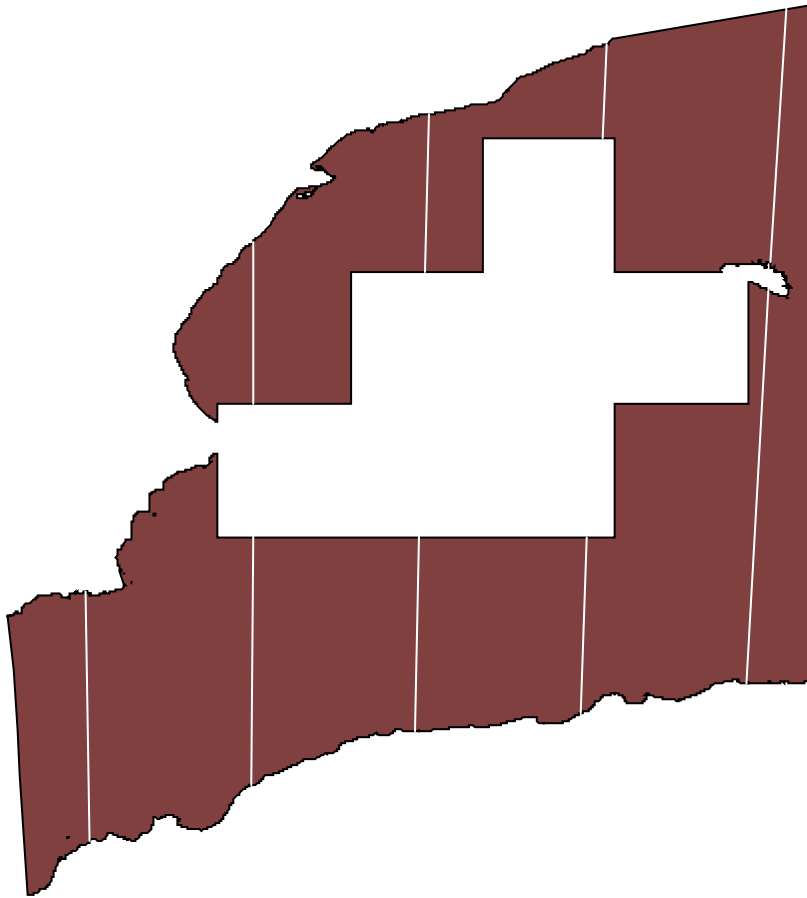


APPENDIX 2 - ICCAT-GBYP AERIAL SURVEY DESIGN FOR 2013

EXTRA SURVEY TRACKS

Area A_outside – EXTRA replica



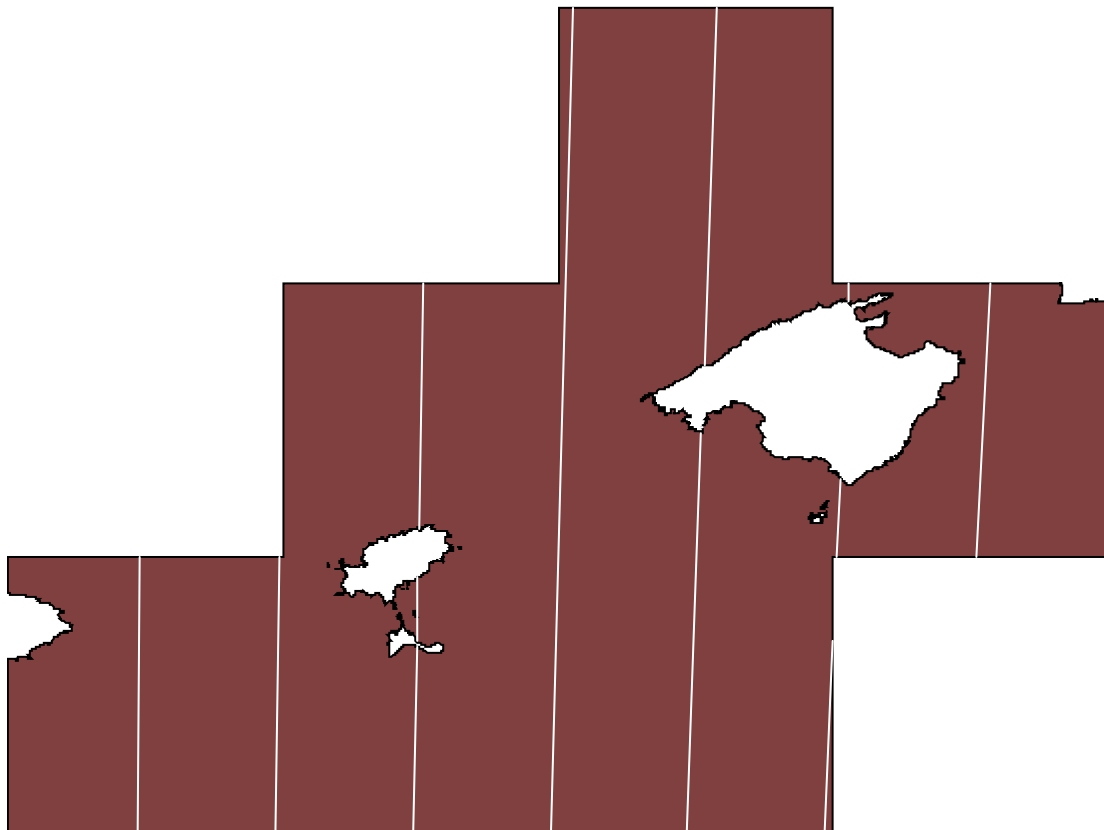
Sample layer name: 1 replica 2
Type of sampler: Line
Number of samplers: 5

