

Supplementary Figure 7

Cluster/population associations: Heatmaps representing the odds ratios of clusters/population associations for each gene, and for both country and continent are shown. The cells are coloured based on the logarithmic value of the correspondent odds ratios, and the absolute values are reported. Significant cluster/population associations are marked by blue borders. Clusters with less than 3 isolates were excluded from the analysis.

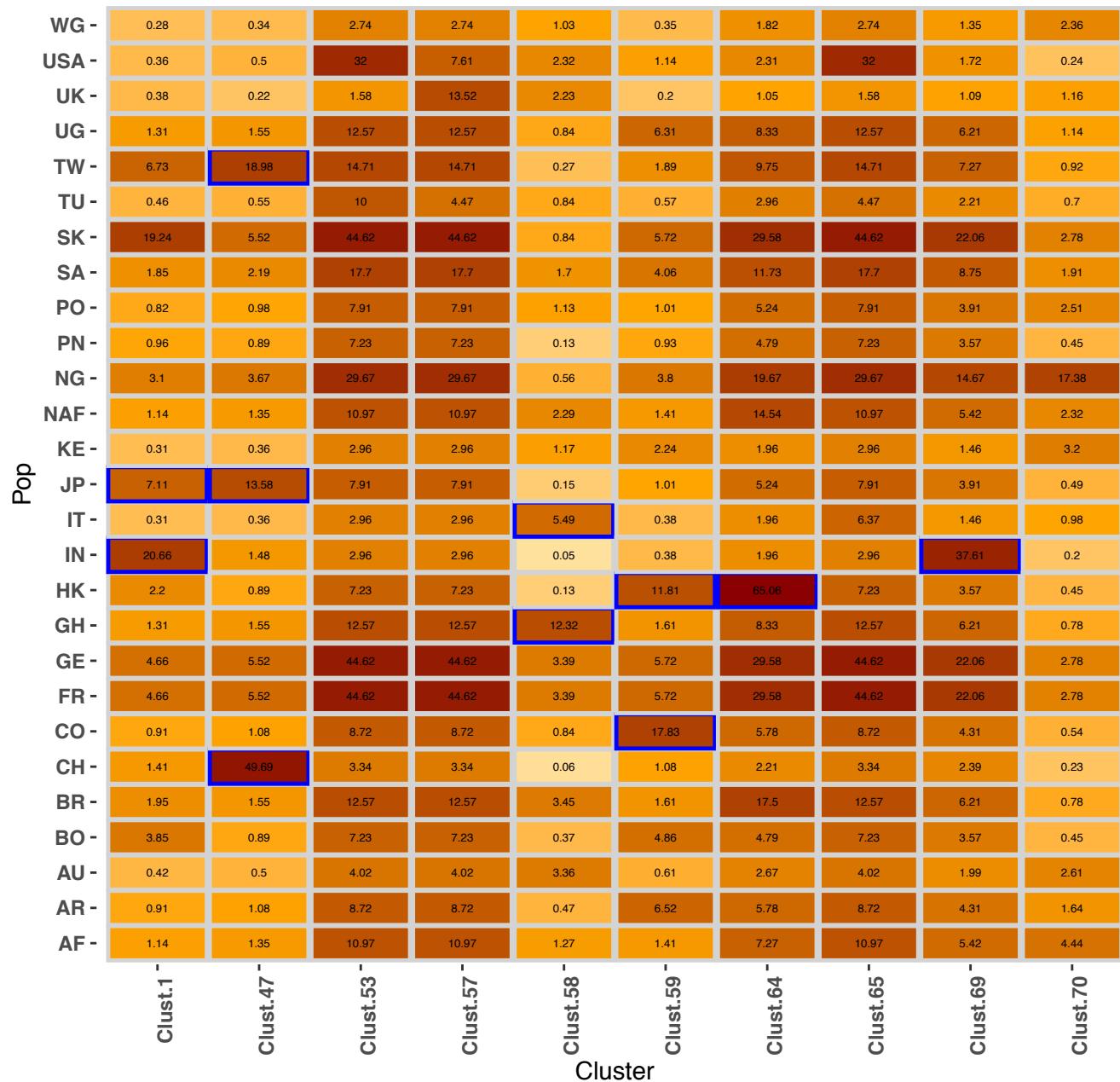
The heatmaps were generated for both max CGS and max MCC cuts.

BDLF4 : grouping per country – max CGS

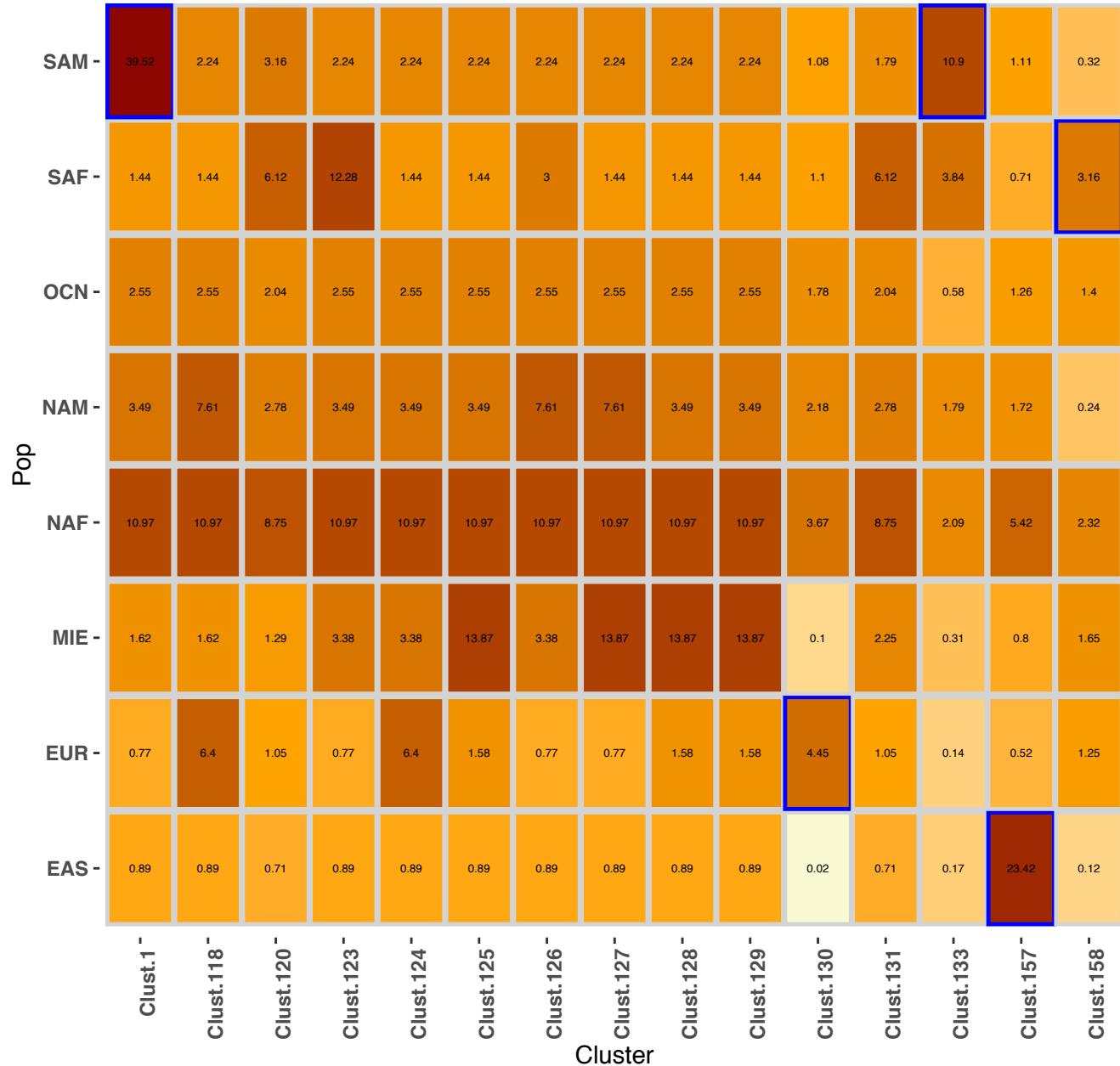
Pop	WG -	USA -	UK -	UG -	TW -	TU -	SK -	SA -	PO -	PN -	NG -	NAF -	KE -	JP -	IT -	IN -	HK -	GH -	GE -	FR -	CO -	CH -	BR -	BO -	AU -	AR -	AF -
	2.74	2.74	2.19	5.88	5.88	24.44	5.88	2.74	2.74	24.44	0.09	3.9	0.52	1.35	2.36												
	3.49	7.61	2.78	3.49	3.49	3.49	7.61	7.61	3.49	3.49	2.18	2.78	1.79	1.72	0.24												
	1.58	13.52	1.26	1.58	1.58	1.58	1.58	1.58	1.58	1.58	3.56	2.19	0.3	1.09	1.16												
	12.57	12.57	10.03	12.57	12.57	12.57	12.57	12.57	12.57	12.57	1.34	10.03	9.91	6.21	1.14												
	14.71	14.71	11.73	14.71	14.71	14.71	14.71	14.71	14.71	14.71	0.43	11.73	2.81	7.27	0.92												
	4.47	4.47	3.57	4.47	4.47	4.47	4.47	42.62	42.62	4.47	0.15	3.57	0.85	2.21	0.7												
	44.62	44.62	35.6	44.62	44.62	44.62	44.62	44.62	44.62	44.62	1.32	35.6	8.53	22.06	2.78												
	17.7	17.7	14.12	17.7	17.7	17.7	59	17.7	17.7	17.7	0.52	14.12	6.26	8.75	1.91												
	7.91	7.91	12.85	7.91	19.33	7.91	7.91	7.91	19.33	19.33	0.23	6.31	1.51	3.91	2.51												
	7.23	7.23	5.77	7.23	7.23	7.23	7.23	7.23	7.23	7.23	0.21	5.77	1.38	3.57	0.45												
	29.67	29.67	23.67	29.67	29.67	29.67	29.67	29.67	29.67	29.67	0.88	23.67	5.67	14.67	17.38												
	10.97	10.97	8.75	10.97	10.97	10.97	10.97	10.97	10.97	10.97	3.67	8.75	2.09	5.42	2.32												
	2.96	2.96	13.24	2.96	2.96	2.96	2.96	2.96	2.96	2.96	0.93	13.24	3.69	1.46	3.2												
	7.91	7.91	6.31	7.91	7.91	7.91	7.91	7.91	7.91	7.91	0.23	6.31	1.51	3.91	0.49												
	2.96	2.96	2.36	2.96	6.37	6.37	2.96	2.96	2.96	2.96	6.33	2.36	0.56	1.46	0.98												
	2.96	2.96	2.36	2.96	2.96	2.96	2.96	2.96	2.96	2.96	0.09	2.36	0.56	37.61	0.2												
	7.23	7.23	5.77	7.23	7.23	7.23	7.23	7.23	7.23	7.23	0.21	5.77	1.38	3.57	0.45												
	12.57	12.57	10.03	176.5	12.57	12.57	12.57	12.57	12.57	12.57	5.53	10.03	2.4	6.21	0.78												
	44.62	44.62	35.6	44.62	44.62	44.62	44.62	44.62	44.62	44.62	5.37	35.6	8.53	22.06	2.78												
	44.62	44.62	35.6	44.62	44.62	44.62	44.62	44.62	44.62	44.62	5.37	35.6	8.53	22.06	2.78												
	8.72	8.72	6.96	8.72	8.72	8.72	8.72	8.72	8.72	8.72	1.35	6.96	30.09	4.31	0.54												
	3.34	3.34	2.66	3.34	3.34	3.34	3.34	3.34	3.34	3.34	0.1	2.66	0.64	2.39	0.23												
	12.57	12.57	23.4	12.57	12.57	12.57	12.57	12.57	12.57	12.57	2.73	10.03	2.4	6.21	0.78												
	155.56	7.23	5.77	7.23	7.23	7.23	7.23	7.23	7.23	7.23	0.59	5.77	1.84	3.57	0.45												
	4.02	4.02	3.21	4.02	4.02	4.02	4.02	4.02	4.02	4.02	4.43	3.21	0.94	1.99	2.61												
	8.72	8.72	6.96	8.72	8.72	8.72	8.72	8.72	8.72	8.72	0.76	6.96	10.47	4.31	1.64												
	10.97	10.97	8.75	10.97	10.97	10.97	10.97	10.97	10.97	10.97	1.07	8.75	2.09	5.42	4.44												
	Clust. 1	Clust. 18	Clust. 120	Clust. 123	Clust. 124	Clust. 125	Clust. 126	Clust. 127	Clust. 128	Clust. 129	Clust. 130	Clust. 131	Clust. 133	Clust. 157	Clust. 158												

Cluster

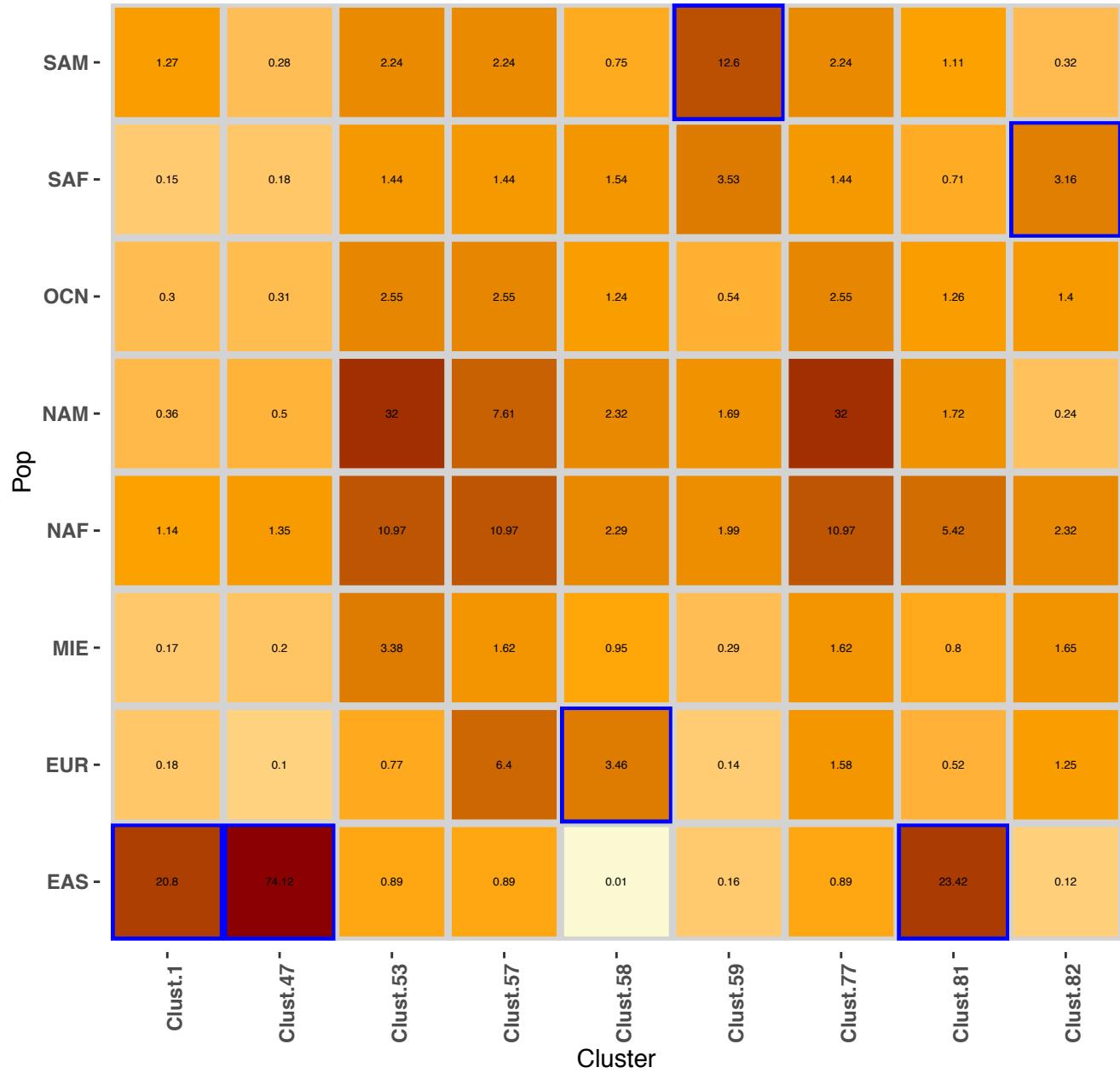
BDLF4 : grouping per country – Max MCC



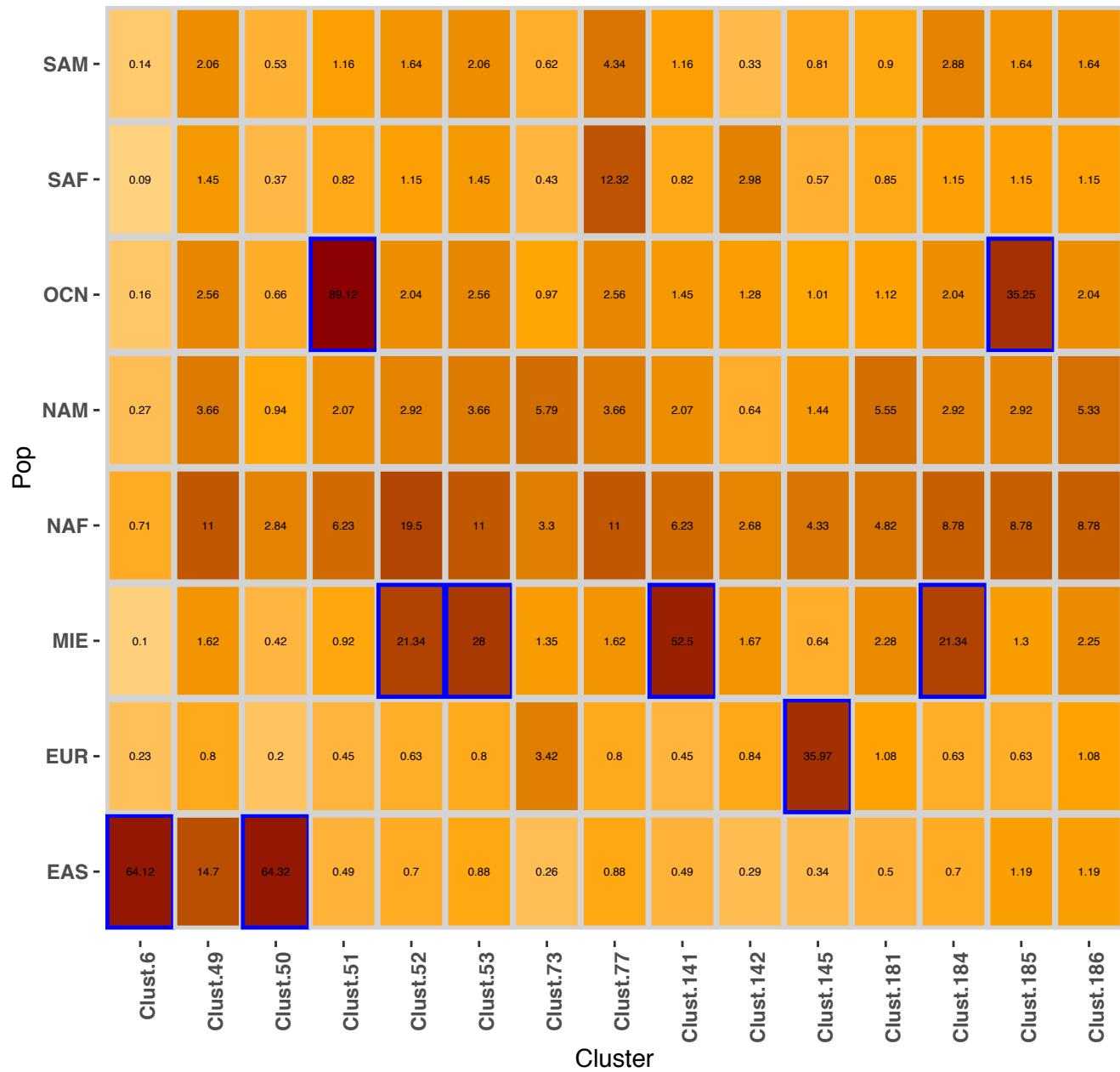
BDLF4 : grouping per continent – max CGS



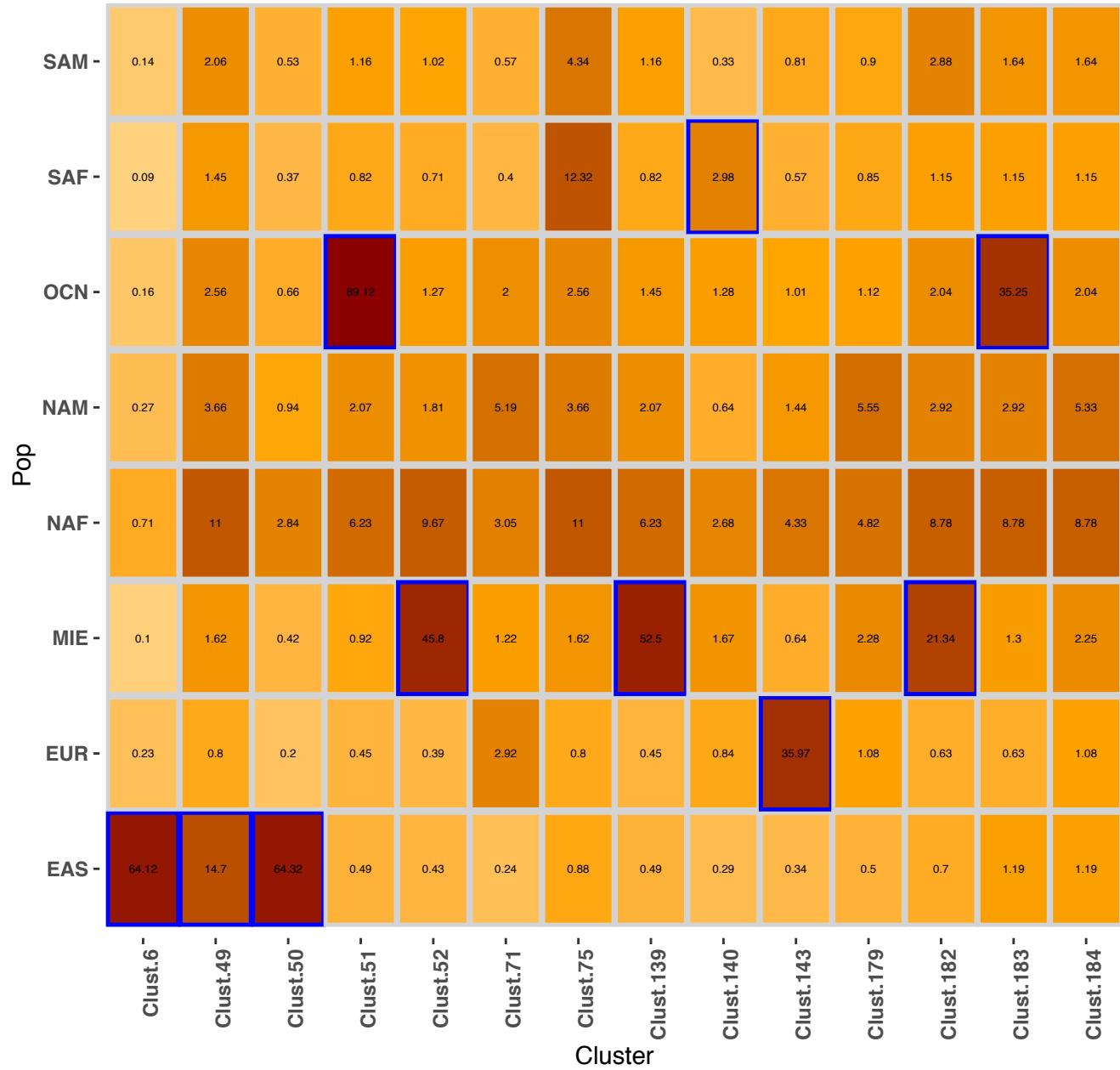
BDLF4 : grouping per continent – Max MCC



