Seychelles Test Drive

Anse Etoile Phase-2 Report

DRIVE TEST ROUTE

Phase-1 Dates- 04th Oct 2024

Route Name: Mahe

District Name: Anse Etoile

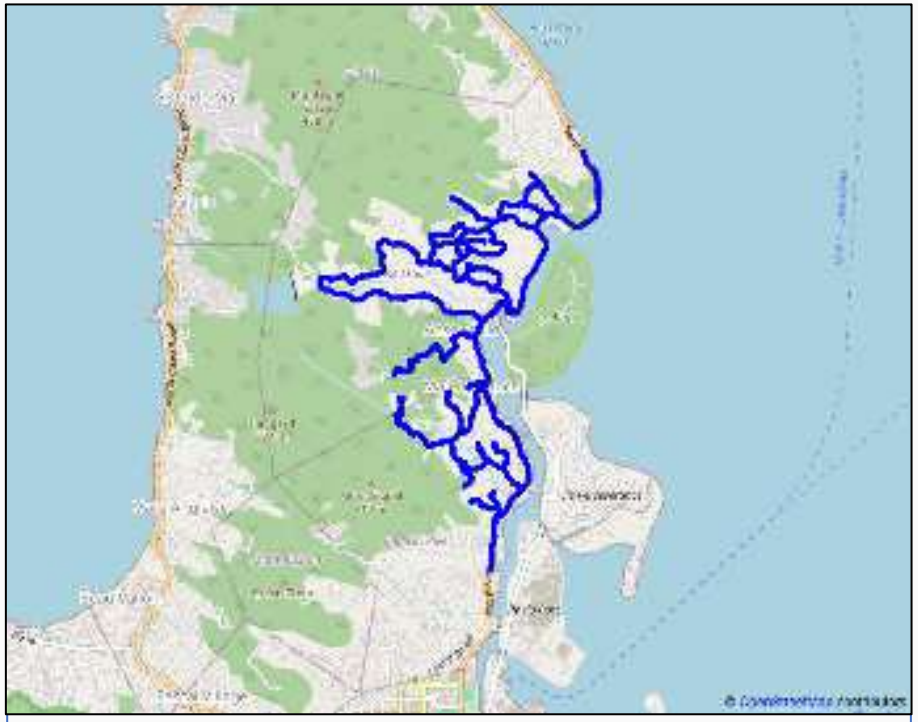
Region: Northern

Island: Mahé

Drive Test Distance: 28.89 kms

Drive Test Duration: 01 hours,41 minutes,34 seconds

Phase-2 Dates- 18th Oct 2024



Route Name: Mahe

District Name: Anse Etoile

Region: Northern

Island: Mahé

Drive Test Distance: 26.96 kms

Drive Test Duration: 01 hours,17 minutes,32 seconds

VOICE EXECUTIVE SUMMARY

Phase-1

Short Call Findings:

- The Call Setup Success Rate for Airtel is (99.22%), while for Operator CWS it is (97.64%).
- The Call Setup Time for Airtel is (6.72s) , while for Operator CWS it is (7.75s)

Long Call Findings :

- The Call Retainability for Airtel is (100.00%), while for CWS it is (100.00%).
- The MOS quality observed for Airtel is (3.10), and for CWS, it is (3.30).

Phase-2

Short Call Findings:

- The Call Setup Success Rate for Airtel is (98.97%), while for Operator CWS it is (96.84%).
- The Call Setup Time for Airtel is (6.55s), while for Operator CWS it is (7.45s)

Long Call Findings :

- The Call Retainability for Airtel is (96.15%), while for CWS it is (96.30%).
- The MOS quality observed for Airtel is (3.10), and for CWS, it is (3.37).

4G PREFERRED DATA TEST – EXECUTIVE SUMMARY

Phase-1

4G Preferred Data Findings:

- Airtel SFTP DL is (11.62 Mbps), while SFTP UL is (5.82 Mbps), CWS SFTP DL is (5.08 Mbps), while SFTP UL is (3.22 Mbps)
- Airtel HTTP DL is (16.11 Mbps), HTTP Capacity DL is (33.34 Mbps) ,HTTP UL is (10.67 Mbps) , and HTTP Capacity UL is (19.44 Mbps).
- CWS HTTP DL is (6.55 Mbps), HTTP Capacity DL is (28.00 Mbps) ,HTTP UL is (6.38 Mbps) , and HTTP Capacity UL is (27.14 Mbps).
- On live web page testing for browsing, www.shein.com took (7.06s), www.nbs.gov.sc took (18.66s), and www.sbc.sc took (20.60s) on Airtel.
- On live web page testing for browsing, www.shein.com took (10.33s), www.nbs.gov.sc took (16.52s), and www.sbc.sc took (20.74s) on CWS.
- On static browsing, Kepler Webpage took (4.58s), and Kepler Mobile took (1.94s) on Airtel.
- On static browsing, Kepler Webpage took (5.49s), and Kepler Mobile took (3.09s) on CWS.
- YouTube average resolution in Airtel is (1024.91) pixels.
- YouTube average resolution in CWS is (985.97) pixels.
- Airtel scored 59.30% in Carrier Aggregation (CA).
- CWS scored 26.19% in Carrier Aggregation (CA).

Phase-2

4G Preferred Data Findings:

- Airtel SFTP DL is (11.59 Mbps), while SFTP UL is (6.86 Mbps), CWS SFTP DL is (6.69 Mbps), while SFTP UL is (3.94 Mbps)
- Airtel HTTP DL is (19.37 Mbps), HTTP Capacity DL is (53.33 Mbps) ,HTTP UL is (11.01 Mbps) , and HTTP Capacity UL is (22.03 Mbps).
- CWS HTTP DL is (8.26 Mbps), HTTP Capacity DL is (20.69 Mbps) ,HTTP UL is (8.09 Mbps) , and HTTP Capacity UL is (29.80 Mbps).
- On live web page testing for browsing, www.shein.com took (7.12s), www.nbs.gov.sc took (17.94s), and www.sbc.sc took (18.83s) on Airtel.
- On live web page testing for browsing, www.shein.com took (6.51s), www.nbs.gov.sc took (17.59s), and www.sbc.sc took (17.18s) on CWS.
- On static browsing, Kepler Webpage took (4.63s), and Kepler Mobile took (1.68s) on Airtel.
- On static browsing, Kepler Webpage took (4.85s), and Kepler Mobile took (2.91s) on CWS.
- YouTube average resolution in Airtel is (1080.00) pixels.
- YouTube average resolution in CWS is (1069.51) pixels.
- Airtel scored 63.69% in Carrier Aggregation (CA).
- CWS scored 30.99% in Carrier Aggregation (CA).

3G PREFERRED DATA TEST - EXECUTIVE SUMMARY

Phase-1

3G Preferred Data Test Findings:

- Airtel SFTP DL is (5.15 Mbps), while SFTP UL is (1.82 Mbps), CWS SFTP DL is (3.17 Mbps), while SFTP UL is (1.20 Mbps)
- Airtel HTTP DL is (4.98 Mbps), HTTP Capacity DL is (6.86 Mbps) ,HTTP UL is (2.45 Mbps) , and HTTP Capacity UL is (5.10 Mbps).
- CWS HTTP DL is (2.97 Mbps), HTTP Capacity DL is (7.97 Mbps) ,HTTP UL is (2.07 Mbps) , and HTTP Capacity UL is (4.67 Mbps).
- On live web page testing for browsing, www.shein.com took (10.18s), www.nbs.gov.sc took (11.79s), and www.sbc.sc took (14.68s) on Airtel.
- On live web page testing for browsing, www.shein.com took (8.03s), www.nbs.gov.sc took (9.80s), and www.sbc.sc took (10.58s) on CWS.
- On static browsing, Kepler Webpage took (4.21s), and Kepler Mobile took (2.14s) on Airtel.
- On static browsing, Kepler Webpage took (5.42s), and Kepler Mobile took (2.71s) on CWS.
- YouTube average resolution in Airtel is (970.17) pixels.
- YouTube average resolution in CWS is (1009.26) pixels.

Phase-2

3G Preferred Data Test Findings:

- Airtel SFTP DL is (5.15 Mbps), while SFTP UL is (1.79 Mbps), CWS SFTP DL is (3.21 Mbps), while SFTP UL is (1.32 Mbps)
- Airtel HTTP DL is (5.22 Mbps), HTTP Capacity DL is (7.30 Mbps) ,HTTP UL is (2.58 Mbps) , and HTTP Capacity UL is (5.34 Mbps).
- CWS HTTP DL is (3.56 Mbps), HTTP Capacity DL is (7.66 Mbps) ,HTTP UL is (2.23 Mbps) , and HTTP Capacity UL is (4.59 Mbps).
- On live web page testing for browsing, www.shein.com took (11.06s), www.nbs.gov.sc took (12.00s), and www.sbc.sc took (12.35s) on Airtel.
- On live web page testing for browsing, www.shein.com took (7.08s), www.nbs.gov.sc took (7.93s), and www.sbc.sc took (12.44s) on CWS.
- On static browsing, Kepler Webpage took (3.57s), and Kepler Mobile took (1.58s) on Airtel.
- On static browsing, Kepler Webpage took (6.55s), and Kepler Mobile took (2.58s) on CWS.
- YouTube average resolution in Airtel is (1016.69) pixels.
- YouTube average resolution in CWS is (1064.40) pixels.

TESTING METHODOLOGY

Short Call	
Call Duration	10 Seconds
Setup and Release phase	30 seconds
Minimum pause between calls	30 seconds

Long Call	
Call Duration	120 Seconds
Setup and Release phase	30 seconds
Minimum between calls	30 seconds

DATA	Test Type and Timeout	Technology 3G Preferred	Technology 4G Preferred
POP always on. ICMP PAYLOAD PING 800 BYTES			
1	FILE TRANSFER DOWNLOAD	FTP DL (3MB)	FTP DL (5MB)
	135s	wait 10s	wait 10s
2	FILE TRANSFER UPLOAD	FTP UL (1MB)	FTP UL (3MB)
	135s	wait 10s	wait 10s
3	FILE TRANSFER DOWNLOAD	HTTP Get (3MB)	HTTP Get (5MB)
	135s	wait 10s	wait 10s
4	FILE TRANSFER UPLOAD	HTTP Put (1MB)	HTTP Put (3MB)
	135s	wait 10s	wait 10s
5	ICMP PING 32 BYTES	Ping (32 bytes) *5	Ping (32 bytes) *5
		wait 10s	wait 10s
6	YOUTUBE STREAMING	Video: YouTube 60sec	Video: YouTube 60sec
	95 seconds	wait 10s	wait 10s
7	KEPLER WEB BROWSING	HTTPS Browsing: Kepler	HTTPS Browsing: Kepler
	45s	wait 10s	wait 10s
8	LIVE WEB BROWSING	www.shein.com, www.nbs.gov.sc, www.sbc.sc	www.shein.com, www.nbs.gov.sc, www.sbc.sc
	45s	wait 10s	wait 10s
9	KEPLER MOBILE WEB BROWSING	HTTPS Browsing: Kepler Mobile	HTTPS Browsing: Kepler Mobile
	45s	wait 10s	wait 10s
10	ICMP PING 32 BYTES	Ping (32 bytes) 5 www.google.com	Ping (32 bytes) 5 www.google.com
		wait 10s	wait 10s
11	FILE TRANSFER-CAPACITY DOWNLOAD	HTTP Get (500MB) Multiple files	HTTP Get (500MB) Multiple files
	10s fixed duration	wait 10s	wait 10s
12	FILE TRANSFER-CAPACITY UPLOAD	HTTP Put (500MB)-Multiple Files	HTTP Put (500MB)-Multiple Files
	10s fixed duration	wait 10s	wait 10s

VOICE TEST KPI STATISTICS (Short Call)

Phase-1

Short Call Statistics		
Short Call Scenario	Operator 1	Operator 2
Voice KPIs	Airtel	CWS
Call Attempt	129	127
Call Failed	1	3
Call Connected	128	124
CSSR[%]	99.22	97.64
USCSR[%]	0.78	2.36
CST [s] Alerting	6.72	7.75
CST [s]Connected	6.95	7.94

CSSR= Call Setup Success rate
USCSR=Unsuccessful call setup ratio
CST=Call setup time
Call Setup Success Ratio >97%
CRR= Call retainability ratio
DCR=Dropped-call rate
MOS=Mean Opinion Score
Drop Call Ratio<2

Call Setup Time (s)	Operators		Rank	
	Airtel	CWS	Airtel	CWS
Overall CST (until ringing/alerting)	6.72	7.75	1	2
CS calls CST (until ringing/alerting)	7.19	8.99	1	2
CSFB calls CST (until ringing/alerting)	6.70	7.71	1	2
Overall CST (until Connect/Connect Acknowledge)	6.95	7.94	1	2
CS calls CST (until Connect/Connect Acknowledge)	7.55	9.20	1	2
CSFB calls CST (until Connect/Connect Acknowledge)	6.94	7.90	1	2

Phase-2

Short Call Statistics		
Short Call Scenario	Operator 1	Operator 2
Voice KPIs	Airtel	CWS
Call Attempt	97.0	95.0
Call Failed	1.0	3.0
Call Connected	96.0	92.0
CSSR[%]	98.97	96.84
USCSR[%]	1.03	3.16
CST [s] Alerting	6.55	7.45
CST [s]Connected	6.82	7.65

Call Setup Time (s)	Operators		Rank	
	Airtel	CWS	Airtel	CWS
Overall CST (until ringing/alerting)	6.55	7.45	1	2
CS calls CST (until ringing/alerting)	7.06	10.47	1	2
CSFB calls CST (until ringing/alerting)	6.52	7.31	1	2
Overall CST (until Connect/Connect Acknowledge)	6.82	7.65	1	2
CS calls CST (until Connect/Connect Acknowledge)	7.35	10.68	1	2
CSFB calls CST (until Connect/Connect Acknowledge)	6.80	7.51	1	2

VOICE TEST KPI STATISTICS (Long Call)

Phase-1

Long Call Statistics

Long Call Scenario	Operator 1	Operator 2
Voice KPIs	Airtel	CWS
Call Connected	35	34
Call Dropped	0	0
Call Completed	35	34
CRR[%]	100.00	100.00
DCR[%]	0.00	0.00
MOS	3.10	3.30

	Airtel short call	CWS short call	Airtel long call	CWS long call
CSFB Calls	125	123	32	34
CS Calls	4	4	3	0

Handover Statistics	Airtel MO	CWS MO
Handover Attempt	39	102
Handover Failure	1	0
Handover Success	38	102
HOSR %	97.44	100.00

Phase-2

Long Call Statistics

Long Call Scenario	Operator 1	Operator 2
Voice KPIs	Airtel	CWS
Call Connected	26	27
Call Dropped	1	1
Call Completed	25	26
CRR[%]	96.15	96.30
DCR[%]	3.85	3.70
MOS	3.10	3.37

	Airtel short call	CWS short call	Airtel long call	CWS long call
CSFB Calls	90	91	25	26
CS Calls	7	4	1	1

Handover Statistics	Airtel MO	CWS MO
Handover Attempt	41	111
Handover Failure	1	0
Handover Success	40	111
HOSR %	97.56	100.00

DATA TEST KPI STATISTICS(4G Preferred)

DATA Scenario		Phase-1				Phase-2			
		Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
FILE TRANSFER	SFTP DL (Mbps)	11.62	5.08	1	2	11.59	6.69	1	2
	SFTP UL(Mbps)	5.82	3.22	1	2	6.86	3.94	1	2
	HTTP DL(Mbps)	16.11	6.55	1	2	19.37	8.26	1	2
	HTTP UL(Mbps)	10.67	6.38	1	2	11.01	8.09	1	2
	HTTP Capacity DL(Mbps)	33.34	28	1	2	53.33	20.69	1	2
	HTTP Capacity UL(Mbps)	19.44	27.14	2	1	22.03	29.80	2	1
BROWSER	Overall Browser DL Time (s)	10.31	11.04	1	2	9.92	9.88	2	1
	Kepler Webpage DL Time (s)	4.58	5.49	1	2	4.63	4.85	1	2
	Mobile Kepler Webpage DL Time (s)	1.94	3.09	1	2	1.68	2.91	1	2
	www.shein.com Webpage DL Time (s)	7.06	10.33	1	2	7.12	6.51	2	1
	www.nbs.gov.sc Webpage DL Time (s)	18.66	16.52	2	1	17.94	17.59	2	1
	www.sbc.sc Webpage DL Time (s)	20.6	20.74	1	2	18.83	17.18	2	1
LATENCY	Avg Latency (ms)	270.63	289.94	1	2	269.94	303.88	1	2
	Median Latency (ms)	243	232	2	1	137	274	1	2
YOUTUBE	YouTube Access Time (s)	6.08	2.39	2	1	5.38	1.69	2	1
	YouTube Average Resolution (pixels)	1024.91	985.97	1	2	1080.00	1069.51	1	2
	YouTube Success Ratio [%]	100.00	100.00	1	1	100.00	100.00	1	1

4G PREFERRED THROUGHPUT FILE ACCESS

Phase-1

Test Type	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
SFTP DL	Success	20	15	100.00	93.75
	Failure	0	1	0.00	6.25
SFTP UL	Success	20	17	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP DL	Success	20	16	100.00	94.12
	Failure	0	1	0.00	5.88
HTTP UL	Success	18	17	90.00	100.00
	Failure	2	0	10.00	0.00
HTTP Capacity DL	Success	18	16	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP Capacity UL	Success	17	14	94.44	87.50
	Failure	1	2	5.56	12.50

Phase-2

Test Type	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
SFTP DL	Success	16	16	100.00	100.00
	Failure	0	0	0.00	0.00
SFTP UL	Success	16	16	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP DL	Success	16	16	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP UL	Success	16	16	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP Capacity DL	Success	14	14	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP Capacity UL	Success	14	13	100.00	92.86
	Failure	0	1	0.00	7.14

4G PREFERRED BROWSING FILE ACCESS

Phase-1

Web Page	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
Kepler	Success	19	17	95.00	100.00
	Failure	1	0	5.00	0.00
Mobile Kepler	Success	18	16	100.00	100.00
	Failure	0	0	0.00	0.00
www.shein.com	Success	20	16	100.00	94.12
	Failure	0	1	0.00	5.88
www.nbs.gov.sc	Success	18	16	90.00	100.00
	Failure	2	0	10.00	0.00
www.sbc.sc	Success	17	15	89.47	93.75
	Failure	2	1	10.53	6.25

Phase-2

Web Page	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
Kepler	Success	15	13	93.75	92.86
	Failure	1	1	6.25	7.14
Mobile Kepler	Success	14	14	100.00	100.00
	Failure	0	0	0.00	0.00
www.shein.com	Success	15	14	100.00	100.00
	Failure	0	0	0.00	0.00
www.nbs.gov.sc	Success	14	14	93.33	100.00
	Failure	1	0	6.67	0.00
www.sbc.sc	Success	14	14	93.33	100.00
	Failure	1	0	6.67	0.00

4G PREFERRED LATENCY

Phase-1

	Latency KPIs	Airtel 4G	CWS 4G
Overall Latency	Sample Count [32 bytes]	38	31
	Average Latency [ms]	267.50	257.16
	Median Latency [ms]	252	191
	Ping session status: Successful	38	31
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	1
	Packet Loss<1%	0.00	3.13
www.google.com	Average Latency [ms]	413.67	175.44
	Median Latency [ms]	410	153
	Ping session status: Successful	18	16
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00
102.133.176.104	Average Latency [ms]	135.95	344.33
	Median Latency [ms]	122	329
	Ping session status: Successful	20	15
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	1
	Packet Loss<1%	0.00	6.25

Phase-2

	Latency KPIs	Airtel 4G	CWS 4G
Overall Latency	Sample Count [32 bytes]	29	30
	Average Latency [ms]	265.79	296.43
	Median Latency [ms]	132	257
	Ping session status: Successful	29	30
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	1	0
	Packet Loss<1%	3.33	0.00
www.google.com	Average Latency [ms]	422.21	248.36
	Median Latency [ms]	418	195
	Ping session status: Successful	14	14
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00
102.133.176.104	Average Latency [ms]	119.80	338.50
	Median Latency [ms]	121	308
	Ping session status: Successful	15	16
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	1	0
	Packet Loss<1%	6.25	0.00

4G PREFERRED YOUTUBE COMPARISON

Phase-1

LTE YOUTUBE Success Ratio		
KPIs	Airtel 4G	CWS 4G
Attempt(Count)	20	17
Success(Count)	20	17
Failure(Count)	0	0
YouTube Access Time (s)	6.08	2.39
YouTube Average Resolution (pixels)	1024.91	985.97
YouTube Success Ratio [%]	100.00	100.00

Phase-2

LTE YOUTUBE Success Ratio		
KPIs	Airtel 4G	CWS 4G
Attempt(Count)	16	14
Success(Count)	16	14
Failure(Count)	0	0
YouTube Access Time (s)	5.38	1.69
YouTube Average Resolution (pixels)	1080.00	1069.51
YouTube Success Ratio [%]	100.00	100.00

DATA TEST KPI STATISTICS (3G Preferred)

DATA Scenario		Phase-1				Phase-2			
		Airtel 3G	CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)	Airtel 3G	CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)
FILE TRANSFER	SFTP DL (Mbps)	5.15	3.17	1	2	5.13	3.21	1	2
	SFTP UL(Mbps)	1.82	1.2	1	2	1.79	1.32	1	2
	HTTP DL(Mbps)	4.98	2.97	1	2	5.22	3.56	1	2
	HTTP UL(Mbps)	2.45	2.07	1	2	2.58	2.23	1	2
	HTTP Capacity DL(Mbps)	6.86	7.97	2	1	7.30	7.66	2	1
	HTTP Capacity UL(Mbps)	5.1	4.67	1	2	5.34	4.59	1	2
BROWSER	Overall Browser DL Time (s)	8.45	7.22	2	1	8.24	7.31	2	1
	Kepler Webpage DL Time (s)	4.21	5.42	1	2	3.57	6.55	1	2
	Mobile Kepler Webpage DL Time (s)	2.14	2.71	1	2	1.58	2.58	1	2
	www.shein.com Webpage DL Time (s)	10.18	8.03	2	1	11.06	7.08	2	1
	www.nbs.gov.sc Webpage DL Time (s)	11.79	9.8	2	1	12.00	7.93	2	1
	www.sbc.sc Webpage DL Time (s)	14.68	10.58	2	1	12.35	12.44	1	2
LATENCY	Avg Latency (ms)	280.21	196.99	2	1	272.30	219.50	2	1
	Median Latency (ms)	402	192	2	1	246	198	2	1
YOUTUBE	YouTube Access Time (s)	5.24	3.06	2	1	5.38	2.86	2	1
	YouTube Average Resolution (pixels)	970.17	1009.26	2	1	1016.69	1064.40	2	1
	YouTube Success Ratio [%]	100.00	82.35	1	2	92.31	92.31	1	1

3G PREFERRED THROUGHPUT FILE ACCESS

Phase-1

Test Type	Status	Airtel 3G	CWS 3G	Airtel 3G (%)	CWS 3G (%)
SFTP DL	Success	15	15	100.00	100.00
	Failure	0	0	0.00	0.00
SFTP UL	Success	15	15	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP DL	Success	17	16	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP UL	Success	17	15	100.00	88.24
	Failure	0	2	0.00	11.76
HTTP Capacity DL	Success	16	15	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP Capacity UL	Success	16	14	100.00	93.33
	Failure	0	1	0.00	6.67

Phase-2

Test Type	Status	Airtel 3G	CWS 3G	Airtel 3G (%)	CWS 3G (%)
SFTP DL	Success	11	11	100.00	100.00
	Failure	0	0	0.00	0.00
SFTP UL	Success	12	10	100.00	90.91
	Failure	0	1	0.00	9.09
HTTP DL	Success	12	10	100.00	90.91
	Failure	0	1	0.00	9.09
HTTP UL	Success	12	12	92.31	92.31
	Failure	1	1	7.69	7.69
HTTP Capacity DL	Success	11	11	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP Capacity UL	Success	11	10	100.00	90.91
	Failure	0	1	0.00	9.09

3G PREFERRED BROWSING FILE ACCESS

Phase-1

Web Page	Status	Airtel 3G	CWS 3G	Airtel 3G(%)	CWS 3G (%)
Kepler	Success	15	14	88.24	87.50
	Failure	2	2	11.76	12.50
Mobile Kepler	Success	17	15	100.00	100.00
	Failure	0	0	0.00	0.00
www.shein.com	Success	16	12	94.12	75.00
	Failure	1	4	5.88	25.00
www.nbs.gov.sc	Success	15	14	93.75	87.50
	Failure	1	2	6.25	12.50
www.sbc.sc	Success	15	14	88.24	93.33
	Failure	2	1	11.76	6.67

Phase-2

Web Page	Status	Airtel 3G	CWS 3G	Airtel 3G(%)	CWS 3G (%)
Kepler	Success	10	11	90.91	91.67
	Failure	1	1	9.09	8.33
Mobile Kepler	Success	11	11	100.00	91.67
	Failure	0	1	0.00	8.33
www.shein.com	Success	12	11	100.00	100.00
	Failure	0	0	0.00	0.00
www.nbs.gov.sc	Success	12	11	100.00	91.67
	Failure	0	1	0.00	8.33
www.sbc.sc	Success	10	11	90.91	91.67
	Failure	1	1	9.09	8.33

3G PREFERRED LATENCY

Phase-1

	Latency KPIs	Airtel 3G	CWS 3G
Overall Latency	Sample Count [32 bytes]	33	28
	Average Latency [ms]	286.33	210.00
	Median Latency [ms]	406	162
	Ping session status: Successful	33	28
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	1	1
	Packet Loss<1%	2.94	3.45
www.google.com	Average Latency [ms]	416.12	143.80
	Median Latency [ms]	413	140
	Ping session status: Successful	17	15
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00
102.133.176.104	Average Latency [ms]	148.44	286.38
	Median Latency [ms]	122	210
	Ping session status: Successful	16	13
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	1	1
	Packet Loss<1%	5.88	7.14

Phase-2

	Latency KPIs	Airtel 3G	CWS 3G
Overall Latency	Sample Count [32 bytes]	23	21
	Average Latency [ms]	266.91	209.43
	Median Latency [ms]	139	197
	Ping session status: Successful	23	21
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	1
	Packet Loss<1%	0.00	4.55
www.google.com	Average Latency [ms]	423.82	153.18
	Median Latency [ms]	420	139
	Ping session status: Successful	11	11
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00
102.133.176.104	Average Latency [ms]	123.08	271.30
	Median Latency [ms]	120	207
	Ping session status: Successful	12	10
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	1
	Packet Loss<1%	0.00	9.09

3G PREFERRED YOUTUBE COMPARISON

Phase-1

UMTS YOUTUBE Success Ratio		
KPIs	Airtel 3G	CWS 3G
Attempt(Count)	17	17
Success(Count)	17	15
Failure(Count)	0	2
YouTube Access Time (s)	5.24	3.06
YouTube Average Resolution (pixels)	970.17	1009.26
YouTube Success Ratio [%]	100.00	82.35

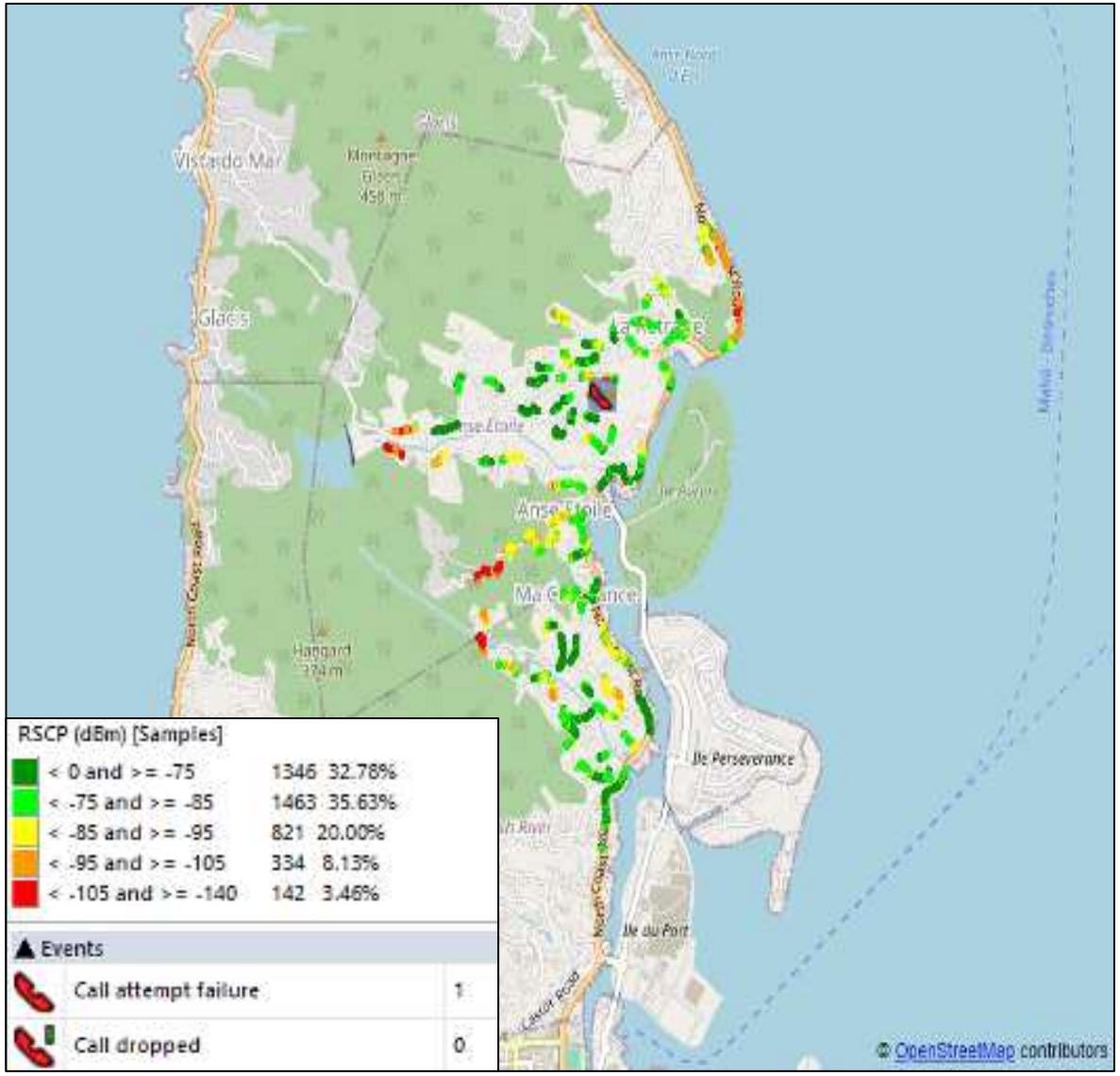
Phase-2

UMTS YOUTUBE Success Ratio		
KPIs	Airtel 3G	CWS 3G
Attempt(Count)	13	13
Success(Count)	12	12
Failure(Count)	1	1
YouTube Access Time (s)	5.38	2.86
YouTube Average Resolution (pixels)	1016.69	1064.40
YouTube Success Ratio [%]	92.31	92.31

