%	-0.22%	-0.08%	-0.01%	-0.01%	
Eastorn	+1.81%	+8.74%	-2.30%	+10.84%	+1.57%	-6.12%					
Eastern	+0.21%	+7.73%	+0.00%	-6.47%	+5.74%	+0.28%	+3.51%	-1.64%	+7.40%	+3.09%	
	+7.35%	-7.15%	-6.45%	-5.89%	-5.43%	-5.05%	+8.72%	+10.97%	-5.91%	-4.51%	
Northern							-3.62%	-3.82%	-4.00%	-4.16%	
	+7.19%	+7.19% -0.29%	+6.47%	-1.81%	+2.47%	+6.16%	+3.20%	+5.95%	+8.35%	+10.44%	
Gozo	-8.38%	-4.12%	-0.42%	+2.71%	+5.39%	+7.69%	-6.00%	-4.52%	-3.24%	-2.12%	
NOTE: Hig	hest Dev	iation in	2017 Gei	neral Elect	ion = +9	.07% (Go	zo District)	•	•	

Table 3e

4. VERIFICATION EXERCISE 3 – Utilising the Statistical Regions and Districts

The existing Statistical Regions and Districts form an Organisational Structure that is used for statistical purposes. Malta and Gozo is divided into 3 Regions, namely, Malta Majjistrall, Malta Xlokk and Gozo. In turn, Malta Majjistrall is in turn subdivided into 3 Districts, namely, Northern Harbour District, Western District and Northern District, and Malta Xlokk Region is subdivided into South Eastern District and Southern Harbour District. Gozo and Comino is a Region in its own right.

To be able to compare this Verification Exercise with the two previous ones, the Statistical Regions and Districts are here defined as follows:

Malta is considered to be divided up into 2 Areas, namely, Malta Majjistrall and Malta Xlokk.

In turn, these 2 Areas are divided in to 5 Regions, namely, Northern Harbour Region, Western Region, Northern Region, South Eastern Region and Southern Harbour Region. These in turn are subdivided into 2 Districts each respectively. Gozo and Comino are defined as Gozo Region, which in itself forms 1 District. All this is shown in Appendix 4.

4.1 Mathematical Model of Future Registered Voter Numbers

Similar to Verification Exercises 1 & 2, Verification Exercise 3 is based on projected future figures of the registered voting population. These figures were fed into the above mentioned Statistical Regions subdivided into Districts as indicated in Table 4a below.

Table 4a compares also the average yearly changes in the number of registerd voters in the respective Districts and Regions. The yearly changes defined for the year April 2018 to April 2019 were used as basis to project the mathematical model for model years 2029 to 2129 at 10 year intervals.

STATISTICAL REGIONS - TYPICAL YEARLY REGISTERED VOTER CHANGES										
Region	District	Localities	Oct '07	Jan '13	Apr '18					
			to Jan '13	to Oct '17	to Apr '19					
	1	Floriana, Luqa, Marsa, Paola,	- 0.17%	- 0.84%	- 0.04%					
Southorn		Santa Luċija, Tarxien, Valletta								
Harbour	2	Birgu, Bormla, Fgura, Isla, Kalkara, Xgħajra, Żabbar	+ 0.70%	+ 0.13%	+ 0.22%					
	Mean	Southern Harbour Region	+ 0.27%	- 0.34%	+ 0.10%					
	3	Gudja, Għaxaq, Marsaskala, Marsaxlokk, Żejtun	+ 1.71%	+ 1.48%	+ 1.25%					
South Eastern	4	Birżebbuġa, Kirkop, Mqabba, Qrendi, Safi, Żurrieq	+ 1.53%	+ 1.25%	+ 0.92%					
	Mean	South Eastern Region	+ 1.62%	+ 1.37%	+ 1.09%					
	5	Attard, Balzan, Iklin, Lija, Żebbuġ	+ 1.37%	+ 1.21%	+ 0.77%					
Western	6	Dingli, Mdina, Mtarfa, Rabat, Siġġiewi	+ 0.92%	+ 0.81%	+ 0.83%					
	Mean	Western Region	+ 1.17%	+ 1.03%	+ 0.79%					
	7	Birkirkara, Pietà, Ħamrun, Qormi	+ 0.41%	- 0.13%	- 0.10%					
Northern	8	Gzira, Msida, Pembroke, San Giljan,	+ 0.80%	- 0.17%	- 0.54%					
Harbour		San Gwann, Santa Venera, Sliema, Swieqi, Ta' Xbiex								
	Mean	Northern Harbour Region	+ 0.63%	- 0.15%	- 0.34%					
	9	Għargħur, Naxxar, San Pawl il-Baħar	+ 2.84%	+ 2.15%	+ 1.05%					
Northern	10	Mellieħa, Mġarr, Mosta	+ 2.31%	+ 1.80%	+ 1.59%					
	Mean	Northern Region	+ 2.57%	+ 1.97%	+ 1.32%					
Gozo	11	All Localities in Gozo and Comino	+ 1.11%	+ 0.83%	+ 0.99%					
	National	Mean	+ 1.07%	+ 0.59%	+ 0.49%					