List of samplers:

	x-coord	y-coord
Sampler 1	-0.9680567	35.70023
	-0.9919043	37.58257
	--	--
Sampler 2	0.2562113	36.12331
	0.2626123	38.00303
	--	--
	0.2662607	39.00081
	0.2709641	40.21792
	--	--
Sampler 3	1.493354	36.53007
	1.52287	38.00954
	--	--
	1.56619	40.00103
	1.594136	41.18775
	--	--
Sampler 4	2.733905	36.67028
	2.782661	38.00254
	--	--
	2.904962	41.00035
	2.936991	41.7161
	--	--
Sampler 5	3.983244	36.89945

```
4.149272 39.85978
--
4.161781 40.06604
4.284169 41.97839
--
```

Area A_inside – previously surveyed sub-area EXTRA replica



```
Sample layer name: 2 replicas 3
Type of sampler: Line
Number of samplers: 7
```

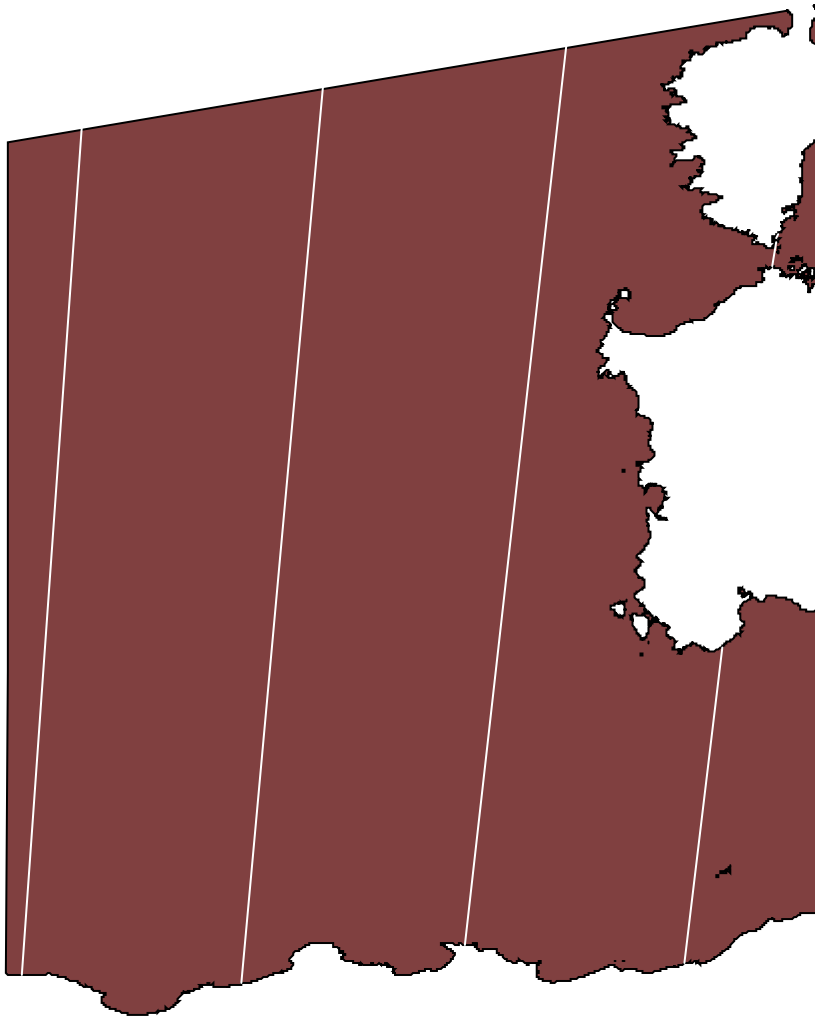
List of samplers:

```
  x-coord  y-coord

Sampler 1
  0.4710971 38.00507
  0.4776304 39.00107
  --
Sampler 2
  0.971265 38.00838
  0.9846776 39.00006
  --
Sampler 3
  1.471417 38.00957
  1.485038 38.67958
  --
  1.485442 38.69912
  1.490206 38.9281
```

```
--
1.493882 39.10297
1.513274 40.00108
--
Sampler 4
1.971501 38.00863
2.057941 41.00024
--
Sampler 5
2.471465 38.00556
2.522011 39.45671
--
2.522645 39.47427
2.522706 39.47596
--
2.530954 39.70288
2.579991 41.00106
--
Sampler 6
2.971255 38.00036
2.999904 38.69755
--
3.012648 39.00005
3.025021 39.28946
--
3.053258 39.93463
3.056178 40.00018
--
Sampler 7
3.519588 39.00107
3.570431 40.00059
--
```