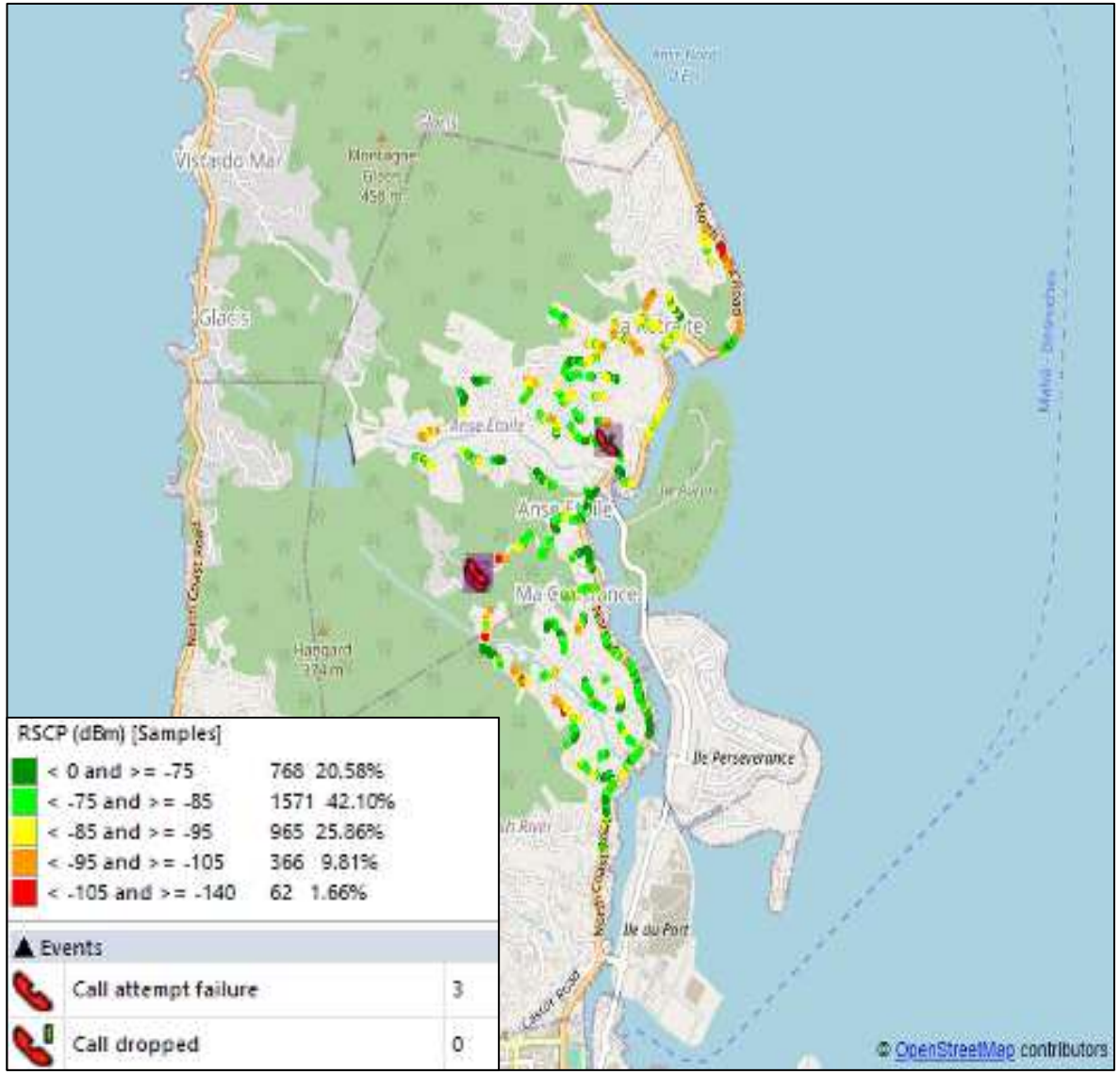
Voice Call Events

Phase-1 SHORT CALL FAILURE EVENTS LOCATION vs RSCP

Airtel SC MO

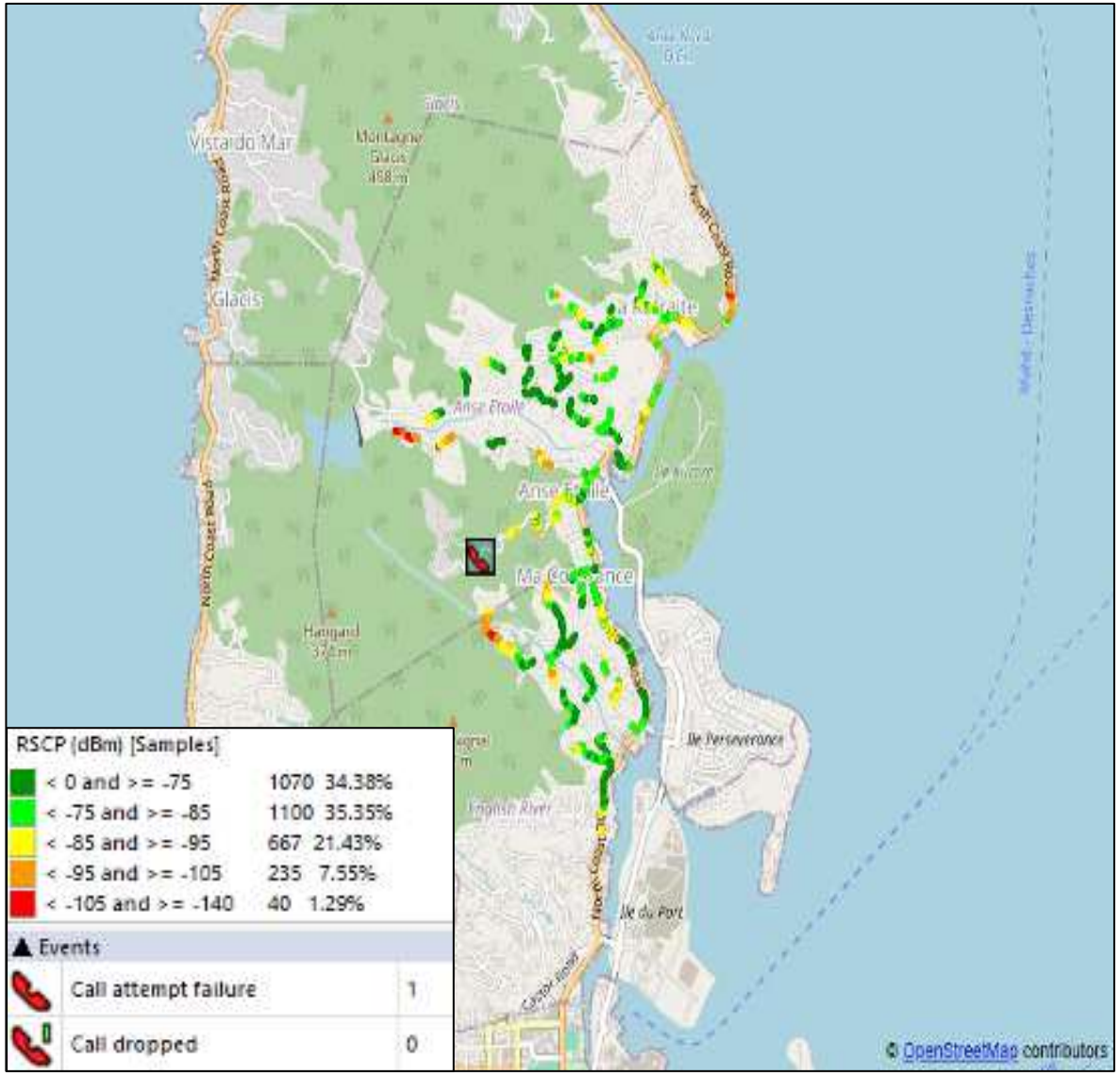


CWS SC MO

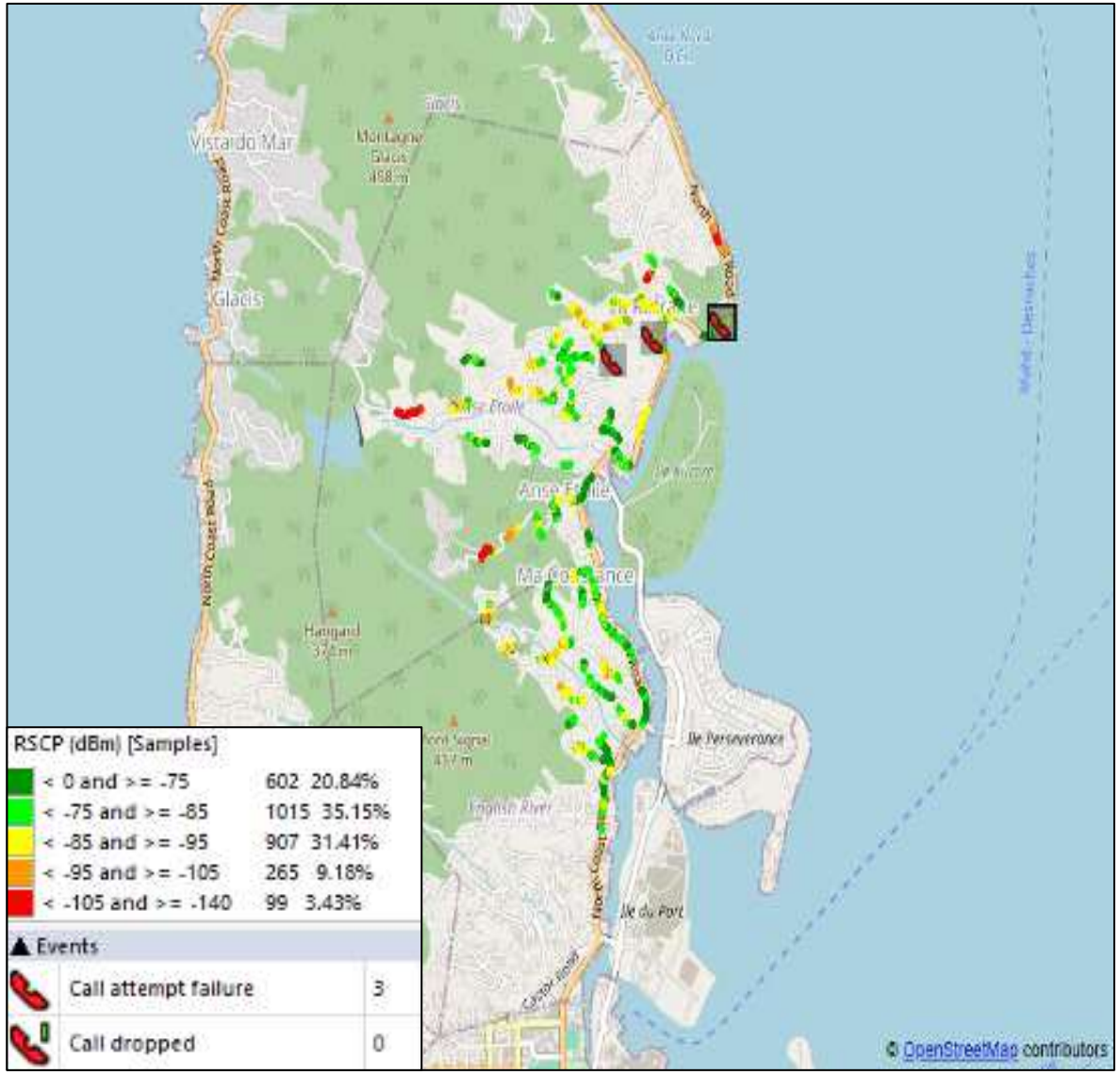


Phase-2 SHORT CALL FAILURE EVENTS LOCATION vs RSCP

Airtel SC MO

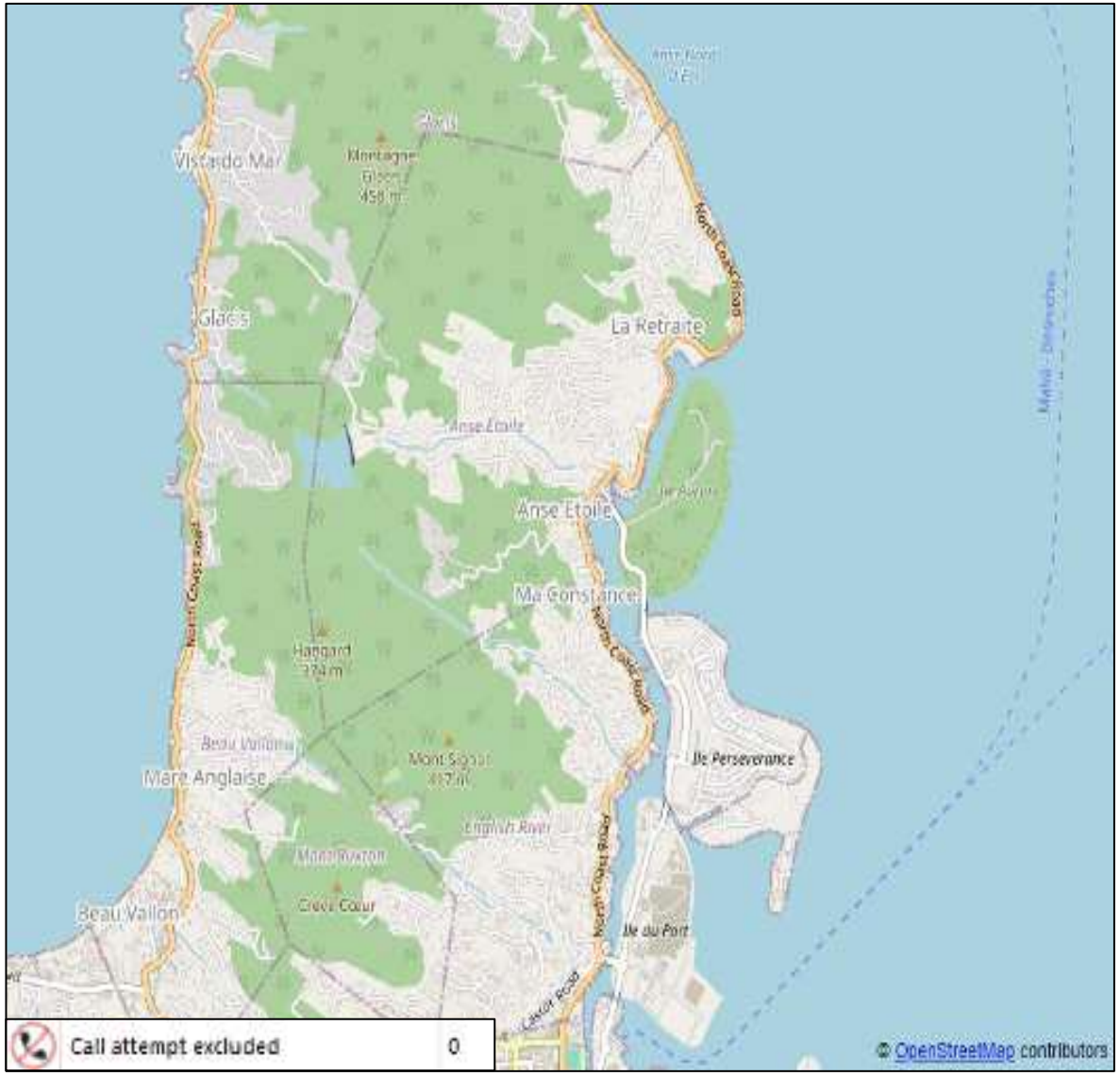


CWS SC MO

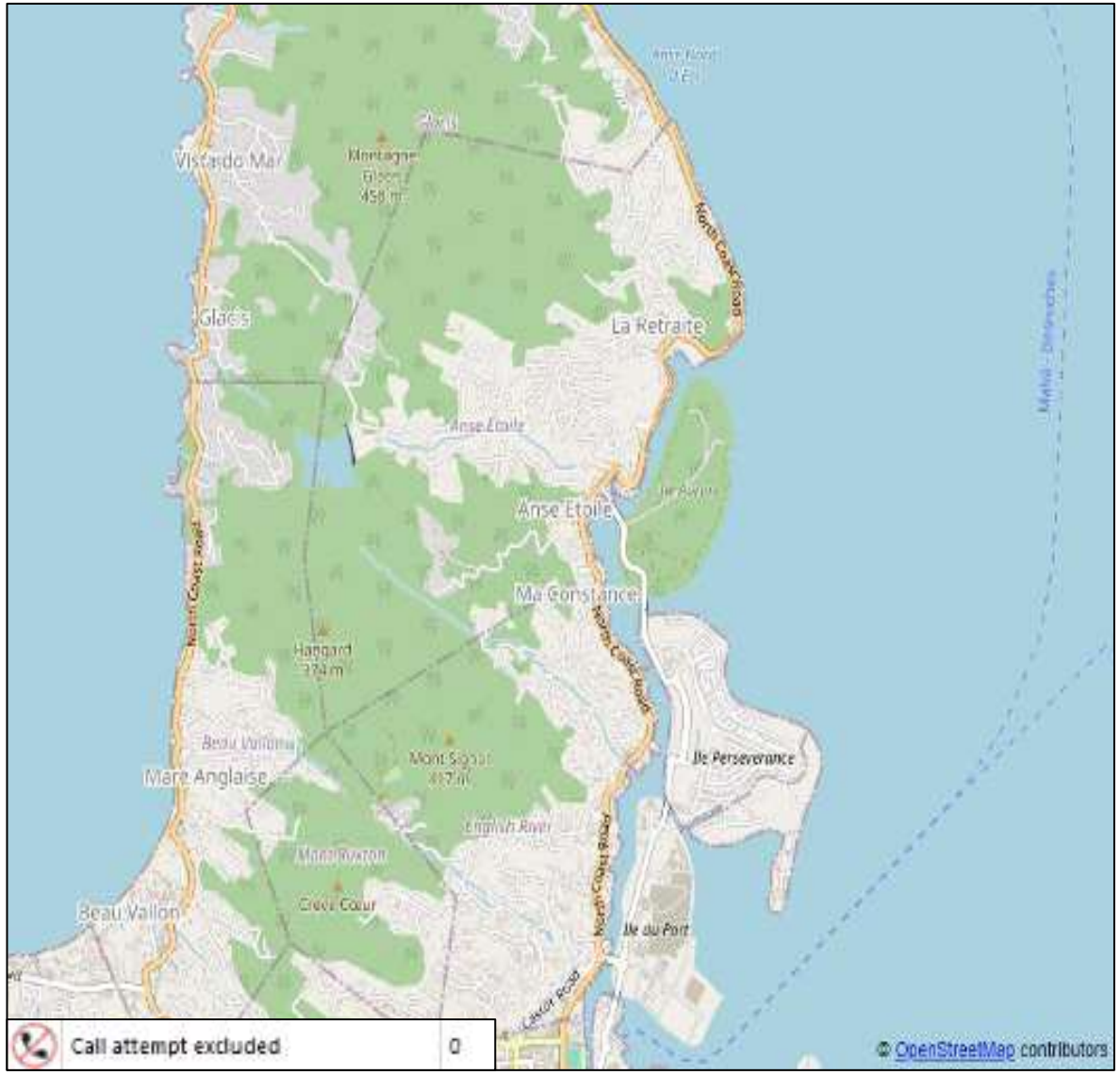


Phase-1 SHORT CALL EXCLUDED EVENTS

Airtel SC MO

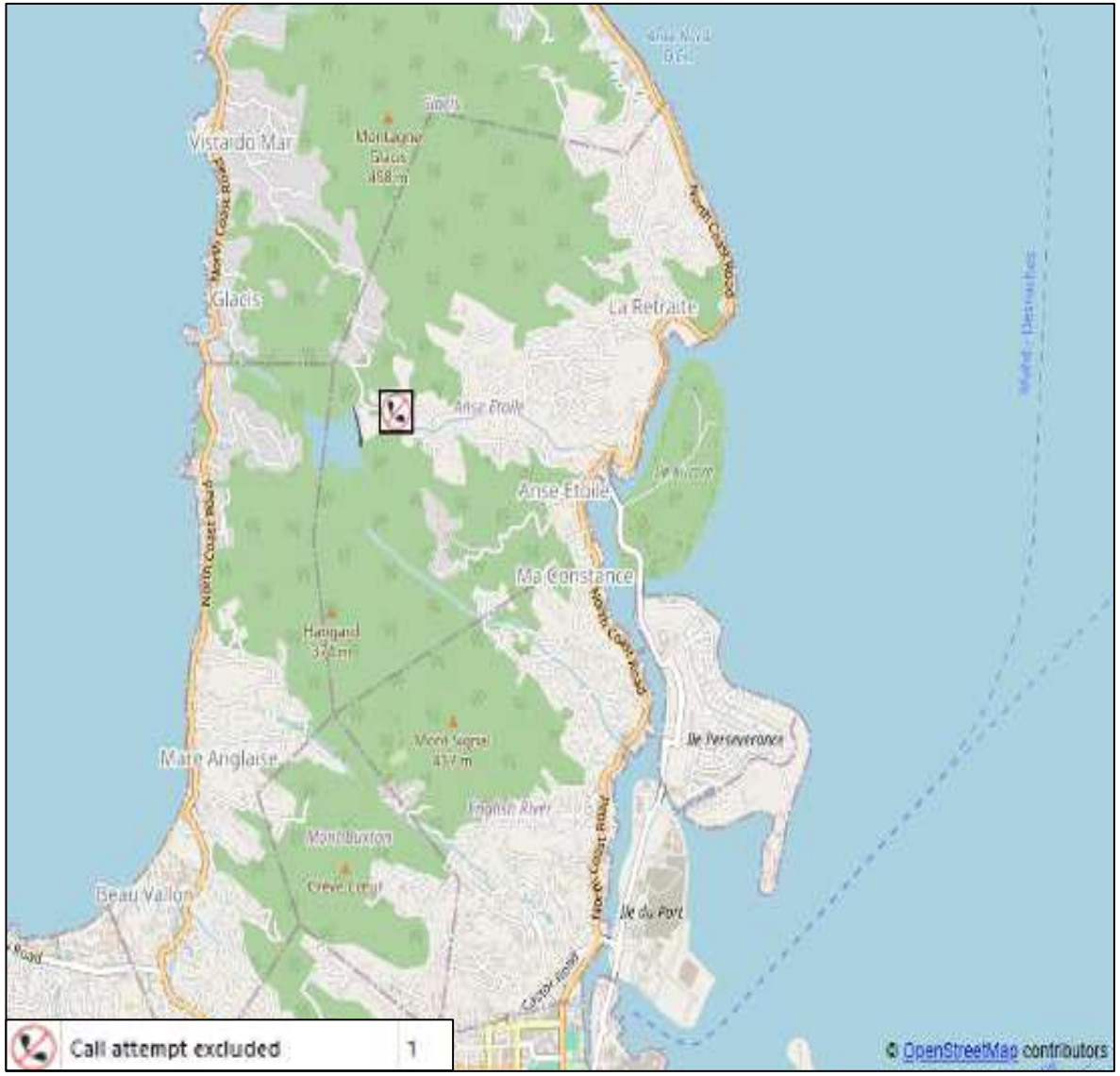


CWS SC MO

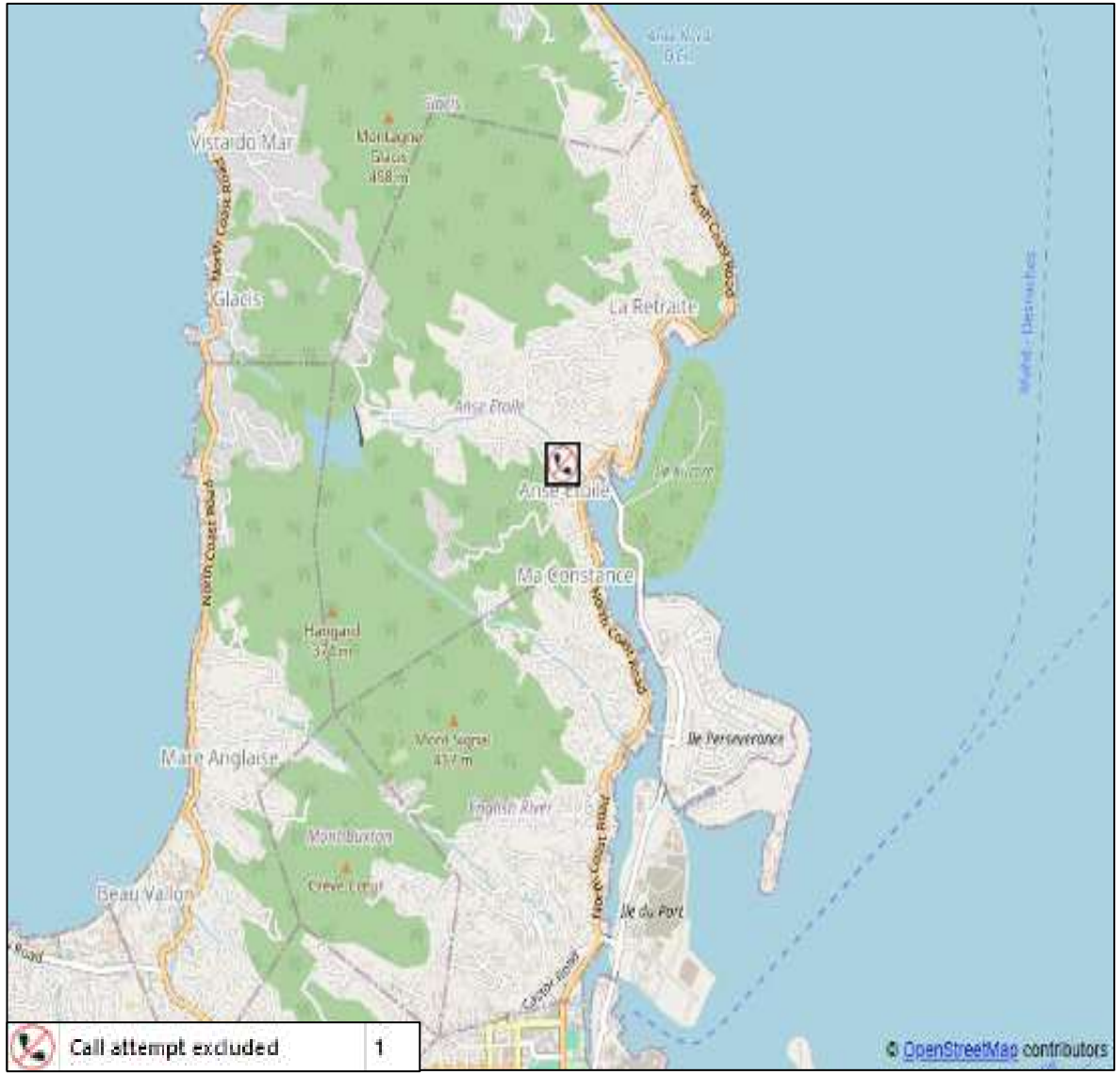


Phase-2 SHORT CALL EXCLUDED EVENTS

Airtel SC MO

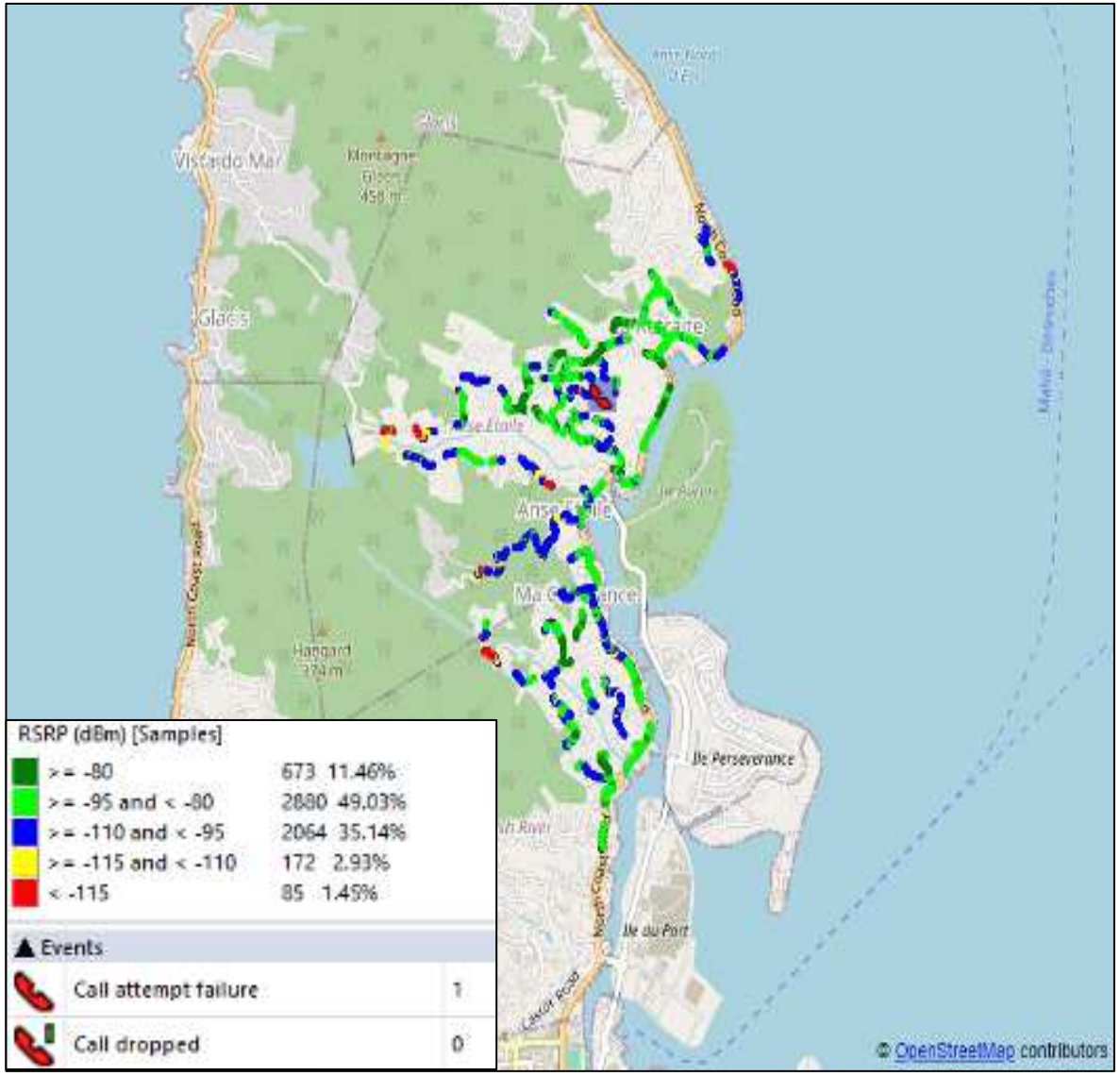


CWS SC MO