Table 4a

4.2 Actual Year 2019 to Model Year 2029

The details presented in the tables below are excerpts taken from the Verification Exercise and are included to specifically highlight certain scenarios that may arise whilst operating the proposed system. As shown, the proposed system reacts effectively to the various situations and eventually establishes the number of Districts in each Region and also defines the number of Seats to be elected to parliament from each District respectively.

ACTUAL YEAR 2019										
Region	Registered Voters	Region Size Factor	Projected Number of Districts	Proposed Number of Districts	District	Registered Voters	Seats	Round-up Seats	Final Seats	
Southern	66 462	12 260	2 0/	2	1	31,472	5.806	6	6	
Harbour	00,402	12.200	2.04	2	2	34,990	6.455	6	7	
South	FF 114	10 1 67	1 0	ſ	3	29,324	5.409	5	5	
Eastern	55,114	10.167	1.69	Z	4	25,790	4.757	5	5	
Mostore	50 252	0.200	1.55	2	5	27,875	5.142	5	5	
Western	50,353	9.209			6	22,478	4.146	4	4	
N a white a we			2.96	3	7	33,020	6.091	6	6	
Northern	96,277	17.760			8	27,586	5.089	5	5	
naibuui					9	35,671	6.580	7	7	
Northorn	FA 417	10.020	1 (7	2	10	26,483	4.885	5	5	
Northern	54,417	10.038	1.07	Z	11	27,934	5.153	5	5	
Gozo	29,800	5.497	0.92	1	12	29,800	5.497	5	5	
TOTAL	352,423			12		352,423		64	65	
(Electoral C	uota = 352,4	23 ÷ 65 =	5,421)	(Number of	(Number of Seats = District Registered Voters ÷ 5,421)					

-			41.
Ia	DI	e	40

As for Verification Exercice 1 & 2, Table 4b above shows the proposed mathematical method to be used to establish the number of Districts within the fixed Regions and also to determine the number of Seats to be elected from each District.

The "regional size factor" in Table 4b is determined for each Region by dividing the number of registered voters in each Region by the national Electoral Quota. These respective factors are then divided by the average number of Seats allowed in each district: $(4 + 8) \div 2 = 6$, so as to define the proposed number of Districts to be allocated to each Region. The other part of Table 4b indicates the number of Seats to be allocated to each District. The two parts of the table are to be analysed together so as to be able to decide on the best possible structure to be adopted. In this case, the Regions are being proposed to be divided into 12 Districts. The second part of Table 4b shows that the Seats allocated to each defined District are within the set limits of 4 to 8 Seats. This solution is adopted for Actual Year 2019 and Model Year 2029.