Area B – EXTRA replica

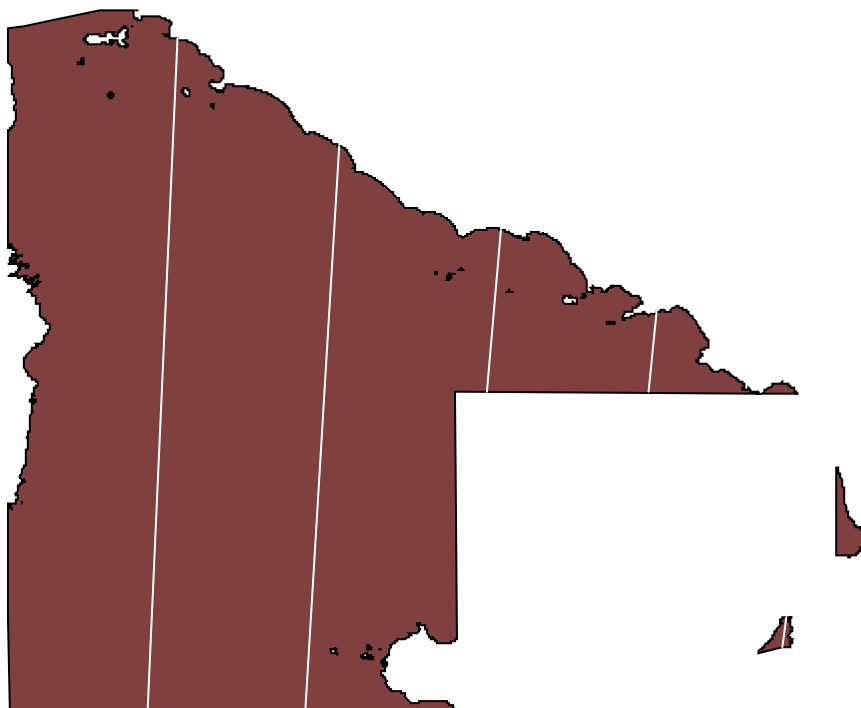


Sample layer name: 1 replica 2
Type of sampler: Line
Number of samplers: 4

List of samplers:

x-coord	y-coord
Sampler 1	
4.596959	36.88508
4.955485	42.10815
--	--
Sampler 2	
5.94977	36.83114
6.446641	42.37816
--	--
Sampler 3	
7.32771	37.06848
7.947943	42.62767
--	--
Sampler 4	
8.673029	36.95544
8.907509	38.90888
--	--
9.22187	41.25891
9.241673	41.39797
--	--
9.245019	41.42137
9.249138	41.45013
--	--