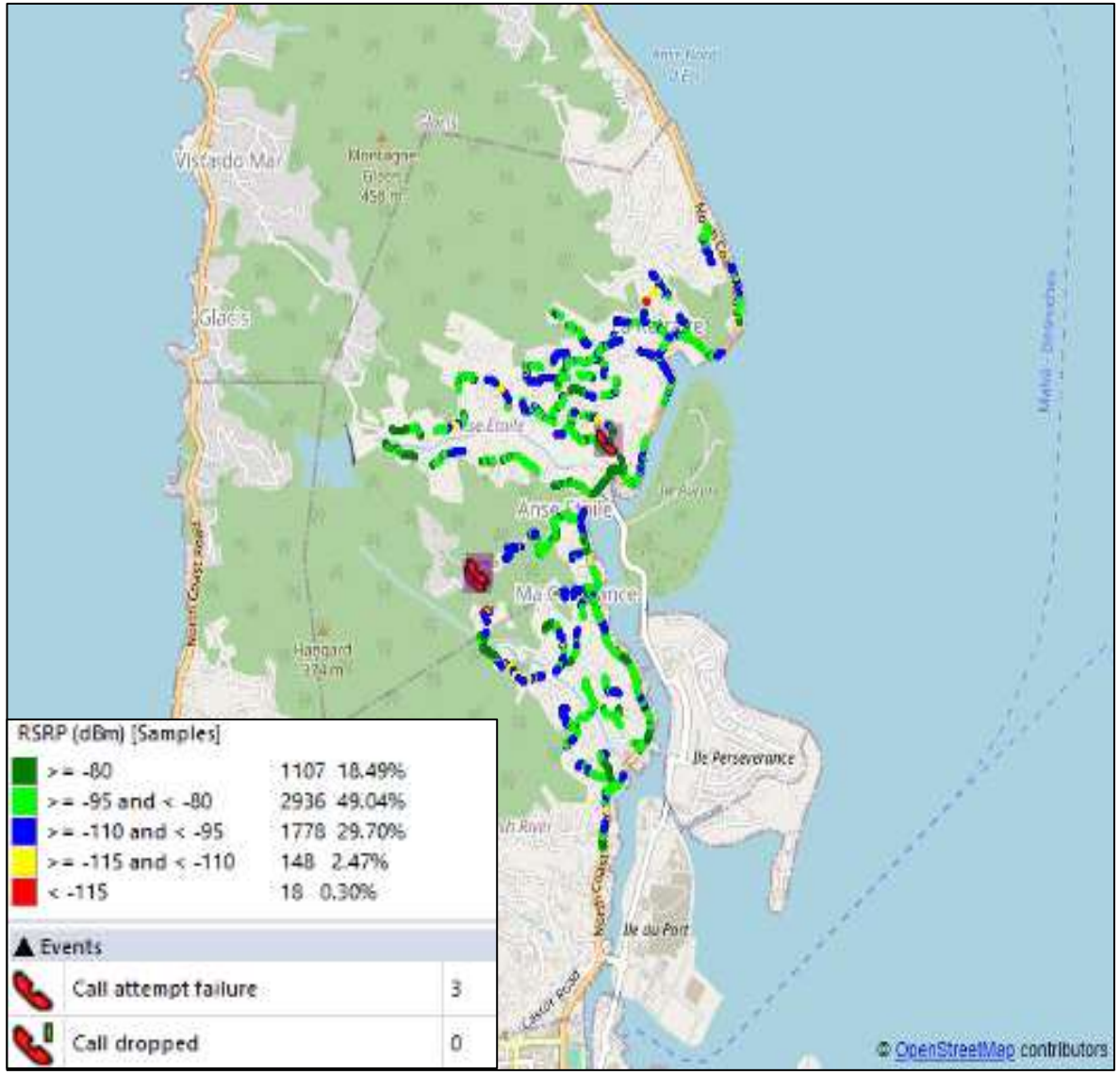


Phase-1 SHORT CALL FAILURE EVENTS LOCATION vs RSRP

Airtel SC MO

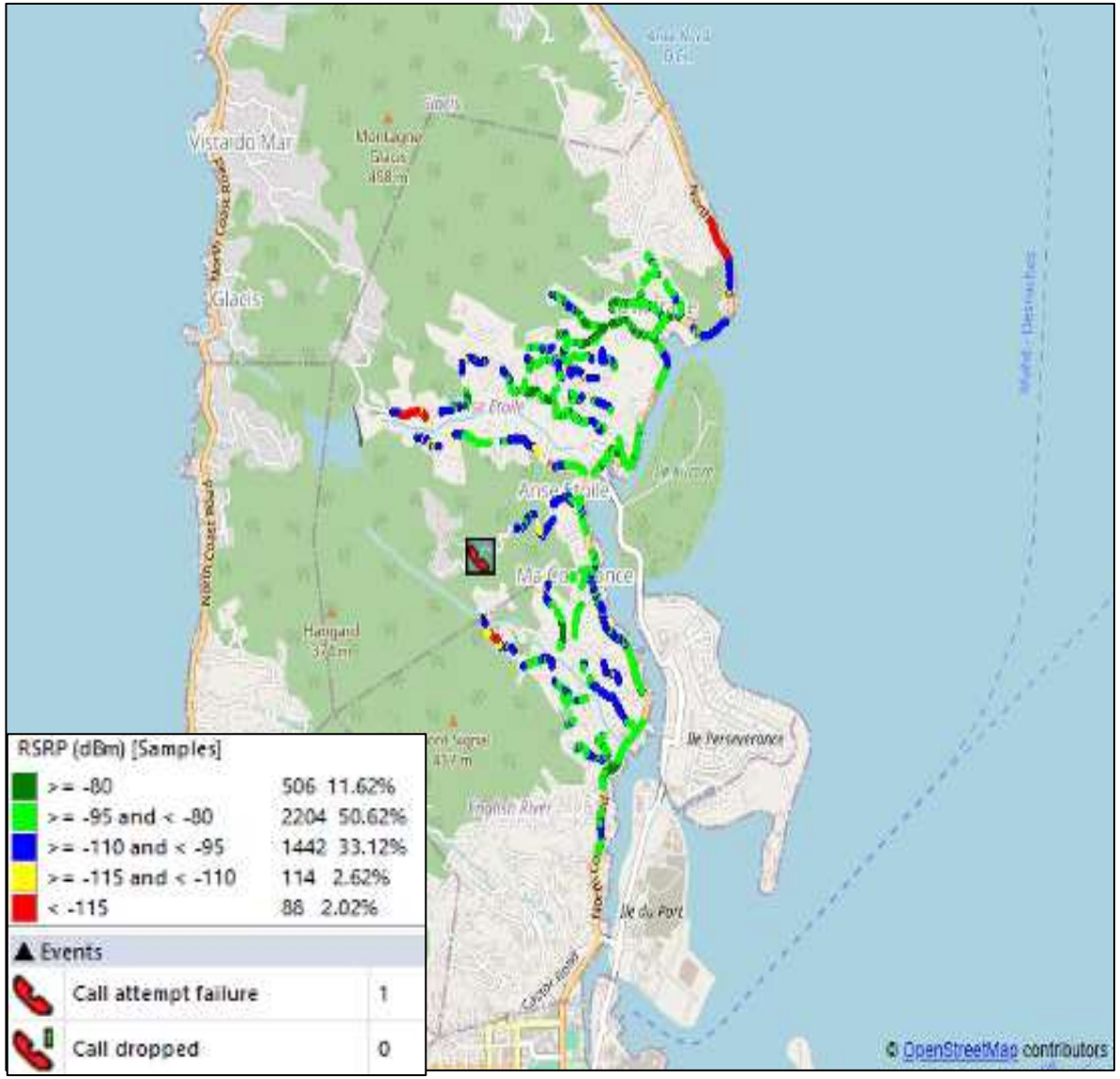


CWS SC MO

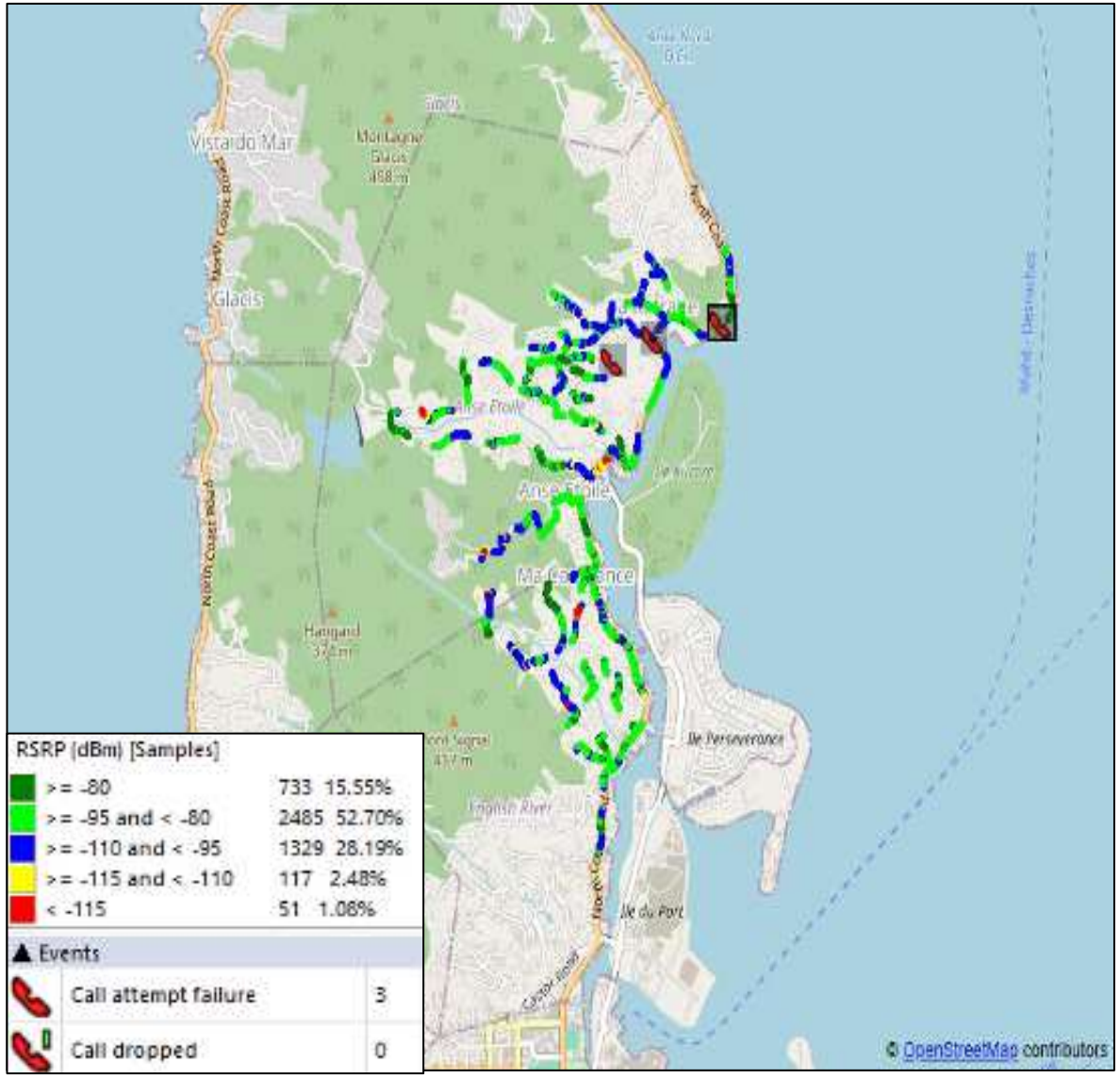


Phase-2 SHORT CALL FAILURE EVENTS LOCATION vs RSRP

Airtel SC MO

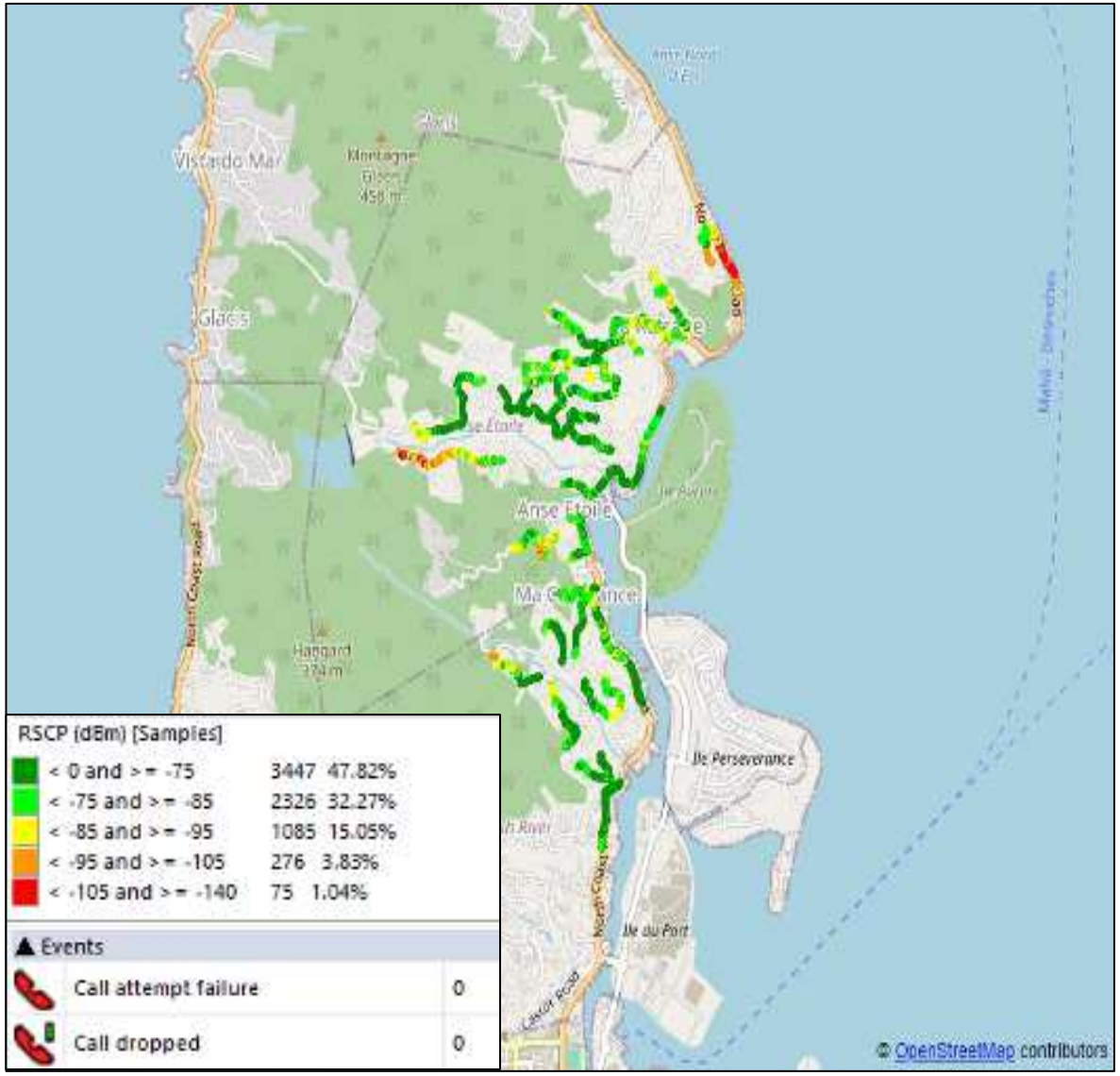


CWS SC MO

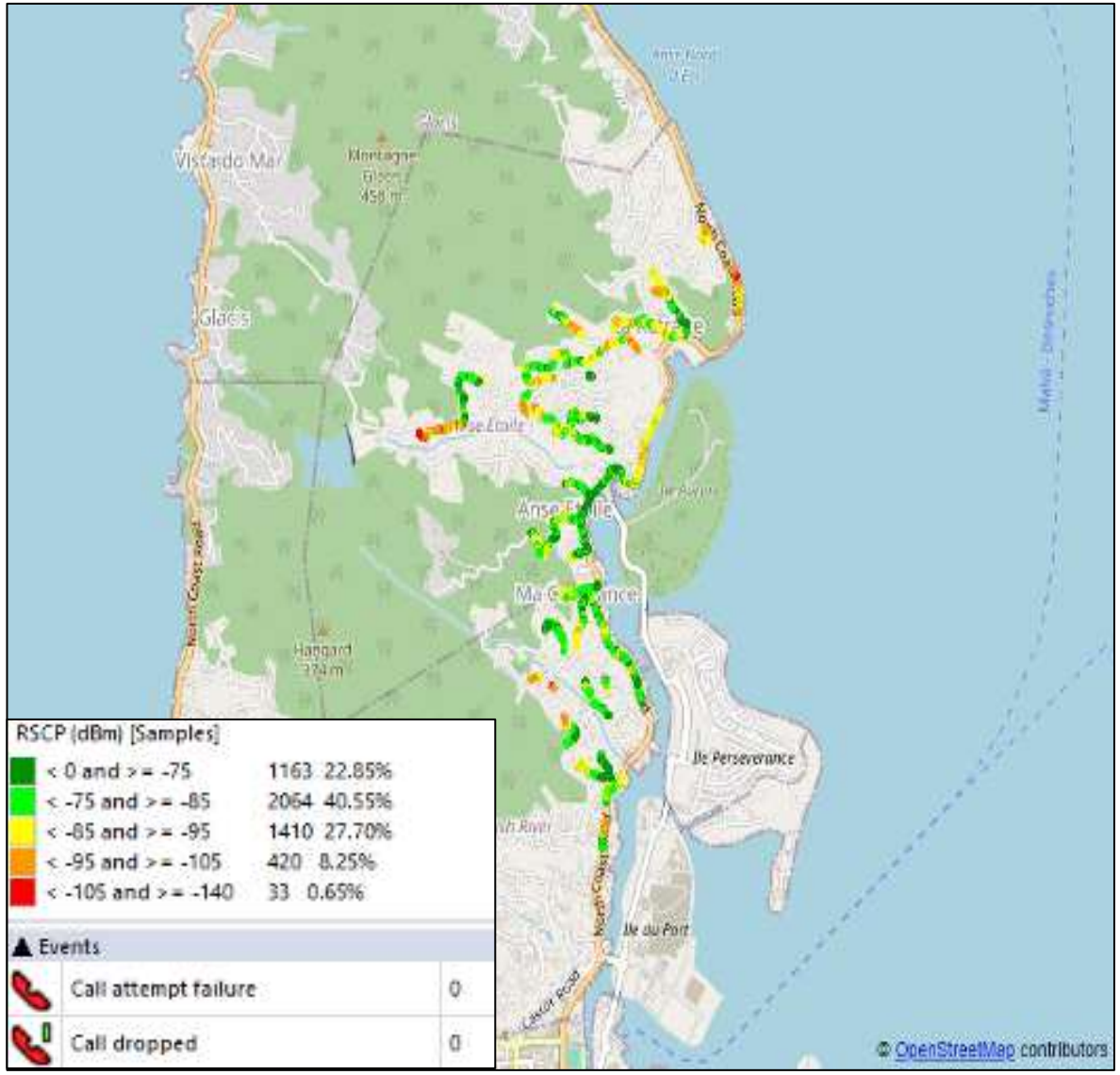


Phase-1 LONG CALL FAILURE EVENTS LOCATION vs RSCP

Airtel LC MO

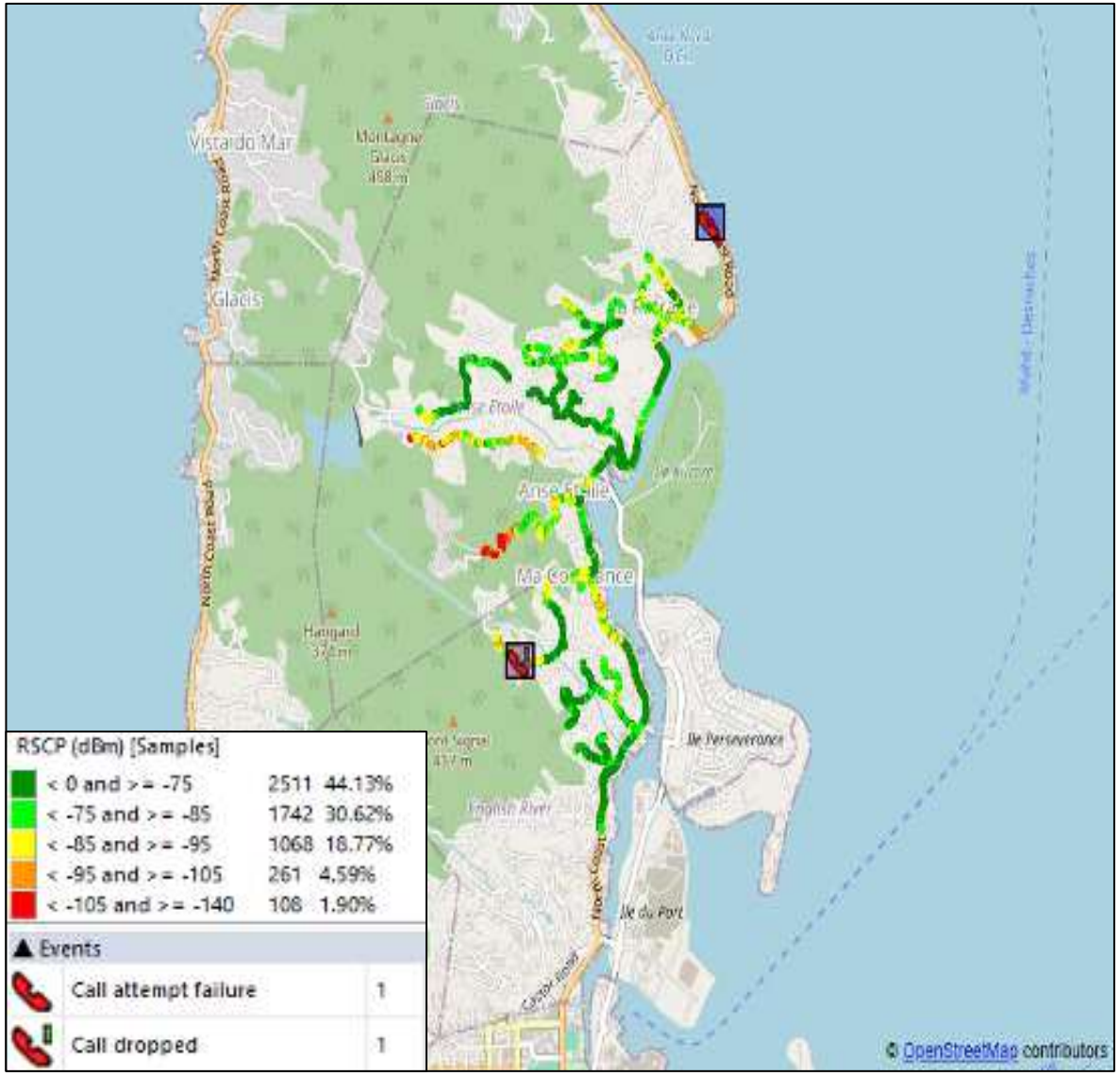


CWS LC MO

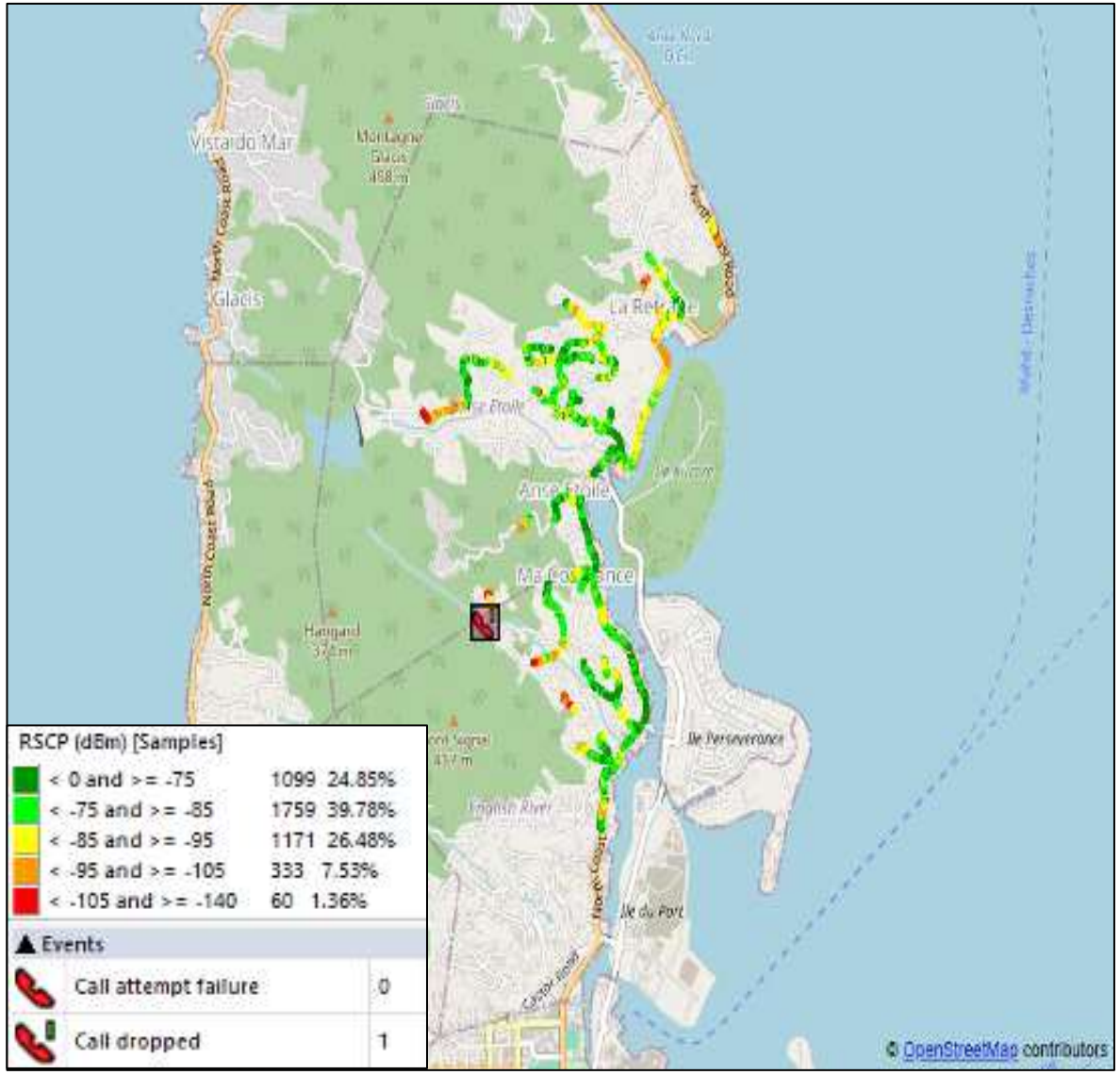


Phase-2 LONG CALL FAILURE EVENTS LOCATION vs RSCP

Airtel LC MO

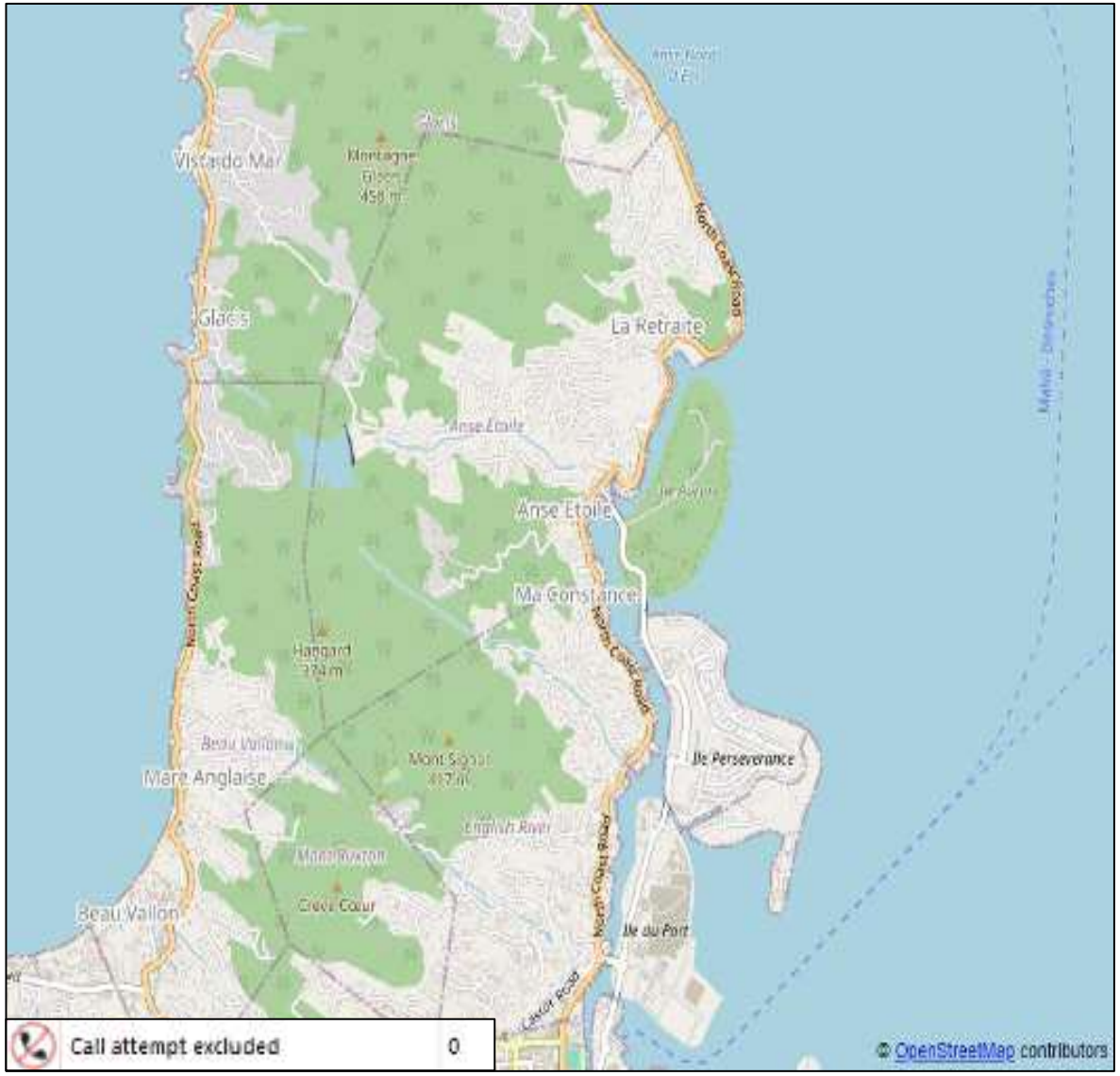