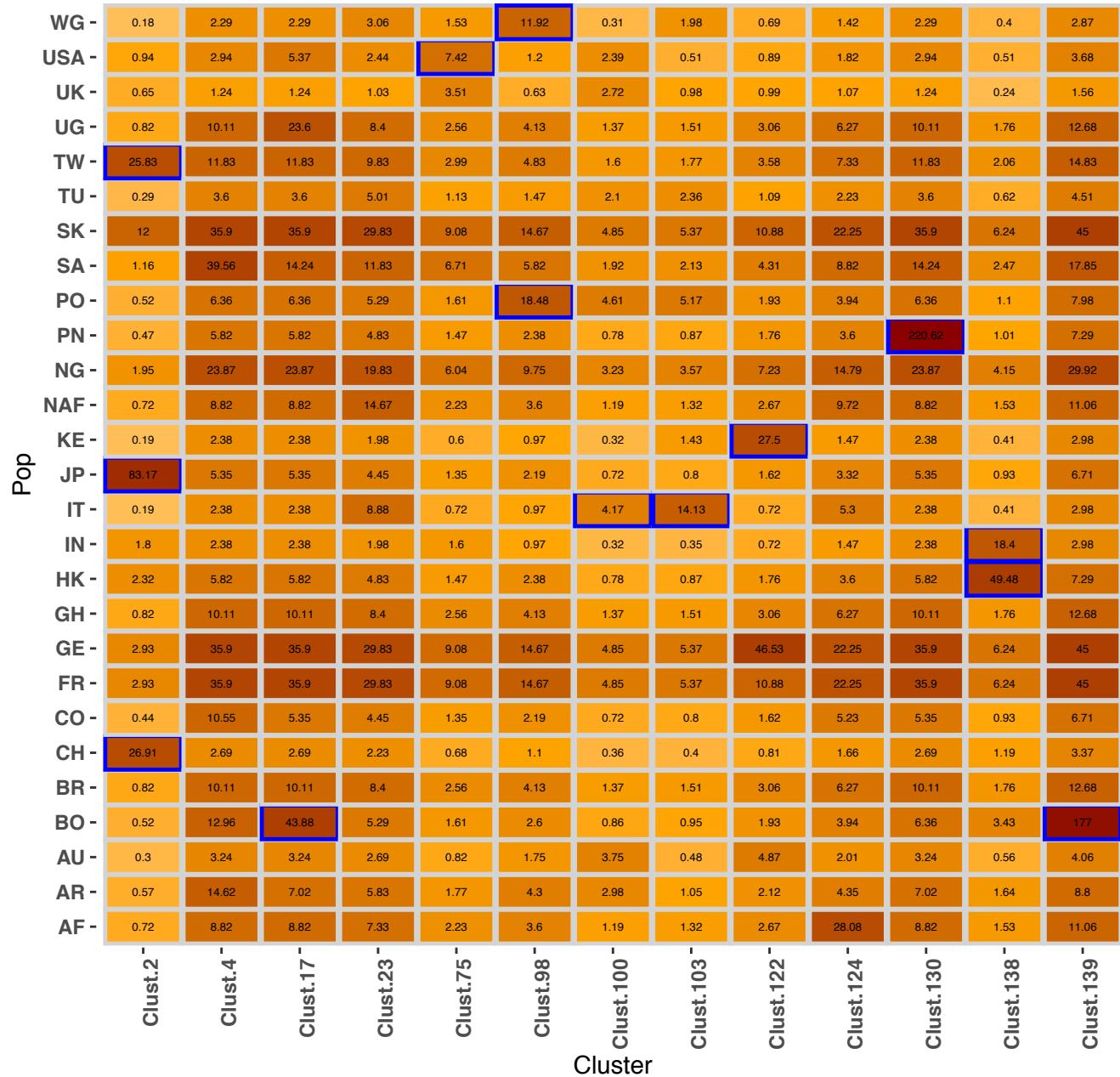
BGLF4 : grouping per continent – max CGS



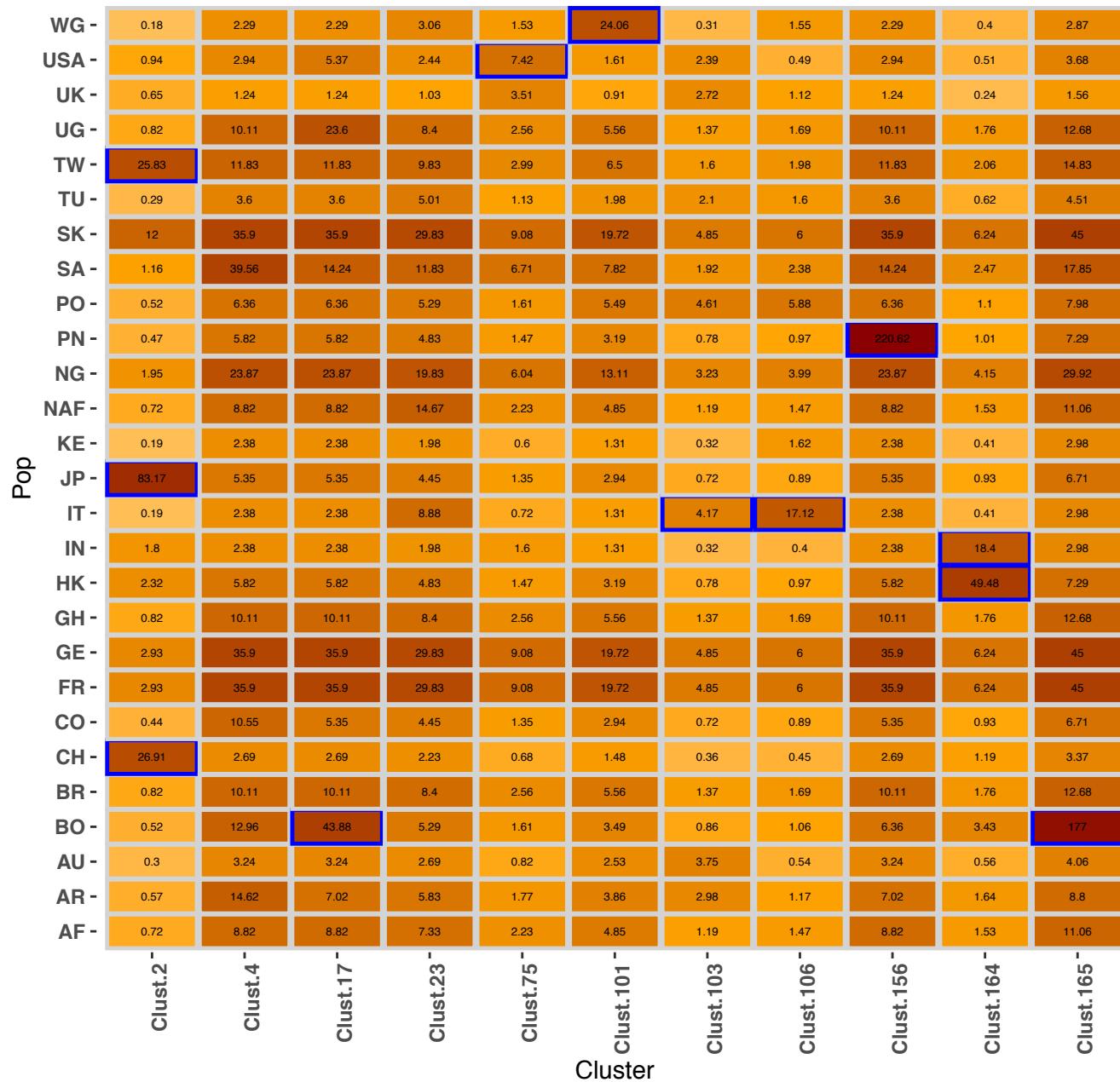
BGLF4 : grouping per continent – Max MCC



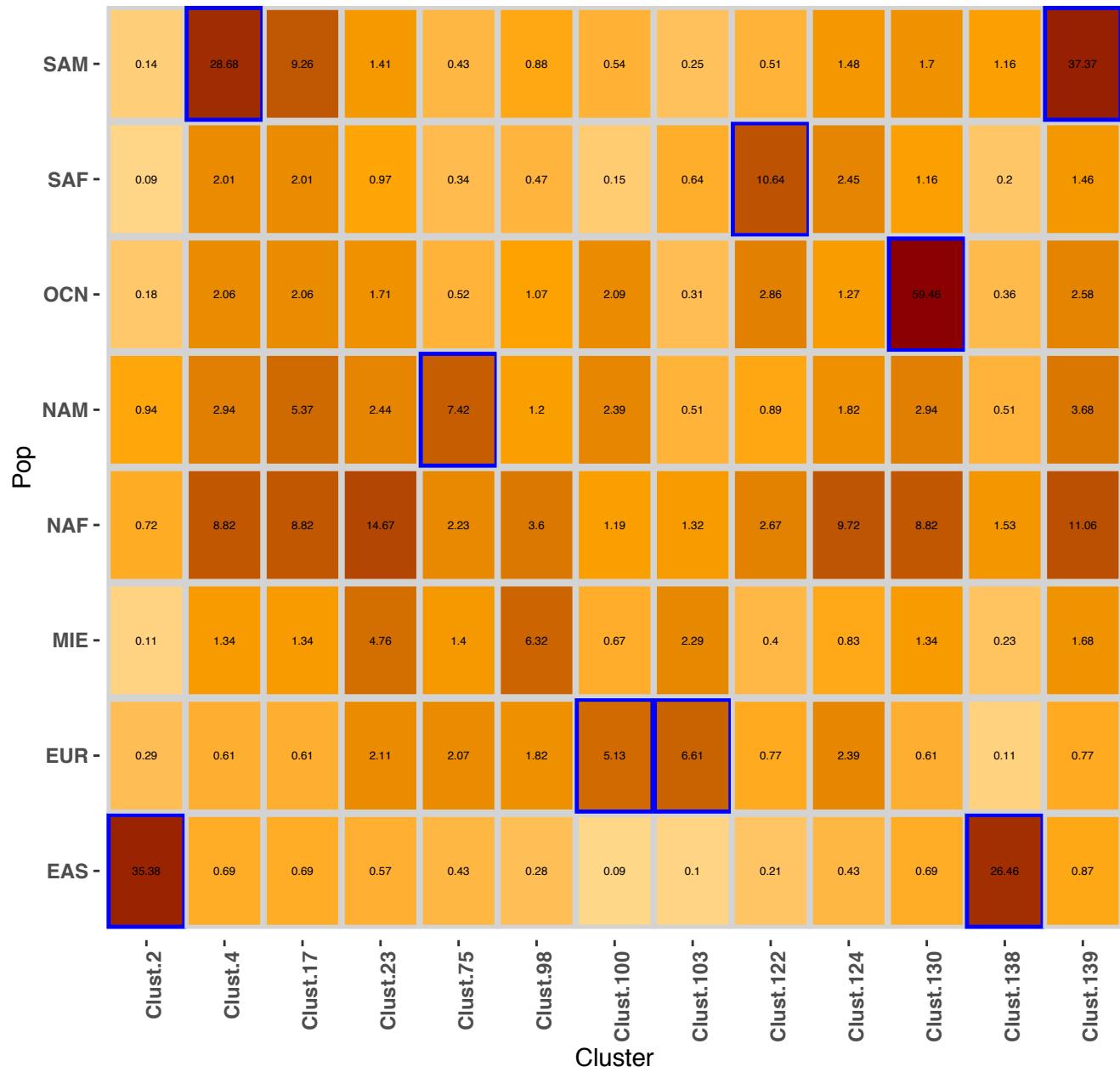
BHRF1 : grouping per country – max CGS



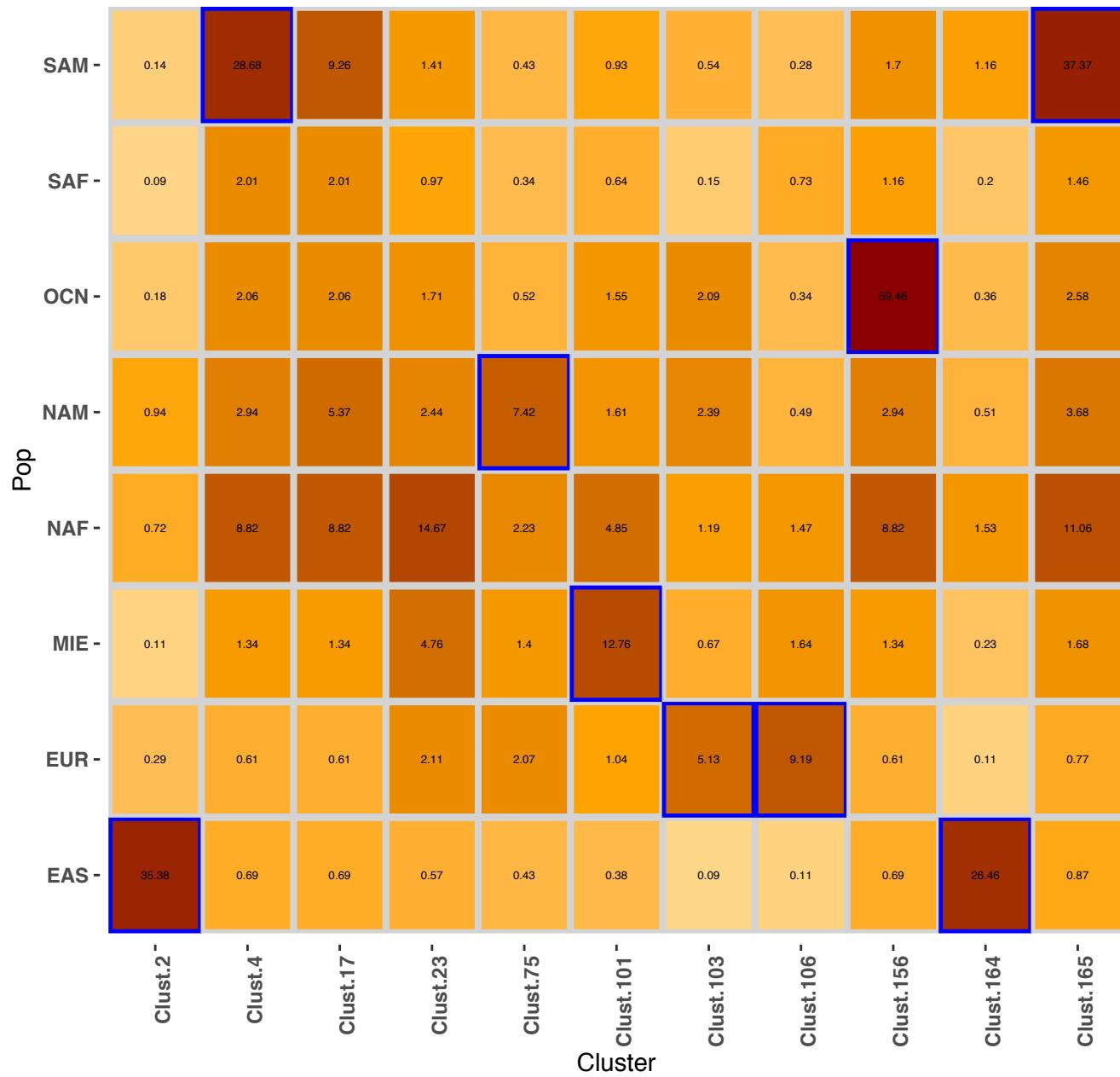
BHRF1 : grouping per country – Max MCC



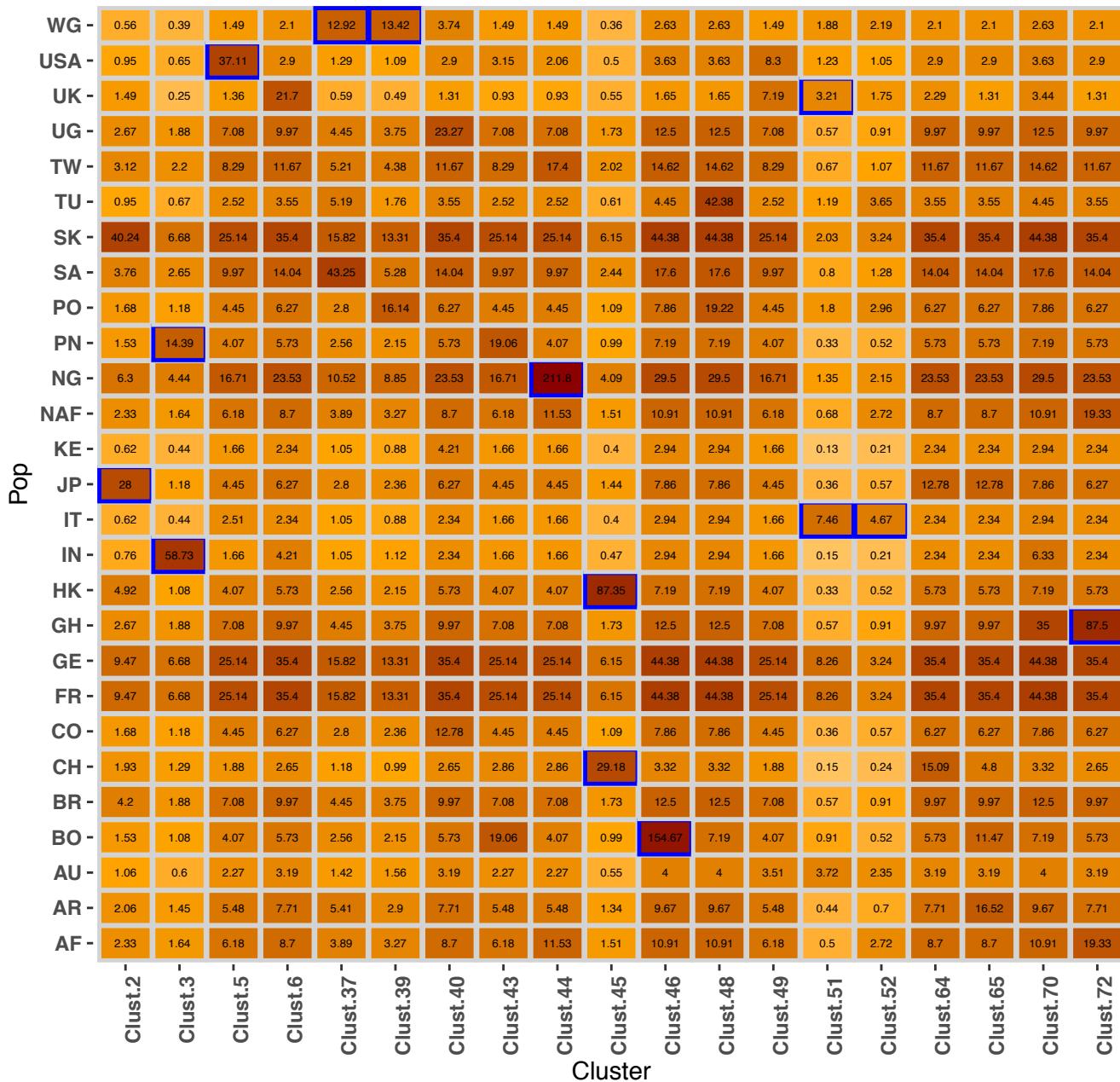
BHRF1 : grouping per continent – max CGS



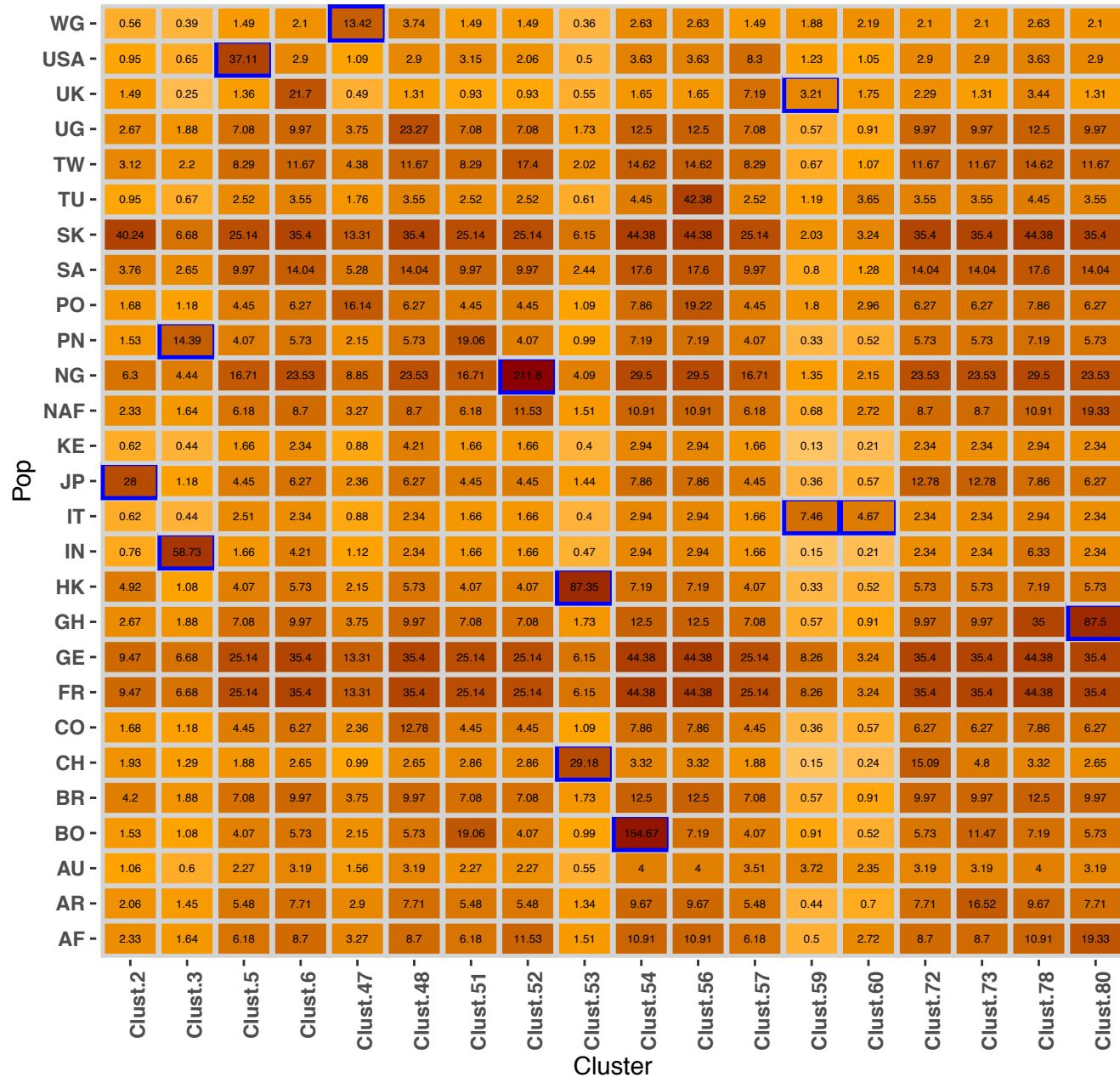
BHRF1 : grouping per continent – Max MCC