Area C – EXTRA replica

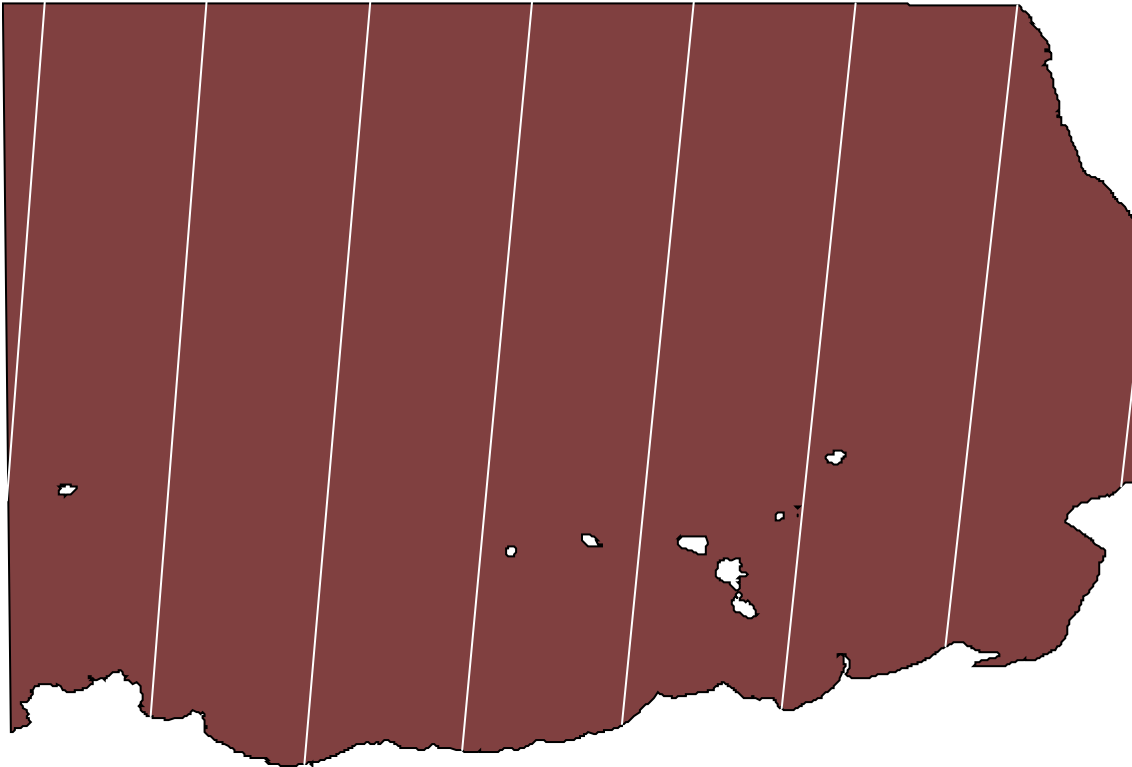


Sample layer name: 1 replica 2
Type of sampler: Line
Number of samplers: 5

List of samplers:

	x-coord	y-coord
Sampler 1		
	15.57753	37.99949
	15.60275	38.23807
	--	--
Sampler 2		
	14.52859	40.00334
	14.59384	40.63206
	--	--
Sampler 3		
	13.0652	37.5001
	13.06542	37.50345
	--	--
	13.25089	40.00208
	13.36131	41.28256
	--	--
Sampler 4		
	11.83041	37.50289
	12.10219	41.93159
	--	--
Sampler 5		
	10.59264	37.50353
	10.82653	42.77315
	--	--

Area C – previously surveyed sub-area EXTRA replica



Sample layer name: 1 replica 3
Type of sampler: Line
Number of samplers: 8

List of samplers:

	x-coord	y-coord
Sampler 1	15.96756	38.71472
	16.0001	38.99485
	--	--
Sampler 2	15.50107	38.28913
	15.69242	39.99403
	--	--
Sampler 3	15.06655	38.12848
	15.26341	39.99745
	--	--
Sampler 4	14.64432	38.08271
	14.8341	40.00148
	--	--
Sampler 5	14.22024	38.01279
	14.40426	40.00386
	--	--
Sampler 6	13.79949	37.97813
	13.97392	40.00459
	--	--
Sampler 7	13.39071	38.10485
	13.54313	40.00366
	--	--