CWS LC MO

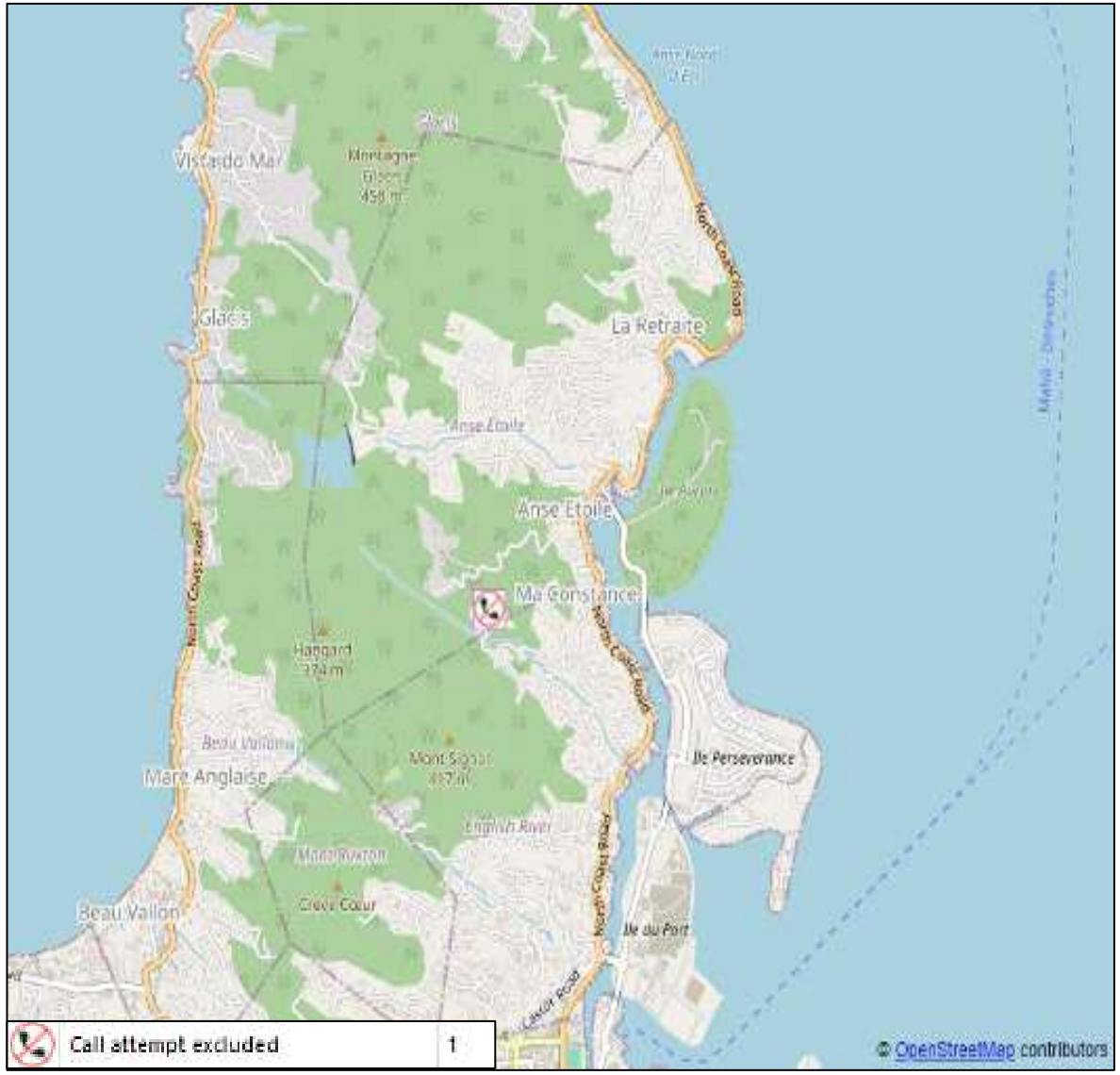


Phase-1 LONG CALL EXCLUDED EVENTS

Airtel LC MO

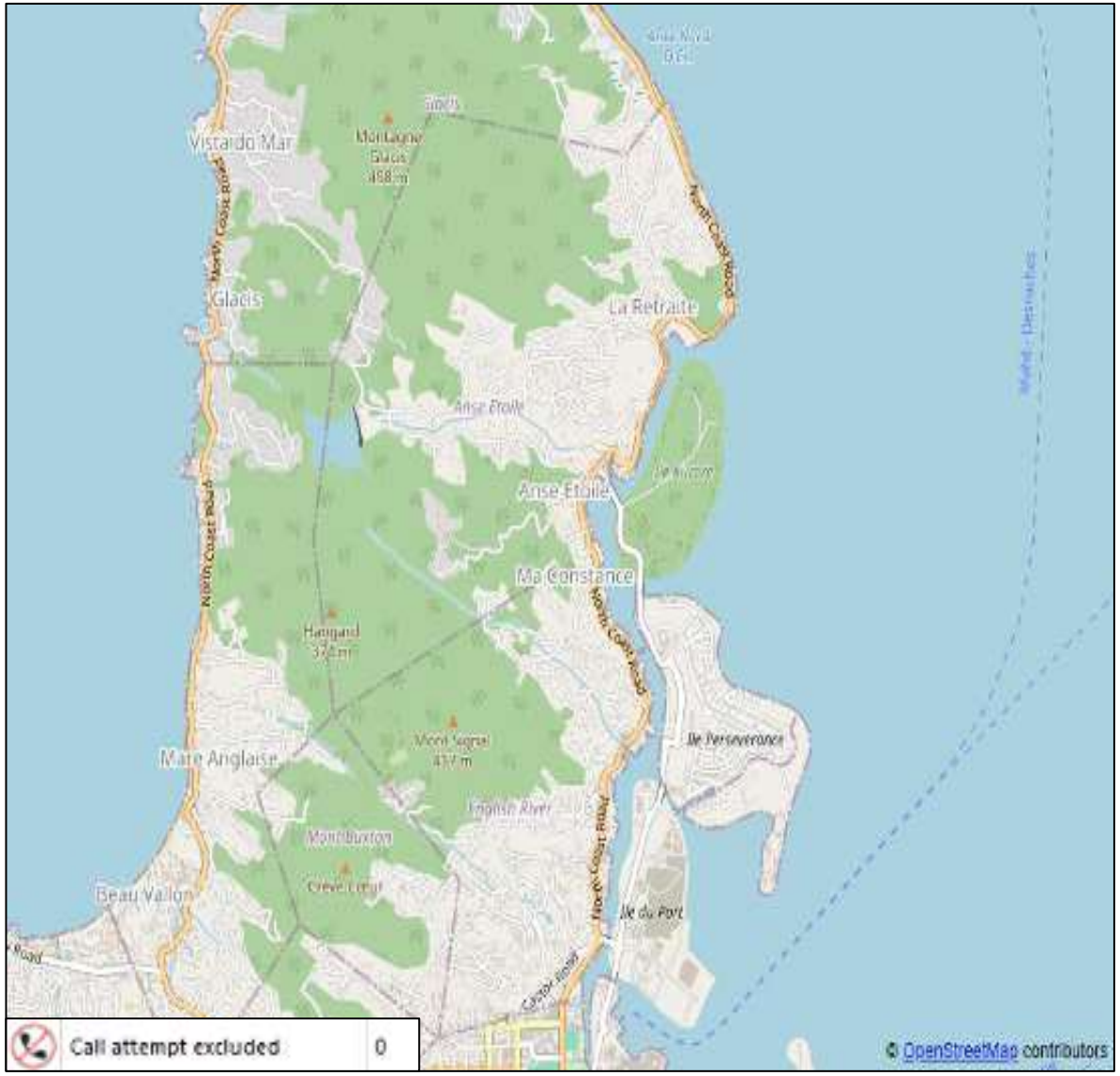


CWS LC MO

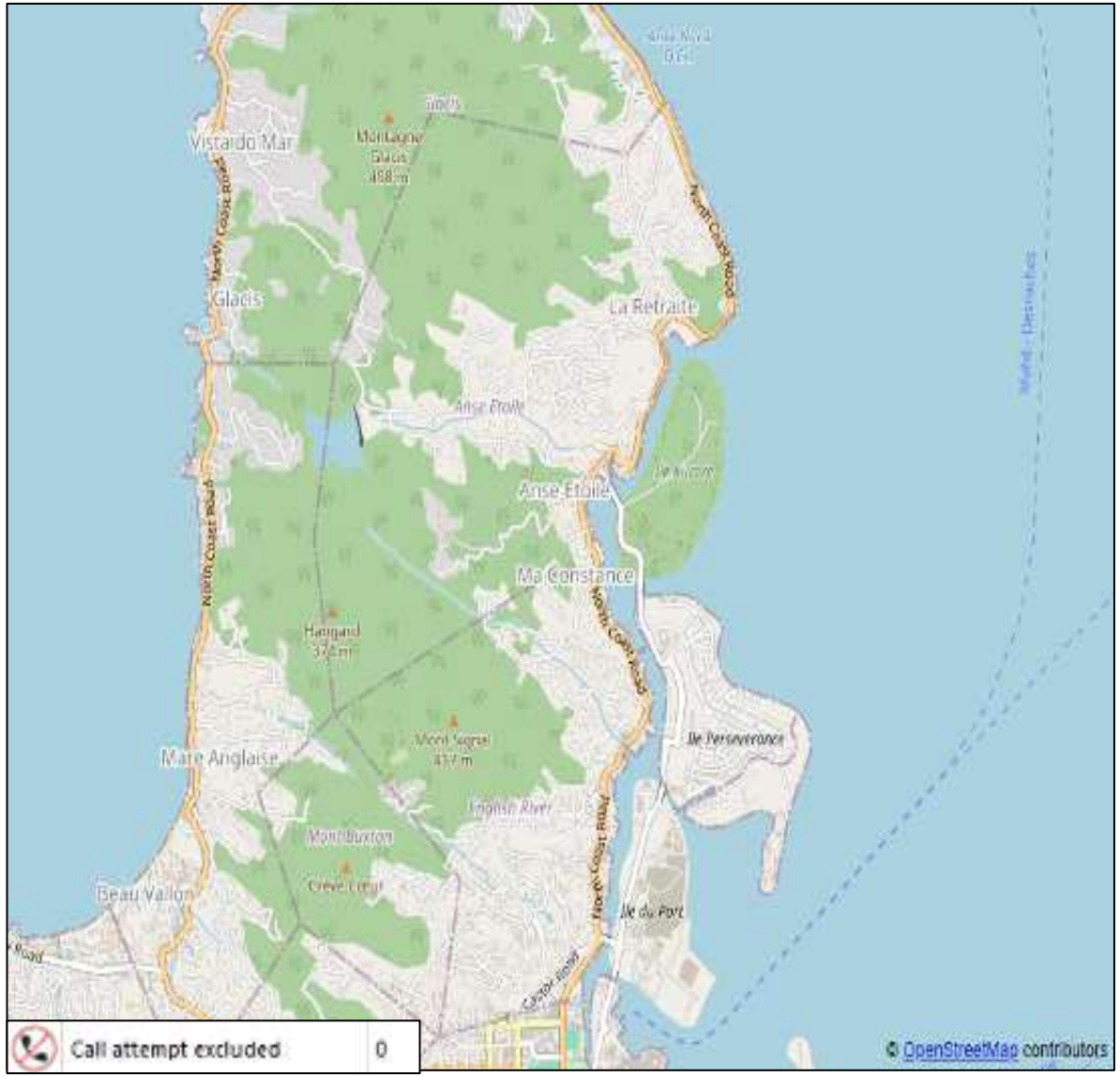


Phase-2 LONG CALL EXCLUDED EVENTS

Airtel LC MO

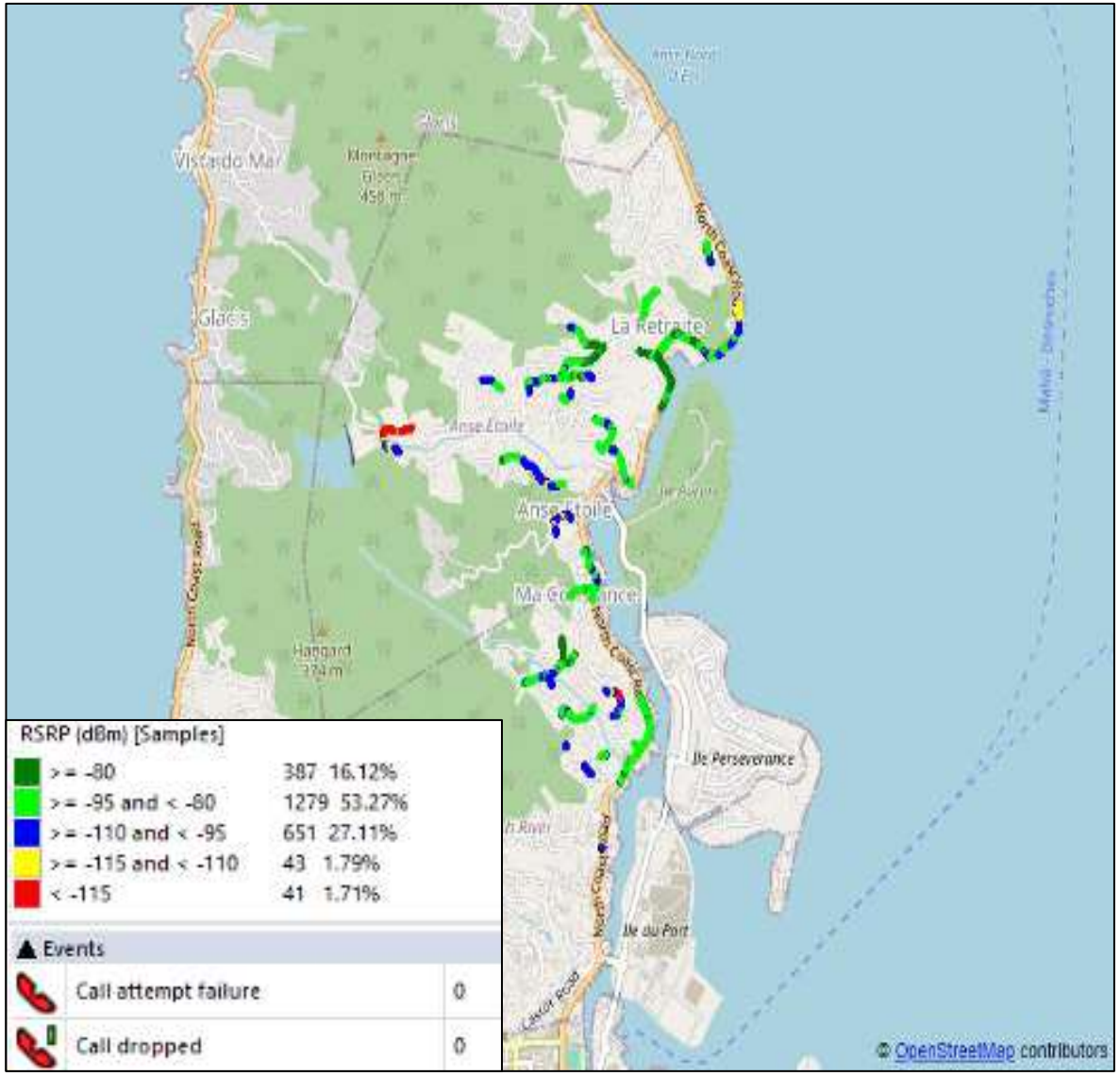


CWS LC MO

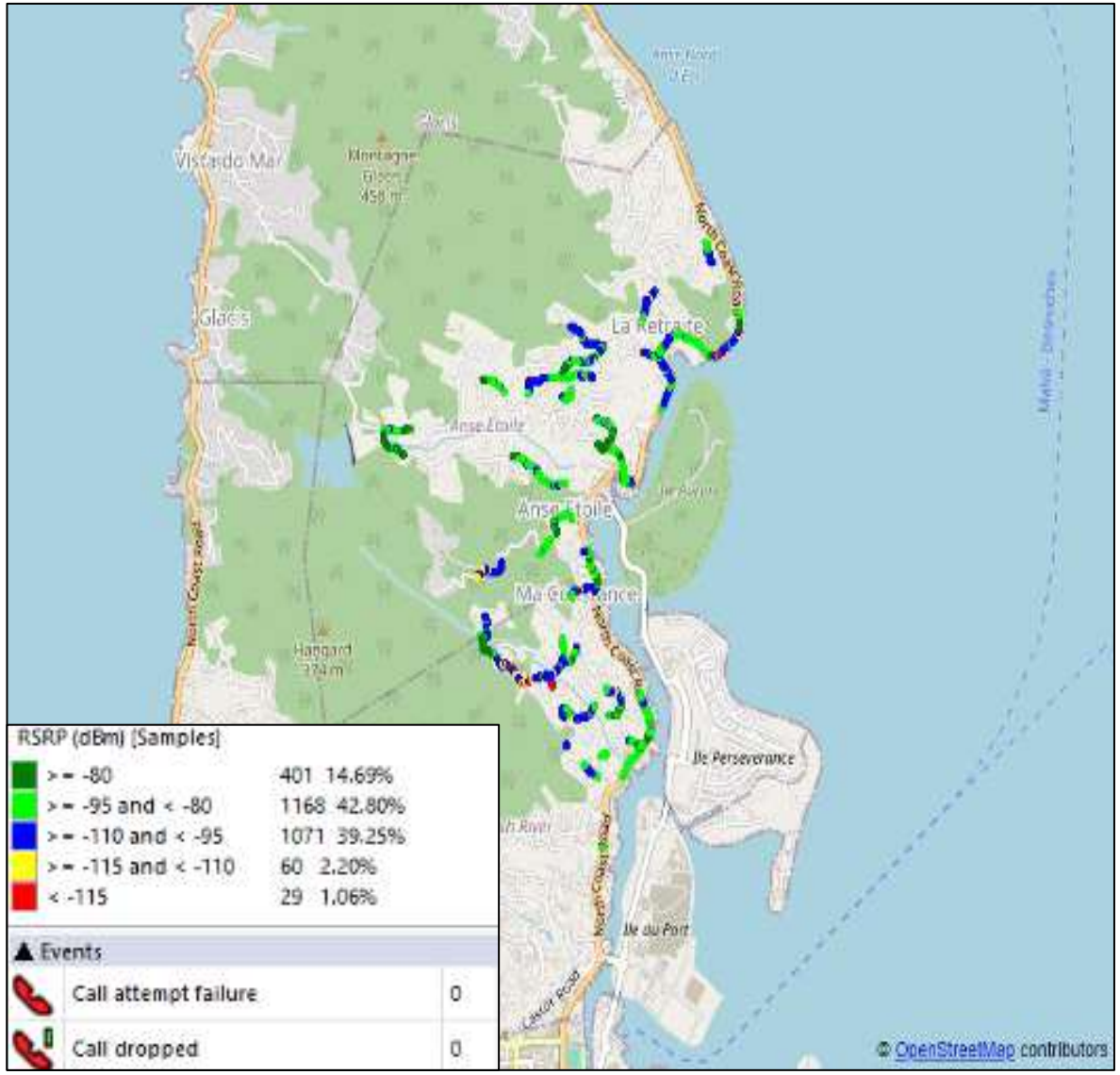


Phase-1 LONG CALL FAILURE EVENTS LOCATION vs RSRP

Airtel LC MO

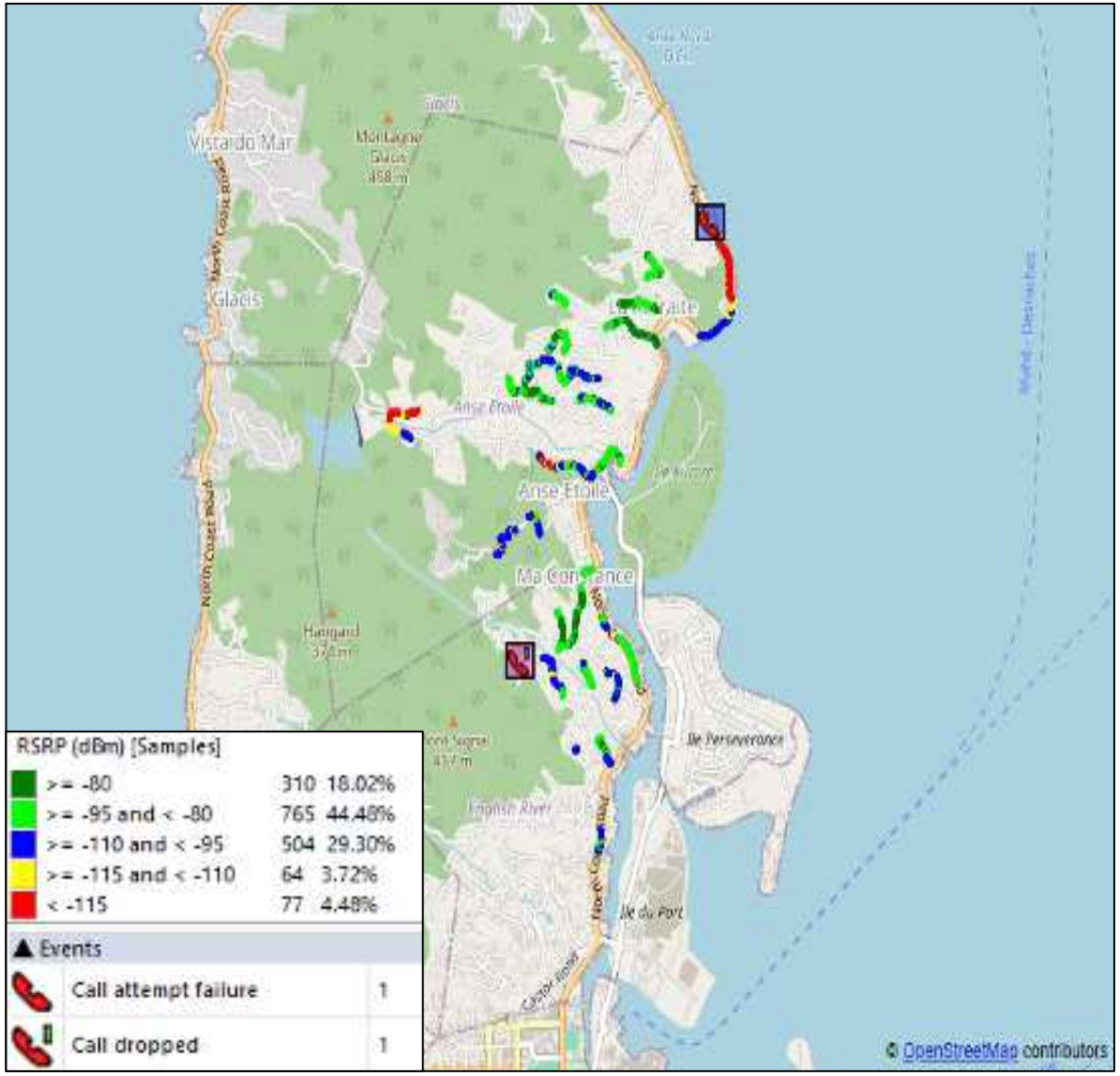


CWS LC MO

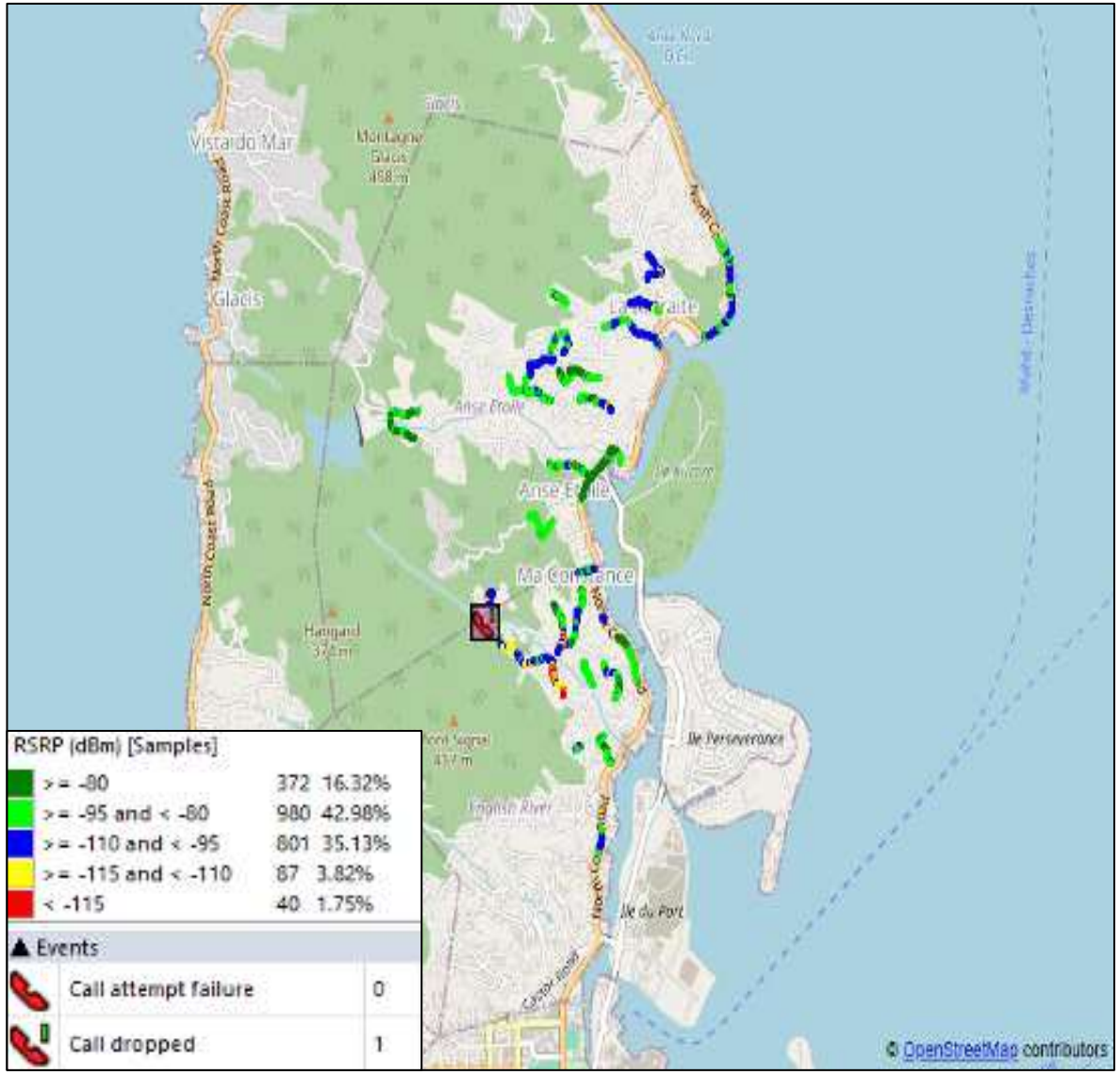


Phase-2 LONG CALL FAILURE EVENTS LOCATION vs RSRP

Airtel LC MO



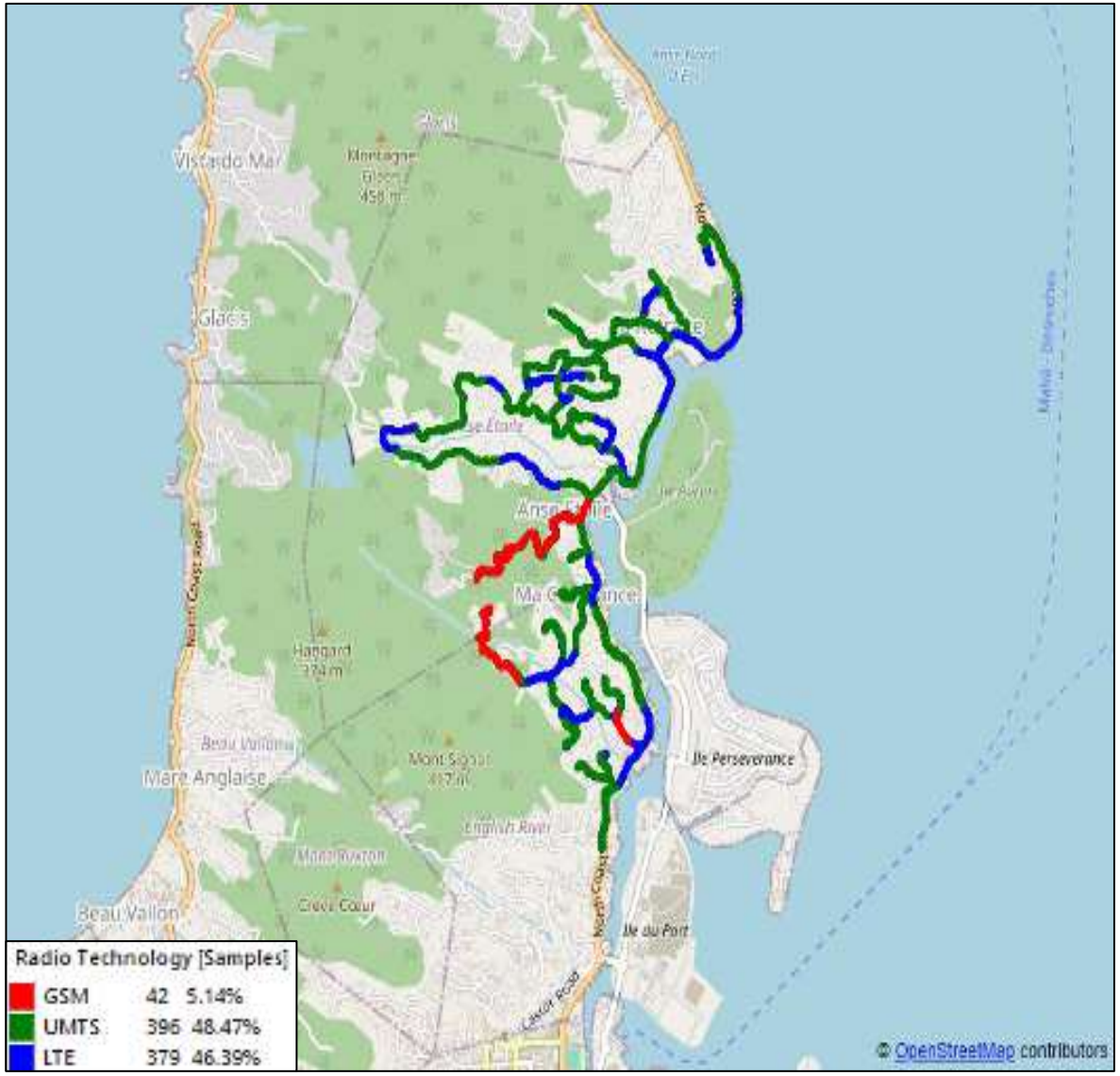
CWS LC MO