4.3 Model Year 2039 to Model Year 2109

This is the second set of Model Years being considered. A different scenario is encountered. Different from Table 4b above, the first part of Table 4c below shows that an 11 District format is being proposed with all the Regions in mainland Malta having 2 Districts each and Gozo defined as 1 District. The second part of Table 4b shows that the Seats to be allocated to each defined District are within the set limits of 4 to 8 Seats. This solution is adopted for all years from Model Year 2039 to Model Year 2109.

Table 4c

MATHEMATICAL MODEL YEAR 2039												
Region	Registered	Region	Projected	Proposed	District	Registered	Seats	Round-up	Final			
	Voters	Size	Number	Number		Voters		Seats	Seats			
		Factor	of Districts	of Districts								
Southern	68 024	11 204	1 00	2	1	31,345	5.250	5	5			
Harbour	06,034	11.594	11.394	1.90	Z	2	36,689	6.145	6	6		
South	67.024	11 225	1.87	ſ	з	36,540	6.120	6	6			
Eastern	67,024	11.225		1.07	1.07	1.07	1.07	Z	4	30,484	5.105	5
Western	58 352 9 773 1 63	1 ()		5	32,197	5.392	5	6				
western	58,352	9.773	1.63	1.05	1.03	Z	6	26,155	4.380	4	5	
Northern	00 497	15 154	2 5 2	2	7	42,790	7.166	7	7			
Harbour	90,487	15.154	2.55	Z	8	47,697	7.988	8	8			
Northorn	C0 C04	11 400	1 01	ſ	9	31,950	5.351	5	5			
Northern	08,004	11.490	1.91	Z	10	36,654	6.139	6	6			
Gozo	35,676	5.975	1.00	1	11	35,676	5.975	6	6			
TOTAL	388,177			11		388,177		63	65			
(Electoral C	uota = 388,1	77 ÷ 65 =	5,971)	(Number of	(Number of Seats = District Registered Voters ÷ 5.971)							

It has been shown that all scenarios encountered in Verification Exercise 3 were all reasonably solved. The Districts defined within the fixed Regions only required to be revised once over the 90 year period covered by this Verification Exercise.

4.4 Summary of Number of Seats Allocated

Table 4d summerises all the Seats allocated to the Dstricts in the two different scenarios encountered in Verification Exercise 3 for Actual Year 2019 and for Model Years 2029 to 2109. As can be seen, there is a progressive flow from one year to another in the number of Seats allocated.

SUMMARY	SUMMARY OF DISTRIBUTION OF SEATS IN VERIFICATION EXERCISE 2											
	Actual			Mat	hematio	al Mod	el Year					
Region	Year 2019	2029	2039	2049	2059	2069	2079	2089	2099	2109		
Southern	6	5	5	5	5	5	4	4	4	4		
Harbour	7	6	6	6	6	6	6	6	6	6		
South	5	6	6	6	7	7	7	7	7	7		
Eastern	5	5	5	5	5	5	5	5	6	6		
Western	5	5	6	6	6	6	6	6	6	6		
western	4	4	5	4	4	5	5	5	5	5		
Northorn	6	6	7	7	6	6	6	5	5	5		
Harbour	5	5	0	7	7	c	C	6	-	_		
naibuui	7	6	ŏ	/	/	0	0	D	5	5		
Northorn	5	5	5	6	6	6	6	6	6	6		
Northern	5	6	6	7	7	7	7	8	8	8		
Gozo	5	6	6	6	6	6	7	7	7	7		
TOTAL	65	65	65	65	65	65	65	65	65	65		
	12 DIST	RICTS				11 DIS	TRICTS					

Table 4d

4.5 District Quota Value

Table 4e is considered to be the most important table in Verification Exercise 3. It shows that the percentage deviation of the District Quota values from the Mean District Quota value are reasonably controlled. They vary between + 1.20% to + 13.31% and – 0.08% to – 12.39%. When comparing these figures with the + 9.07% figure, this being the % Deviation Value for the District of Gozo in the last general election in 2017, it can be concluded that such figures should be considered as being reasonable figures. In the coming general elections, the figure for the % Deviation for the presently only fixed District (Gozo) would be expected to rise again nearing more to the resultant figures from Valuation Exercise 3 that are listed in Table 4e.