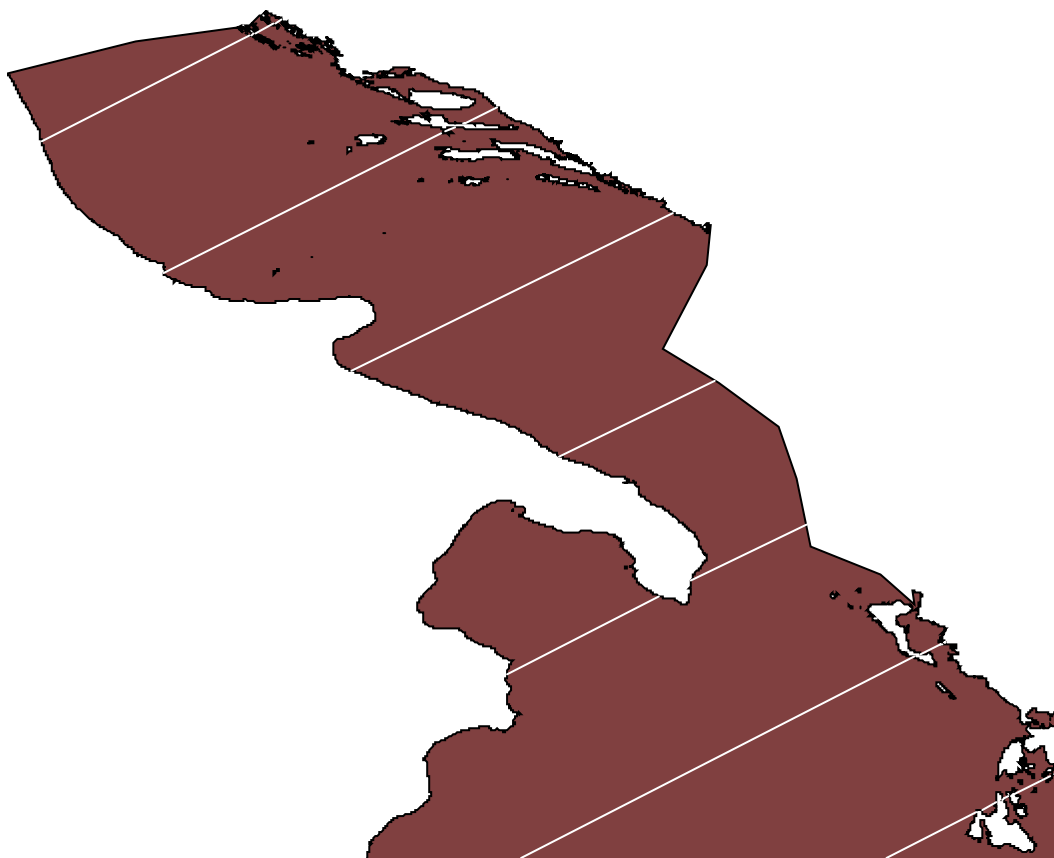
Sampler 8

13.0116 38.67741

13.1119 40.00107

--

Area D – EXTRA replica



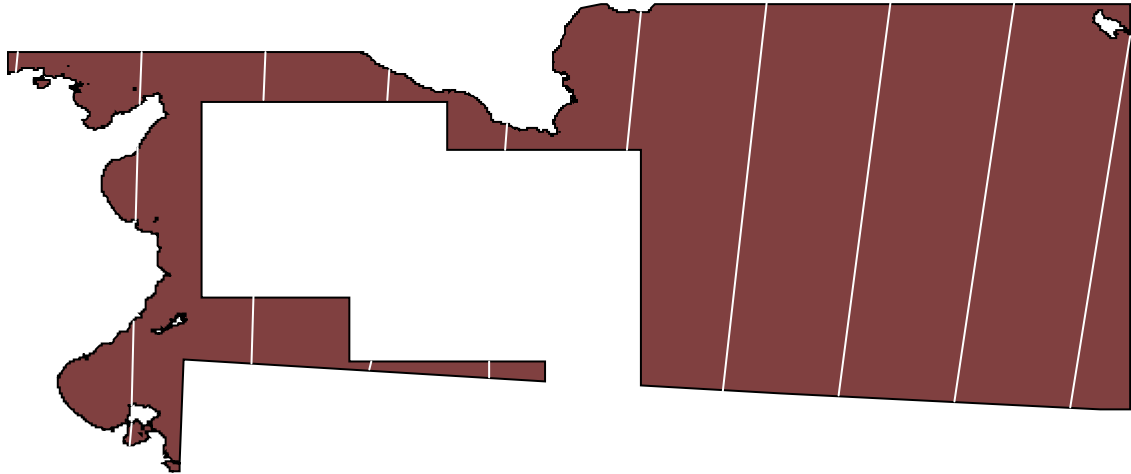
Sample layer name: 1 replica 2
Type of sampler: Line
Number of samplers: 7

List of samplers:

	x-coord	y-coord
Sampler 1		
	13.86057	43.03519
	15.315	43.77383
	--	--
	15.32187	43.77722
	15.34135	43.78683
	--	--
	15.35595	43.79403
	15.48624	43.8581
	--	--
	15.49004	43.85996
	15.53405	43.88153
	--	--
Sampler 2		
	14.71792	42.10994
	16.66242	43.08741
	--	--
	16.68921	43.10036
	16.74712	43.12834
	--	--
	16.81053	43.15889
	16.81901	43.16298
	--	--
	16.81913	43.16303
	17.04815	43.27273

```
--
Sampler 3
16.02577 41.42739
18.27499 42.53119
--
Sampler 4
17.48659 40.827
18.56437 41.35501
--
Sampler 5
17.11355 39.30148
18.18152 39.84934
--
18.40588 39.96165
19.20683 40.35485
--
Sampler 6
17.22128 38.01812
19.96727 39.42101
--
20.01021 39.44181
20.15299 39.51072
--
20.15476 39.51157
20.16818 39.51803
--
20.17393 39.5208
20.17609 39.52184
--
20.18065 39.52403
20.18426 39.52576
--
Sampler 7
19.7656 38.02026
20.39832 38.33557
--
20.40895 38.34081
20.41205 38.34233
--
20.41275 38.34268
20.41673 38.34464
--
20.44038 38.35627
20.54005 38.40517
--
20.58717 38.42823
20.5959 38.43249
--
20.59663 38.43285
20.62627 38.44733
--
20.67309 38.47016
20.92114 38.59044
--
20.94002 38.59955
20.99931 38.62811
--
```