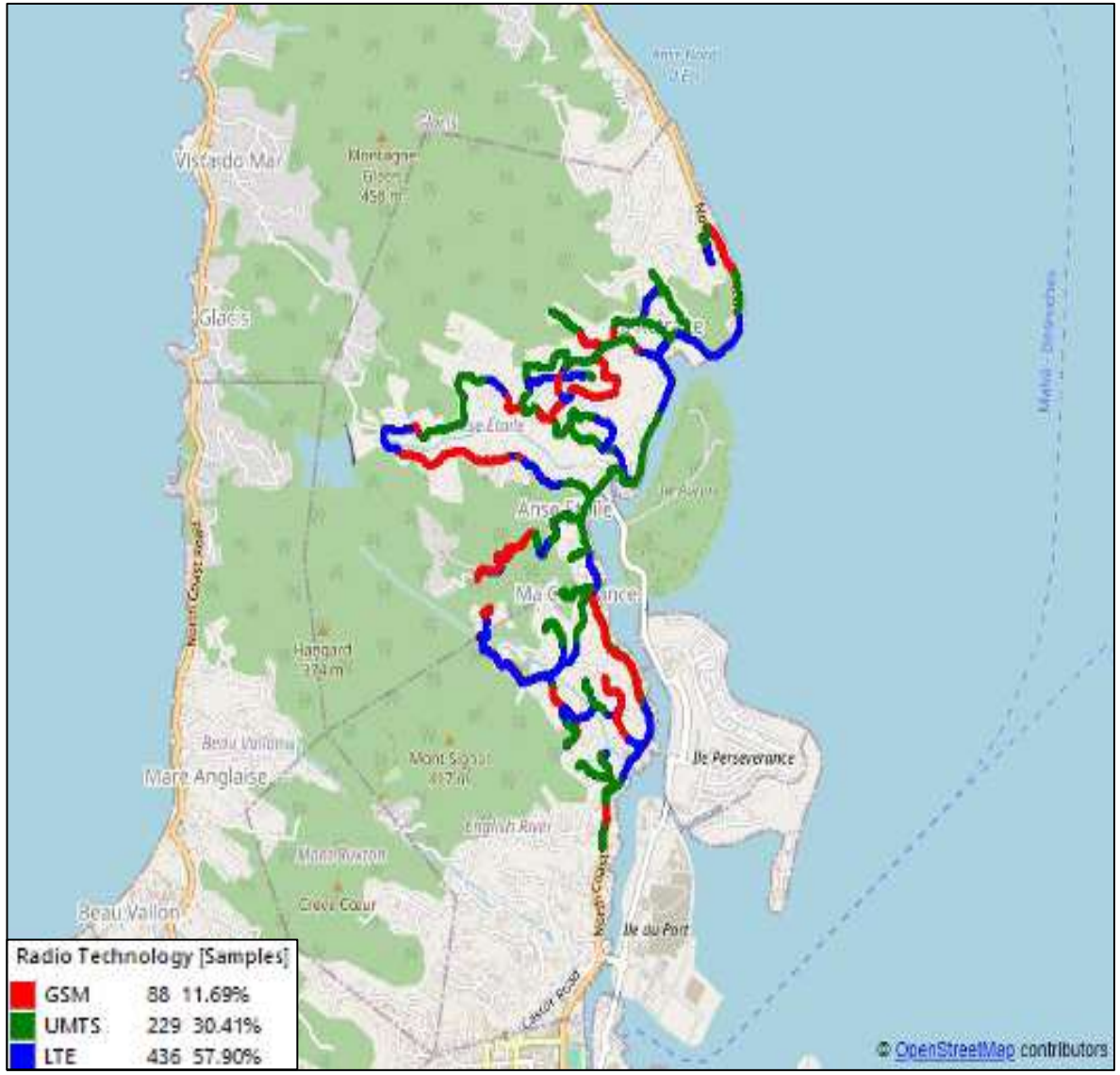
LONG CALL DRIVE PLOTS

Phase-1 Long Call RADIO TECHNOLOGY PLOT

Airtel LC MO

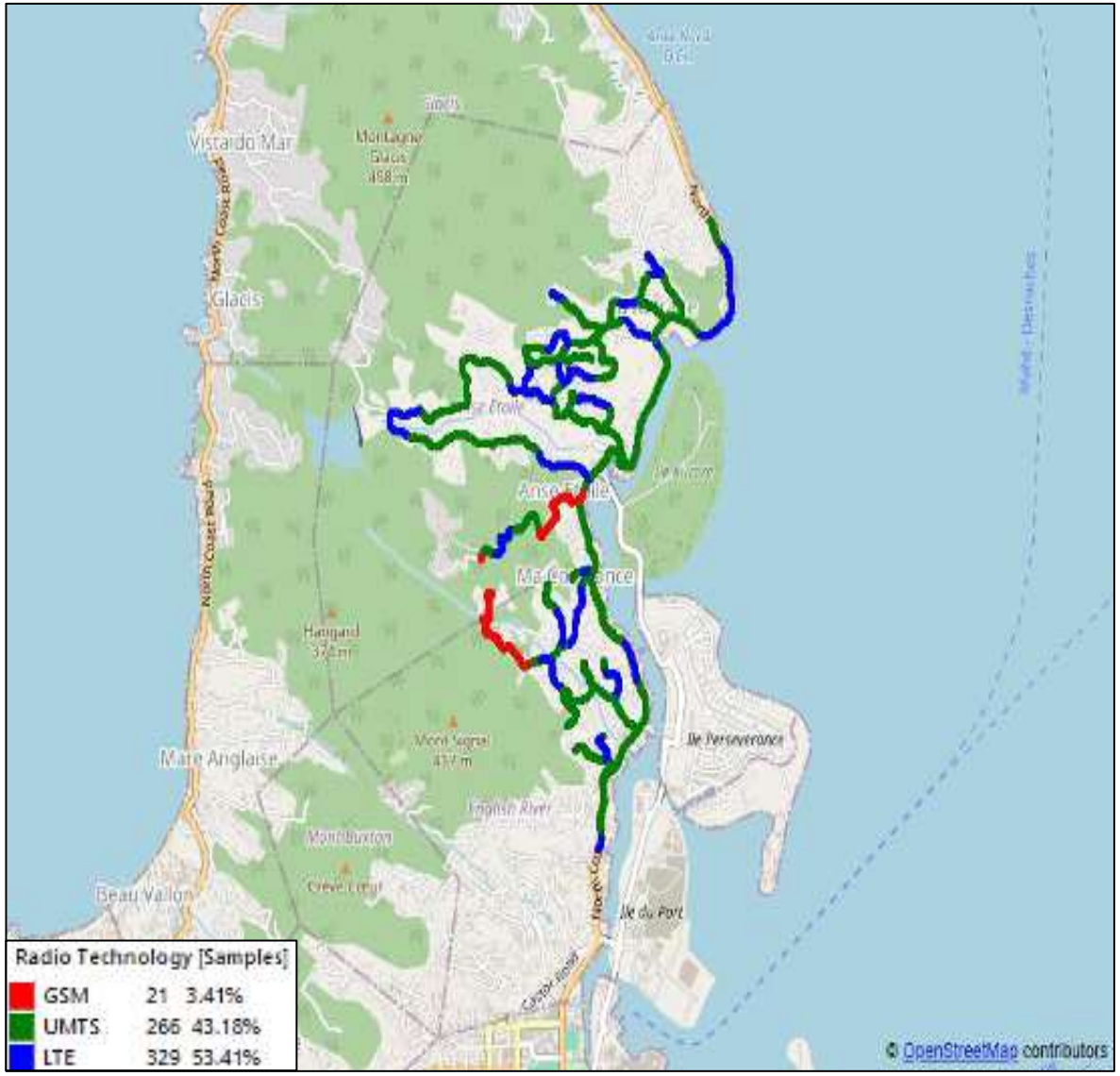


CWS LC MO

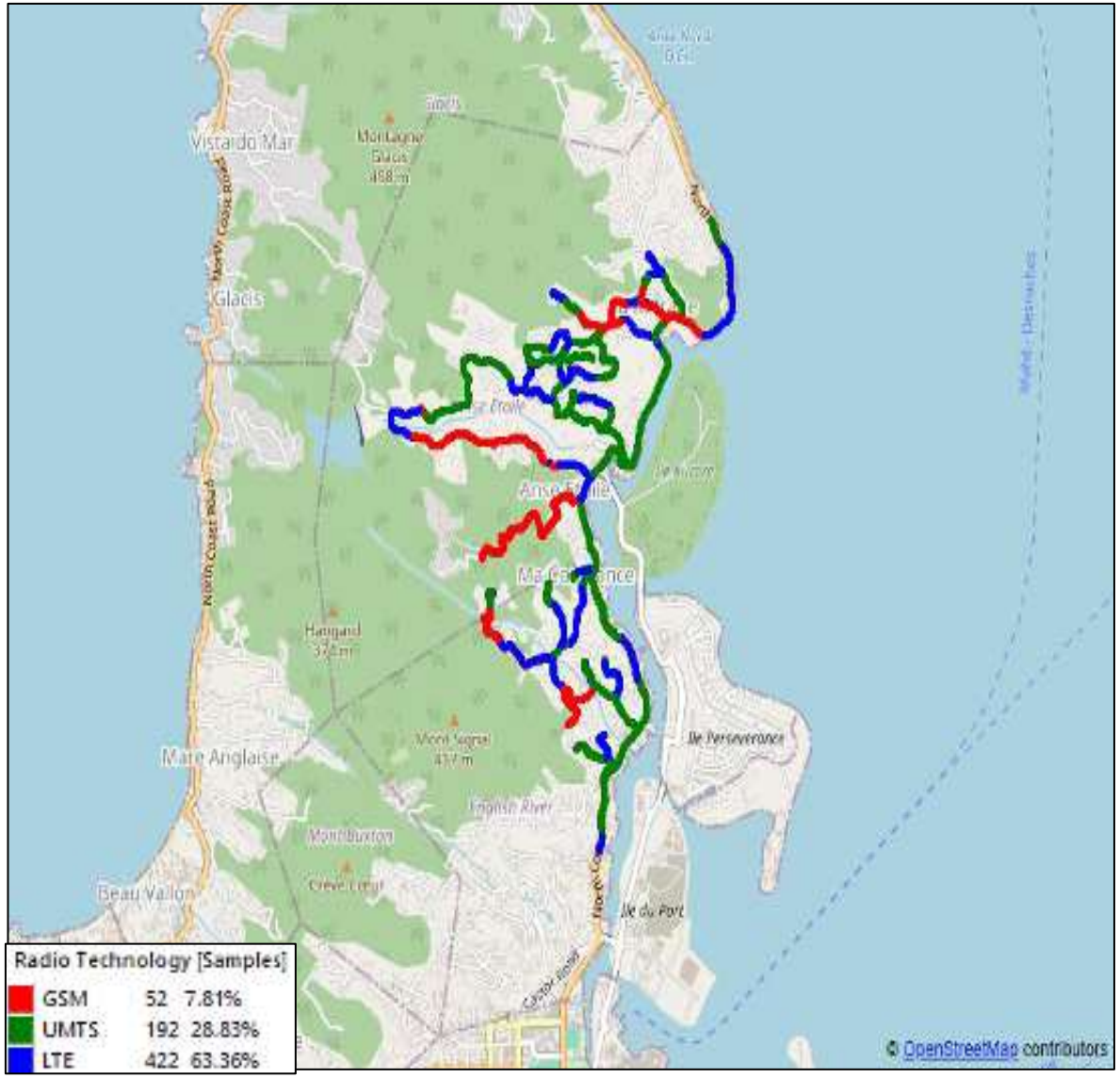


Phase-2 Long Call RADIO TECHNOLOGY PLOT

Airtel LC MO

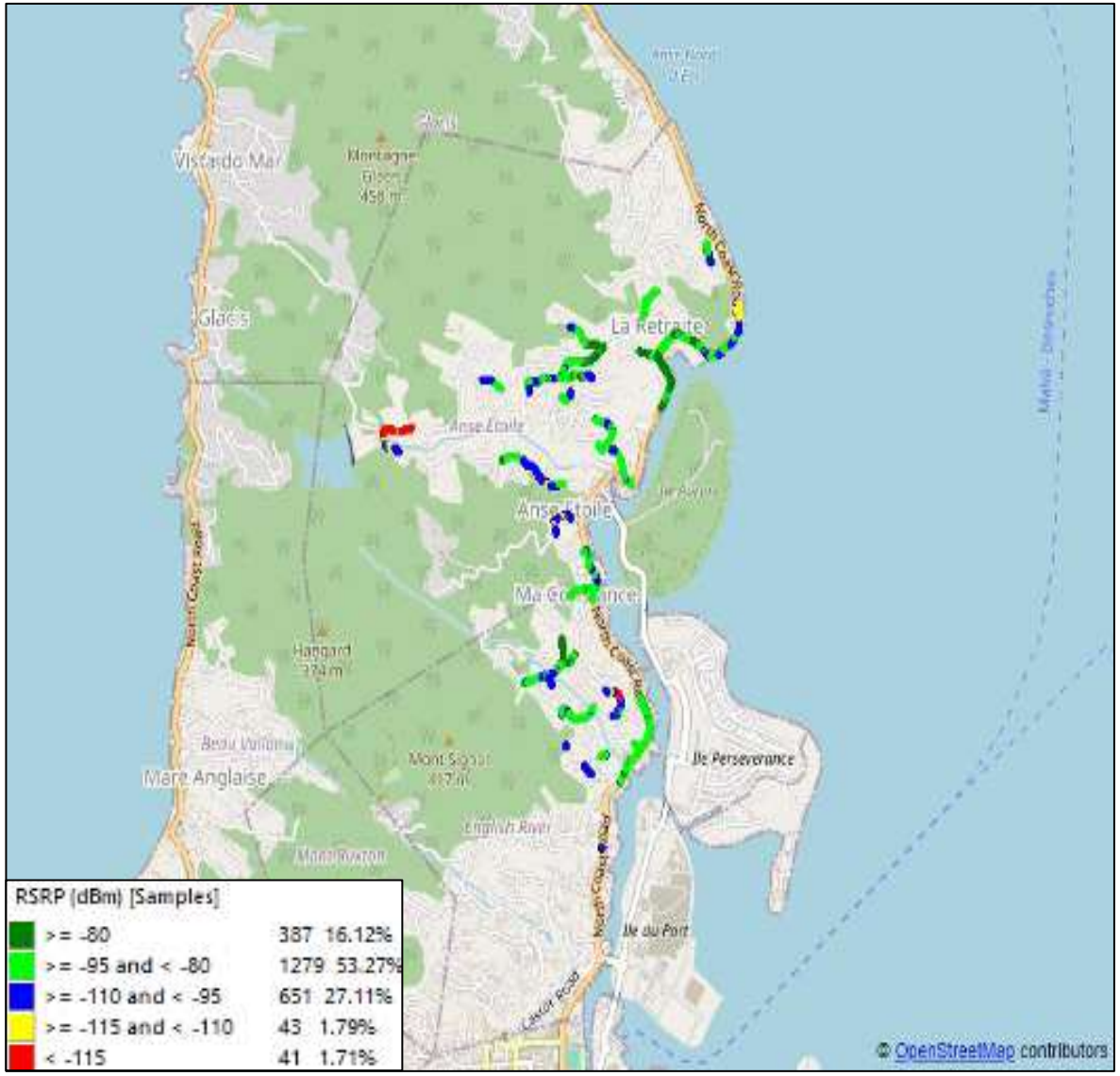


CWS LC MO

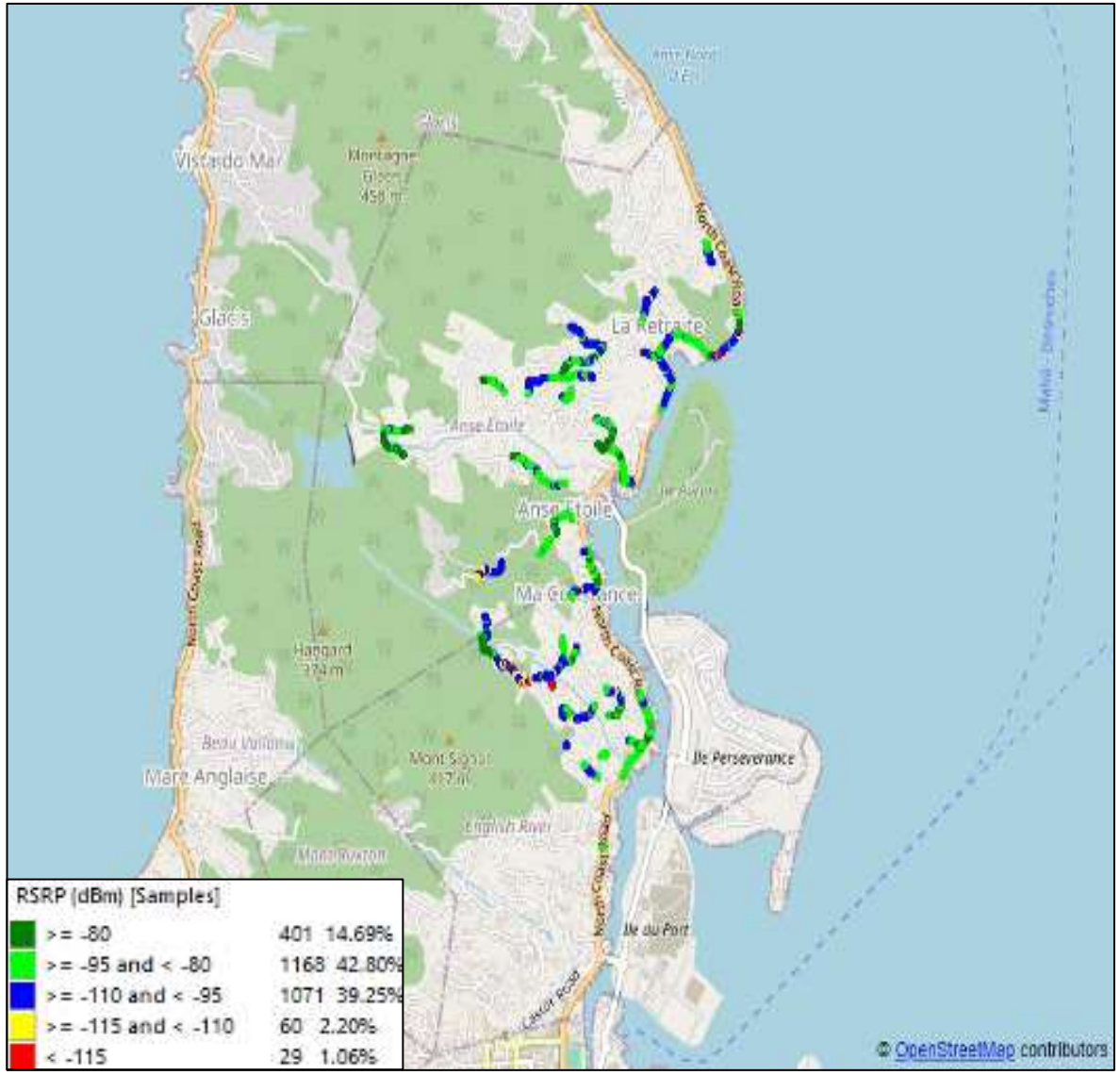


Phase-1 Long Call RSRP PLOT

Airtel LC MO

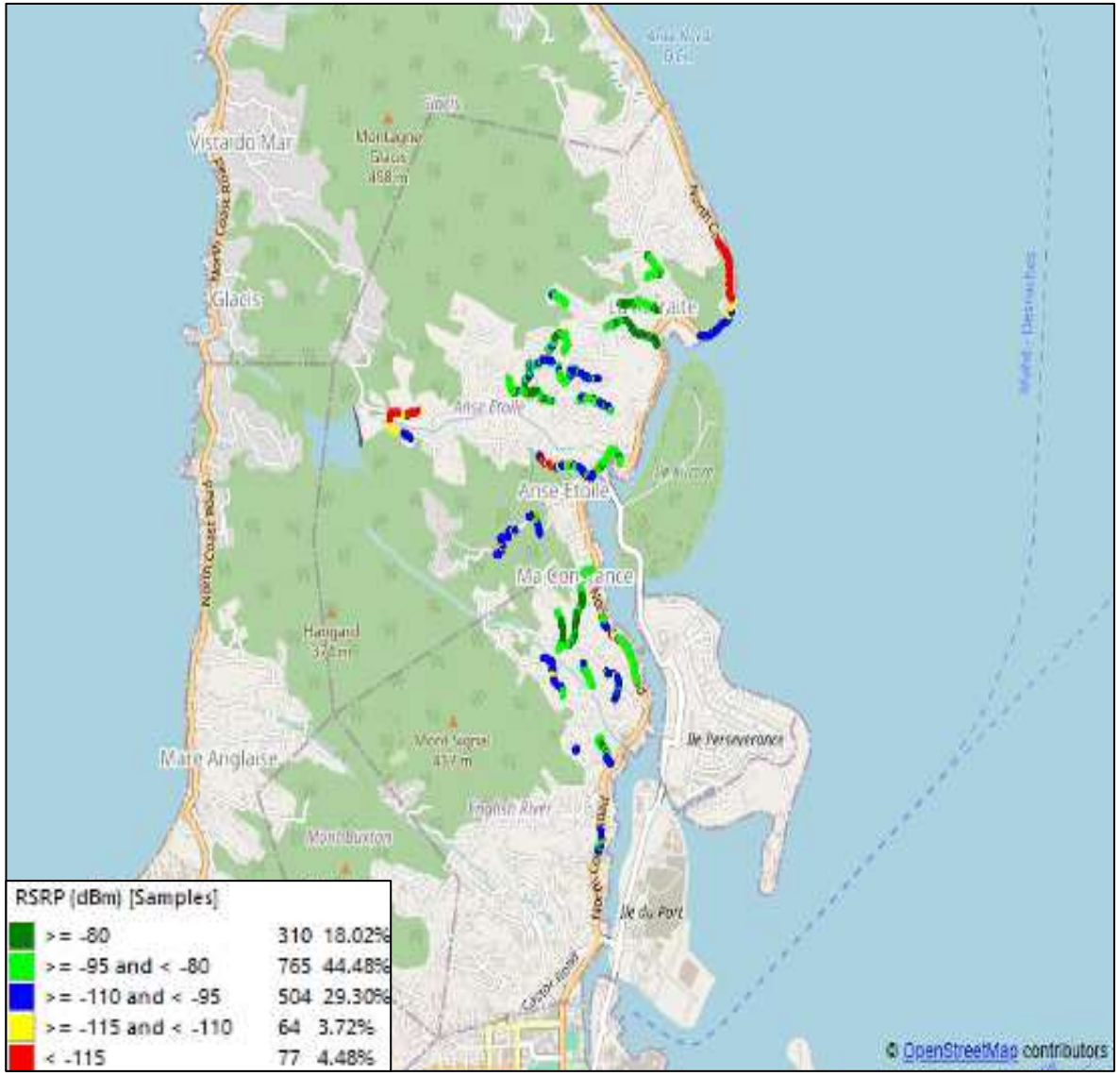


CWS LC MO

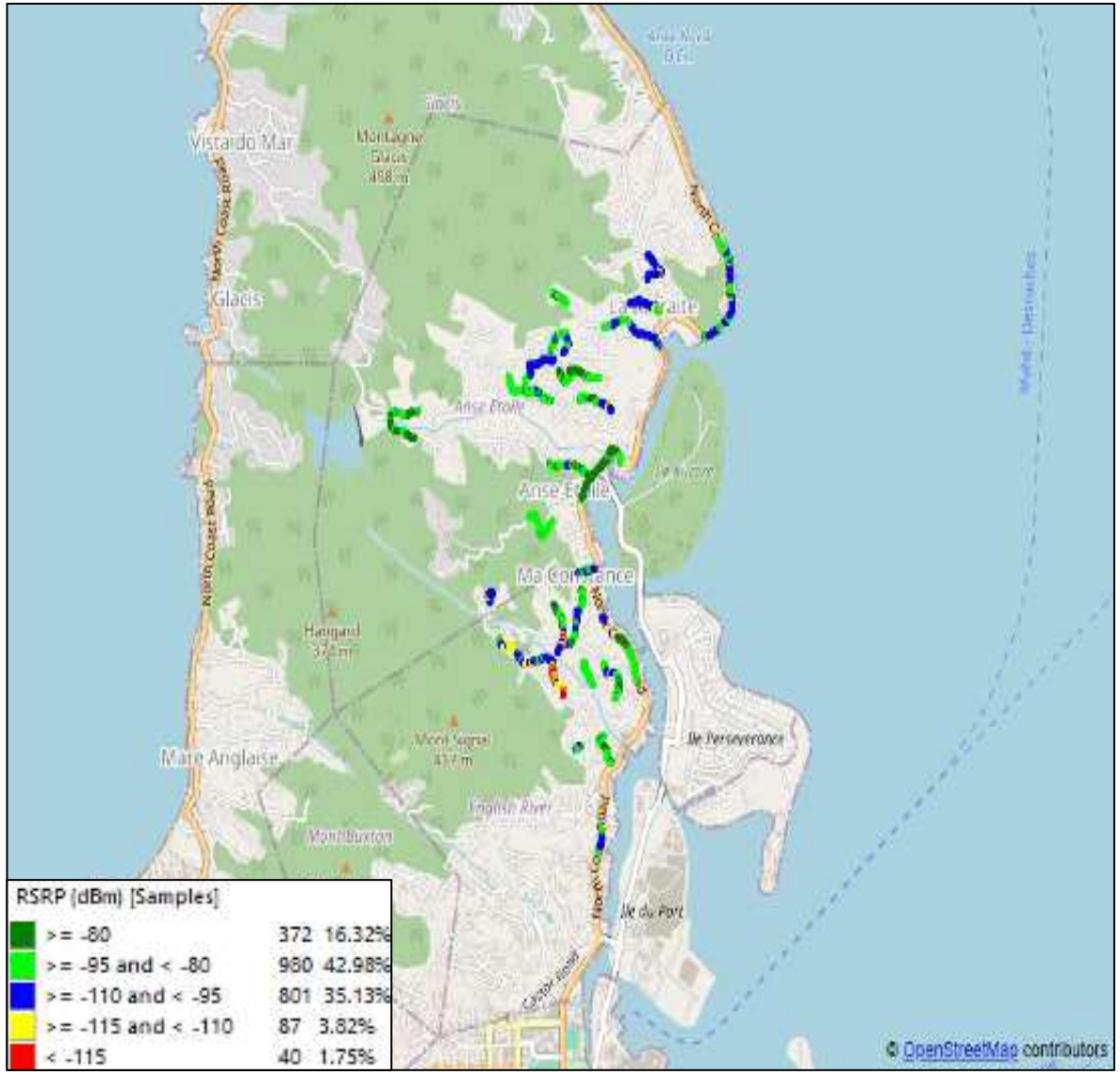


Phase-2 Long Call RSRP PLOT

Airtel LC MO

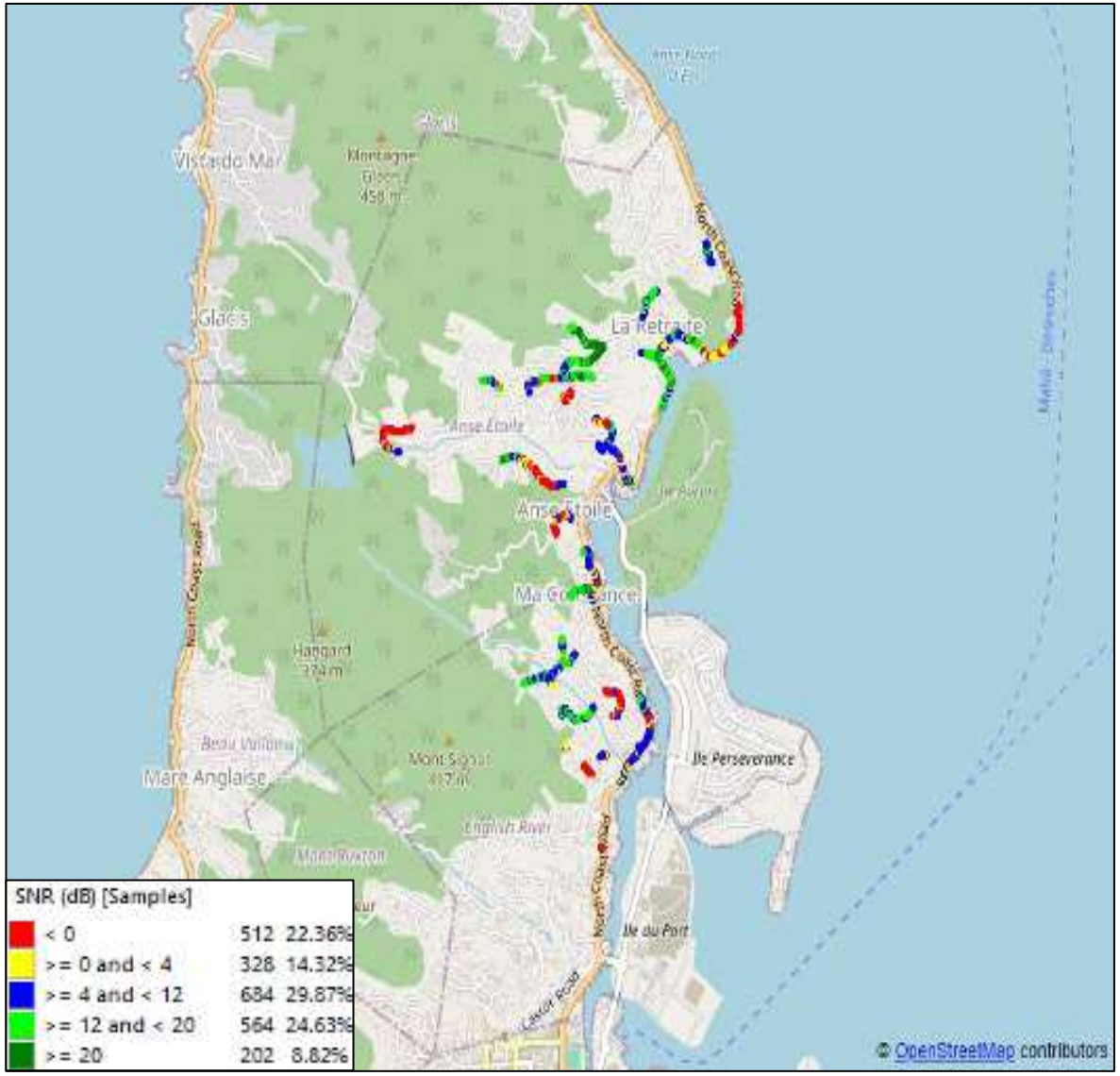


CWS LC MO

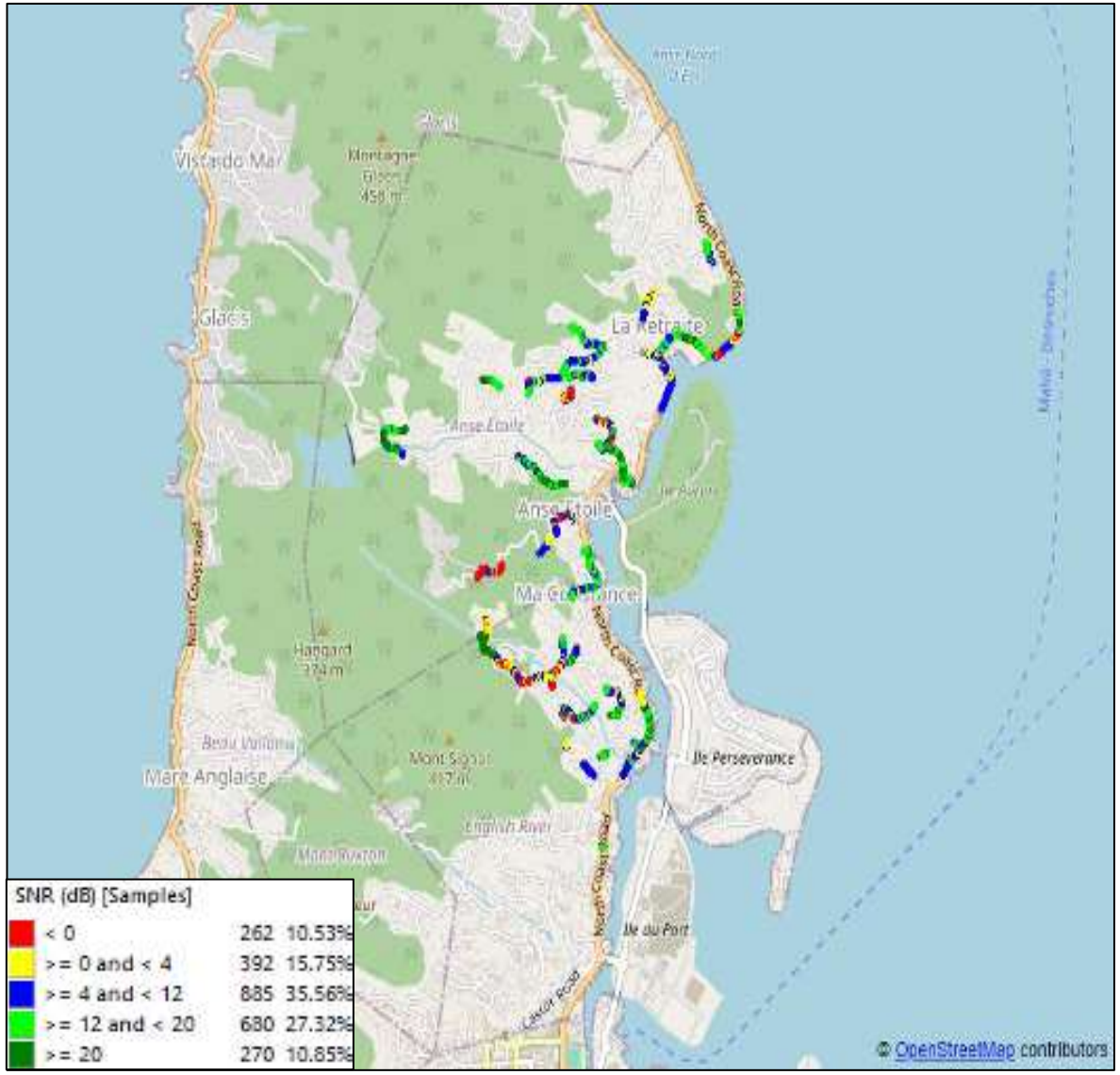