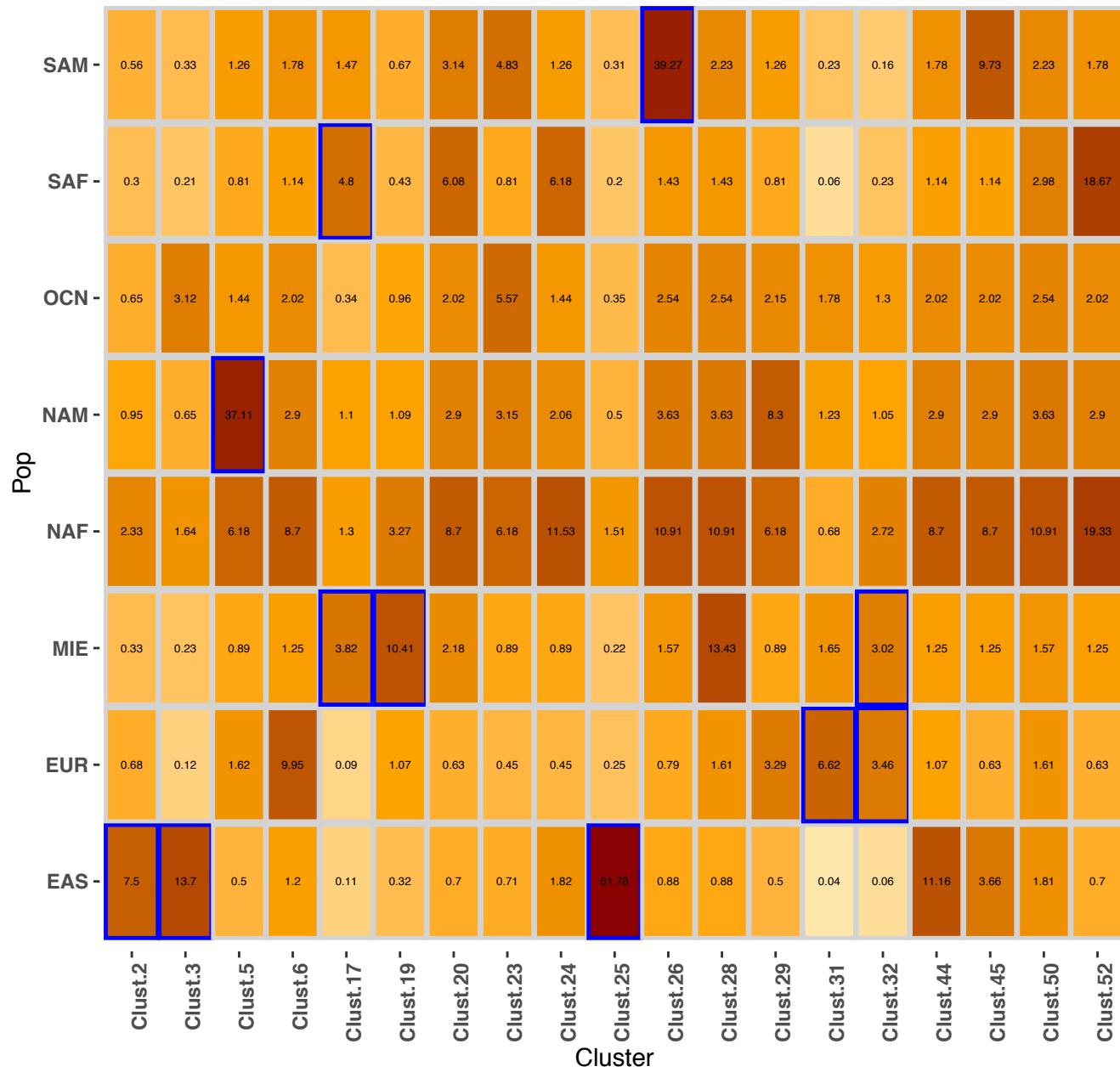
BRLF1 : grouping per country – max CGS



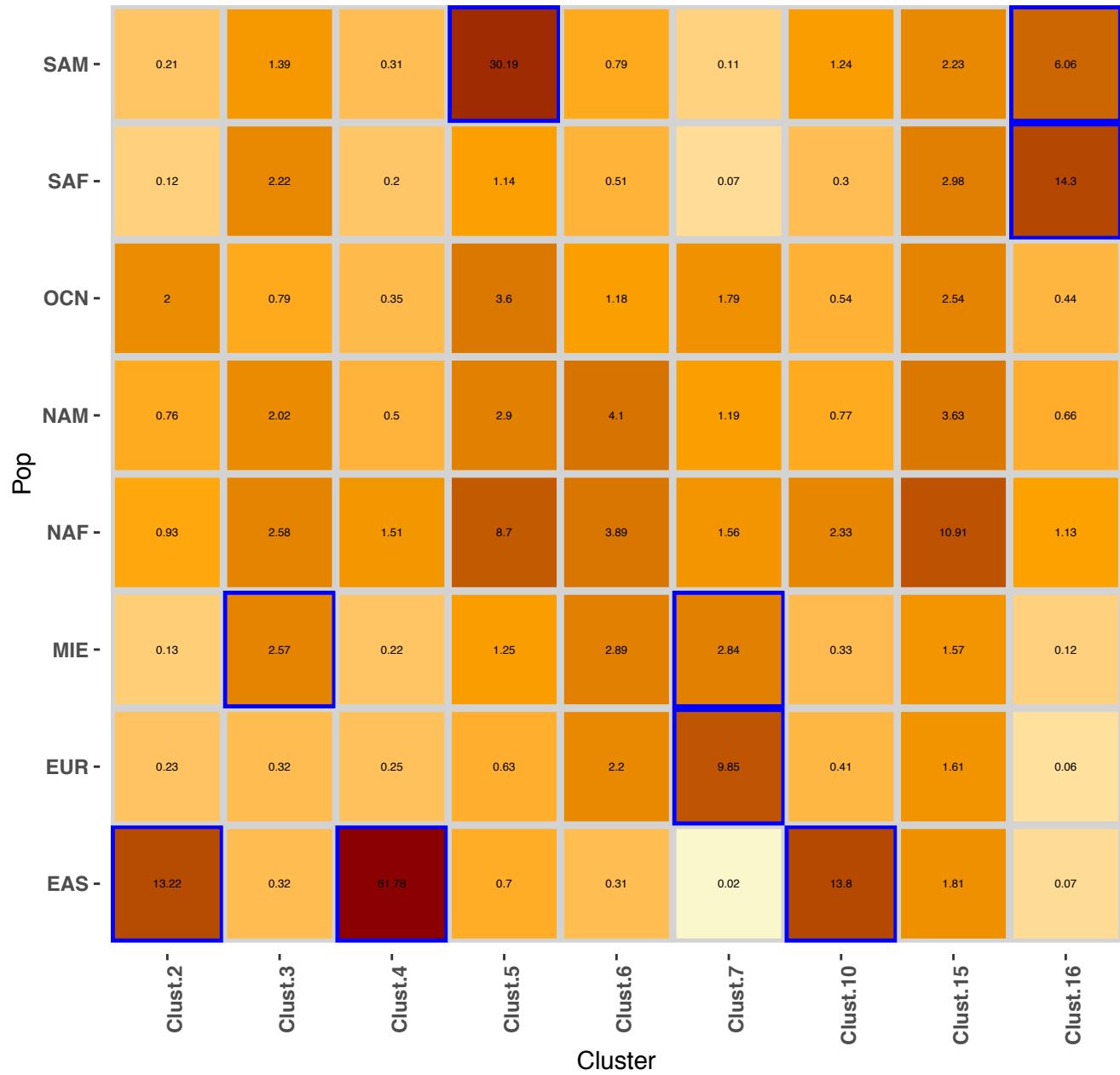
BRLF1 : grouping per country – Max MCC



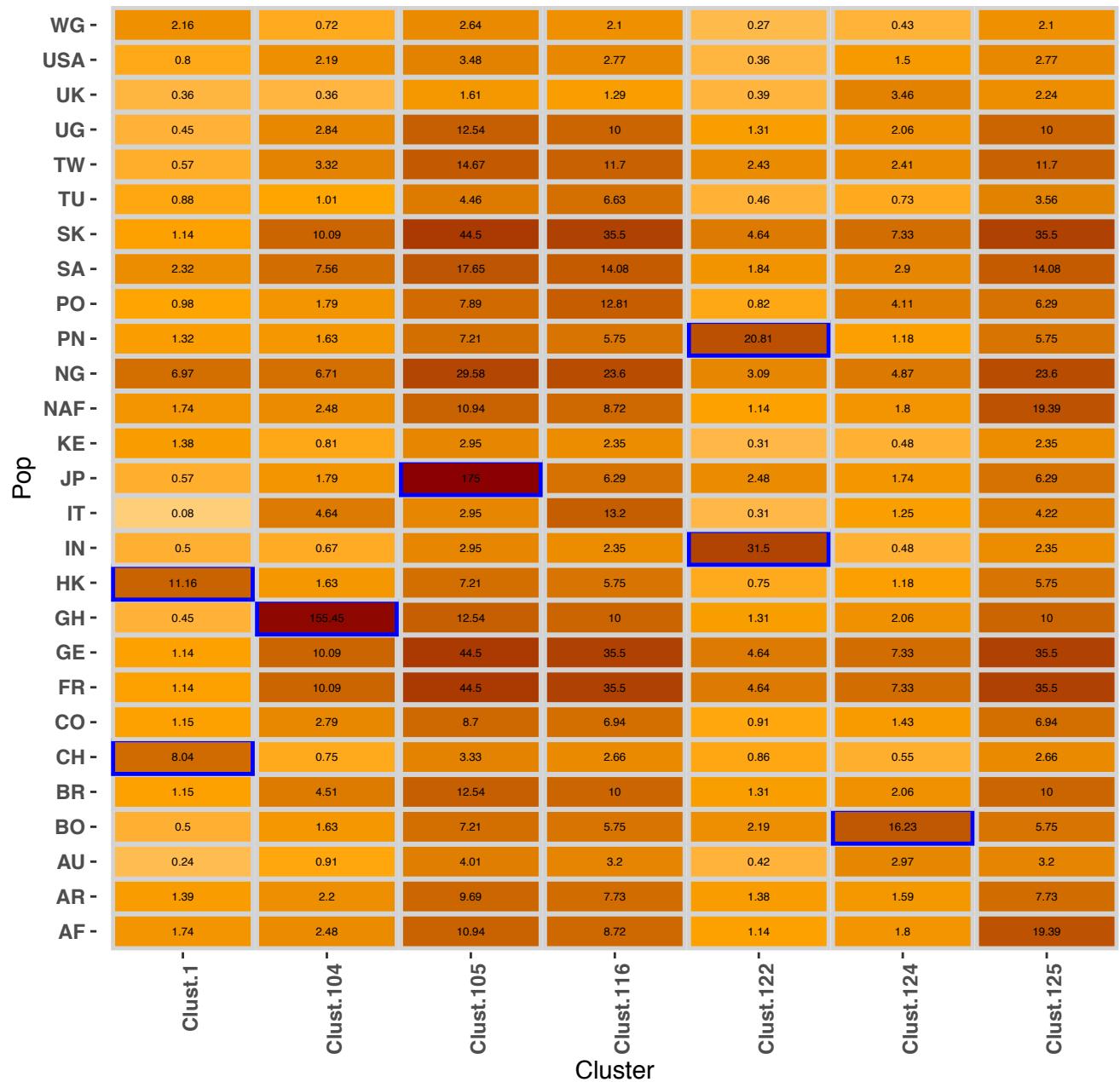
BRLF1 : grouping per continent – max CGS



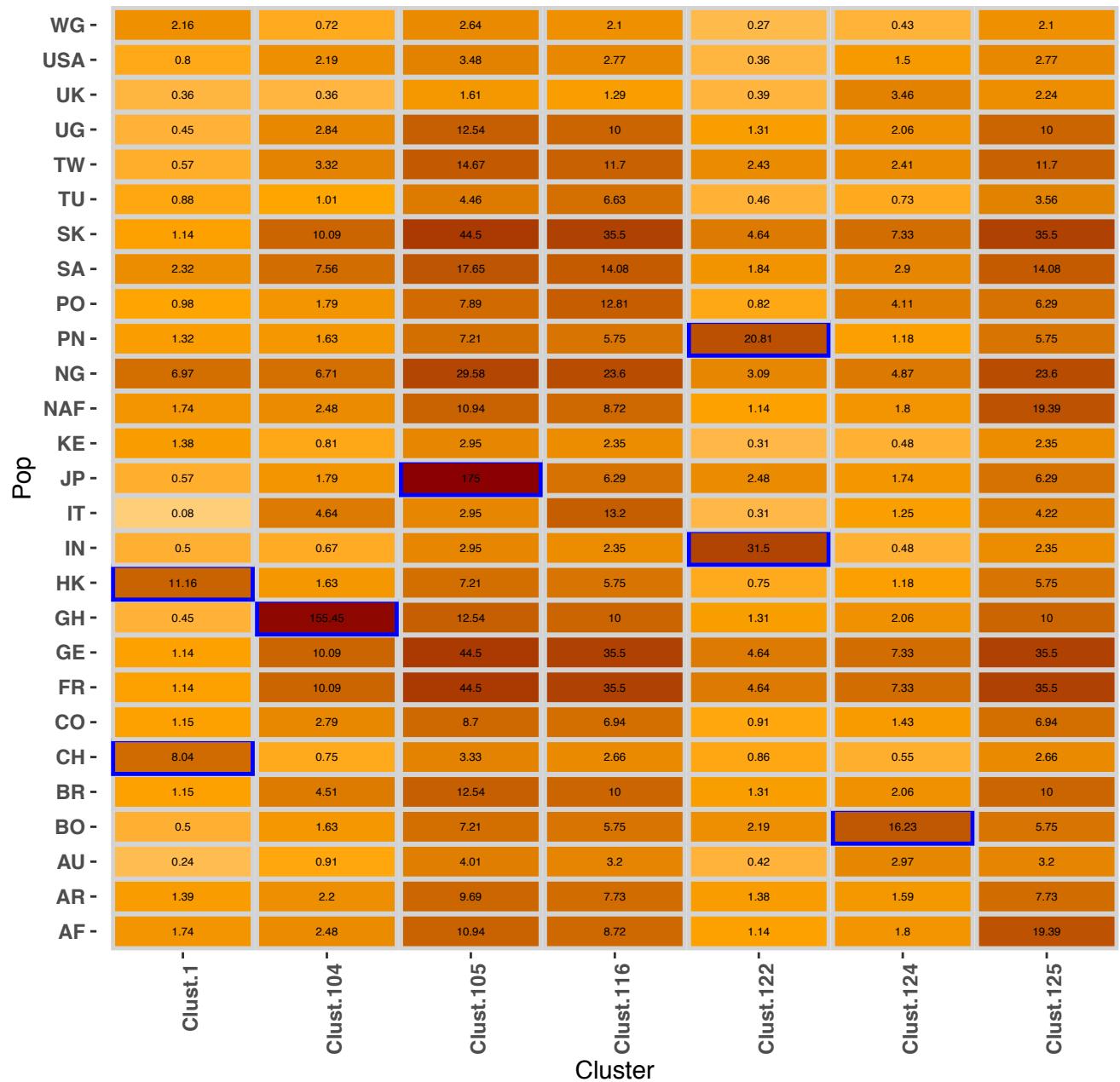
BRLF1 : grouping per continent – Max MCC