Area E – EXTRA replica



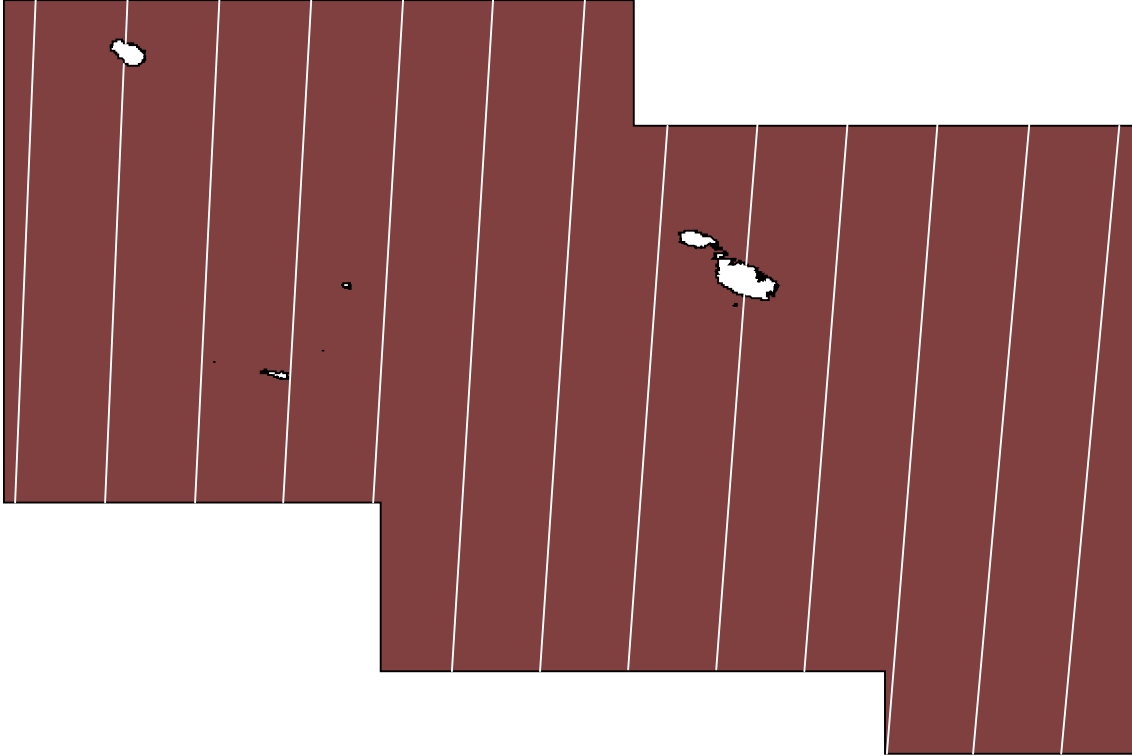
Sample layer name: 1 replica 2
Type of sampler: Line
Number of samplers: 10

List of samplers:

	x-coord	y-coord
Sampler 1	20.38915	33.87109
	20.99918	37.66963
	--	--
Sampler 2	19.20808	33.93146
	19.80425	38.01981
	--	--
Sampler 3	18.01967	33.98003
	18.54252	38.02654
	--	--
Sampler 4	16.8265	34.03635
	17.27518	38.01874
	--	--
Sampler 5	15.84606	36.50125
	15.9943	37.91658
	--	--
Sampler 6	14.42574	34.18103
	14.43614	34.33345
	--	--
	14.6	36.50368
	14.62181	36.76533
	--	--

```
Sampler 7
 13.21693 34.2579
 13.22087 34.33167
 --
 13.38401 37.00505
 13.40661 37.32975
 --
Sampler 8
 12.00196 34.32281
 12.02928 35.00219
 --
 12.12264 37.00508
 12.14933 37.51036
 --
Sampler 9
 10.76148 33.47318
 10.76619 33.69805
 --
 10.77046 33.8944
 10.79089 34.7545
 --
 10.81909 35.78234
 10.842 36.5214
 --
 10.85703 36.97095
 10.8763 37.51326
 --
Sampler 10
 9.596216 37.30095
 9.600022 37.50206
 --
```

Area E – previously surveyed sub-area EXTRA replica



Sample layer name: 1 replica 3
Type of sampler: Line
Number of samplers: 13

List of samplers:

	x-coord	y-coord
Sampler 1	15.70226	34.0009
	15.93073	36.50059
--		
Sampler 2	15.3549	34.00098
	15.57213	36.50295
--		
Sampler 3	15.00715	34.00003
	15.21312	36.50418
--		
Sampler 4	14.68268	34.33228
	14.85372	36.50429
--		
Sampler 5	14.33307	34.33379
	14.44036	35.8238
--		
	14.44965	35.94432

```
14.49394 36.50326
--
Sampler 6
13.98309 34.33426
14.1338 36.50109
--
Sampler 7
13.63275 34.33368
13.81007 37.00191
--
Sampler 8
13.28206 34.33206
13.44731 37.00468
--
Sampler 9
12.96582 35.00021
13.08418 37.00631
--
Sampler 10
12.61181 35.00183
12.72071 37.00679
--
Sampler 11
12.25747 35.00239
12.3569 37.00612
--
Sampler 12
11.90281 35.00188
11.98014 36.7469
--
11.98392 36.82449
11.99279 37.0043
--
Sampler 13
11.54785 35.00029
11.6284 37.00132
--
```