Phase-1 Long Call SINR PLOT

Airtel LC MO

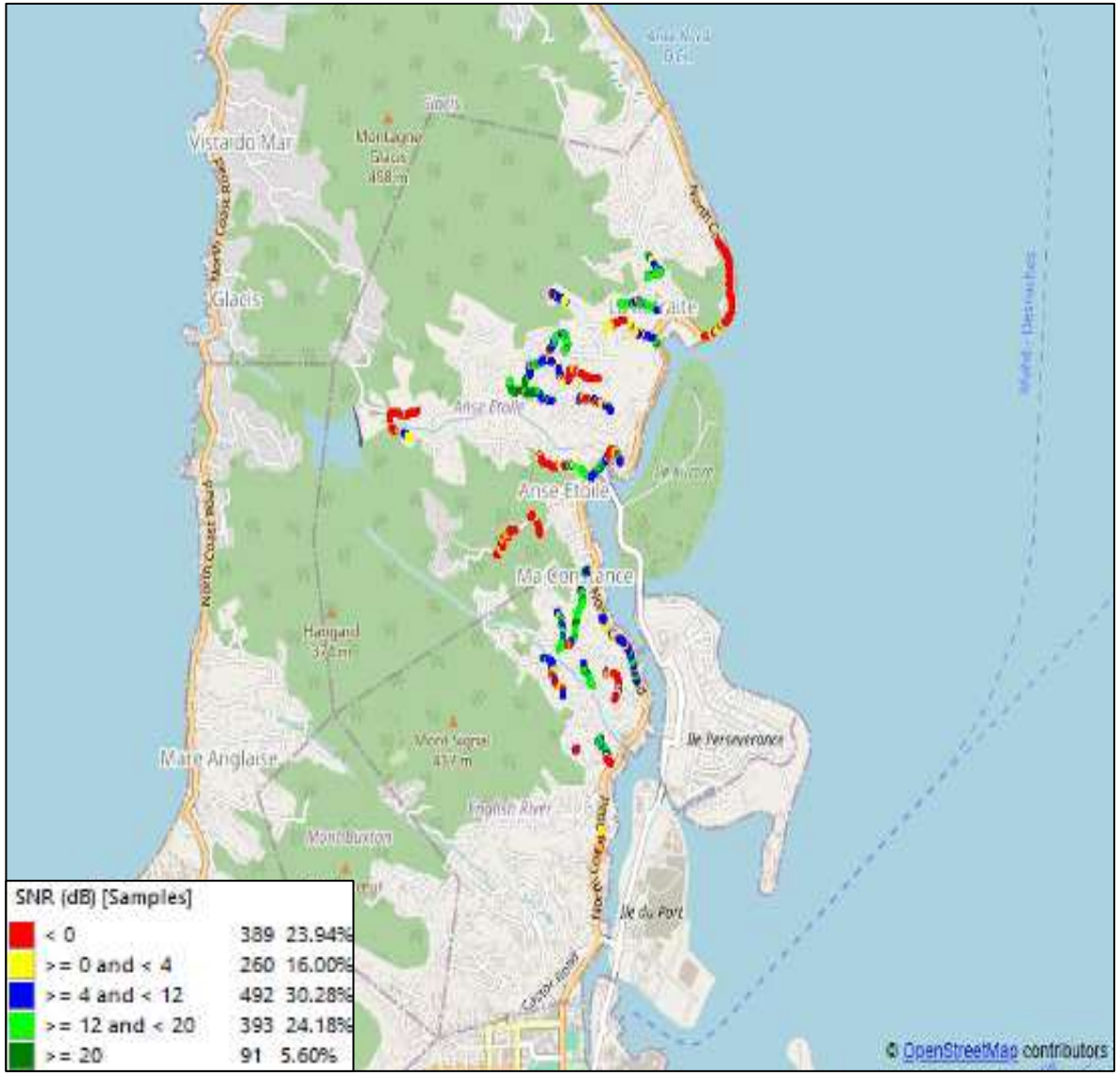


CWS LC MO

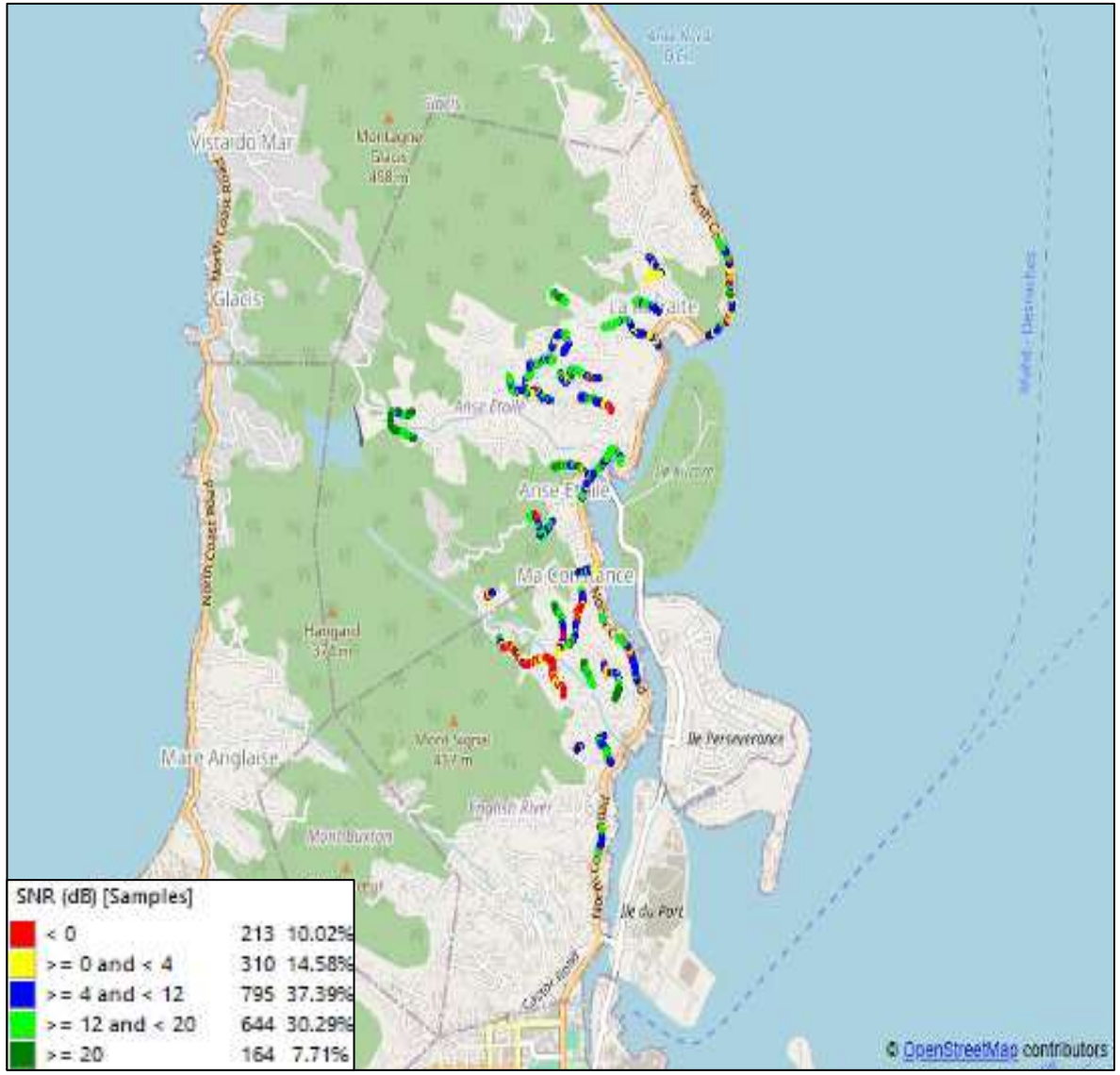


Phase-2 Long Call SINR PLOT

Airtel LC MO

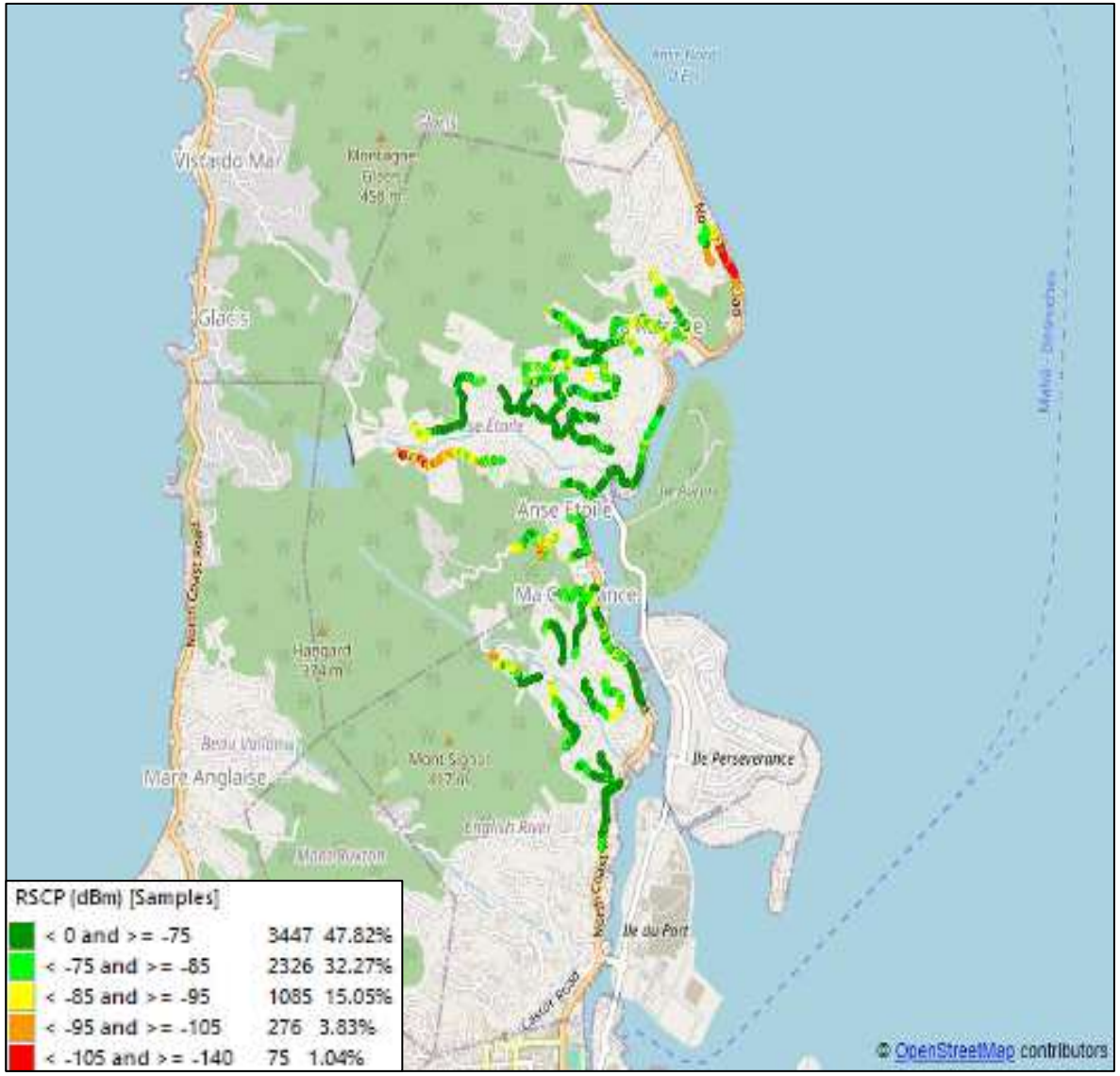


CWS LC MO

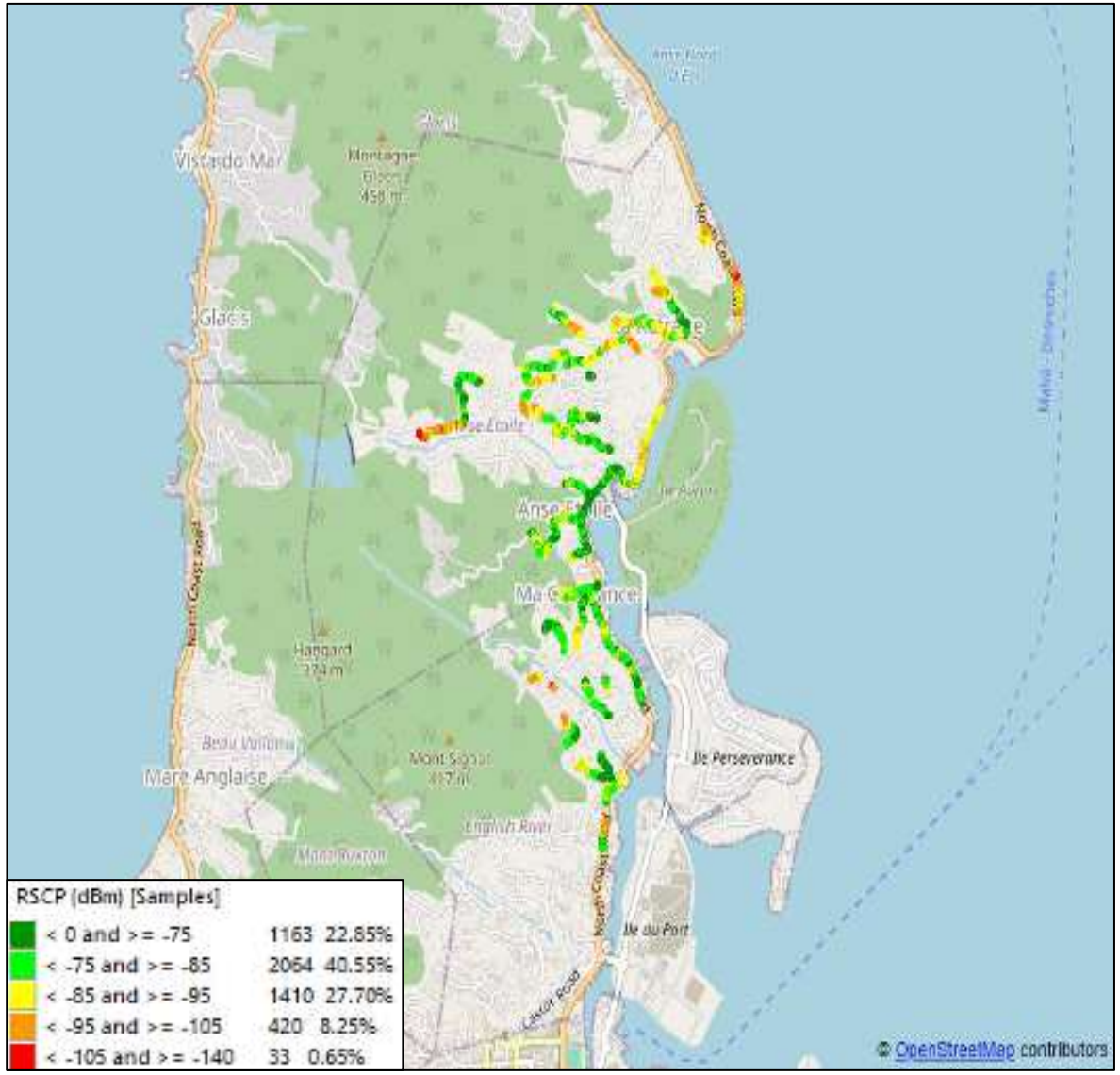


Phase-1 Long Call RSCP PLOT

Airtel LC MO

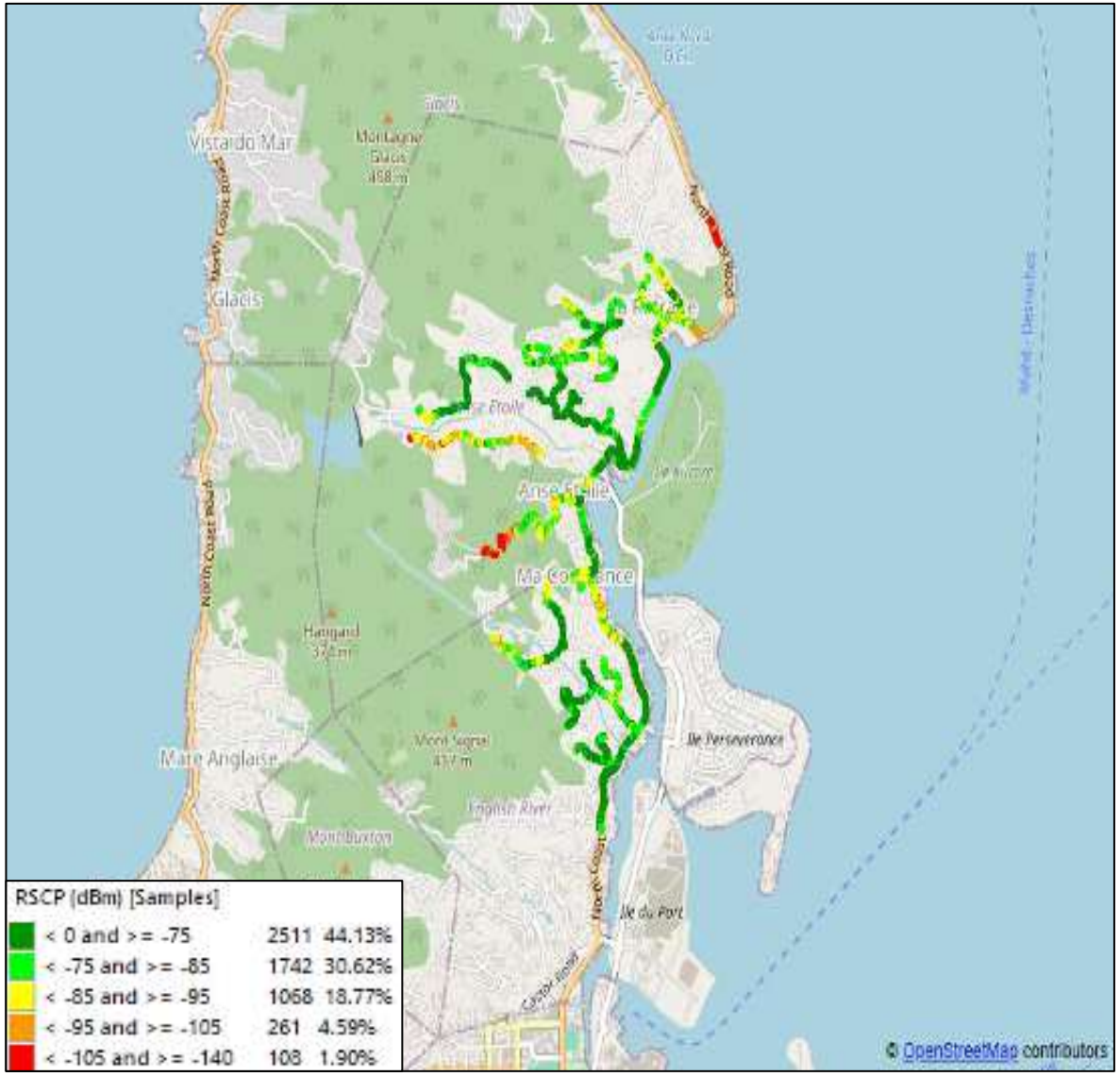


CWS LC MO

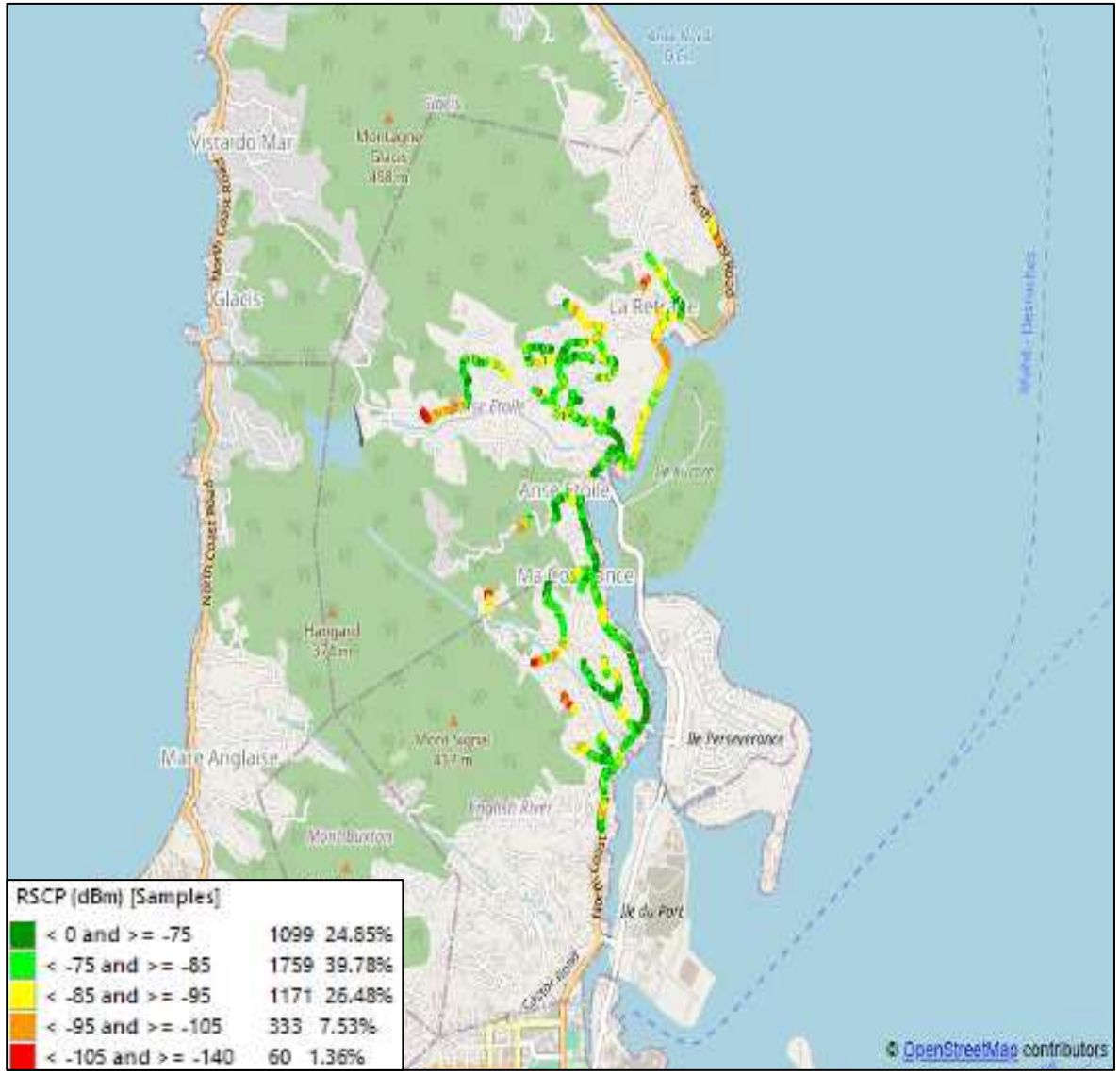


Phase-2 Long Call RSCP PLOT

Airtel LC MO

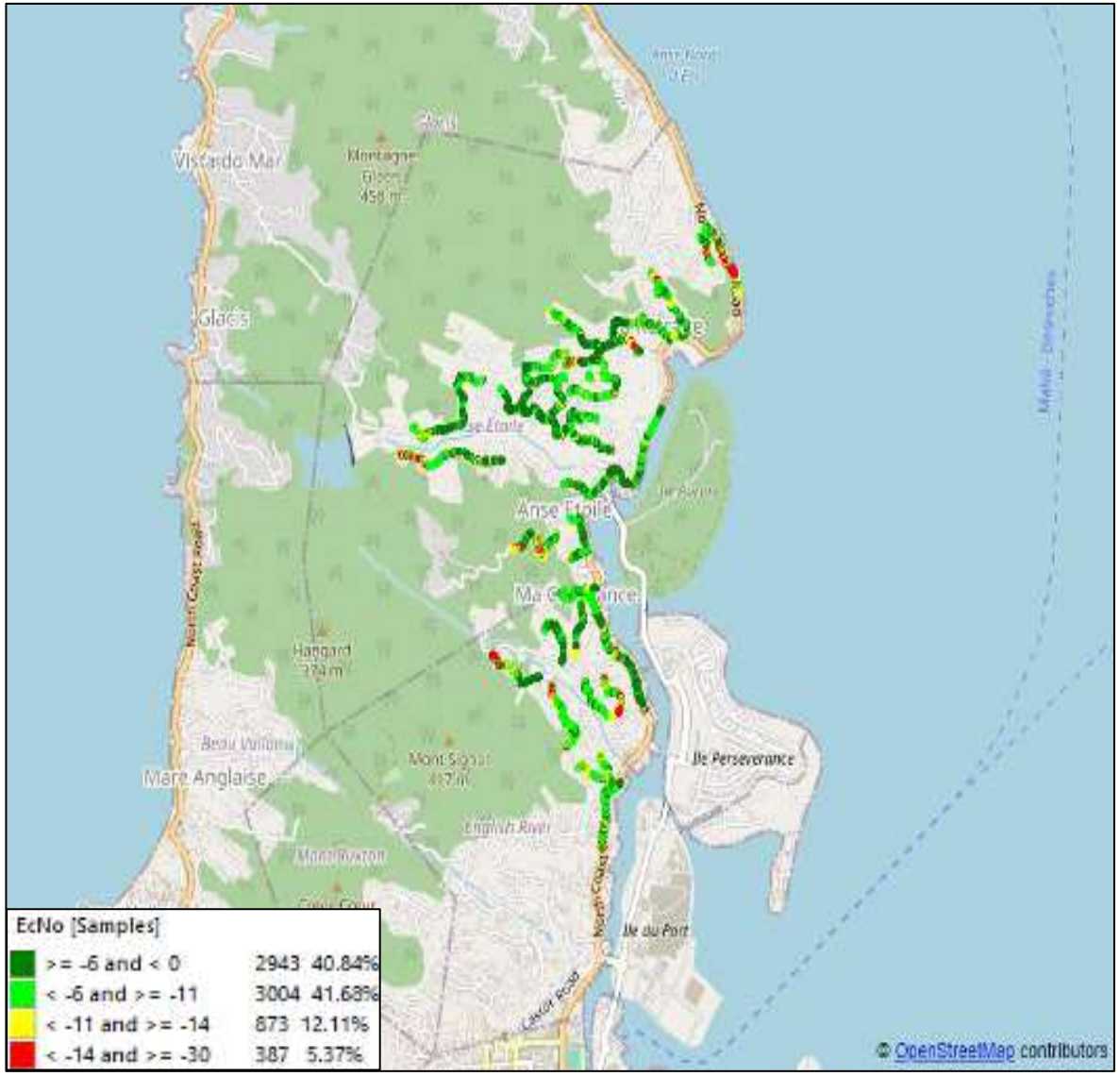


CWS LC MO

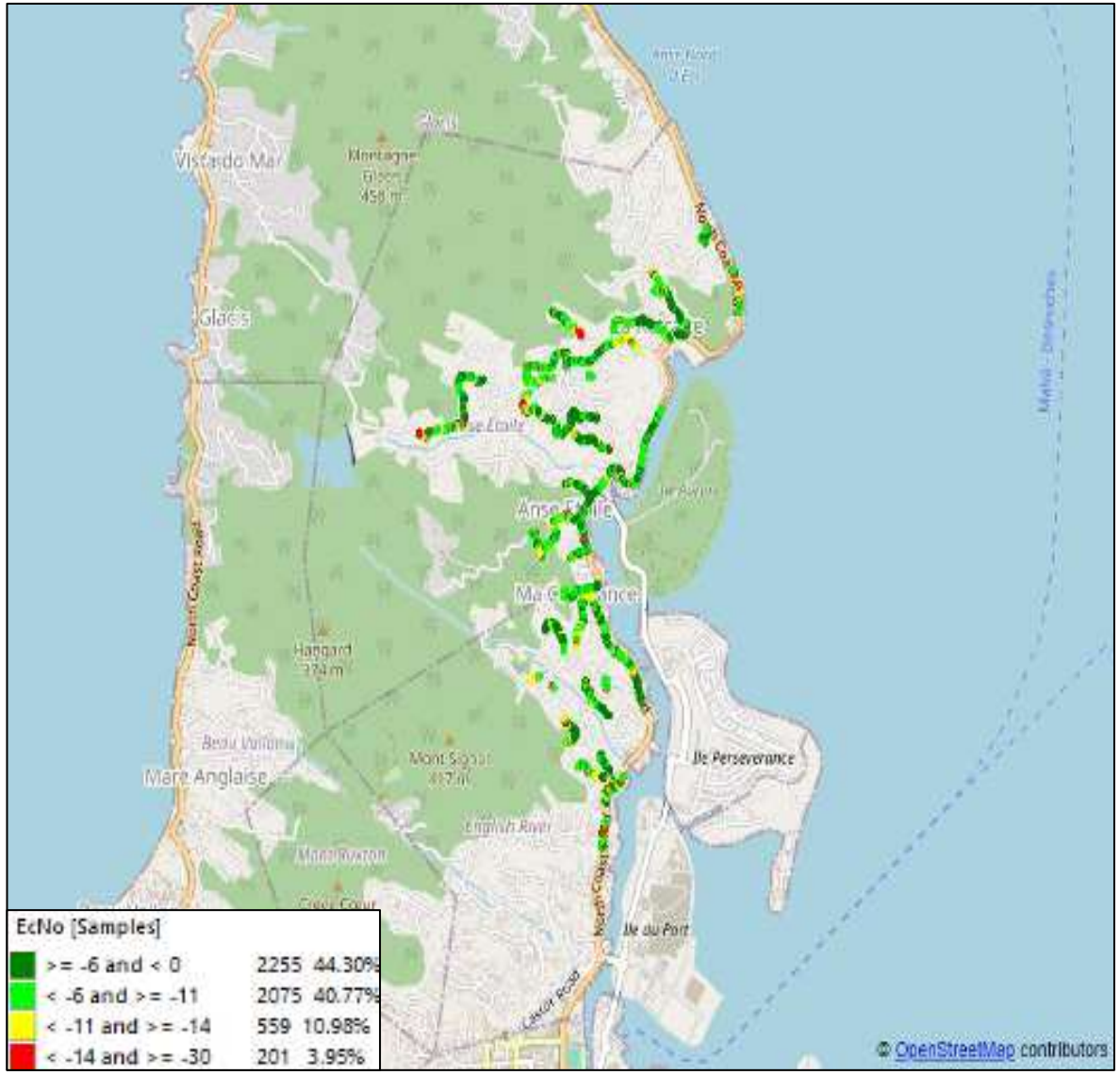


Phase-1 Long Call EC/NO PLOT

Airtel LC MO

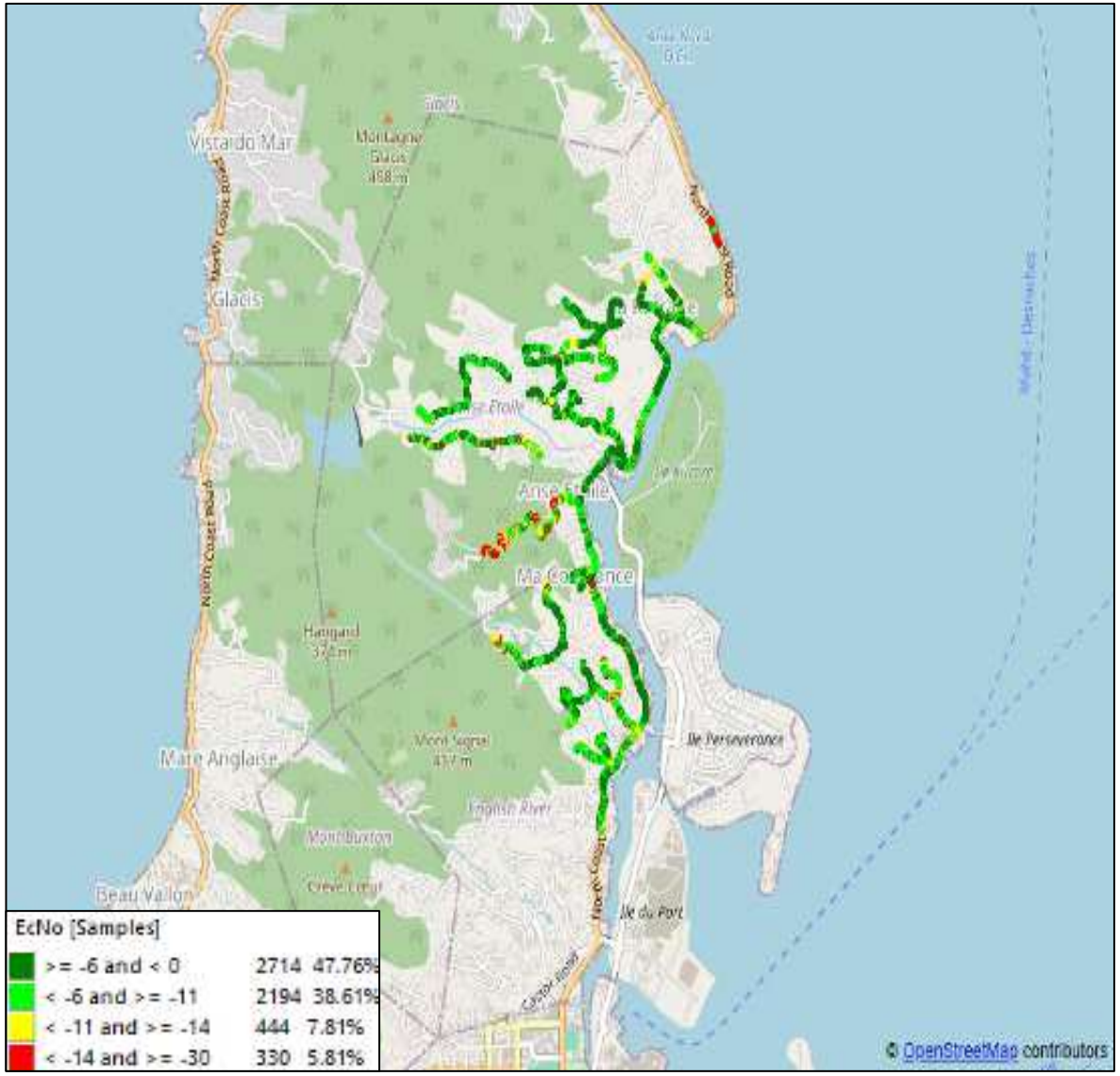