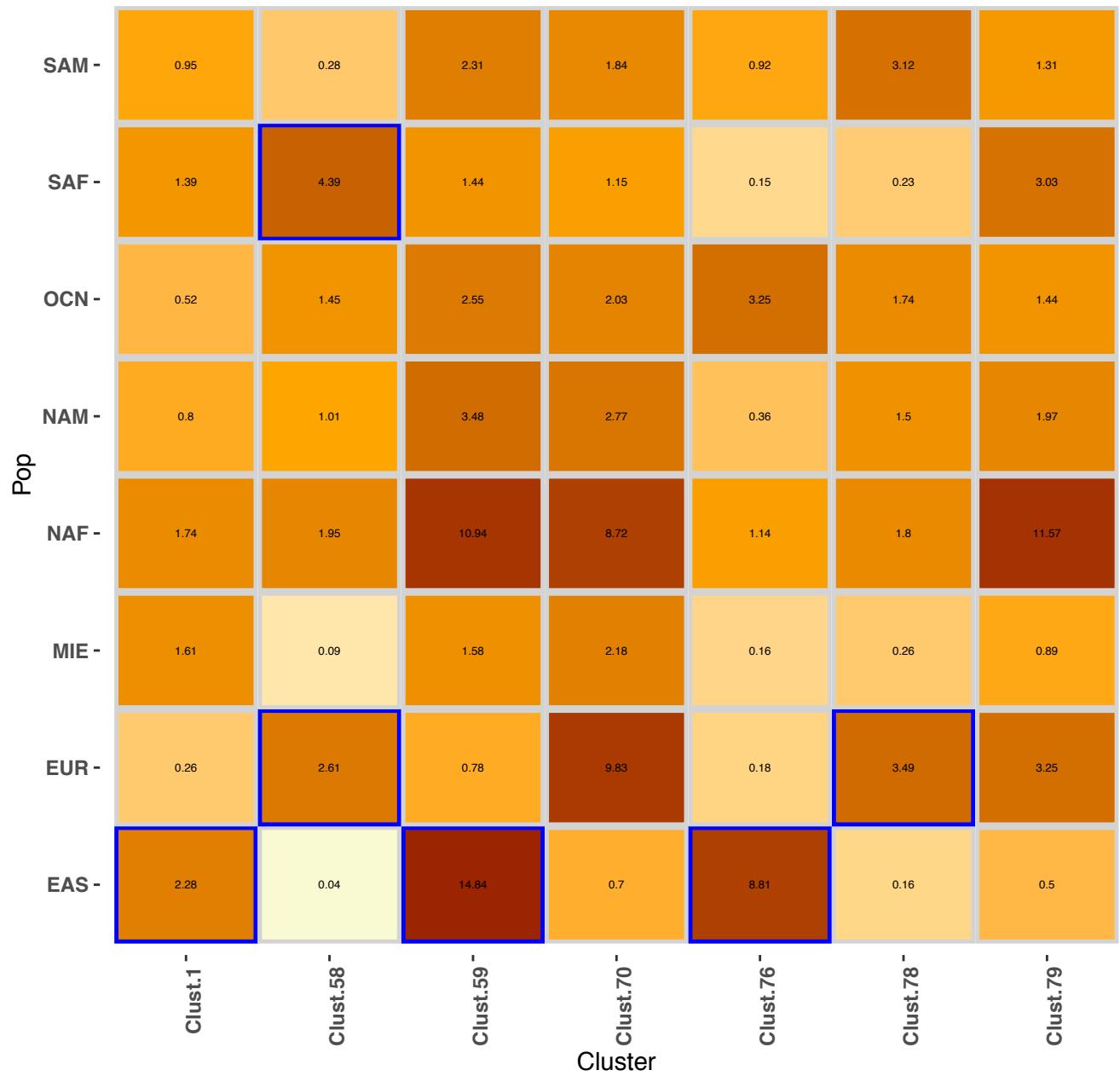
BZLF1 : grouping per country – max CGS



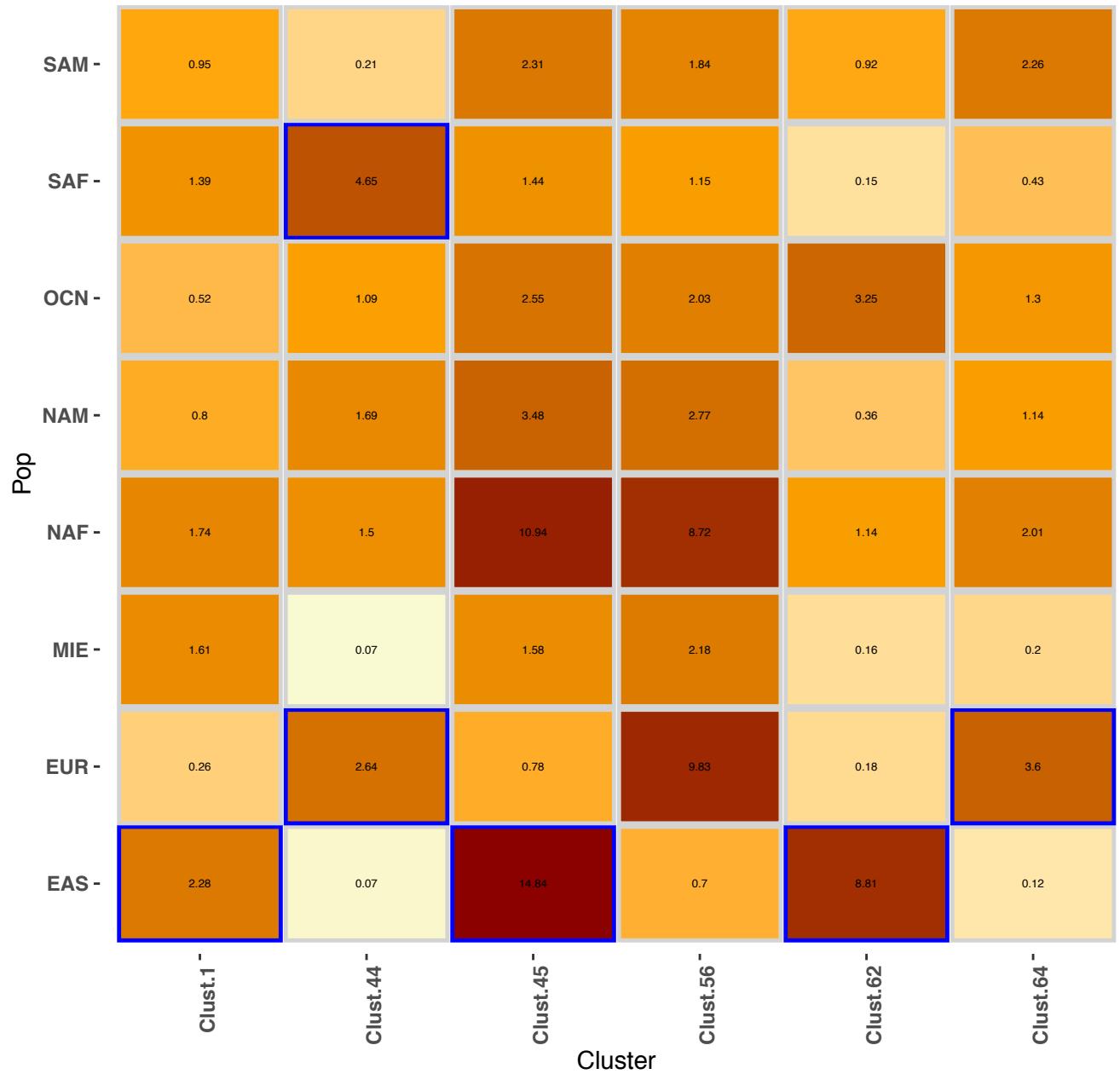
BZLF1 : grouping per country – Max MCC



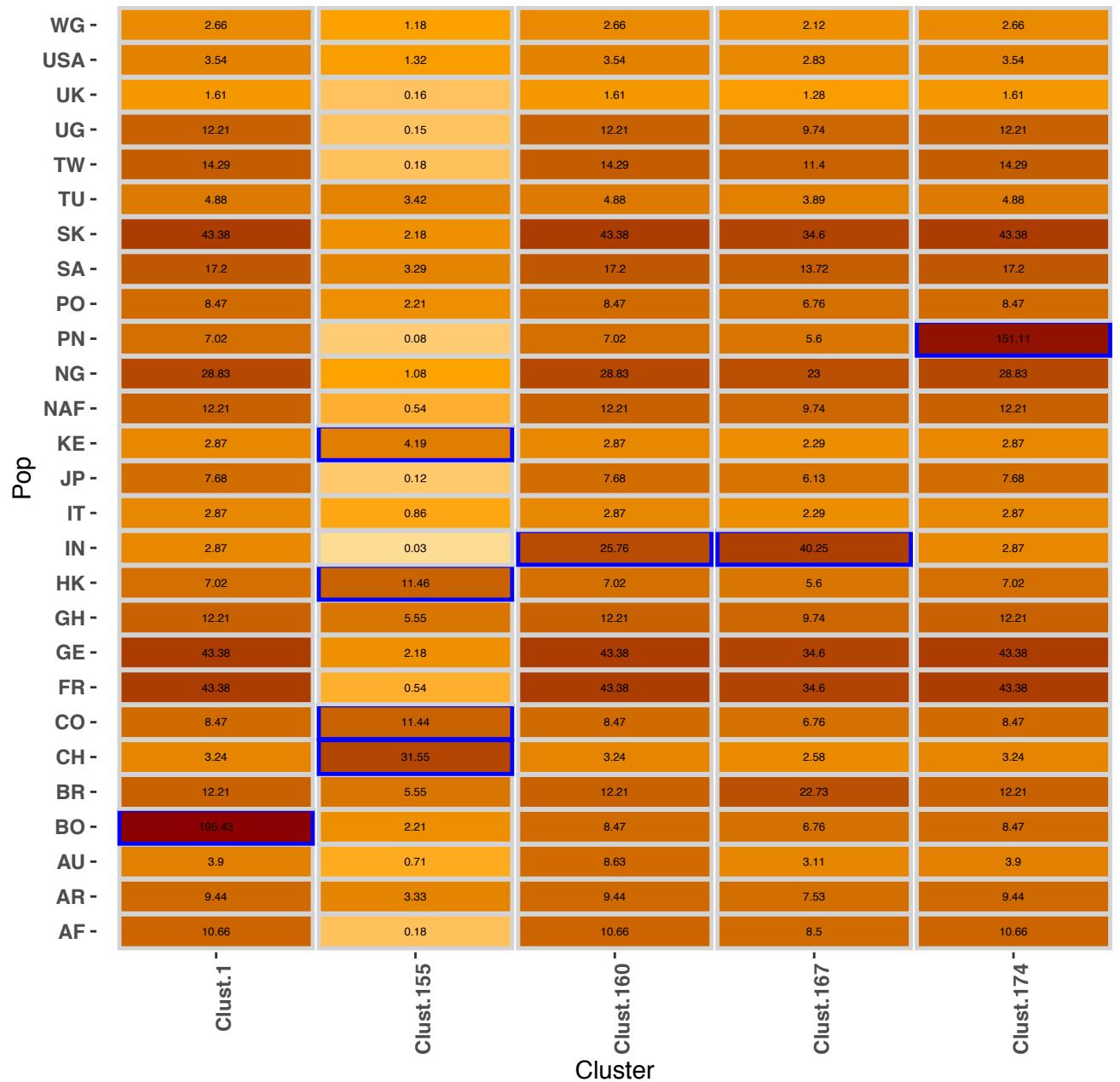
BZLF1 : grouping per continent – max CGS



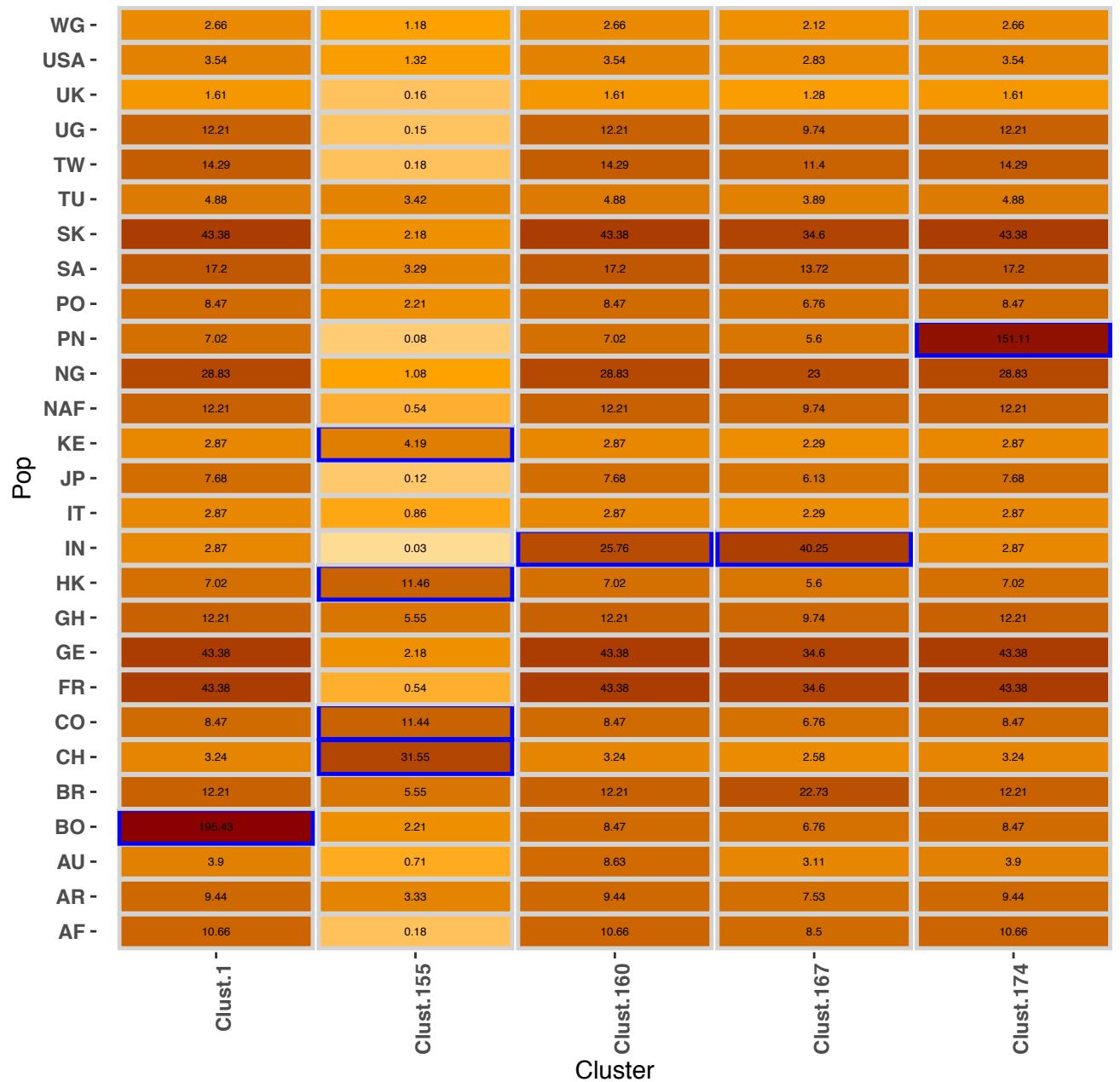
BZLF1 : grouping per continent – Max MCC



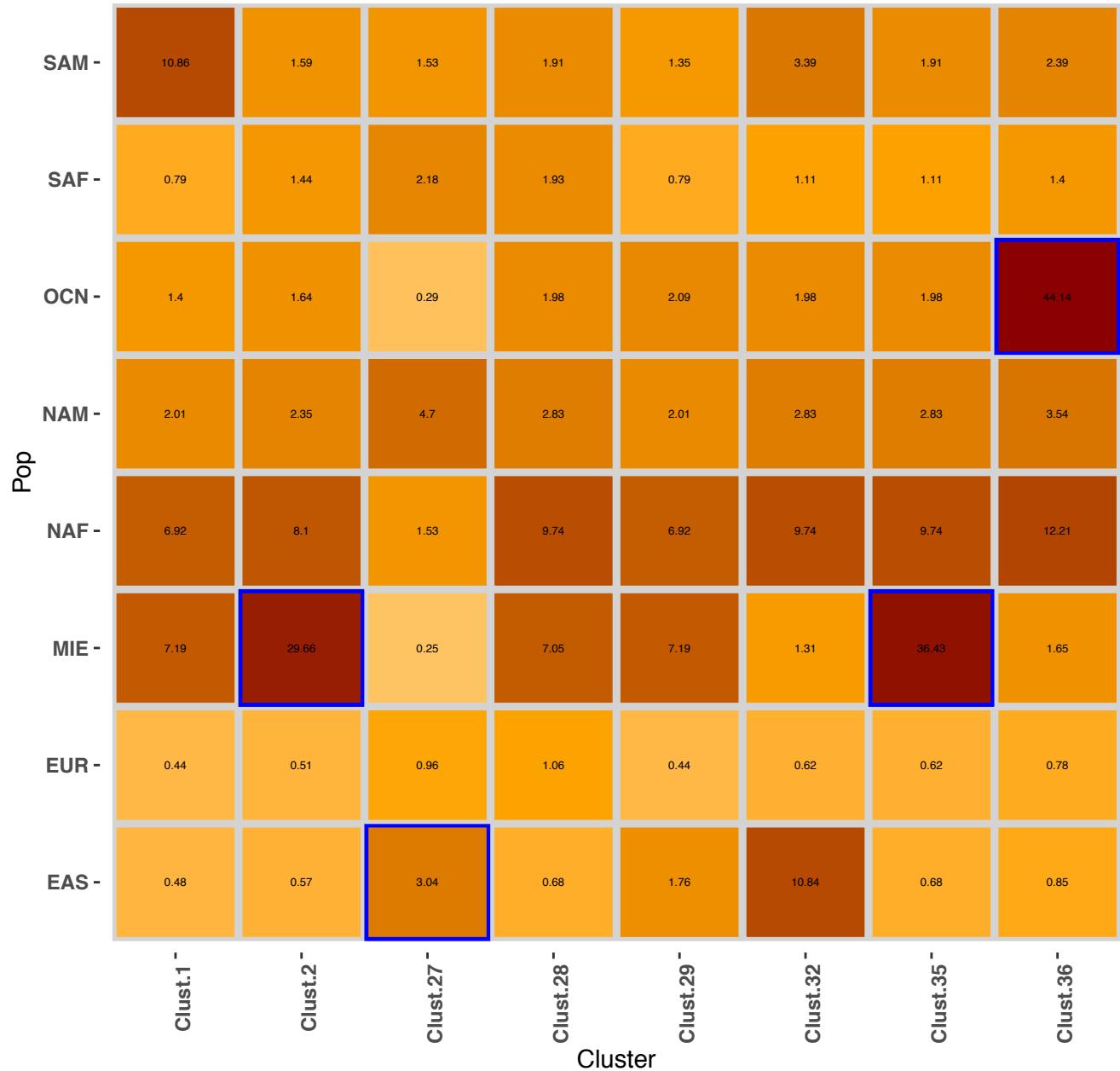
EBER-1 : grouping per country – max CGS



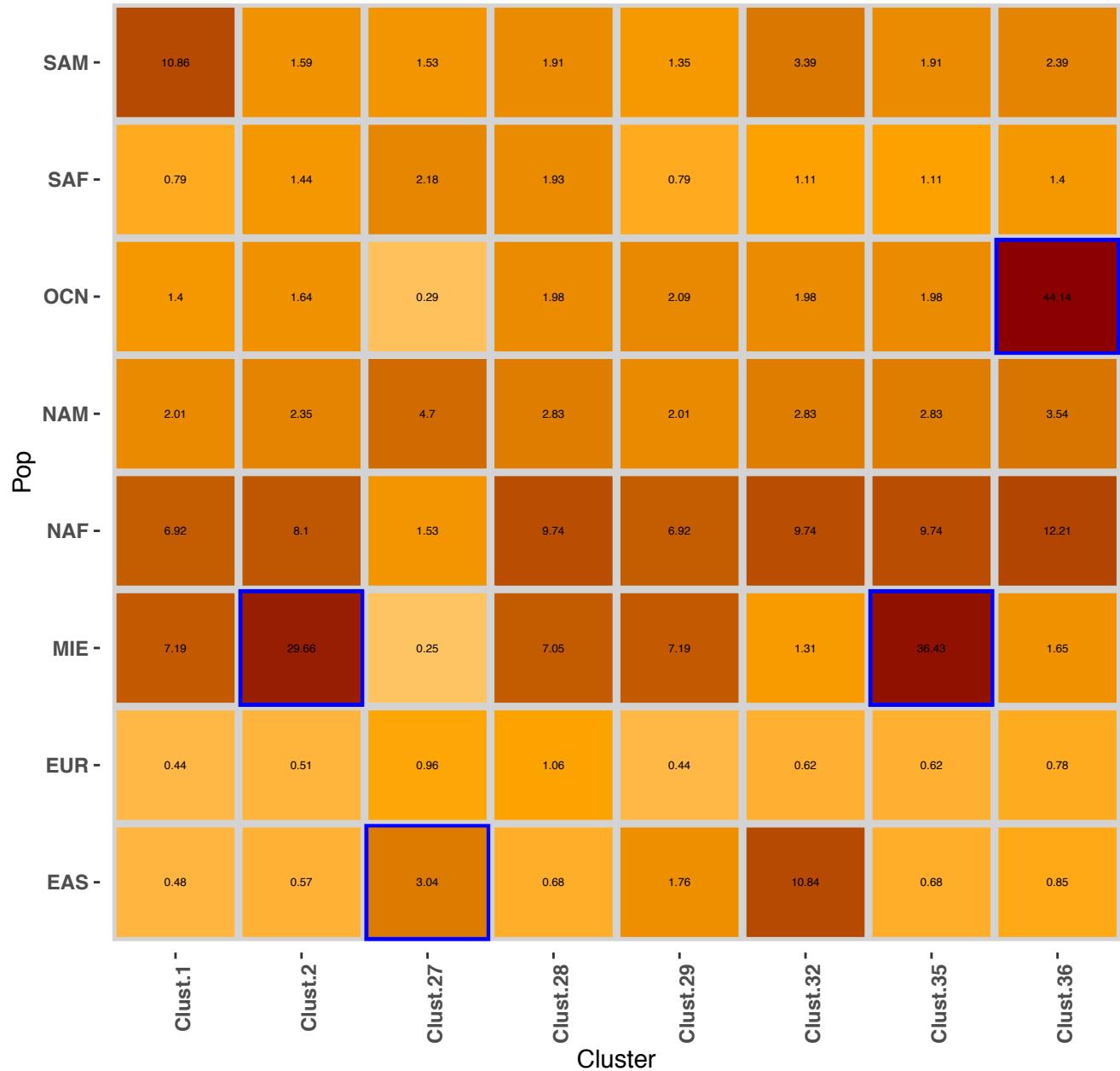
EBER-1 : grouping per country – Max MCC



EBER-1 : grouping per continent – max CGS



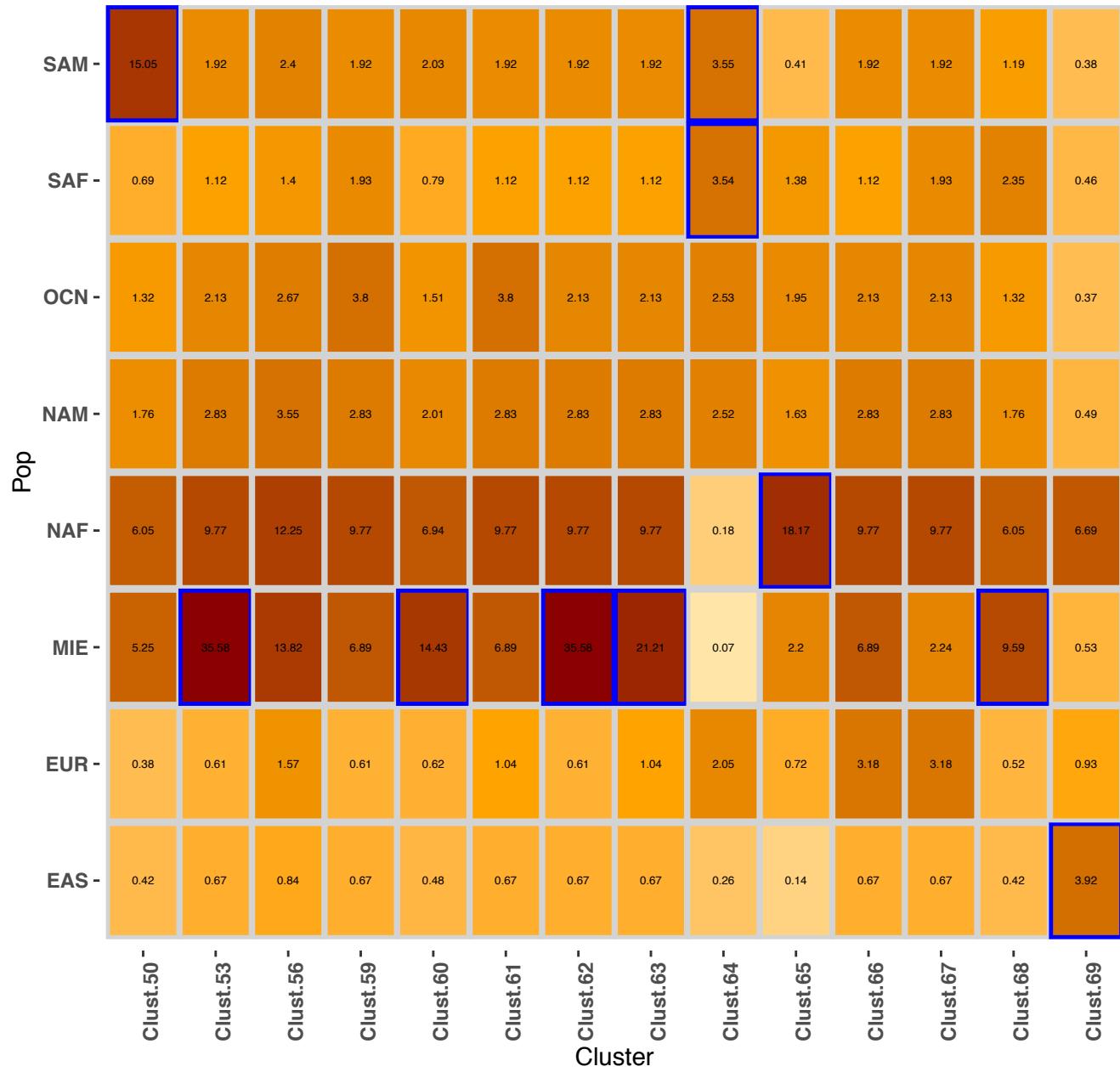
EBER-1 : grouping per continent – Max MCC