Area F – EXTRA replica



Sample layer name: 1 replica 2
Type of sampler: Line
Number of samplers: 6

List of samplers:

	x-coord	y-coord
Sampler 1		
	27.40603	33.70298
	27.71965	35.94088
	--	--
	27.72033	35.9453
	27.7452	36.10581
	--	--
	27.75818	36.18872
	27.76647	36.24138
	--	--
	27.76689	36.24403
	27.81925	36.57156
	--	--
	27.82793	36.62502
	27.8302	36.63895
	--	--
	27.83407	36.66272
	27.84789	36.7471
	--	--
	27.85767	36.8065
	27.89437	37.02685
	--	--
Sampler 2		
	26.24629	33.63512

26.59666 36.41626
--
26.59714 36.41961
26.72705 37.30029
--
26.73116 37.32714
26.73784 37.37067
--
26.73803 37.37189
26.73843 37.3745
--
26.74054 37.38821
26.78185 37.6535
--
26.8067 37.8104
26.83742 38.00168
--

Sampler 3

25.08101 33.55368
25.22289 34.95452
--
25.26485 35.33411
25.38422 36.34552
--
25.38666 36.36529
25.39015 36.39344
--
25.39258 36.41302
25.39808 36.4571
--
25.40063 36.47758
25.44383 36.81784
--
25.44848 36.85392
25.457 36.91964
--
25.4923 37.18798
25.60426 38.00036
--

Sampler 4

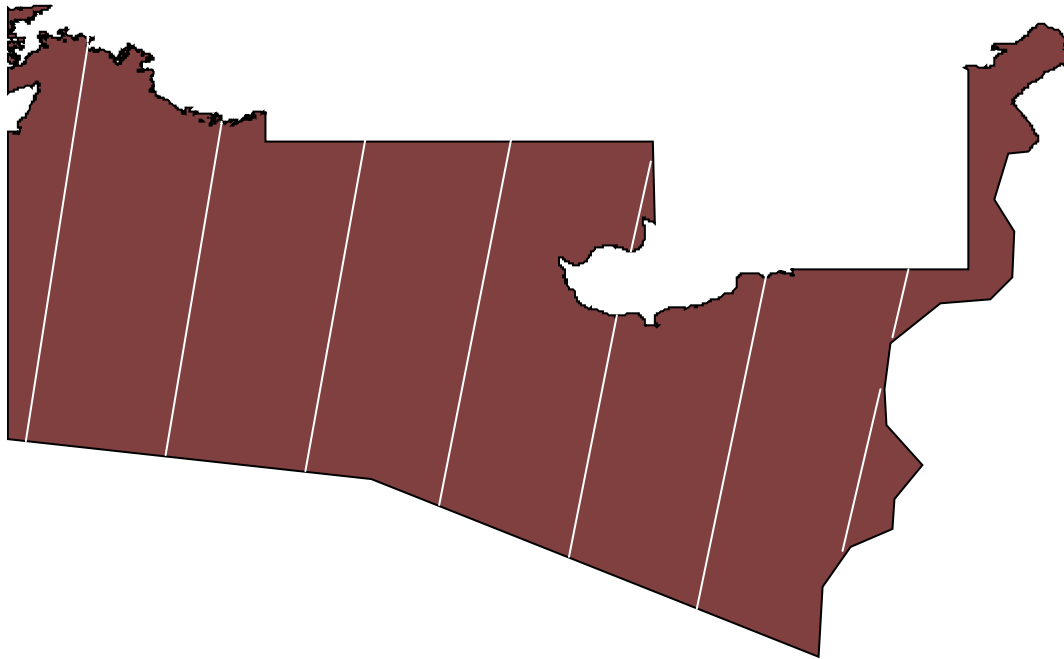
23.93238 33.72886
24.06095 35.19881
--
24.08854 35.48639
24.09042 35.50567
--
24.09948 35.59818
24.22304 36.78115
--
24.22538 36.8023
24.30957 37.53696
--
24.32676 37.68109
24.36221 37.97252
--

Sampler 5

22.76926 33.85449
22.94536 36.15844
--
22.96332 36.36299
22.97224 36.46289
--
22.97253 36.46615
22.97317 36.47328
--
22.97662 36.51158
22.97742 36.52053
--
23.01523 36.9306
23.01647 36.94379
--
23.01689 36.9482