Summary	of % Dev	viation of [District Qu	ota Value	from Mea	n District	Quota			
	Actual		Μ	athematica	l Model Ye	ar				
Region	Year 2019	2029	2039	2049	2059	2069	2079	2089	2099	2109
Southern	-3.24%	+10.21%	+4.99%	+0.41%	-3.60%	-7.11%	+12.25%	+8.86%	+5.85%	+3.18%
Harbour	-7.79%	+4.76%	+2.41%	+0.45%	-1.18%	-2.56%	-3.72%	-4.69%	-5.53%	-6.26%
South	+8.19%	-3.49%	+1.99%	+6.64%	-5.20%	-2.28%	+0.23%	+2.43%	+4.33%	+6.00%
Eastern	-4.85%	-1.05%	+2.11%	+4.66%	+6.77%	+8.51%	+9.96%	+11.18%	-6.50%	-5.78%
Western	+2.84%	+5.48%	-10.13%	-8.42%	-6.92%	-5.61%	-4.45%	-3.41%	-2.51%	-1.71%
western	+3.66%	+6.87%	-12.39%	+11.61%	+13.31%	-8.25%	-7.35%	-6.66%	-5.98%	-5.48%
	+1.52%	-3.30%	+2.38%	-3.07%	+7.36%	+2.21%	-2.41%	+12.11%	+7.61%	+3.54%
Northern Harbour	+1.77%	-7.72%	0.15%	LE 200/	2.02%	17 4 40/	1.000/	2.05%		18.03%
	-6.00%	-1.11%	-0.15%	+5.20%	-2.02%	+7.44%	+1.80%	-2.85%	+11.92%	+8.02%
Northorn	-2.29%	+2.75%	+7.02%	-7.87%	-5.41%	-3.34%	-1.58%	-0.08%	+1.20%	+2.30%
Northern	+3.06%	-5.33%	+2.31%	-6.72%	-1.92%	+2.21%	+5.80%	-4.69%	-2.29%	-0.20%
Gozo	+9.94%	-4.12%	-0.42%	+2.71%	+5.39%	+7.69%	-6.00%	-4.52%	-3.24%	-2.12%

Table 4e

5. CONCLUSION

Through the three Verification Exercises outlined in this paper, it has been shown that the proposed system of utilising the fixed Regions of Malta subdivided into Districts would stand the test of time when they are utilised as Electoral Divisions and would also provide good acceptable workable solutions. No restrictive conditions were imposed. The fixed Regions were accepted as being the natural limits for the Districts defined within them. And whilst the number and size of the Districts varied, the total number of Seats to be elected to parliament fixed at 65 as required at law was always respected. No Locality was ever divided up as a result of pre-fixed limits for the number of registered voters in each District as is the norm today. The Locality boundaries as defined by law were all respected. The format of the fixed Regions was always respected, whichever format was utilised in the three different exercises. The revision of the Districts within the fixed Regions was only needed at lengthy intervals, namely, three times in the first exercise and only once in each of the second and third exercises. And above all, reasonable deviations were achieved for the District Quota values from the National Mean. Three fixed Region formats were studied in this study paper. It is hoped that this would generate interest in the necessary revision of the established fixed Regions of Malta that needs to be done so that the Regions could also be utilised as a basis for the inclusion of Electoral Divisions within their boundaries. Hopefully also, all the main entities in Malta would align their organisational structure in line within the finally defined Regions of Malta format.

APPENDIX 1 MAP OF "WHITE PAPER" SIX REGIONS OF MALTA



APPENDIX 2 MAP OF "LOCAL GOVERNMENT ACT 2019" SIX REGIONS OF MALTA SUBDIVIDED INTO DISTRICTS



APPENDIX 3 MAP OF "ALTERNATIVE" SIX REGIONS OF MALTA SUBDIVIDED INTO DISTRICTS