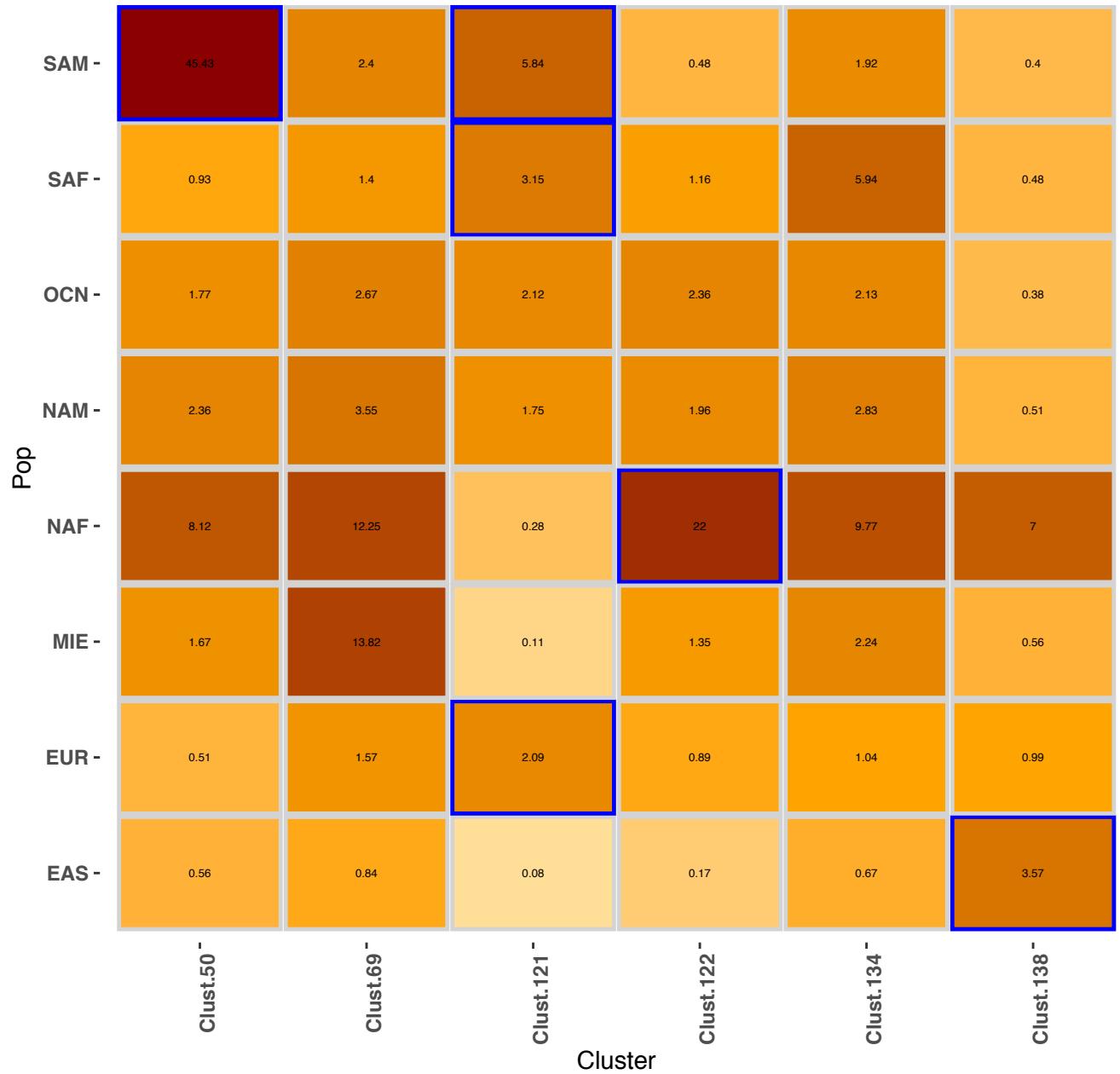
EBER-2 : grouping per country – max CGS

Pop	WG -	USA -	UK -	UG -	TW -	TU -	SK -	SA -	PO -	PN -	NG -	NAF -	KE -	JP -	IT -	IN -	HK -	GH -	GE -	FR -	CO -	CH -	BR -	BO -	AU -	AR -	AF -
	1.88	62.12	5.71	3.8	12.27	3.8	11.85	11.85	0.06	2.87	3.8	2.13	9.17	0.42													
	1.76	2.83	3.55	2.83	2.01	2.83	2.83	2.83	2.52	1.63	2.83	2.83	1.76	0.49													
	0.78	1.25	3.28	1.25	0.89	1.25	1.25	1.25	2.11	1.57	1.25	1.25	0.78	0.24													
	6.05	9.77	12.25	9.77	6.94	9.77	9.77	9.77	4.58	3.25	9.77	9.77	6.05	1.69													
	7.08	11.43	14.33	11.43	8.12	11.43	11.43	11.43	0.15	2.47	11.43	11.43	7.08	3.21													
	8.77	3.68	10.38	6.9	4.11	6.9	22.13	6.9	0.11	0.98	6.9	6.9	3.42	0.77													
	21.5	34.7	43.5	34.7	24.64	34.7	34.7	34.7	0.45	7.5	34.7	34.7	21.5	25.08													
	8.53	13.76	17.25	38.22	9.77	13.76	13.76	13.76	0.3	5.45	13.76	38.22	8.53	2.39													
	4.2	6.78	8.5	6.78	8.43	14.12	6.78	14.12	0.08	1.46	48.57	48.57	7	1.17													
	4.2	6.78	8.5	14.12	4.81	6.78	6.78	6.78	1.12	2.01	6.78	6.78	4.2	1.17													
	14.29	23.07	28.92	23.07	16.38	23.07	23.07	23.07	2.72	4.98	23.07	23.07	14.29	4													
	6.05	9.77	12.25	9.77	6.94	9.77	9.77	9.77	0.18	18.17	9.77	9.77	6.05	6.69													
	1.42	2.29	2.88	2.29	1.63	2.29	2.29	2.29	4.35	0.58	2.29	2.29	5.1	0.4													
	3.2	5.17	6.48	5.17	3.67	5.17	5.17	5.17	0.08	1.12	5.17	5.17	3.2	2.62													
	1.42	2.29	2.88	2.29	1.63	2.29	2.29	2.29	4.35	0.49	2.29	2.29	1.42	3.28													
	1.42	2.29	2.88	2.29	1.63	2.29	2.29	2.29	1.33	0.49	2.29	2.29	1.42	0.4													
	3.48	5.62	7.04	5.62	3.99	5.62	5.62	5.62	0.07	1.21	5.62	5.62	3.48	0.97													
	6.05	9.77	12.25	9.77	6.94	9.77	9.77	9.77	6.49	2.11	9.77	9.77	6.05	1.69													
	21.5	34.7	43.5	34.7	24.64	34.7	34.7	34.7	1.81	7.5	34.7	34.7	21.5	6.02													
	21.5	34.7	43.5	34.7	24.64	34.7	34.7	34.7	1.81	7.5	34.7	34.7	21.5	6.02													
	4.2	6.78	8.5	6.78	4.81	6.78	6.78	6.78	9.44	1.46	6.78	6.78	4.2	1.17													
	1.68	2.71	3.4	2.71	1.92	2.71	2.71	2.71	0.23	0.58	2.71	2.71	1.68	11.76													
	11.3	9.77	12.25	9.77	6.94	9.77	9.77	9.77	1.81	2.11	9.77	9.77	6.05	1.69													
	4.2	6.78	8.5	6.78	8.43	6.78	6.78	6.78	7.46	1.46	6.78	6.78	4.2	1.17													
	1.93	3.12	3.92	3.12	2.22	5.75	3.12	3.12	3.83	1.82	3.12	3.12	1.93	0.54													
	50.85	7.56	9.47	7.56	5.37	7.56	7.56	7.56	0.9	1.63	7.56	7.56	4.68	1.82													
	5.28	8.53	10.69	8.53	6.05	8.53	8.53	8.53	1.2	2.7	8.53	8.53	5.28	5.33													
	Clust.50	Clust.53	Clust.56	Clust.59	Clust.60	Clust.61	Clust.62	Clust.63	Clust.64	Clust.65	Clust.66	Clust.67	Clust.68	Clust.69													

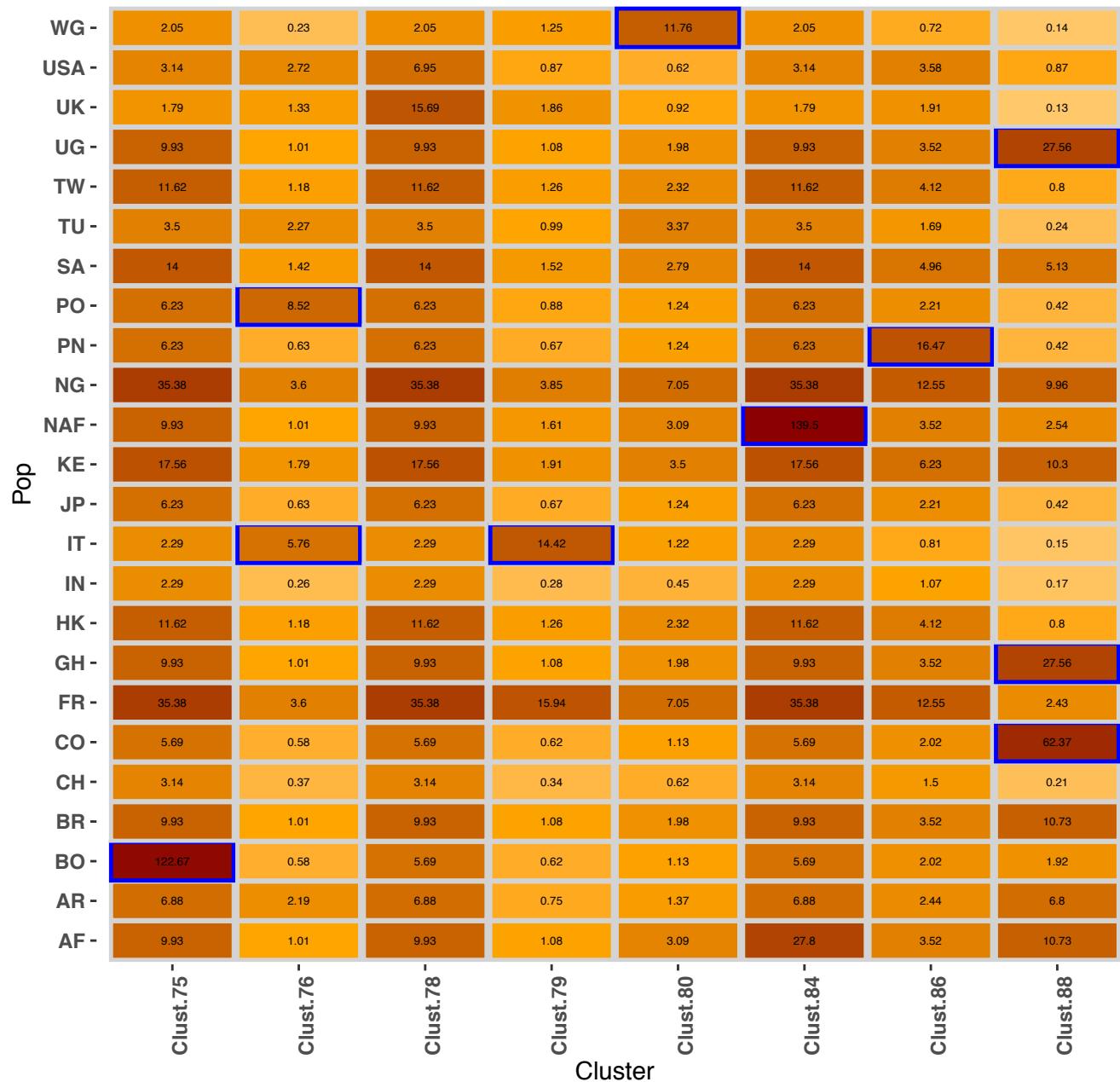
EBER-2 : grouping per continent – max CGS



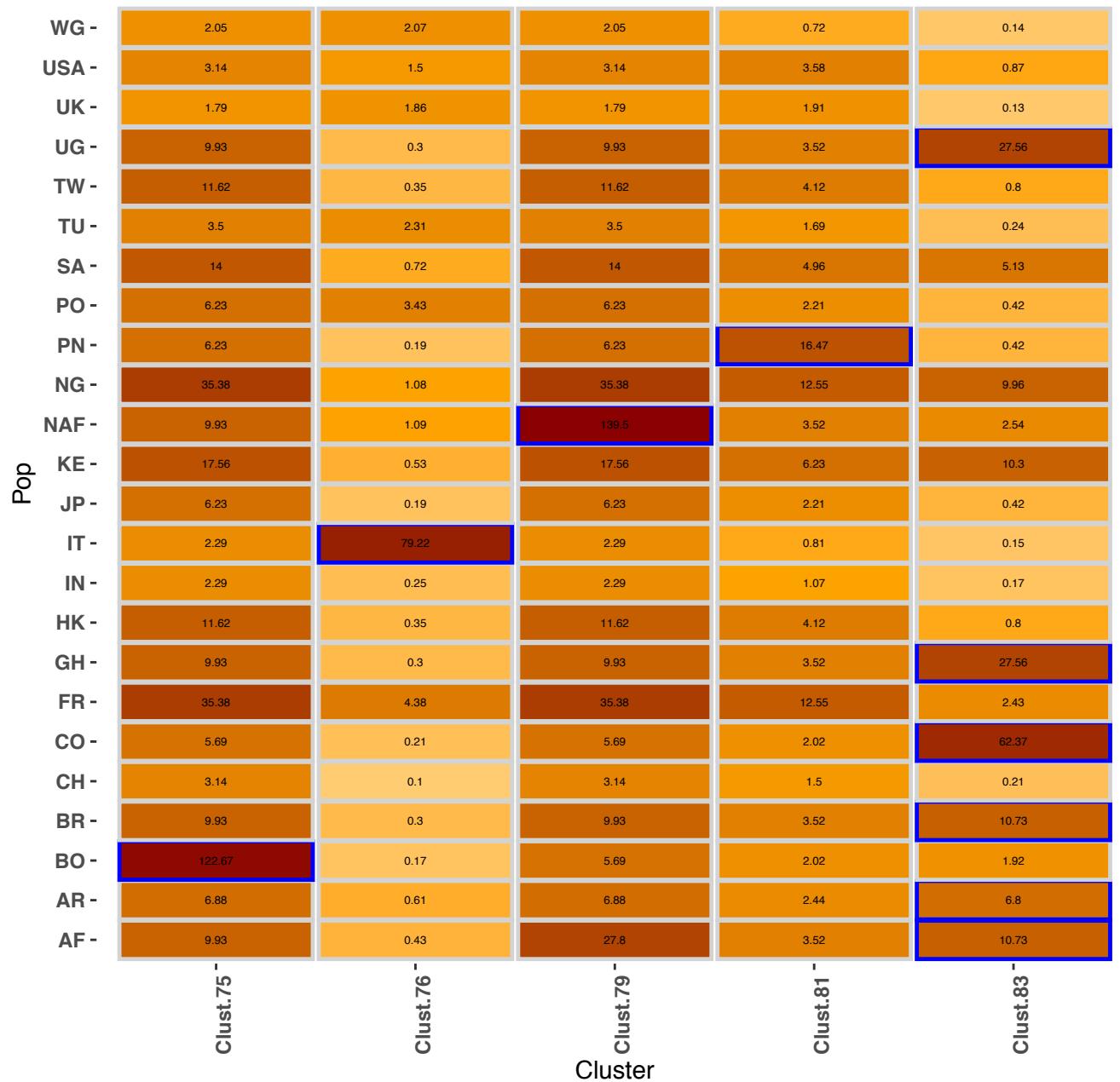
EBER-2 : grouping per continent – Max MCC



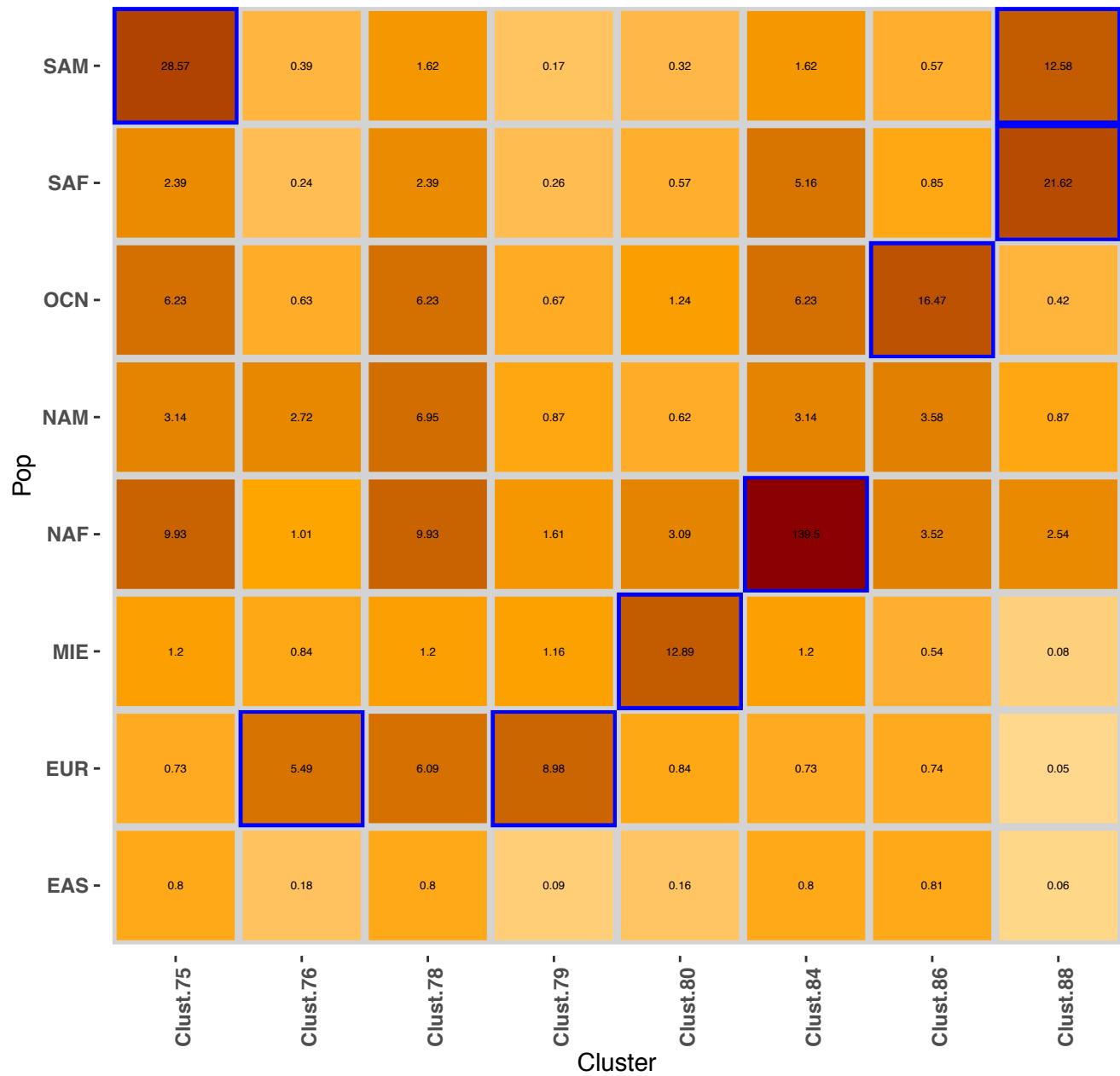
EBNA-1 : grouping per country – max CGS



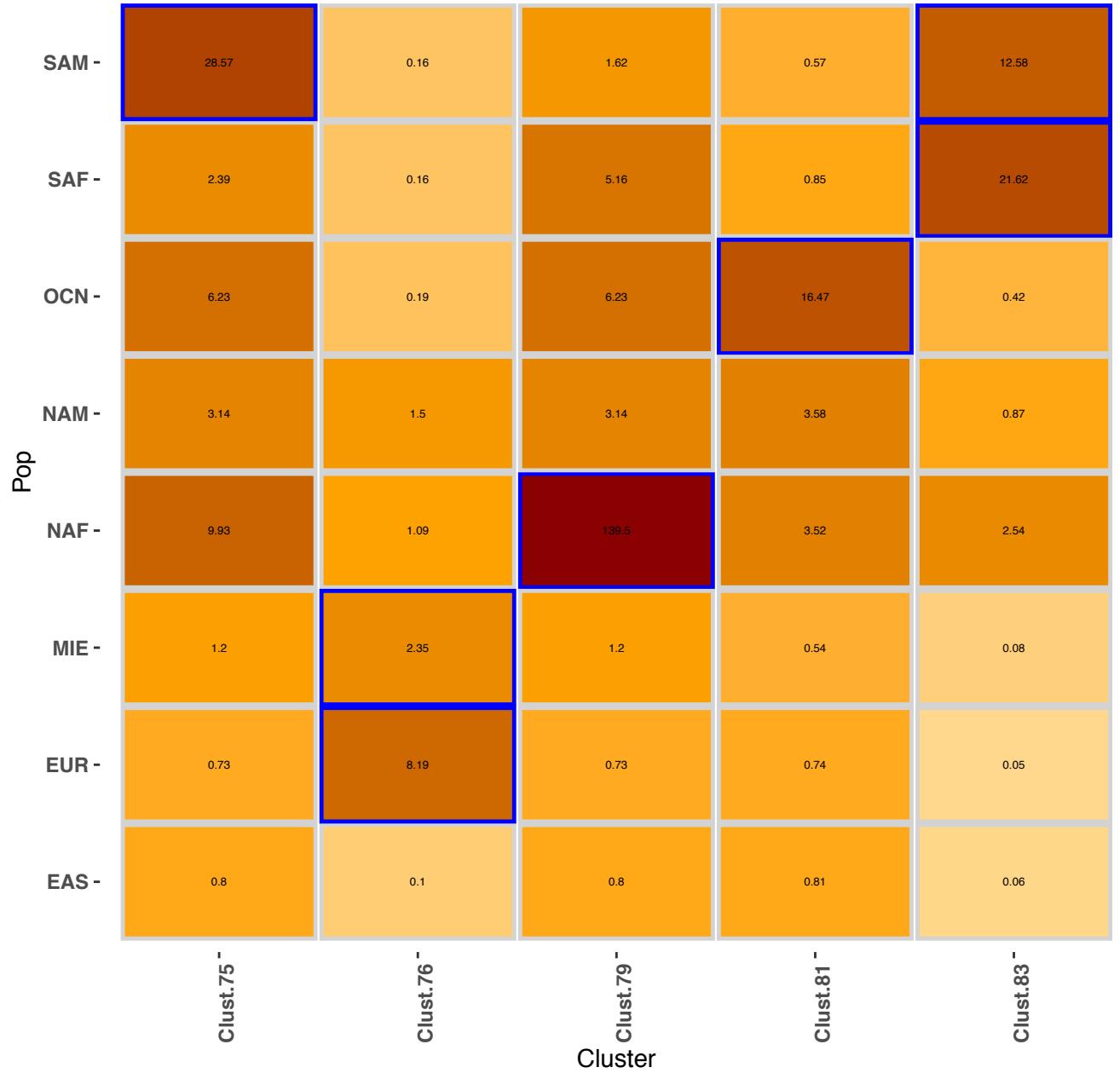
EBNA-1 : grouping per country – Max MCC



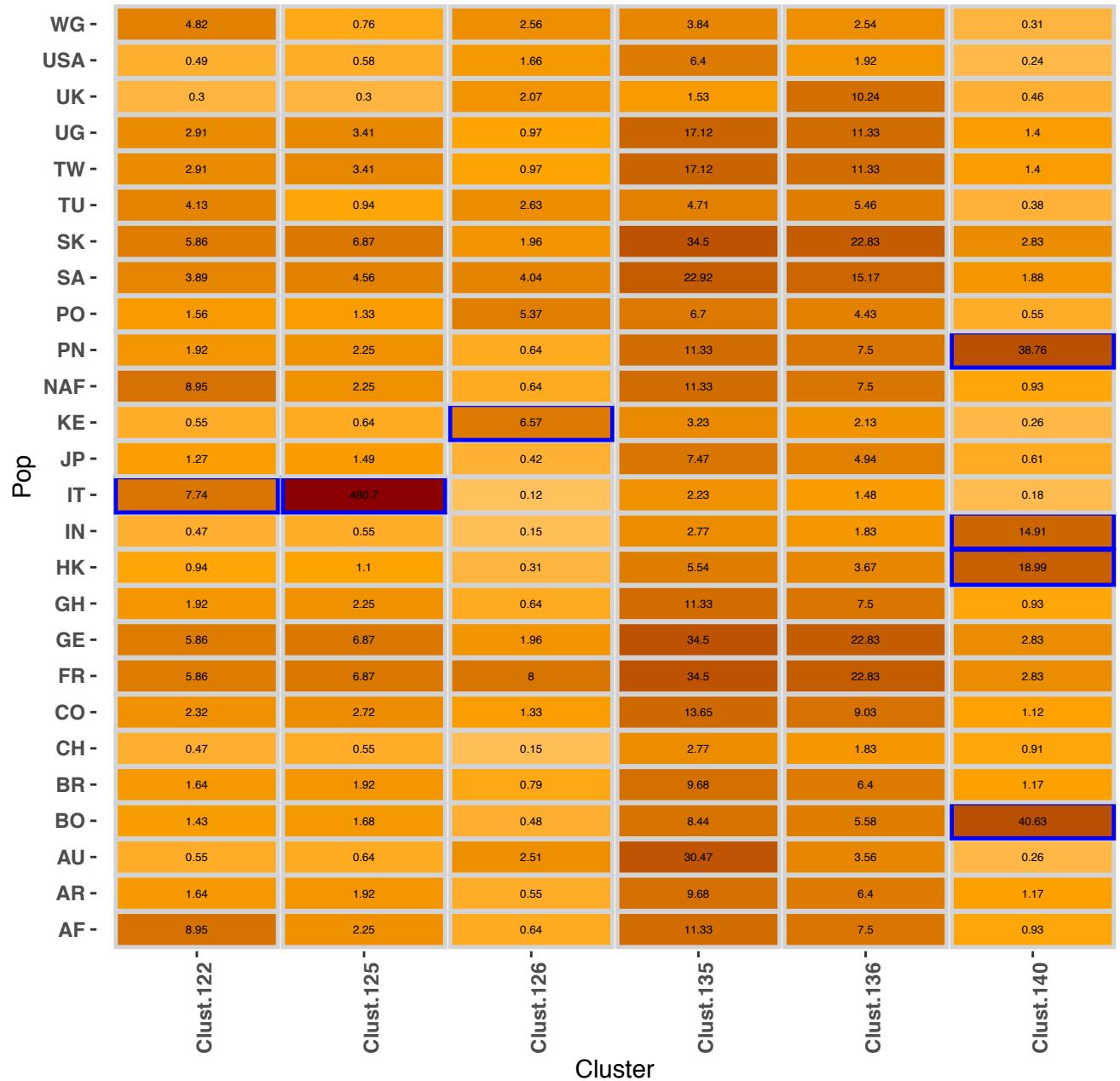
EBNA-1 : grouping per continent – max CGS