CWS LC MO

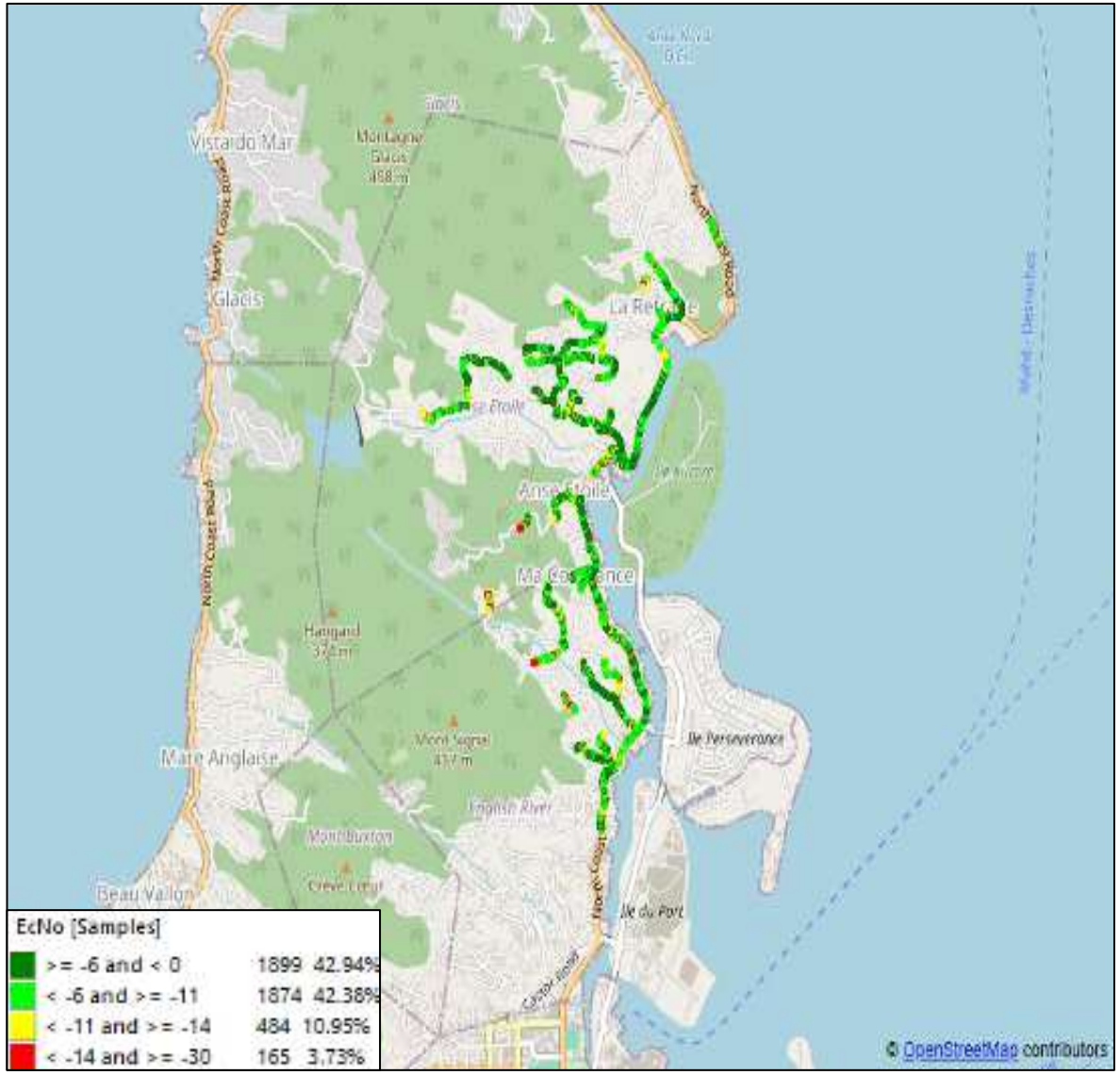


Phase-2 Long Call EC/NO PLOT

Airtel LC MO

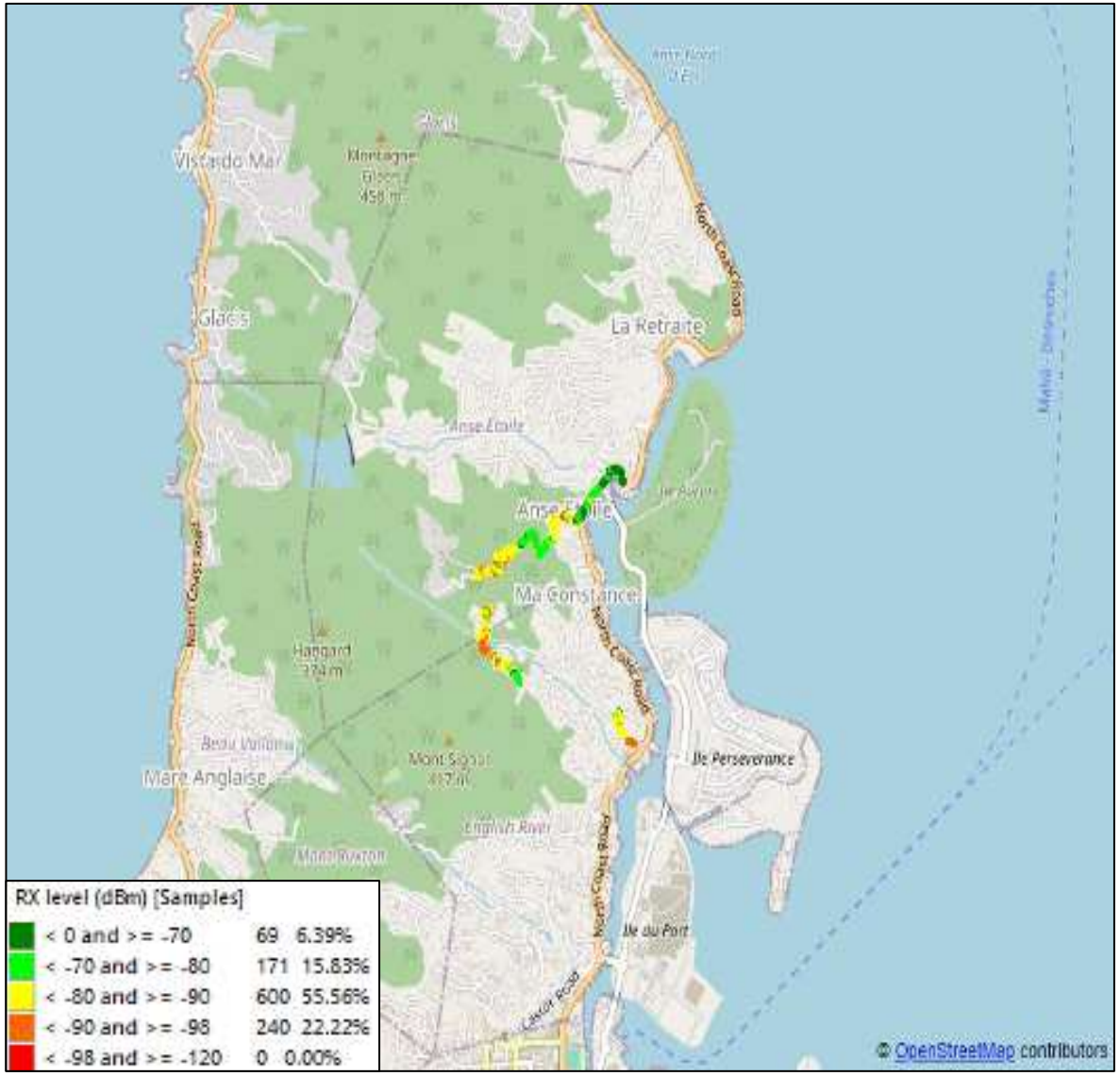


CWS LC MO

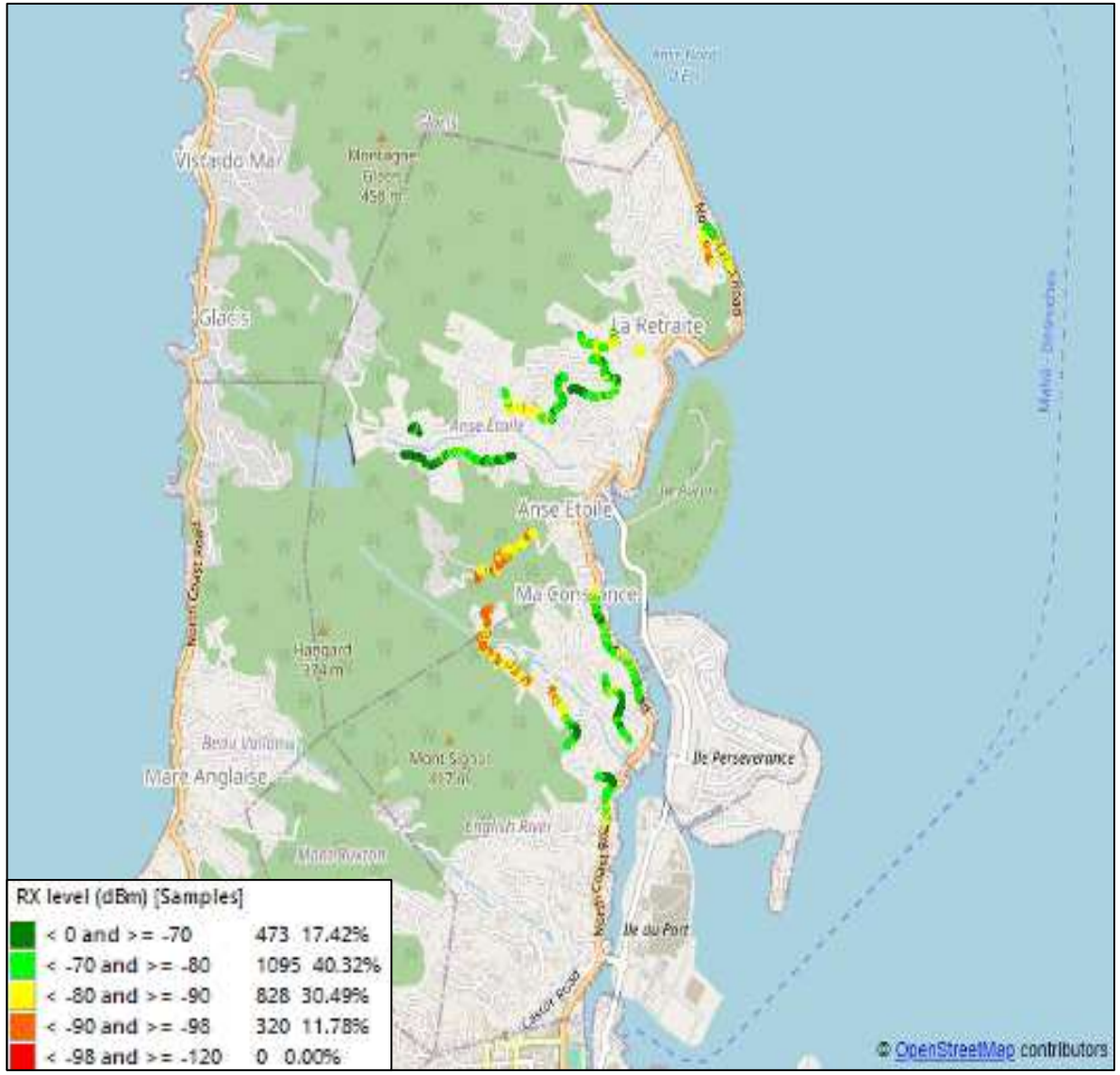


Phase-1 Long Call RX level sub PLOT

Airtel LC MO

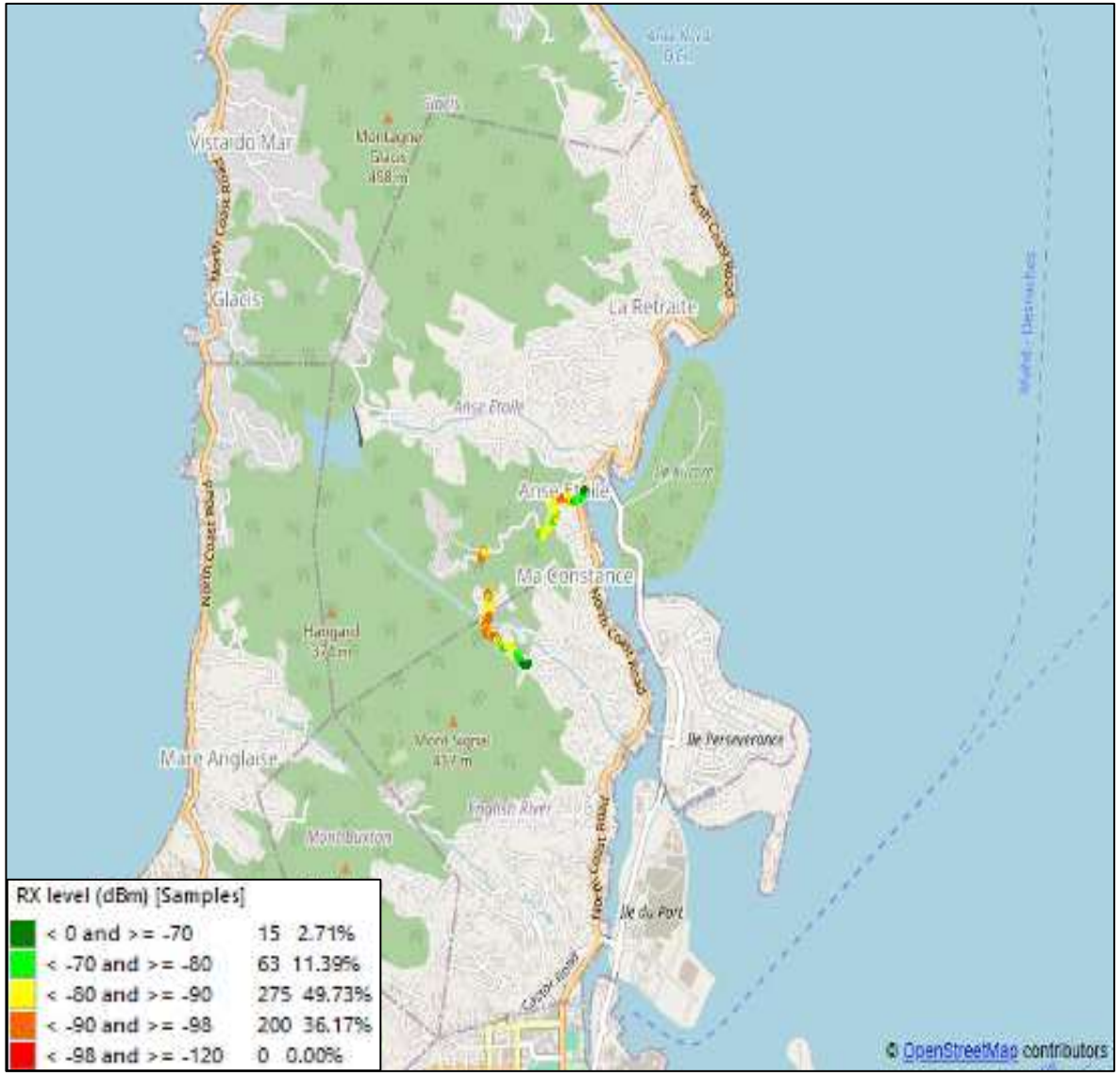


CWS LC MO

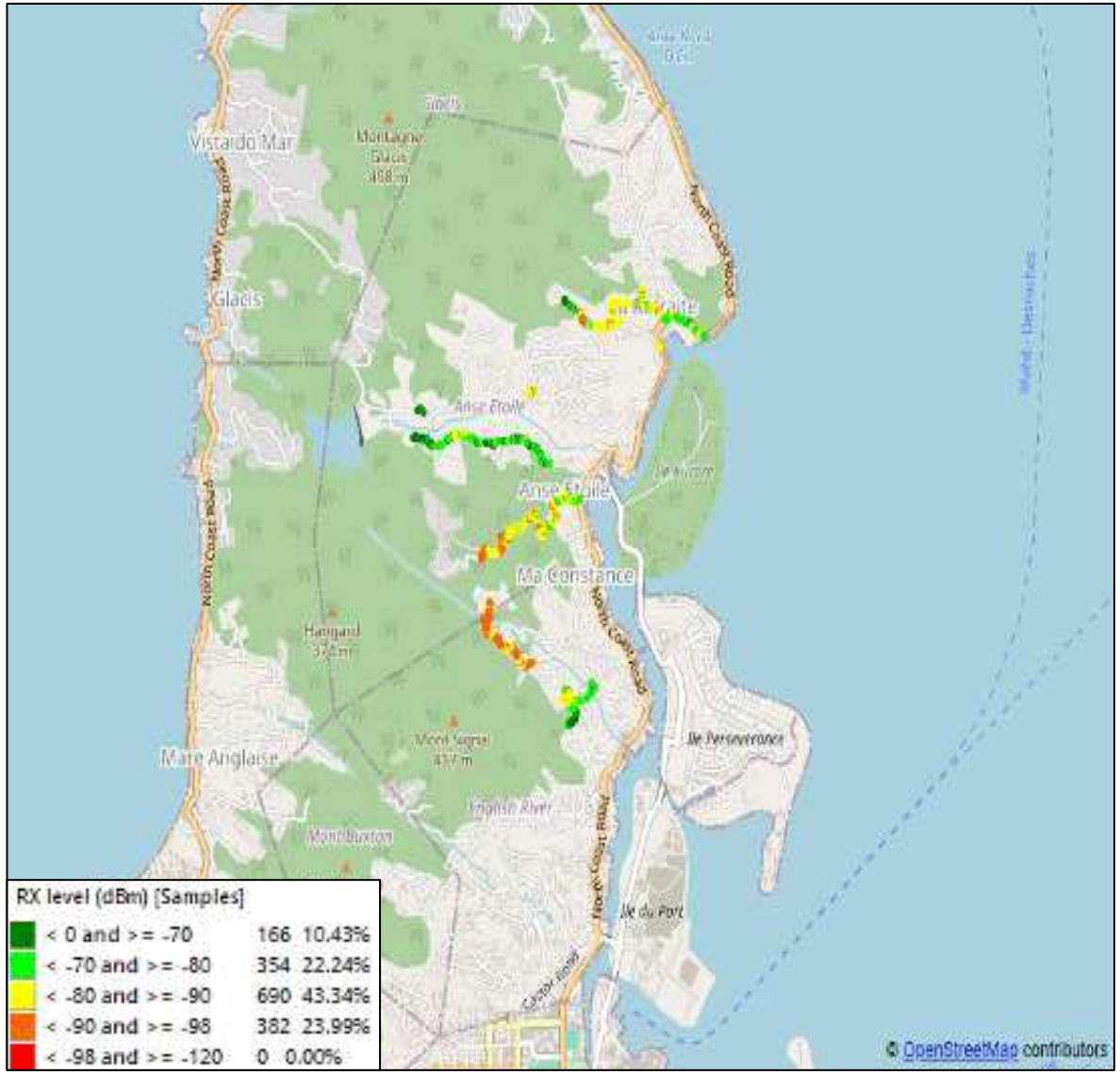


Phase-2 Long Call RX level sub PLOT

Airtel LC MO

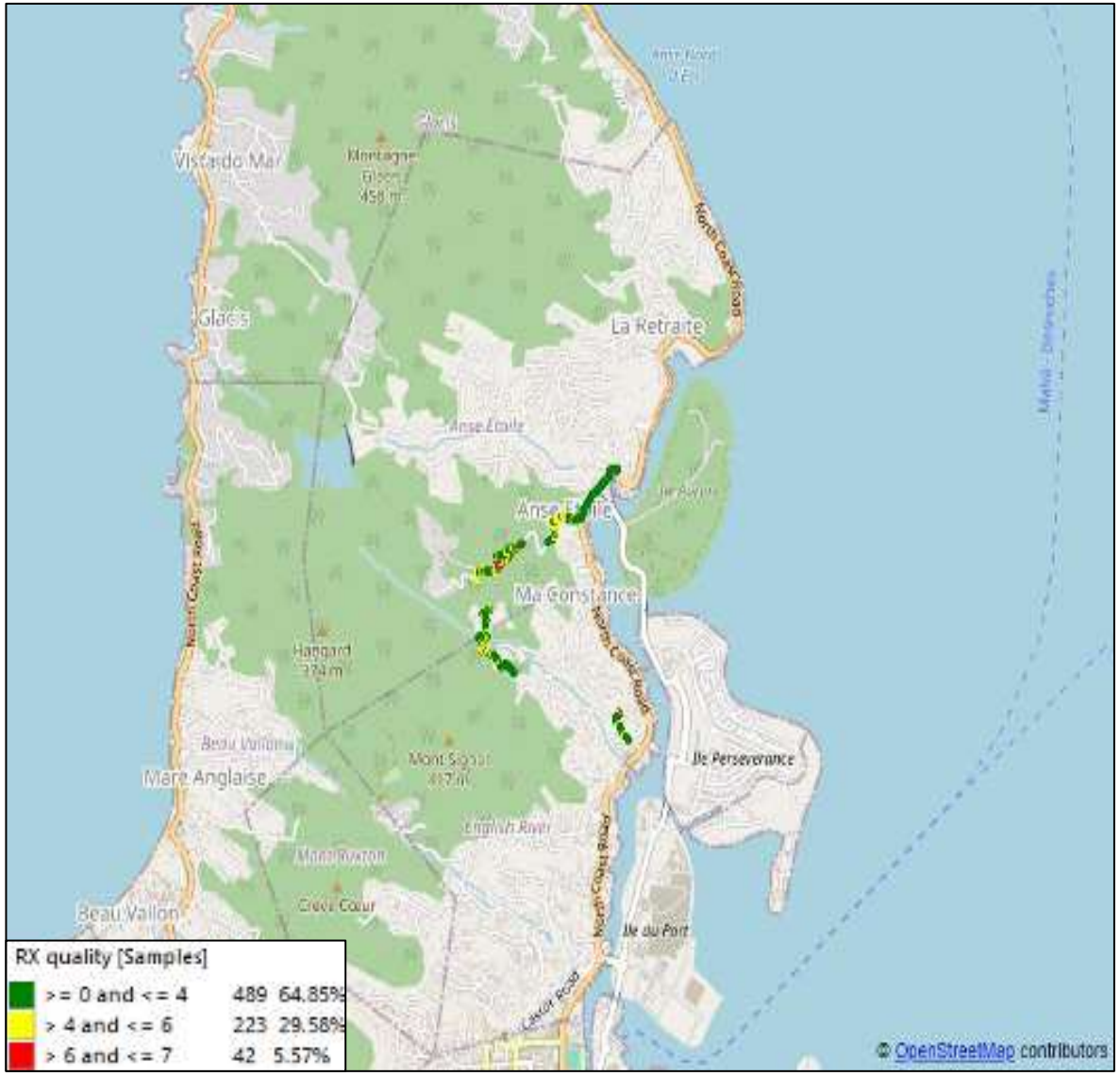


CWS LC MO

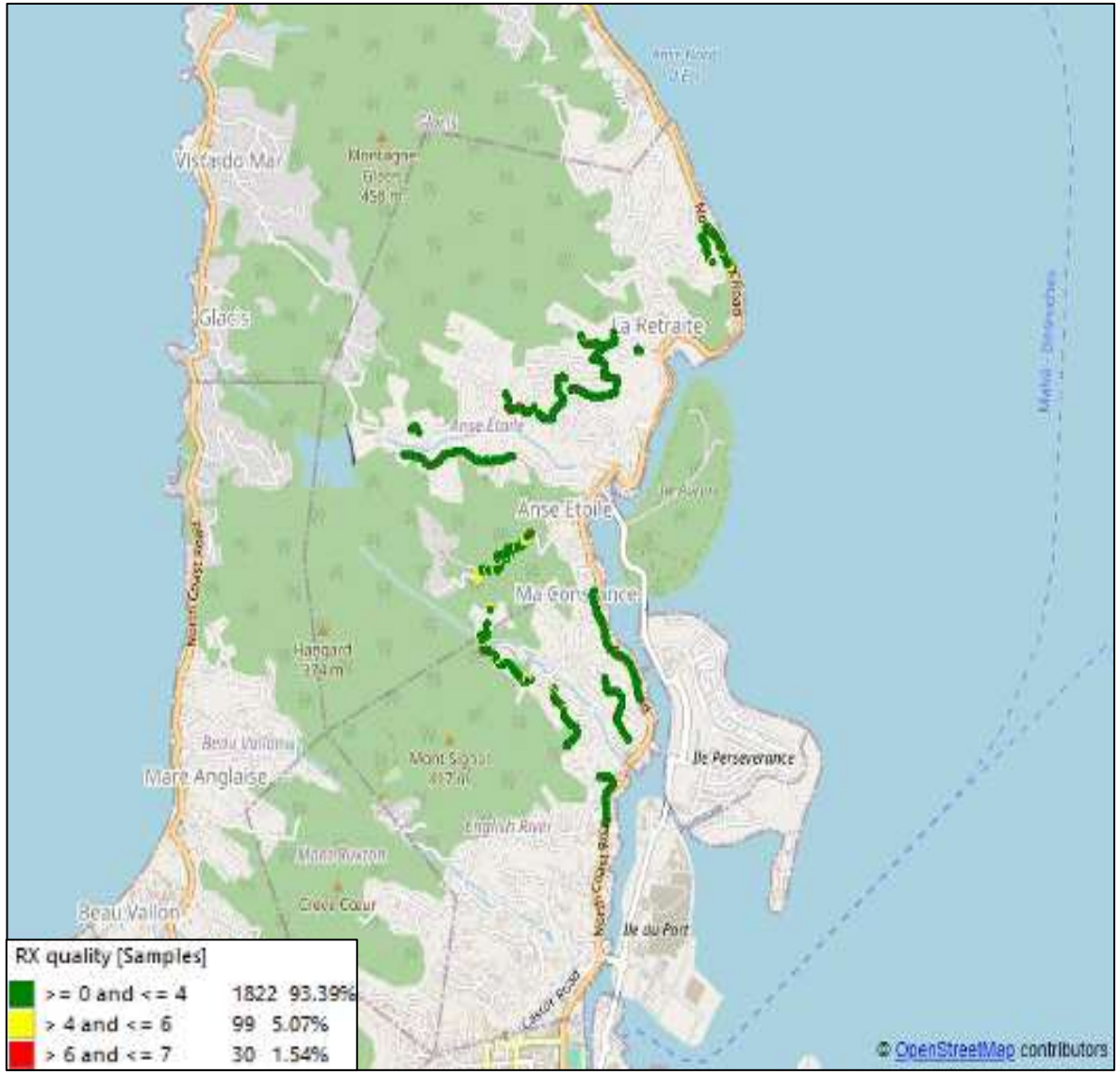


Phase-1 Long Call RX quality sub PLOT

Airtel LC MO

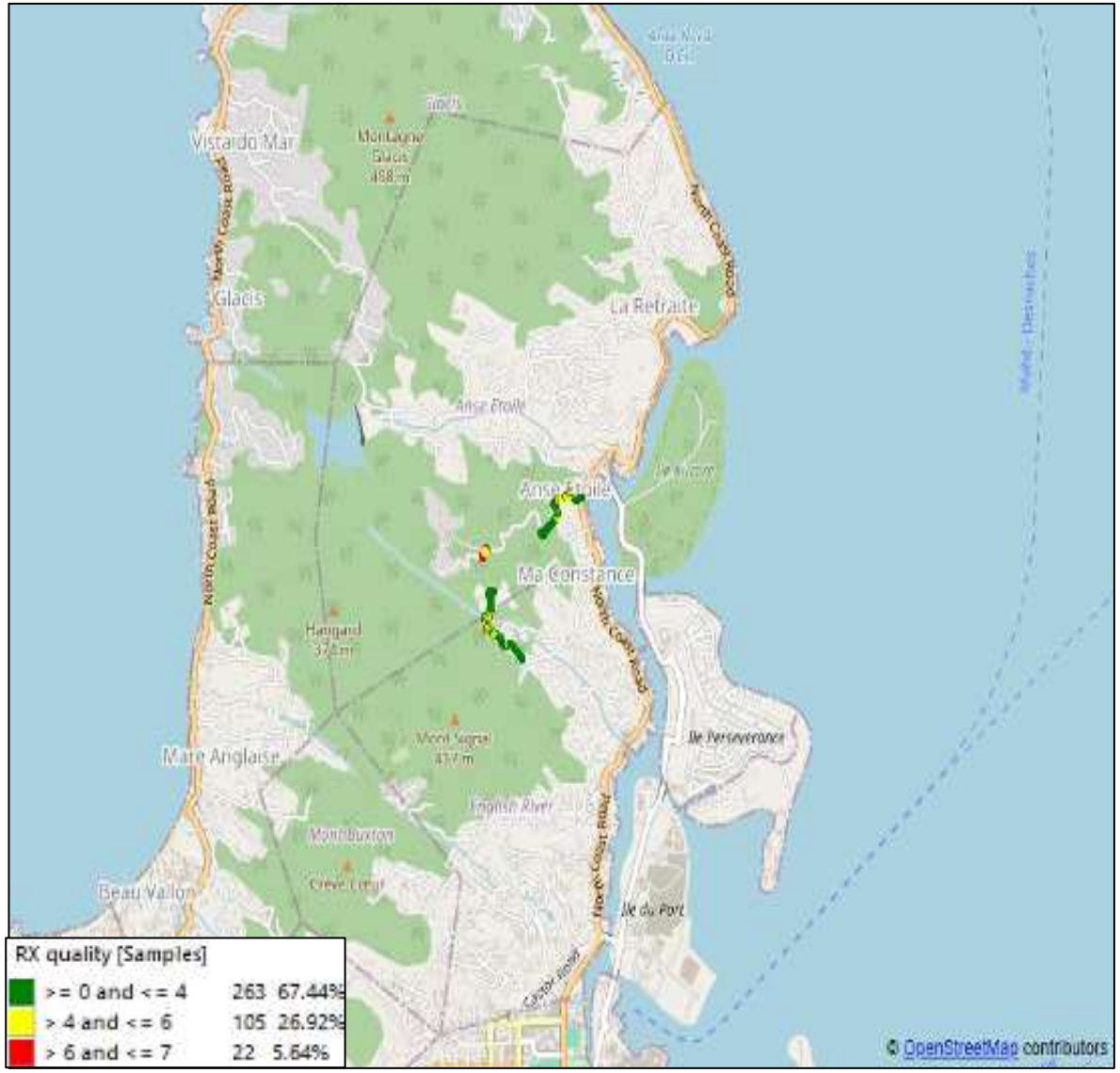


CWS LC MO

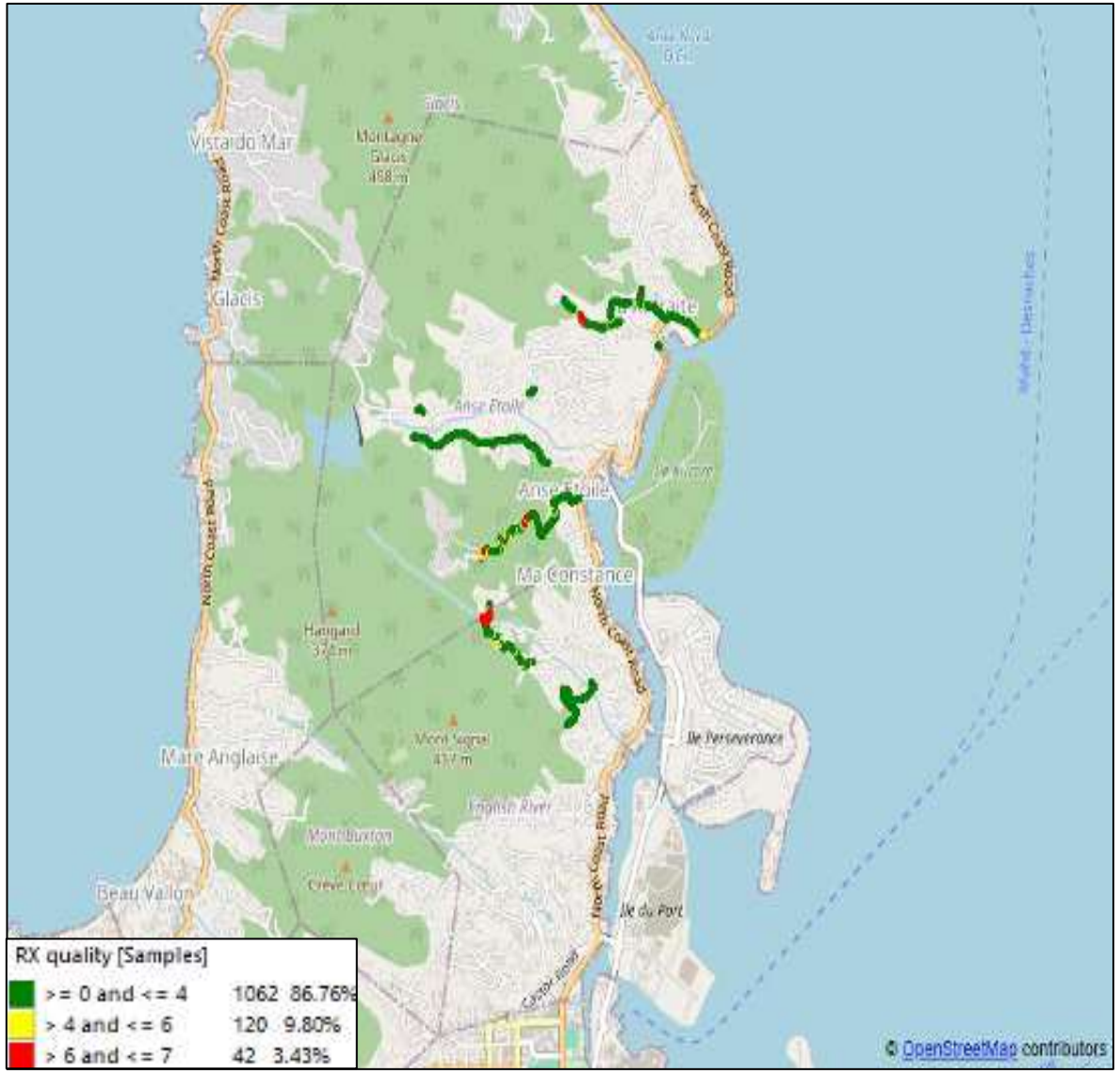