23.06547 37.45047
--
23.10572 37.84852
23.11266 37.91559
--
23.12833 38.06549
23.13876 38.16416
--
23.14069 38.18227
23.14081 38.18341
--
Sampler 6
21.58971 33.84851
21.76816 36.70441
--
21.7716 36.75053
21.77519 36.79837
--
21.90034 38.32576
21.90517 38.37996
--

Area G_outside – EXTRA replica



Sample layer name: 1 replica 2
Type of sampler: Line
Number of samplers: 7

List of samplers:

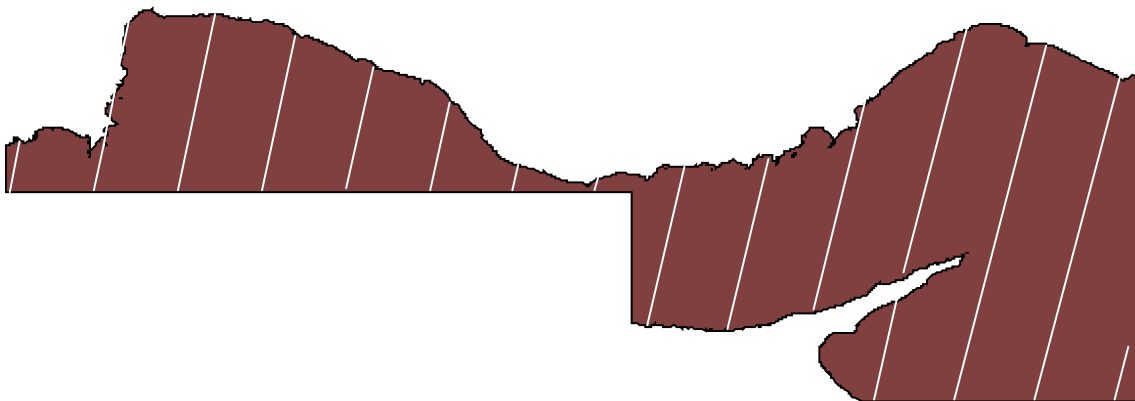
	x-coord	y-coord
Sampler 1		
	34.46987	32.83313
	34.74926	34.07859
	--	--
	34.84509	34.48145
	34.9748	35.00928
	--	--
	35.37787	36.53803
	35.39289	36.59211
	--	--
Sampler 2		
	33.32705	32.38437
	33.87996	34.97808
	--	--
Sampler 3		
	32.34242	32.78162
	32.71331	34.65088
	--	--

```

32.82128 35.14927
32.97648 35.83561
--
Sampler 4
31.33989 33.17513
31.89623 36.0132
--
Sampler 5
30.29937 33.44125
30.76648 36.01052
--
Sampler 6
29.22325 33.56508
29.65281 36.13251
--
29.65379 36.13783
29.65566 36.14791
--
Sampler 7
28.1356 33.67928
28.61173 36.73592
--
28.61323 36.74445
28.6157 36.7585
--
28.61847 36.77421
28.62051 36.78576
--
28.62165 36.79225
28.62168 36.7924
--
28.62221 36.7954
28.62231 36.79597
--
28.62371 36.80388
28.62442 36.80791
--

```

Area G_inside – previously surveyed sub-area EXTRA replica



```

Sample layer name: 1 replica 3
Type of sampler: Line
Number of samplers: 15

```

```

List of samplers:
x-coord y-coord

```

```

Sampler 1
35.31715 35.00862

```

```
35.38045 35.25465
--
Sampler 2
34.93341 35.00926
35.34284 36.56435
--
Sampler 3
34.54798 35.00841
34.9861 36.70142
--
Sampler 4
34.16096 35.00605
34.2819 35.50448
--
34.3088 35.61304
34.61823 36.80713
--
Sampler 5
33.87488 35.43574
34.12916 36.45842
--
Sampler 6
33.46157 35.34118
33.65638 36.1551
--
Sampler 7
33.07423 35.36089
33.25257 36.12519
--
Sampler 8
32.82726 36.00578
32.84245 36.07121
--
Sampler 9
32.43036 36.00999
32.45703 36.12767
--
Sampler 10
32.03207 36.01264
32.12532 36.43081
--
Sampler 11
31.63245 36.01369
31.76139 36.60458
--
Sampler 12
31.23154 36.01315
31.38949 36.754
--
Sampler 13
30.82942 36.01099
31.00408 36.85184
--
Sampler 14
30.42613 36.0072
30.46923 36.22623
--
30.4696 36.2281
30.48859 36.32344
--
30.49382 36.34959
30.49428 36.35192
--
30.49589 36.35992
30.52283 36.49369
--
30.54542 36.60487
30.59061 36.82452
--
Sampler 15
30.02172 36.00177
30.06803 36.24457
```