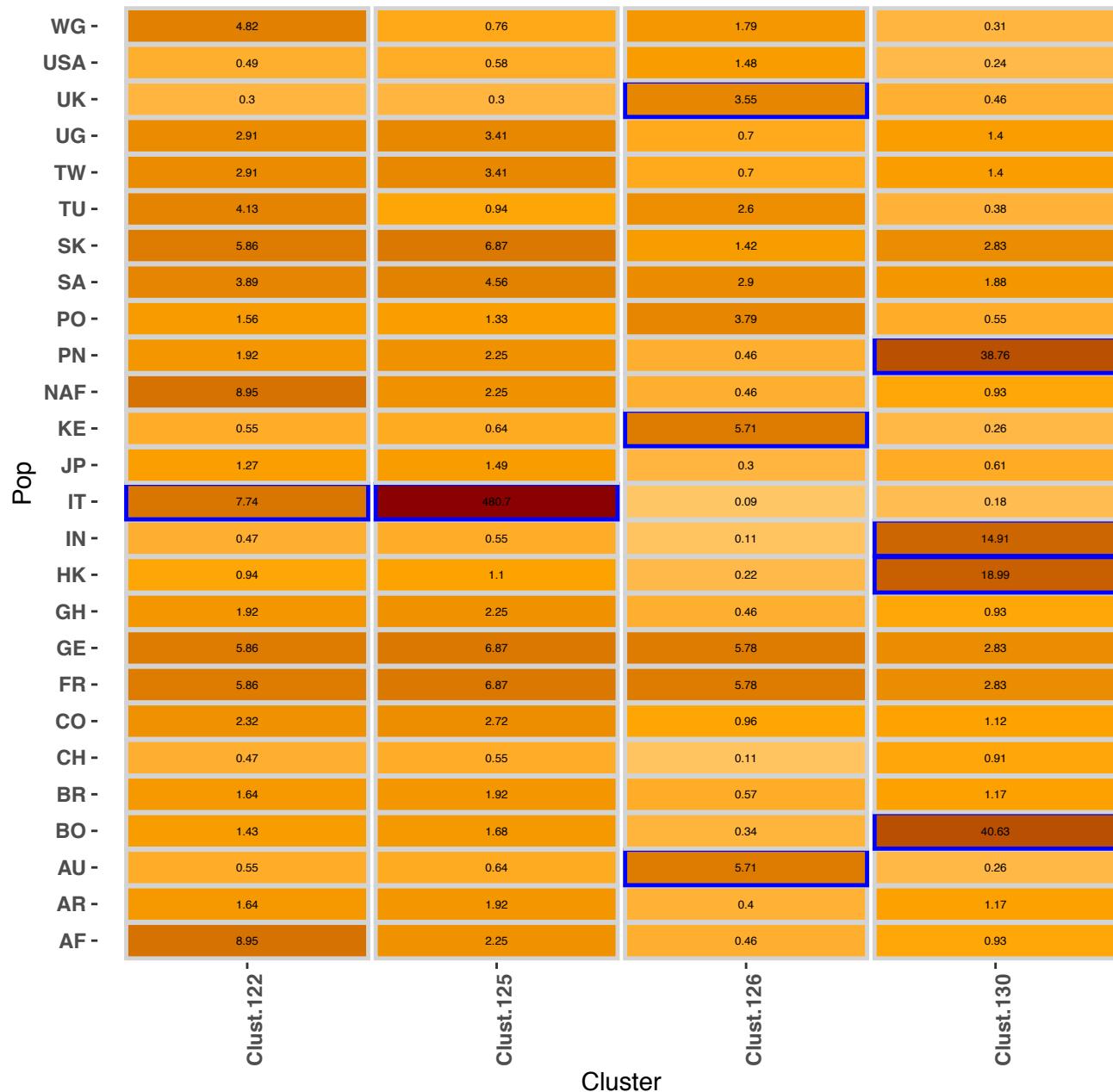
EBNA-1 : grouping per continent – Max MCC



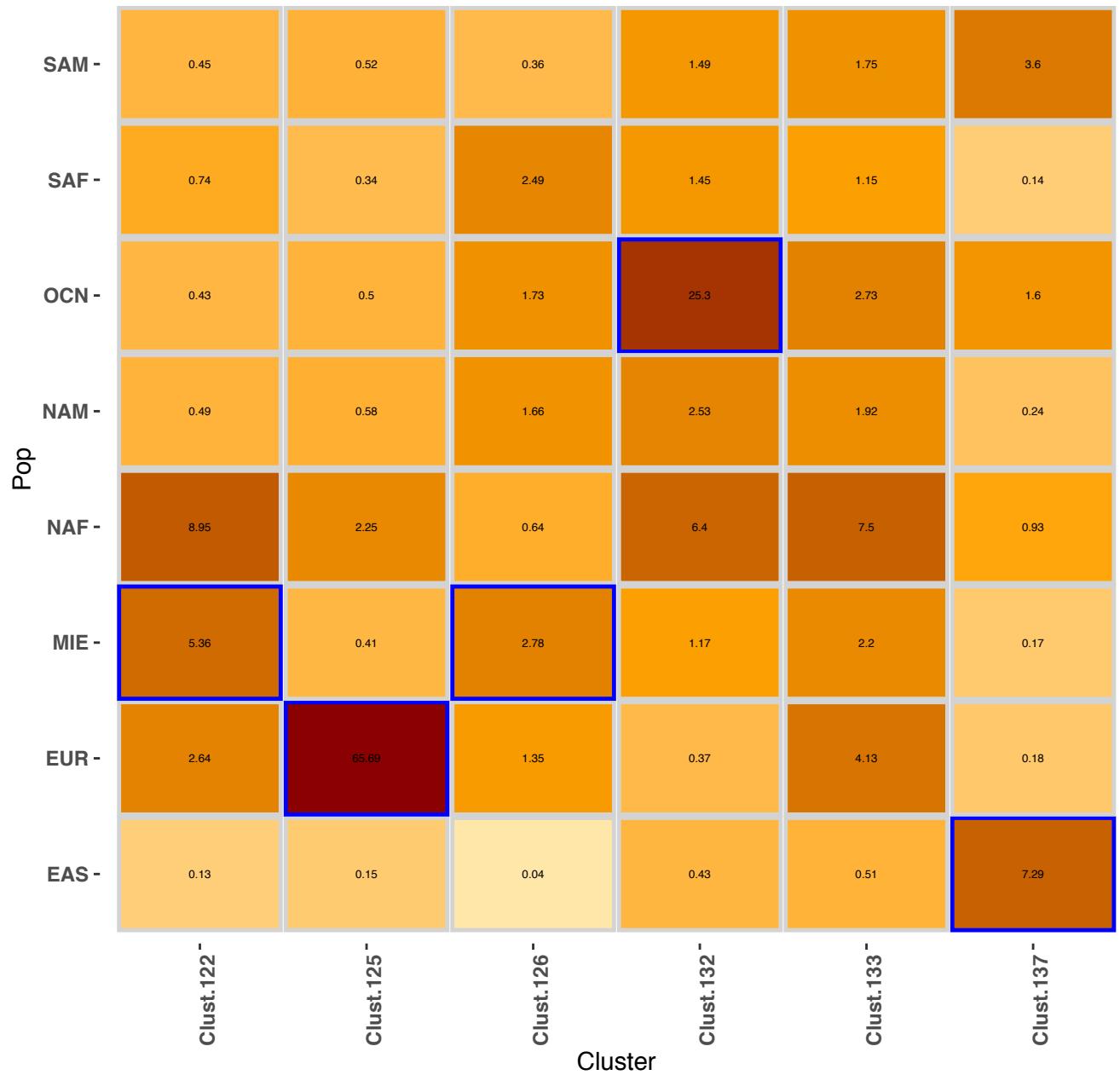
EBNA-2_type1 : grouping per country – max CGS



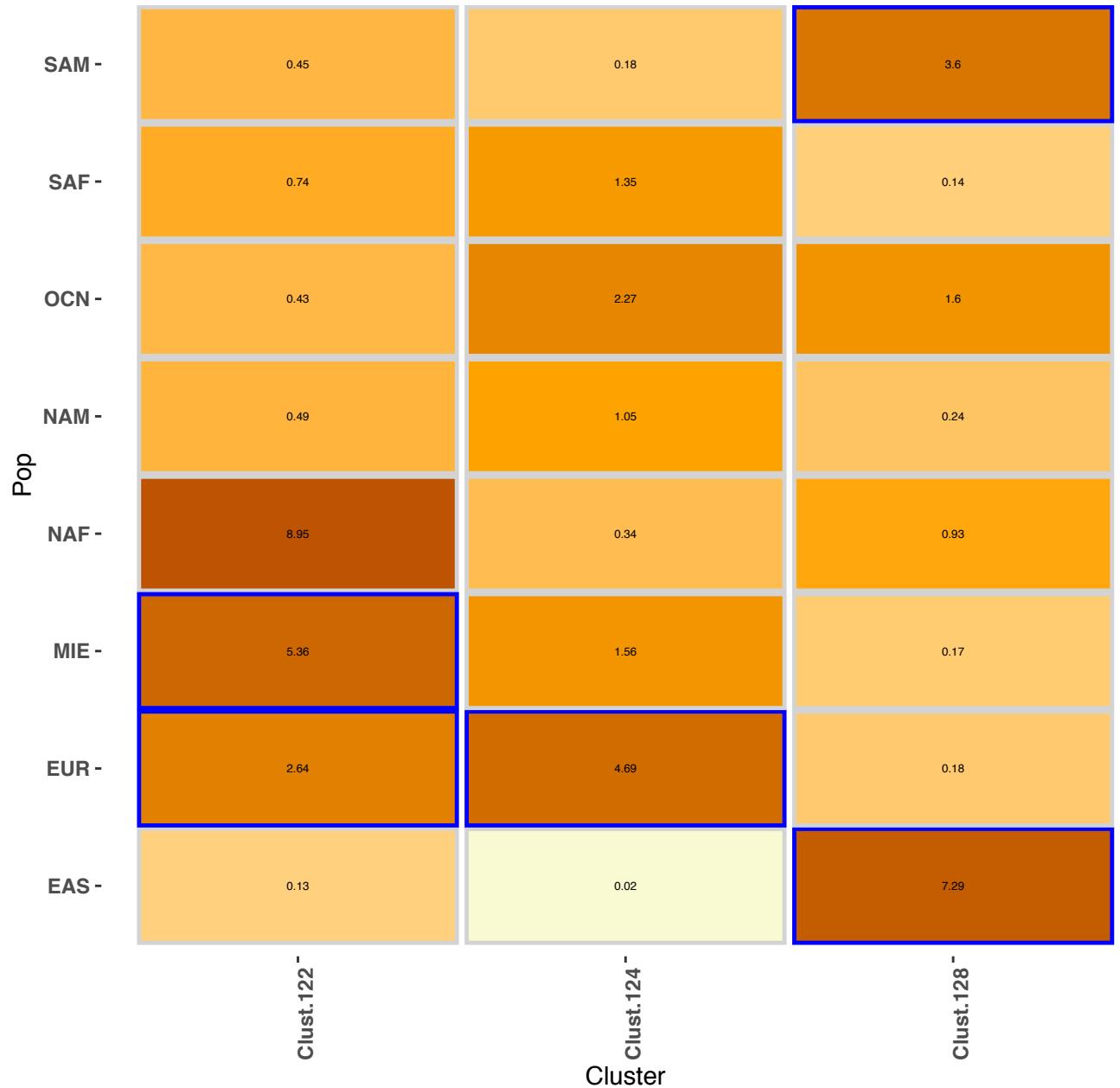
EBNA-2_type1 : grouping per country – Max MCC



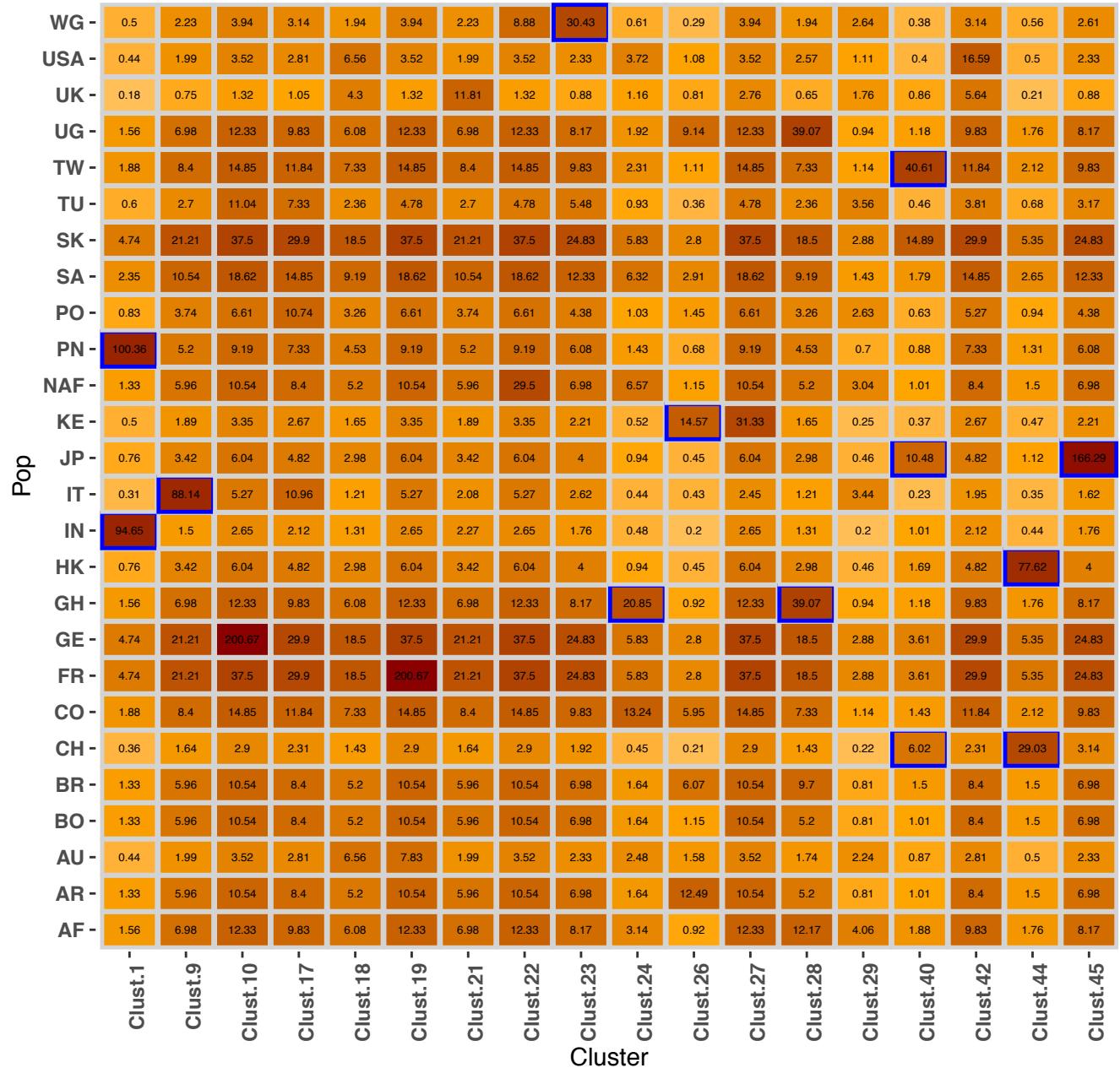
EBNA-2_type1 : grouping per continent – max CGS



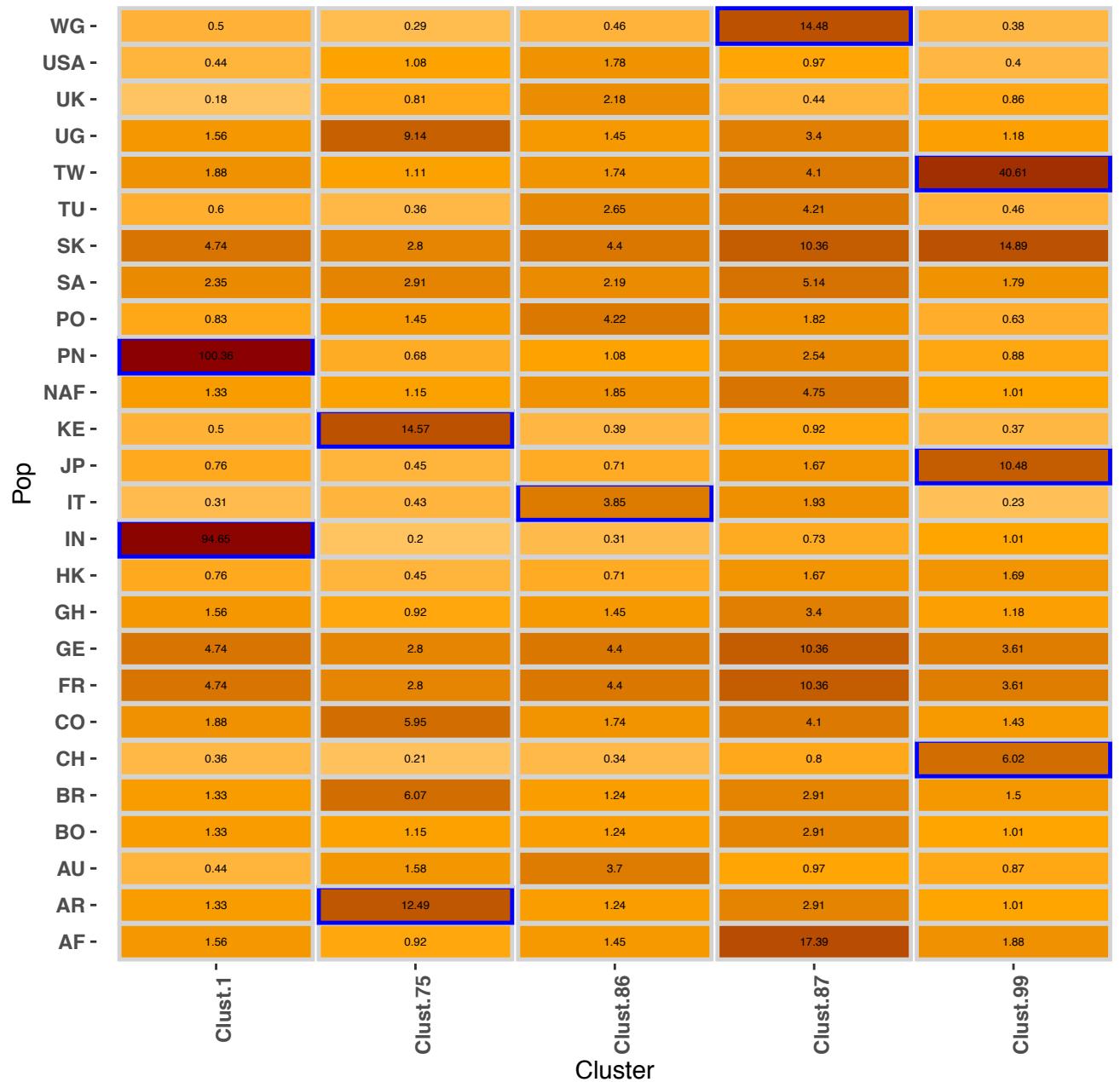
EBNA-2_type1 : grouping per continent – Max MCC



EBNA-3A_type1 : grouping per country – max CGS

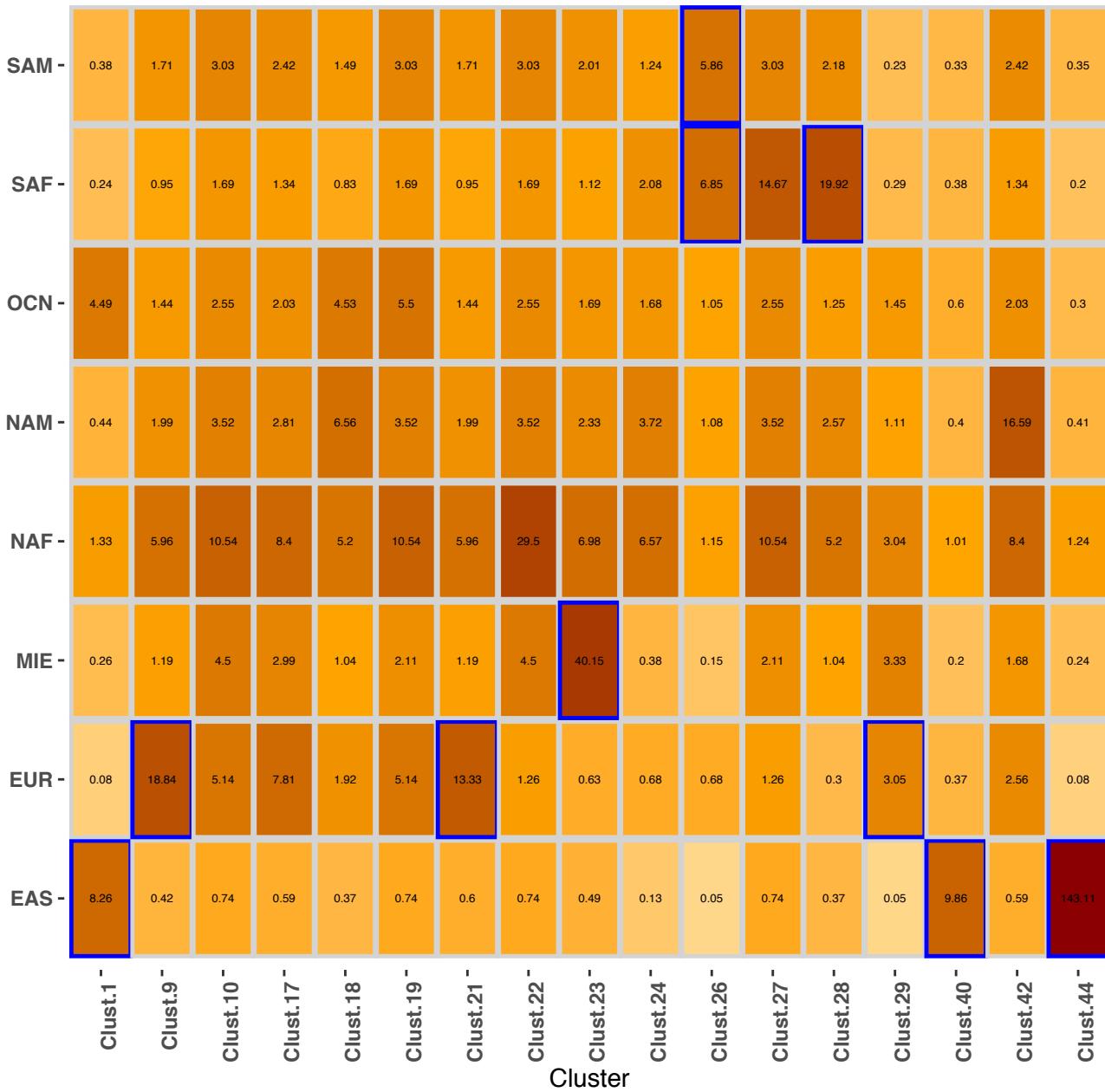


EBNA-3A_type1 : grouping per country – Max MCC



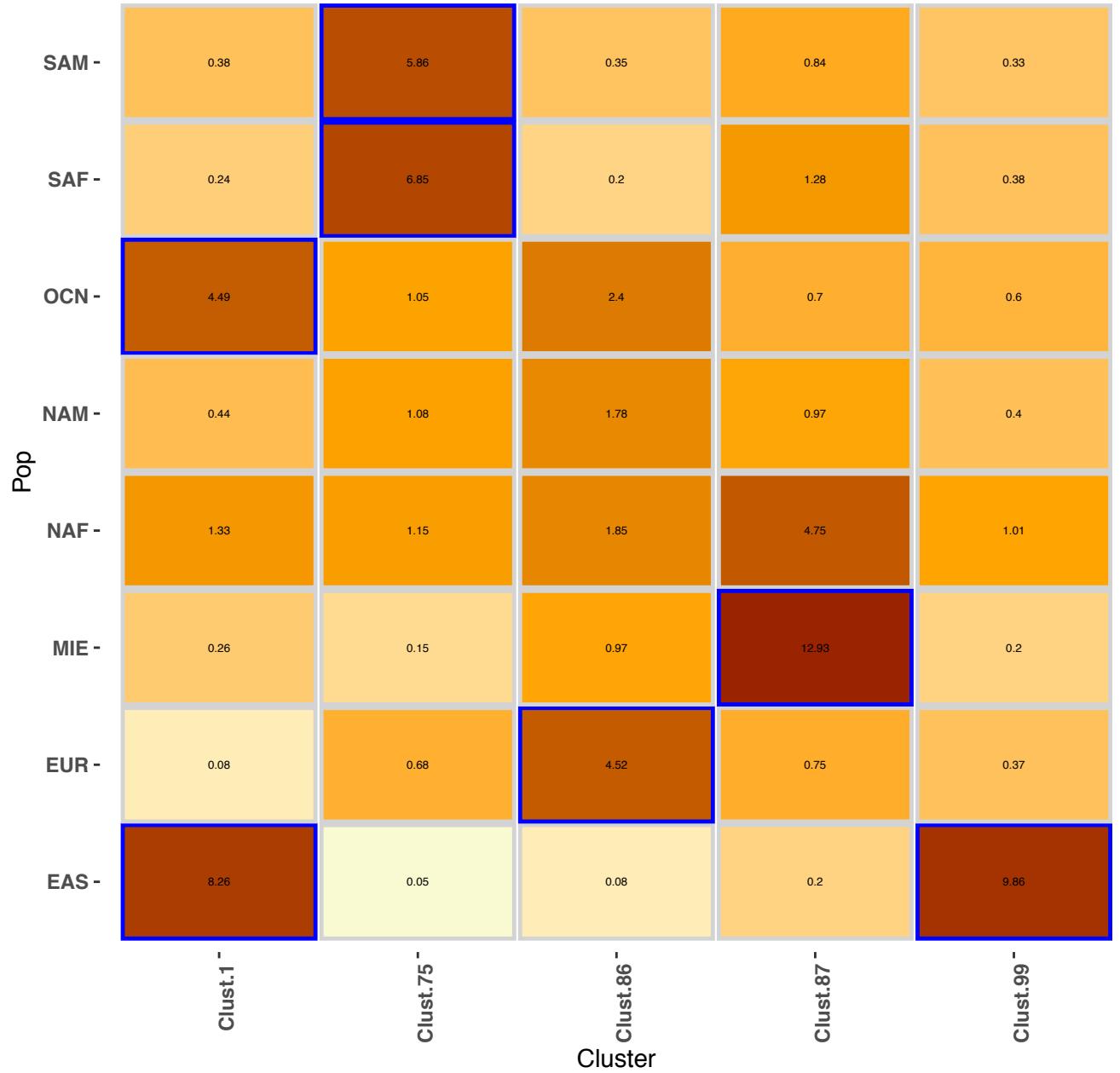
EBNA-3A_type1 : grouping per continent – max CGS

Pop

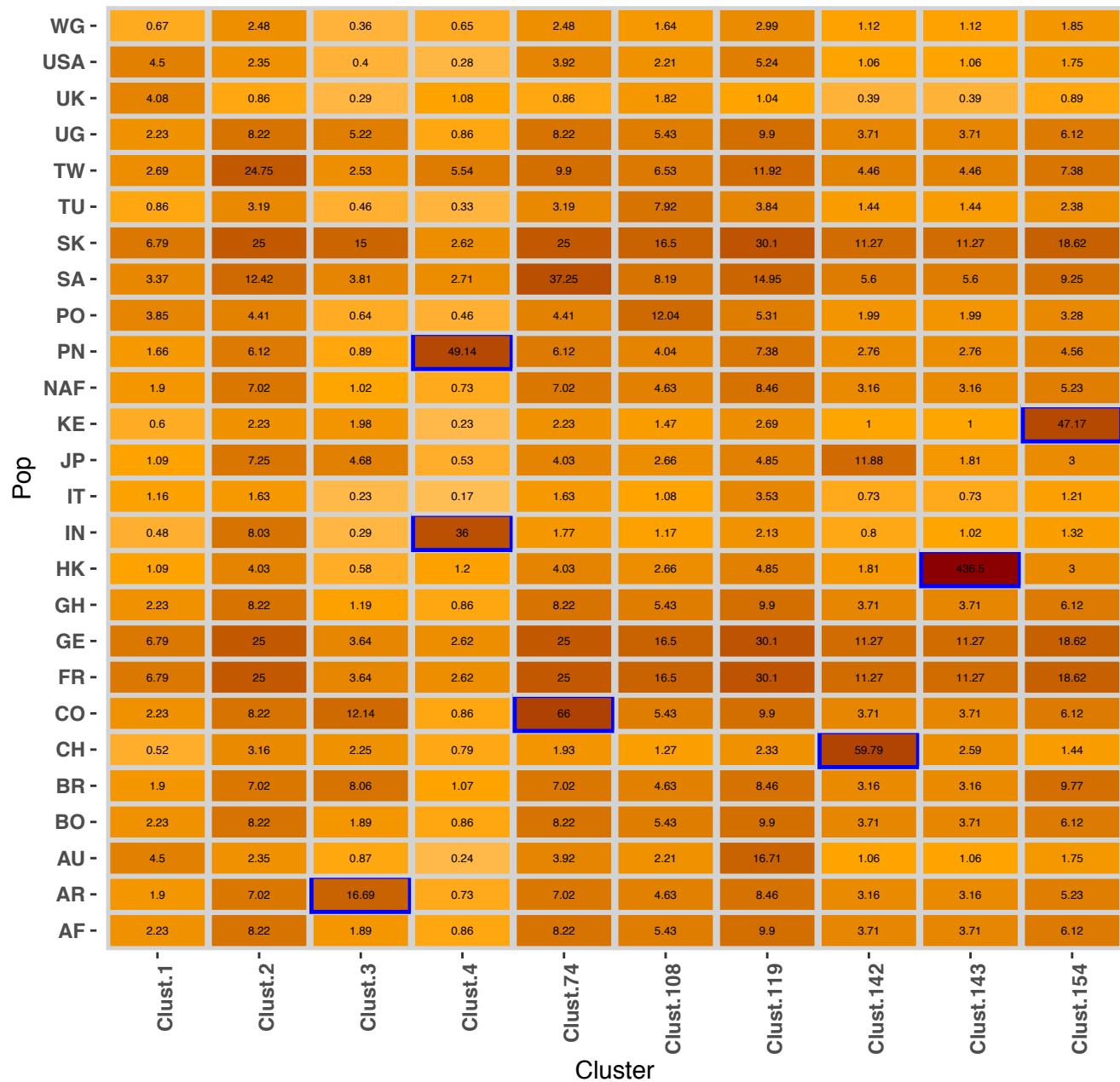


Cluster

EBNA-3A_type1 : grouping per continent – Max MCC

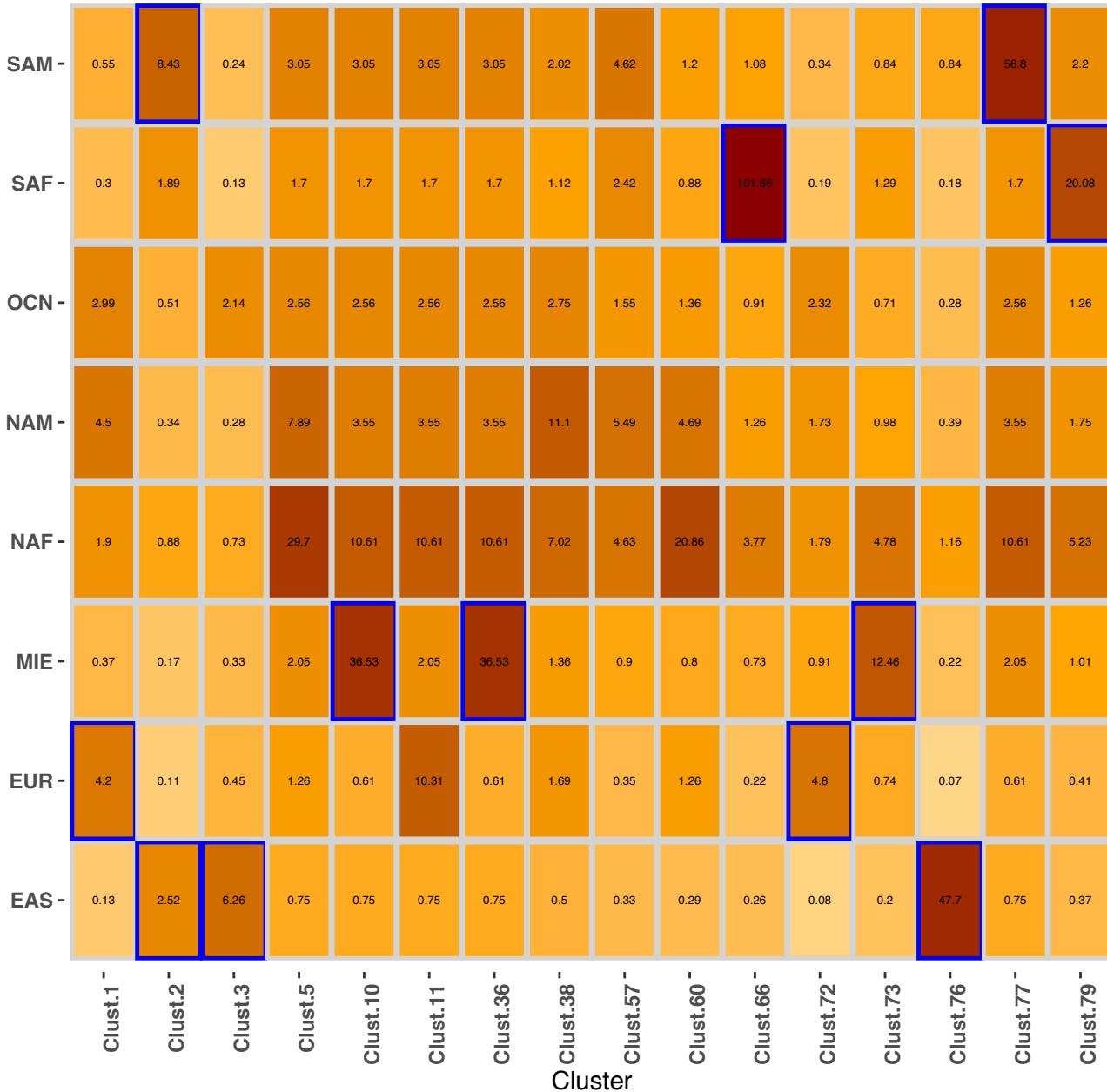


EBNA-3B_type1 : grouping per country – Max MCC



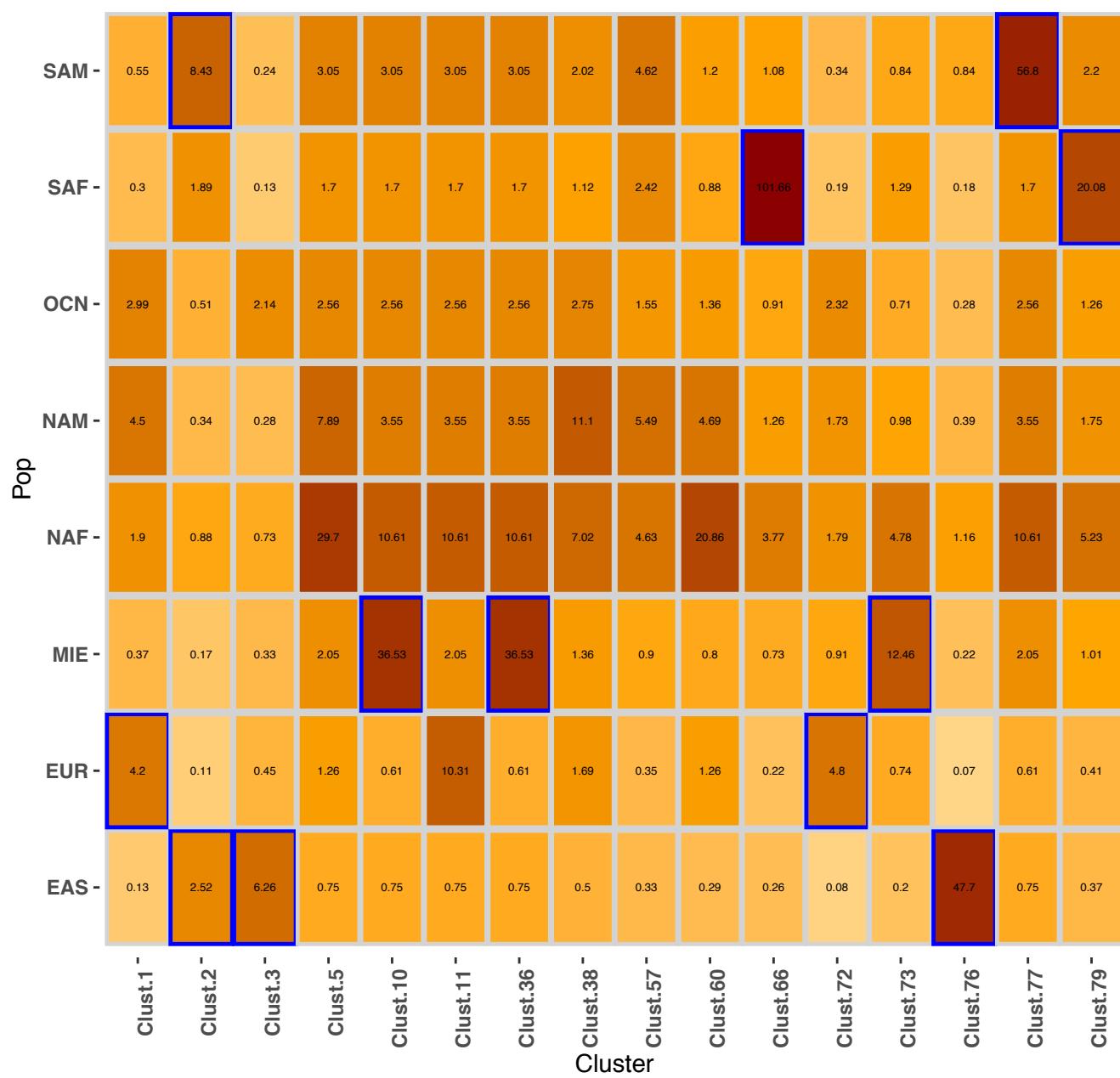
EBNA-3B_type1 : grouping per continent – max CGS

Pop

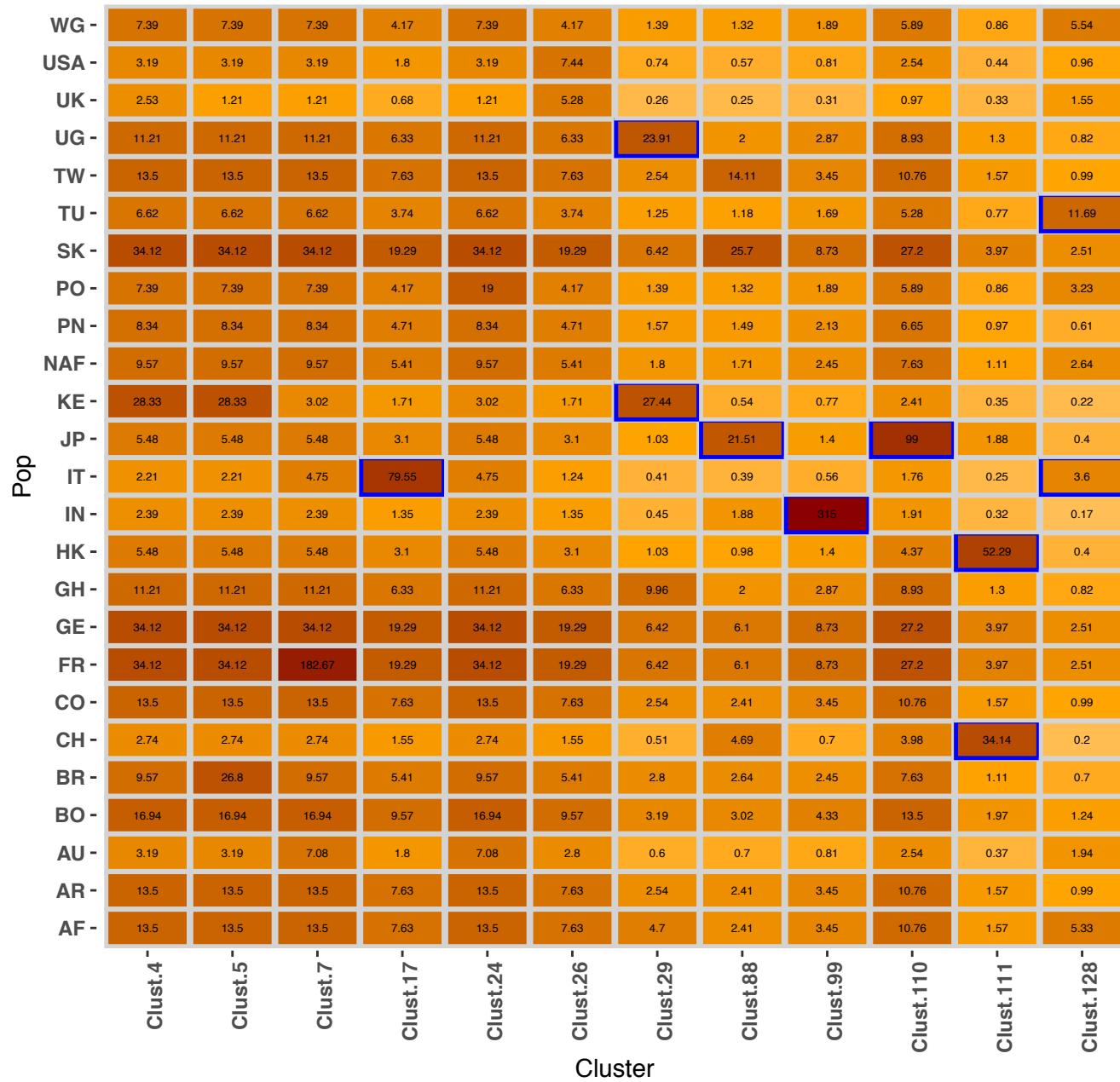


Cluster

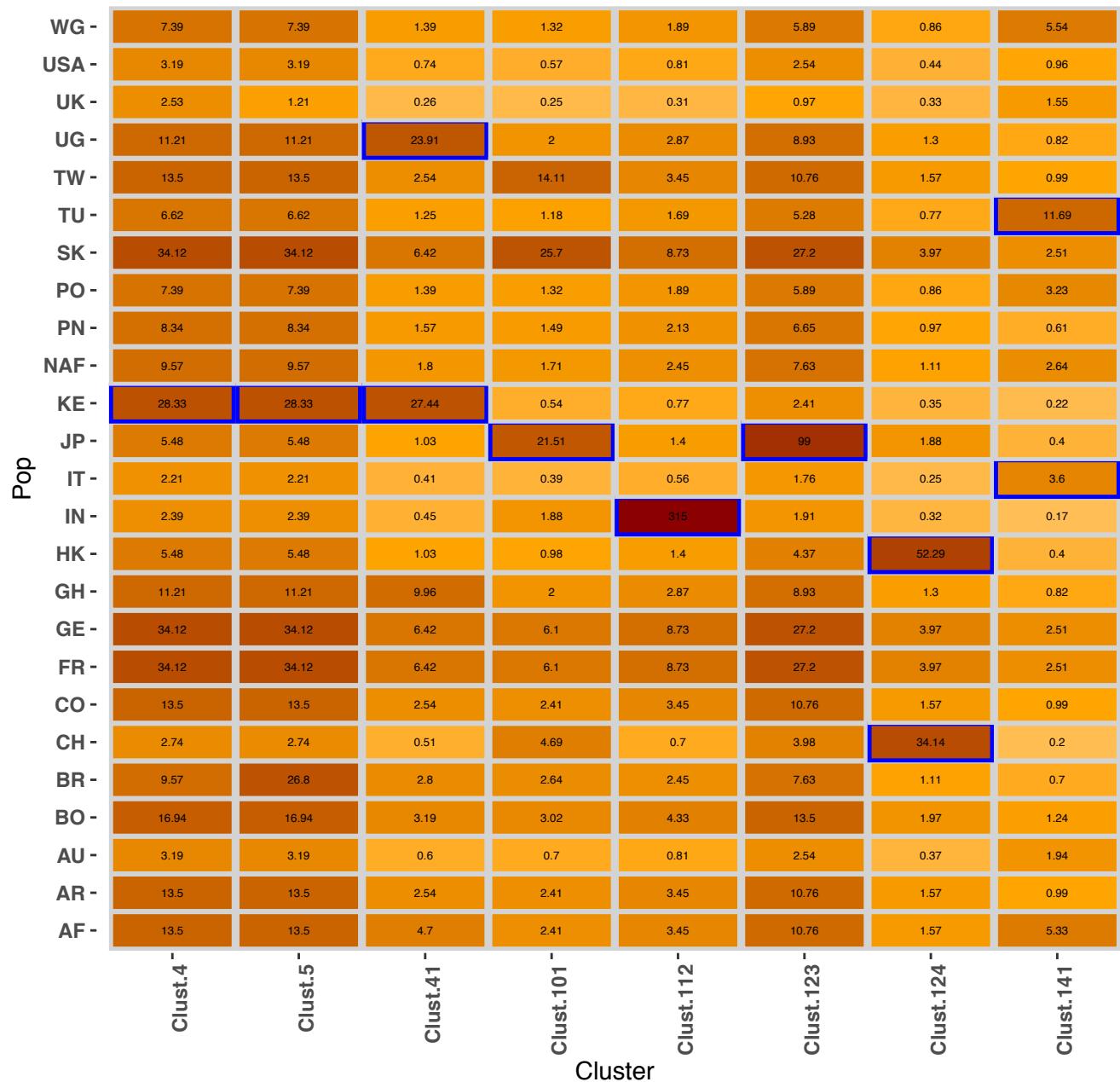
EBNA-3B_type1 : grouping per continent – Max MCC



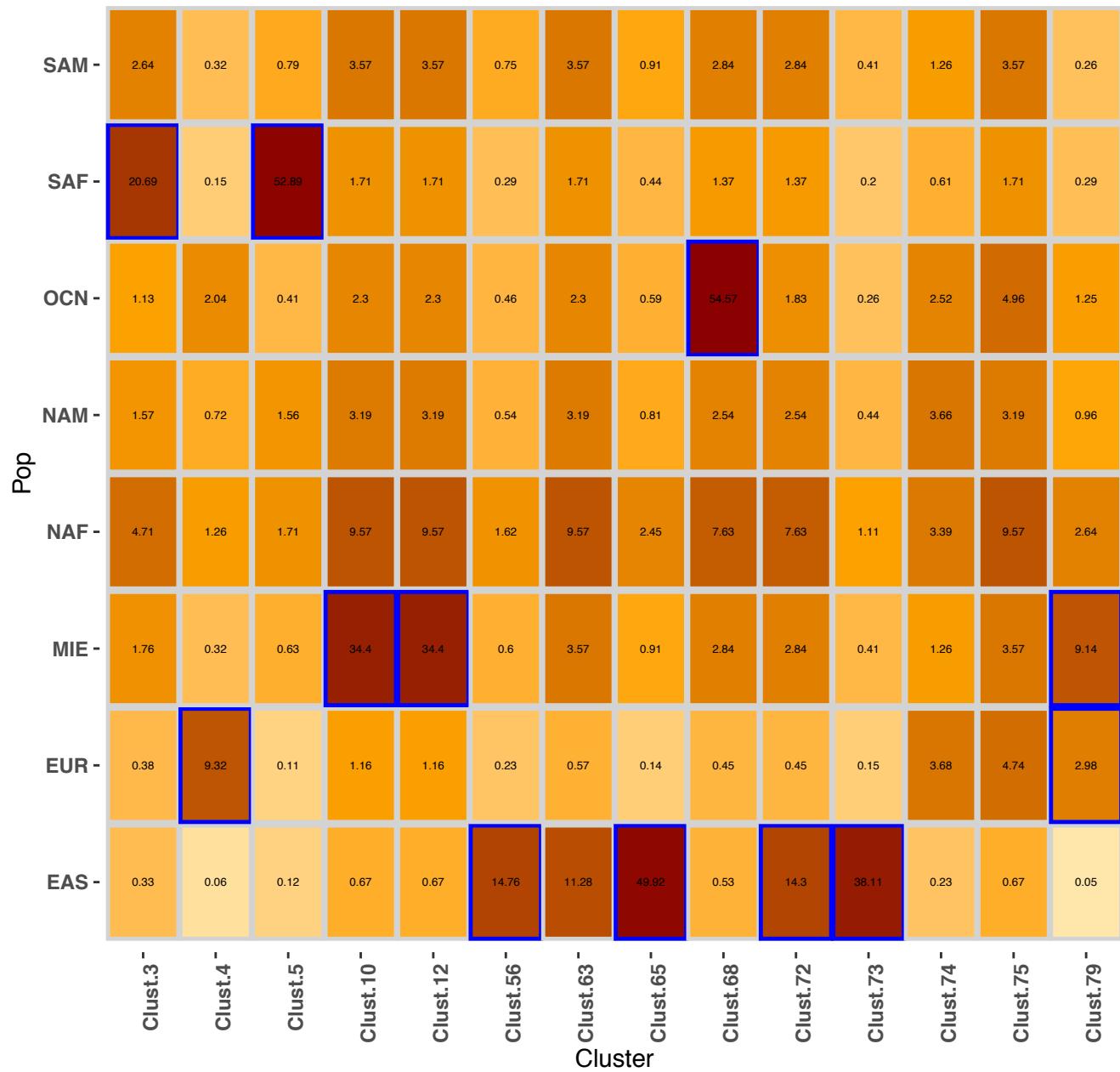
EBNA-3C_type1 : grouping per country – max CGS



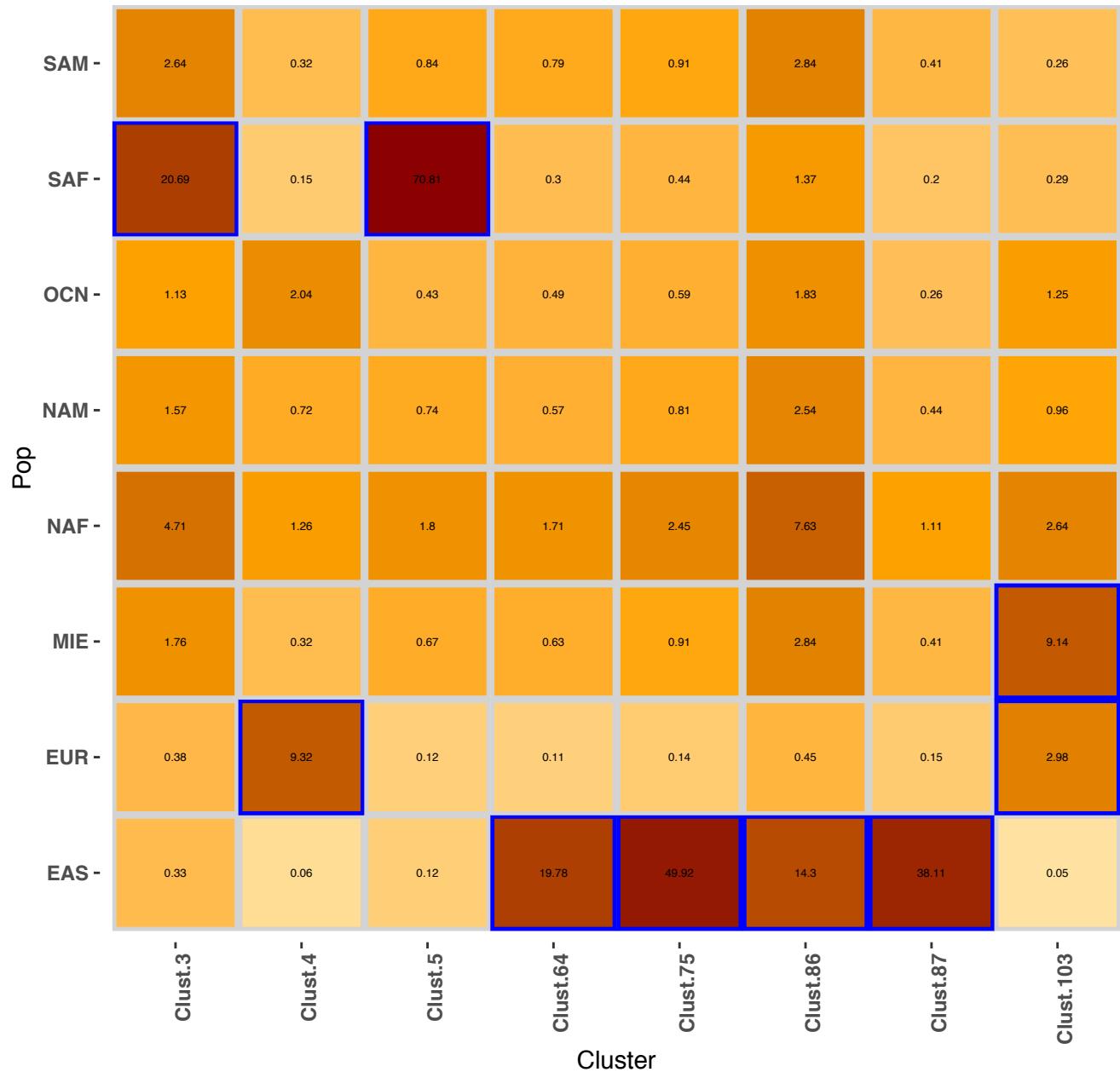
EBNA-3C_type1 : grouping per country – Max MCC



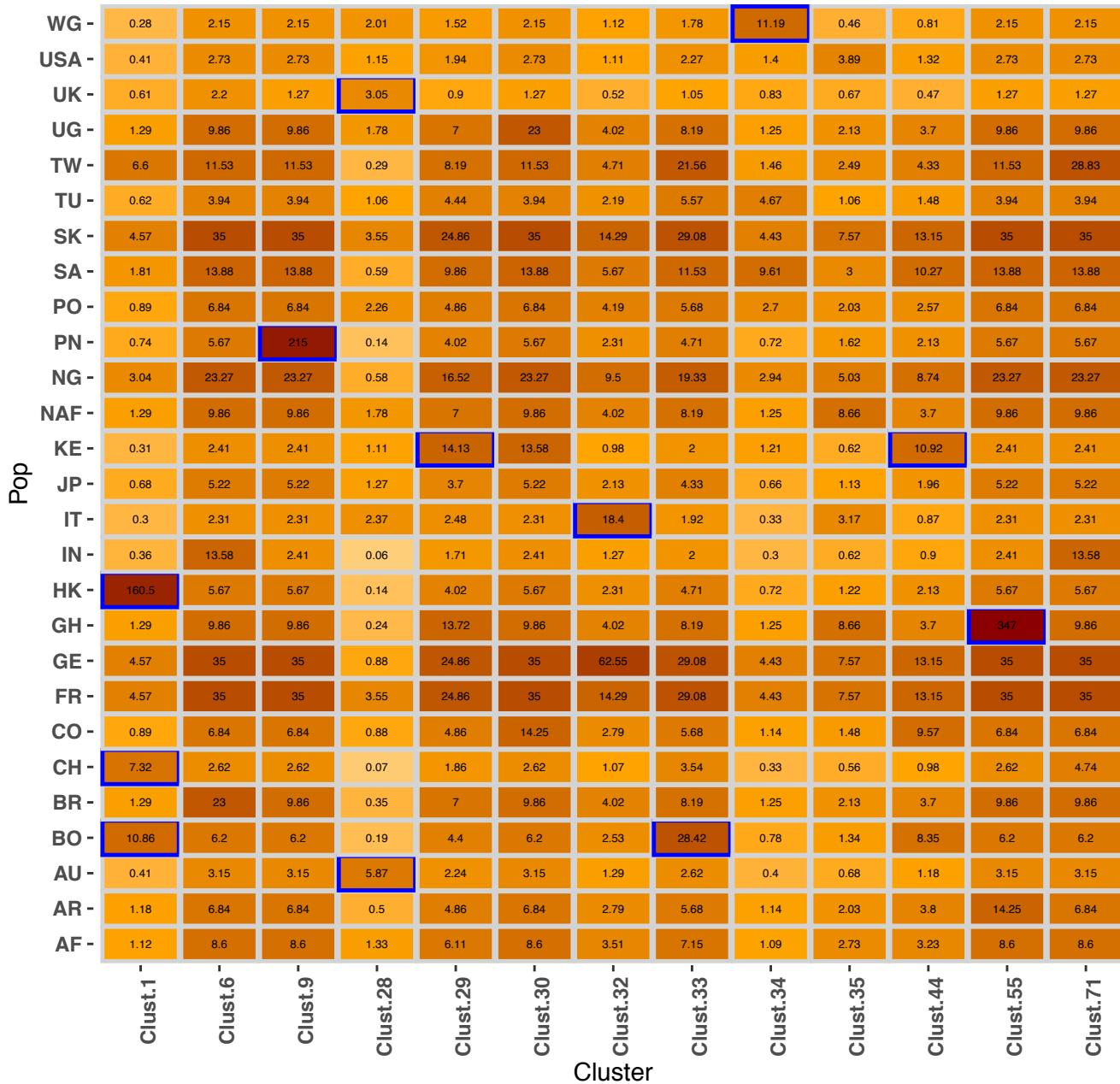
EBNA-3C_type1 : grouping per continent – max CGS



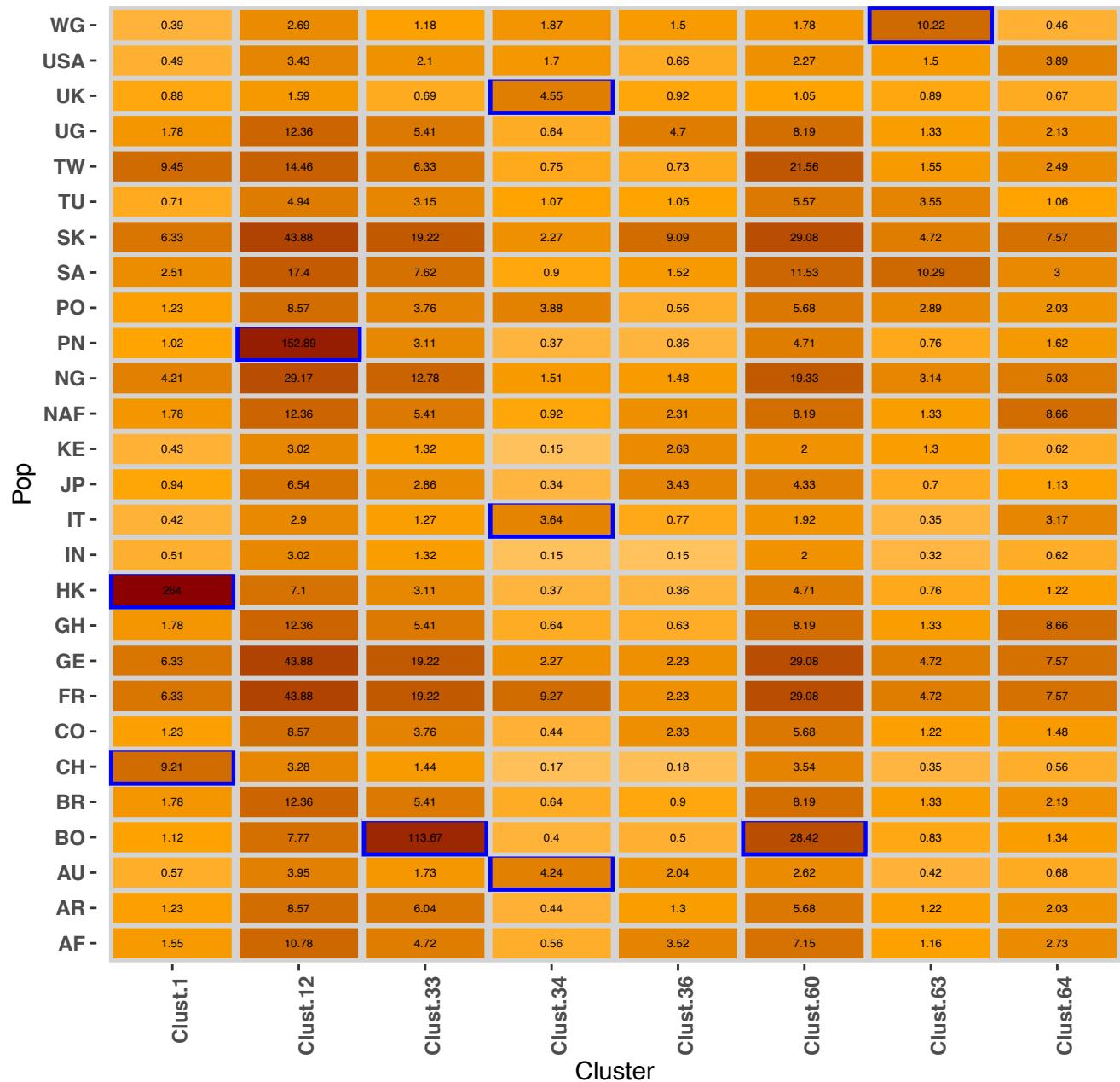
EBNA-3C_type1 : grouping per continent – Max MCC



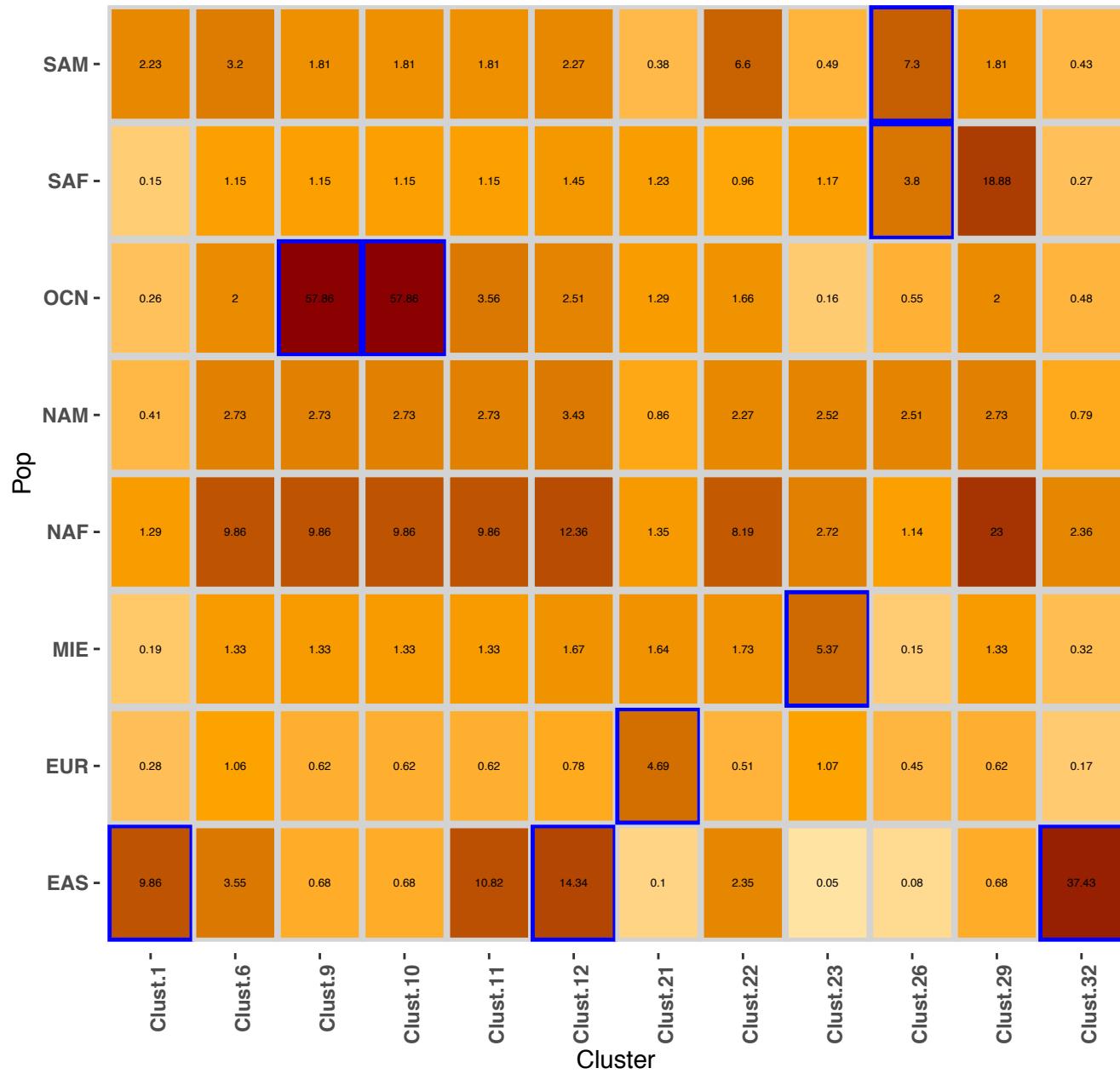
LMP-2A : grouping per country – max CGS



LMP-2A : grouping per country – Max MCC



LMP-2A : grouping per continent – max CGS



LMP-2A : grouping per continent – Max MCC