Phase-2 Long Call RX quality sub PLOT

Airtel LC MO



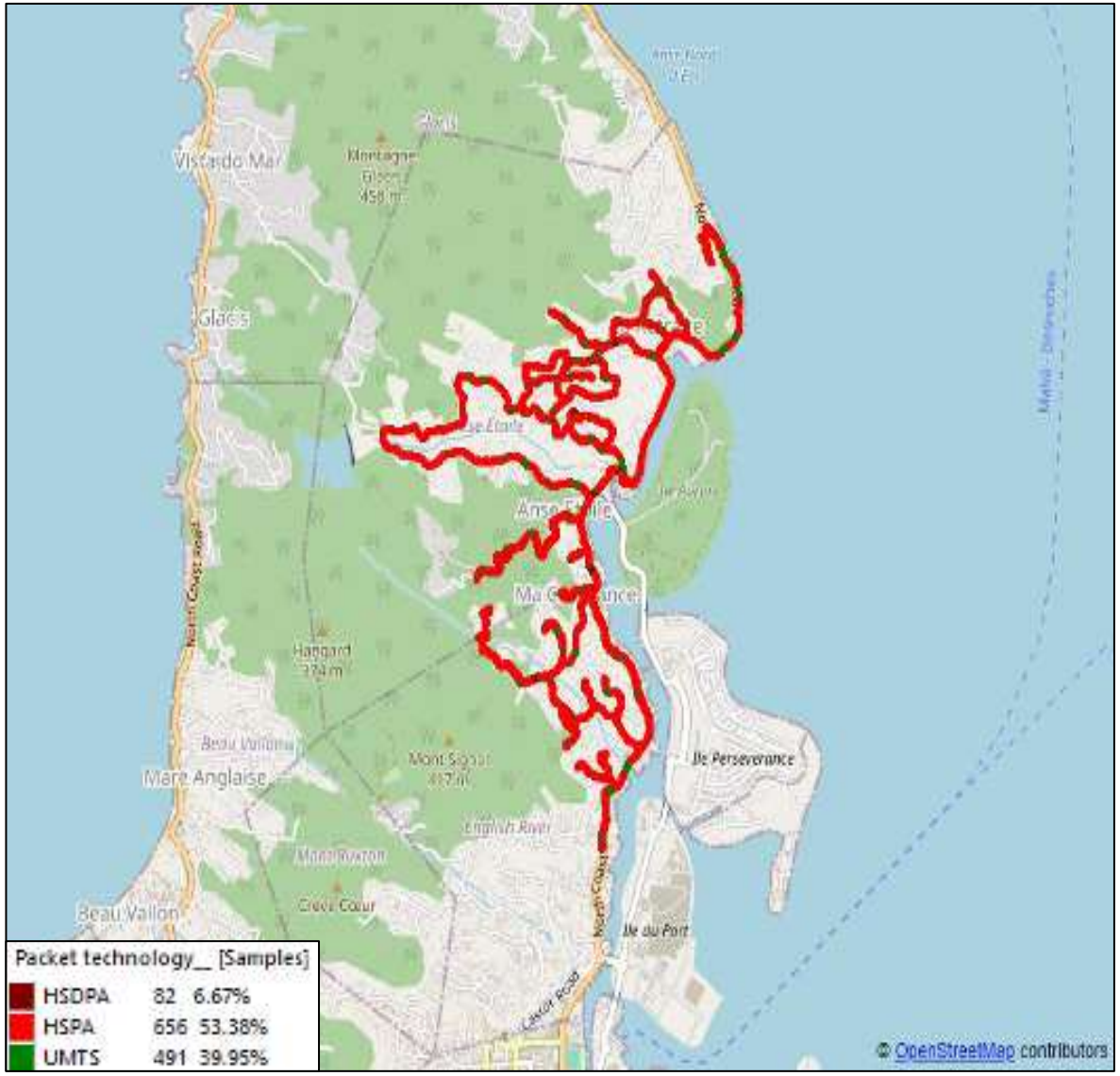
CWS LC MO



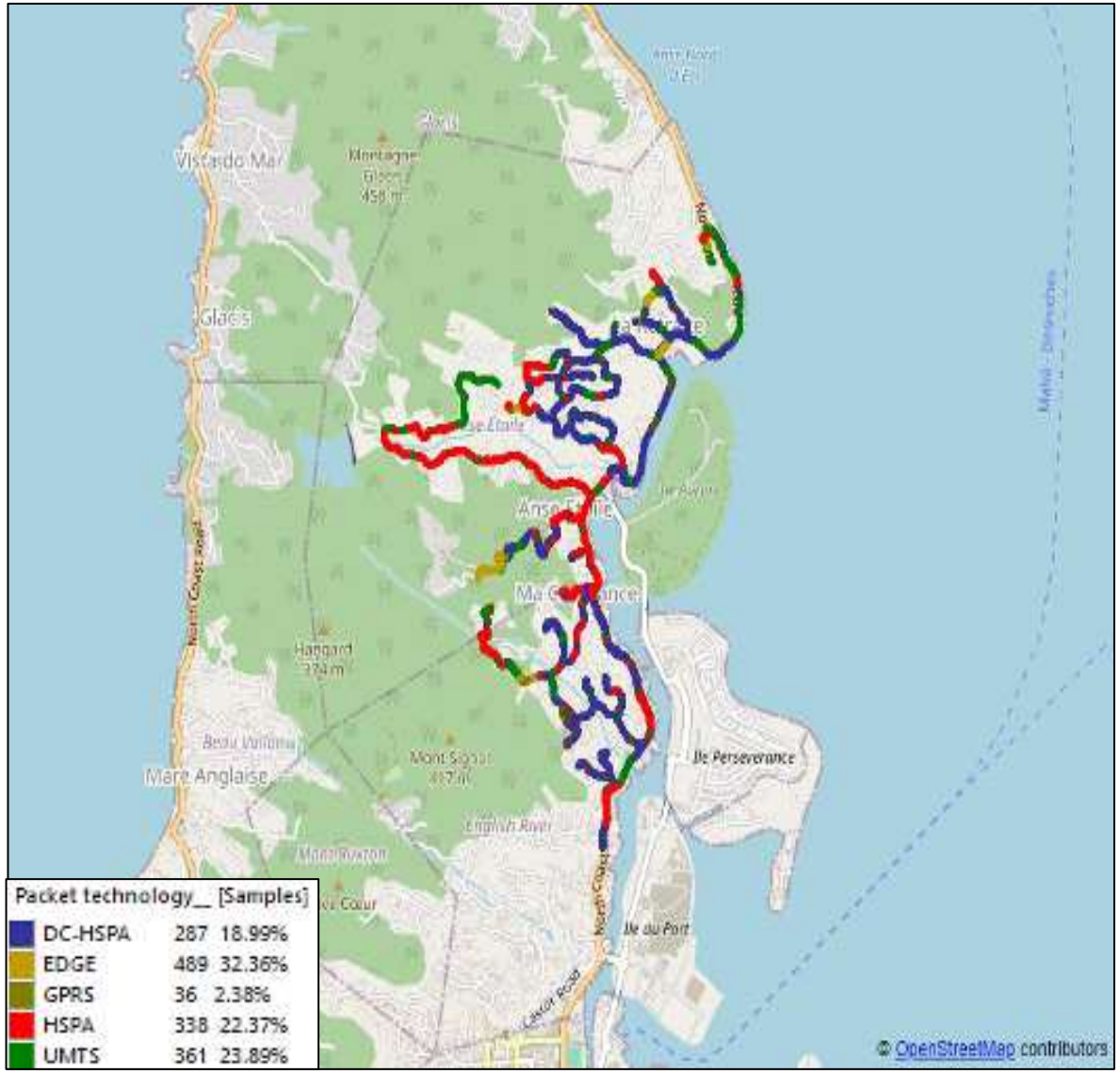
3G PREFERRED DATA DRIVE PLOTS

Phase-1 3G PREFERRED DATA TEST - TECHNOLOGY PLOT

Airtel Data 3G

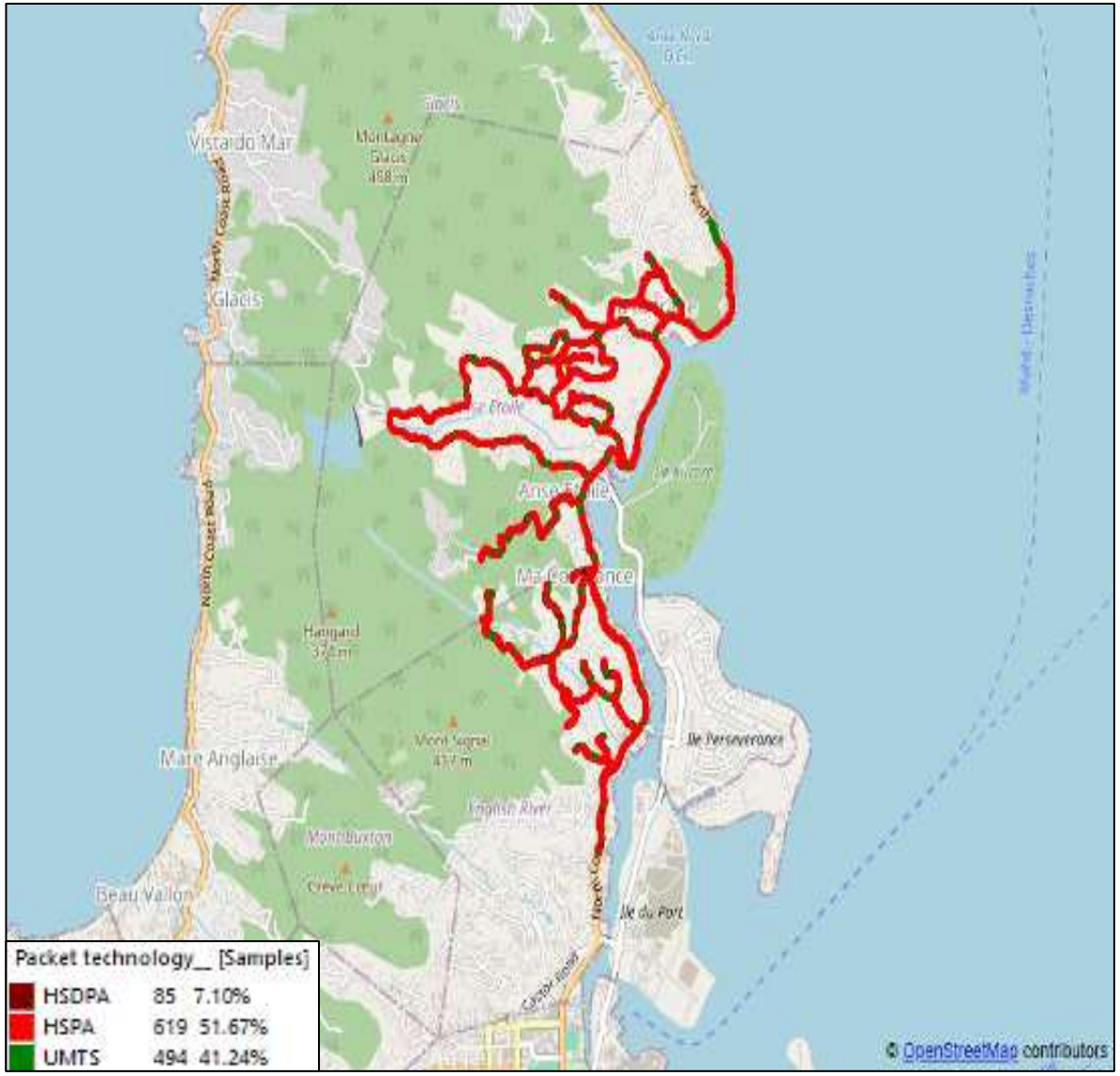


CWS Data 3G

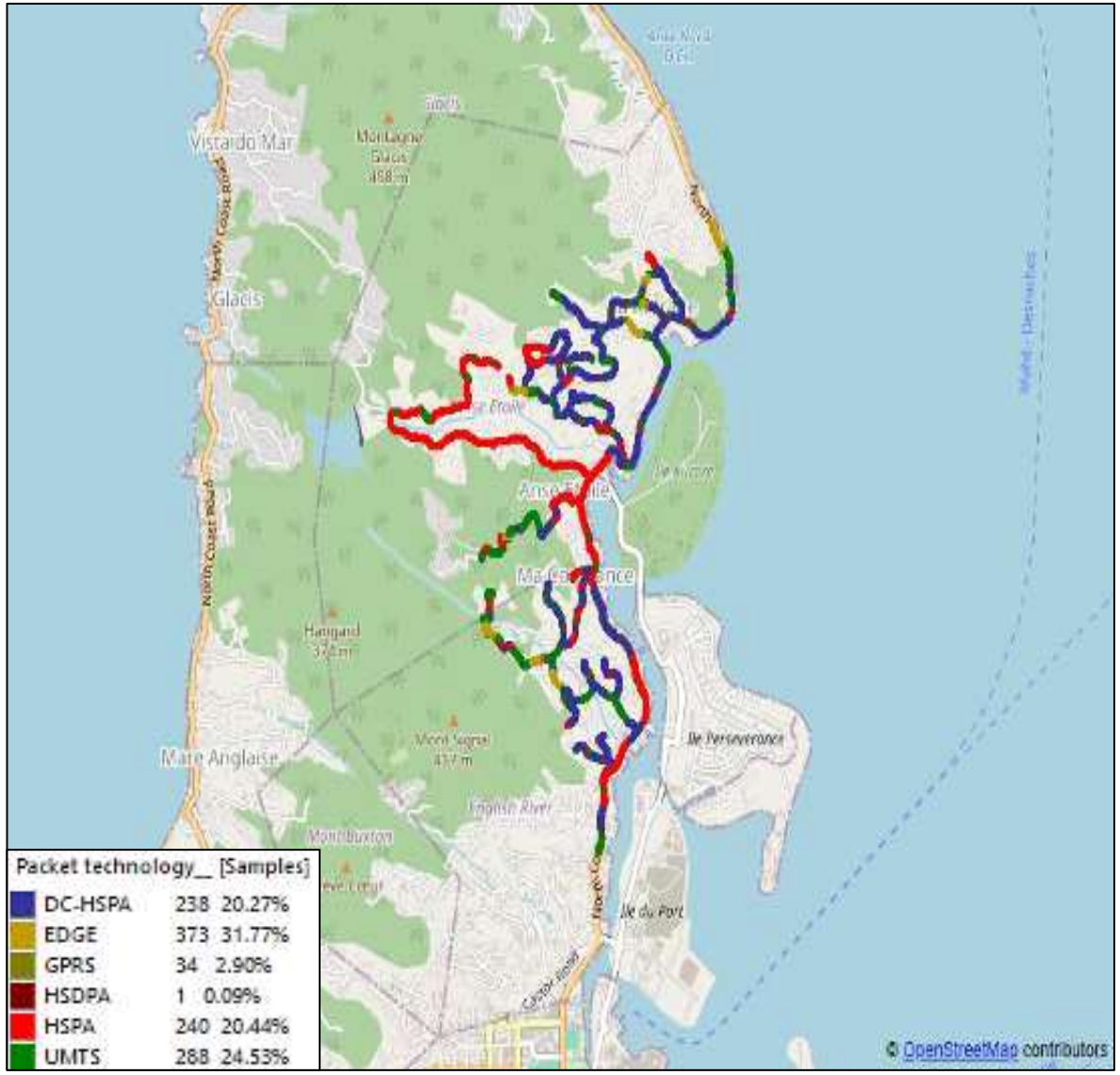


Phase-2 3G PREFERRED DATA TEST - TECHNOLOGY PLOT

Airtel Data 3G

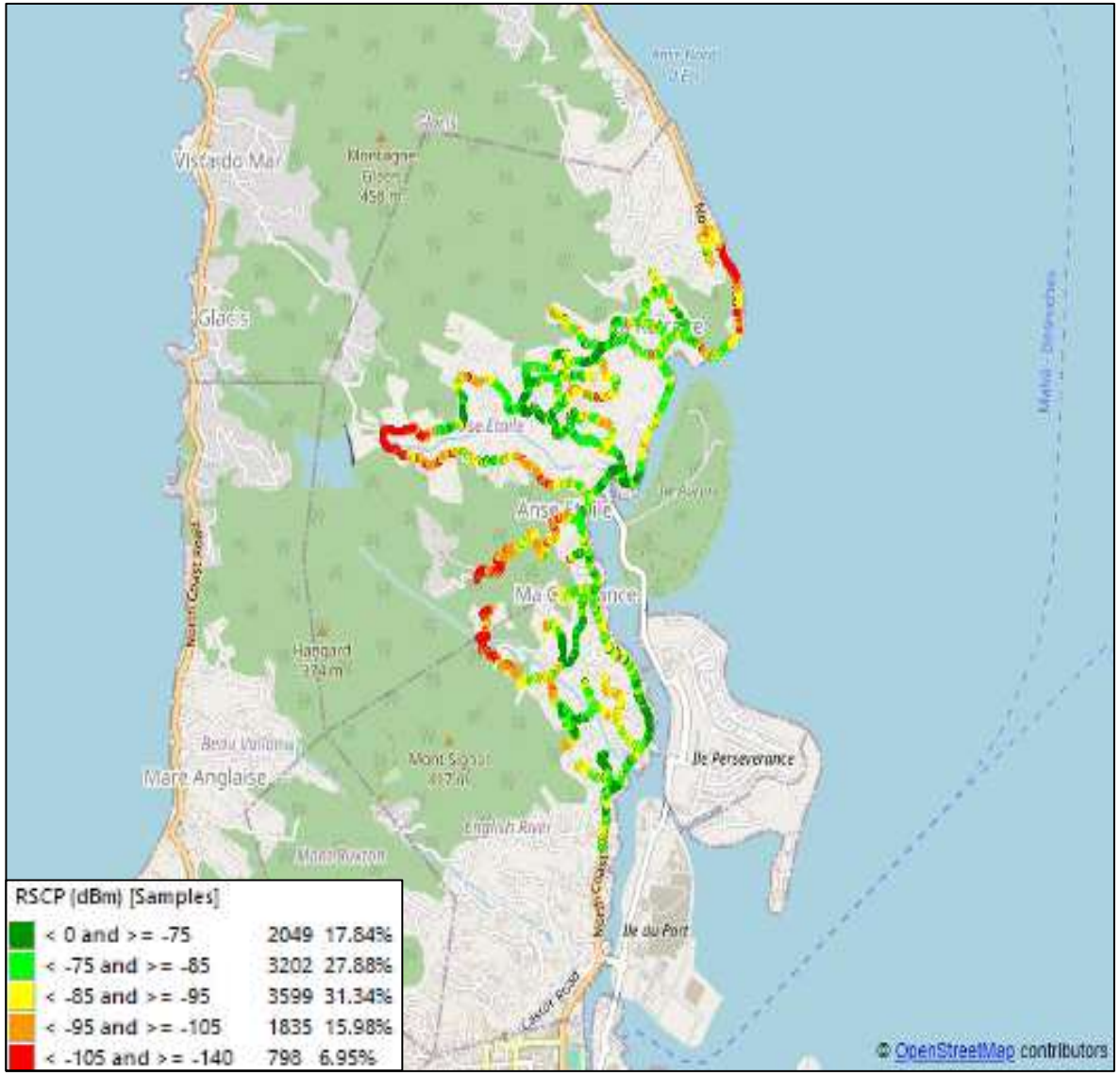


CWS Data 3G

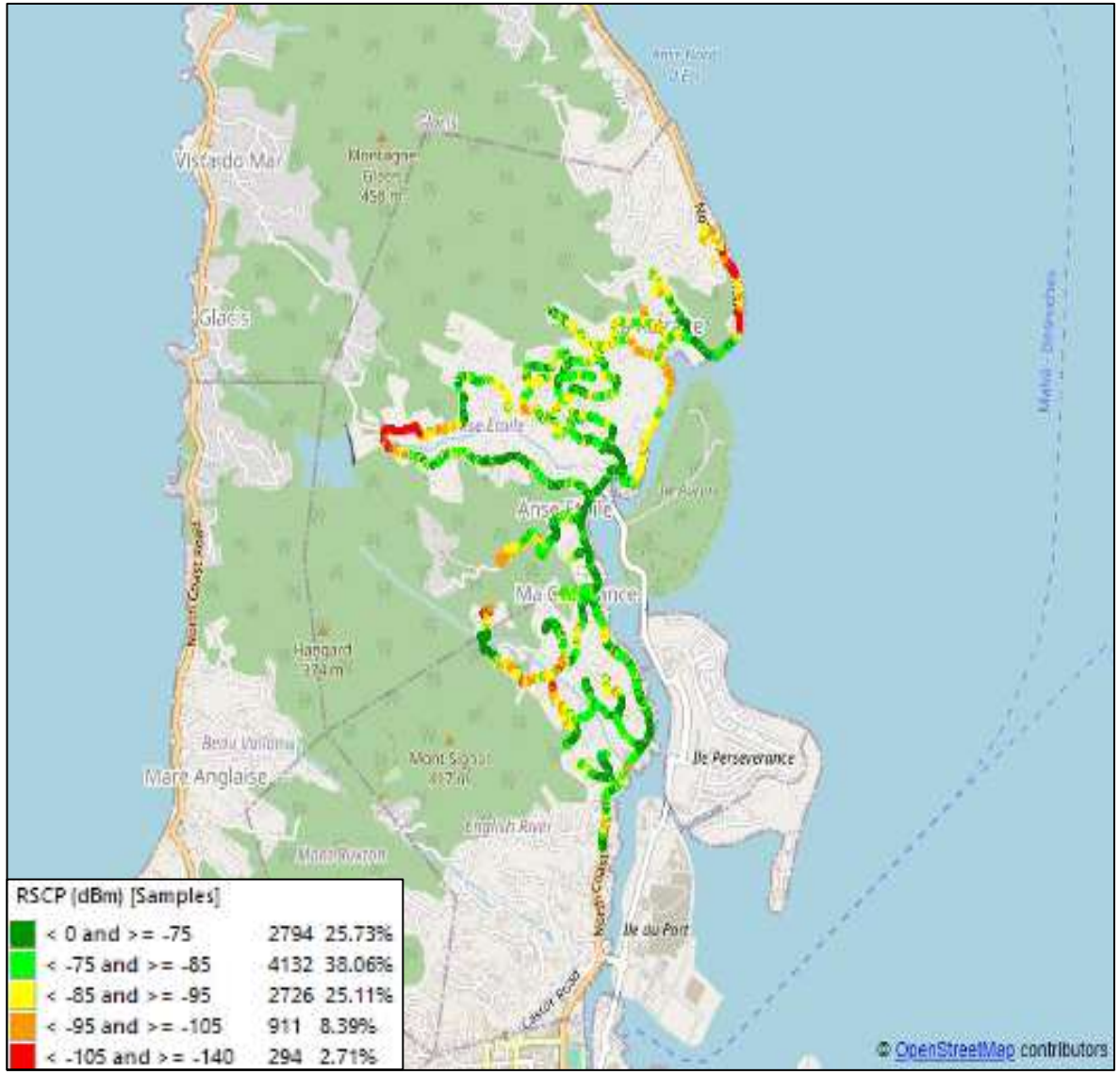


Phase-1 3G PREFERRED DATA TEST - RSCP PLOT

Airtel Data 3G

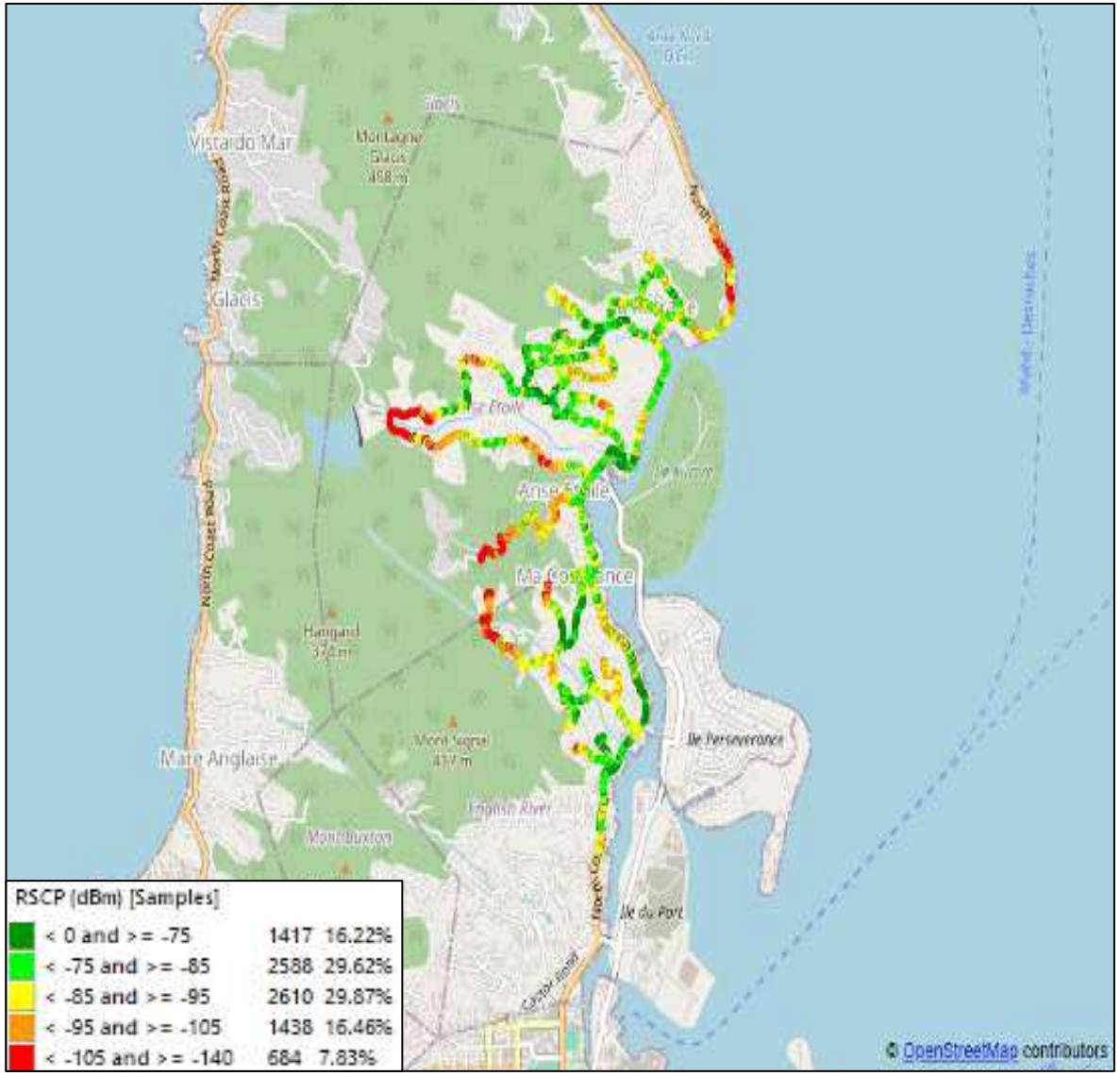


CWS Data 3G

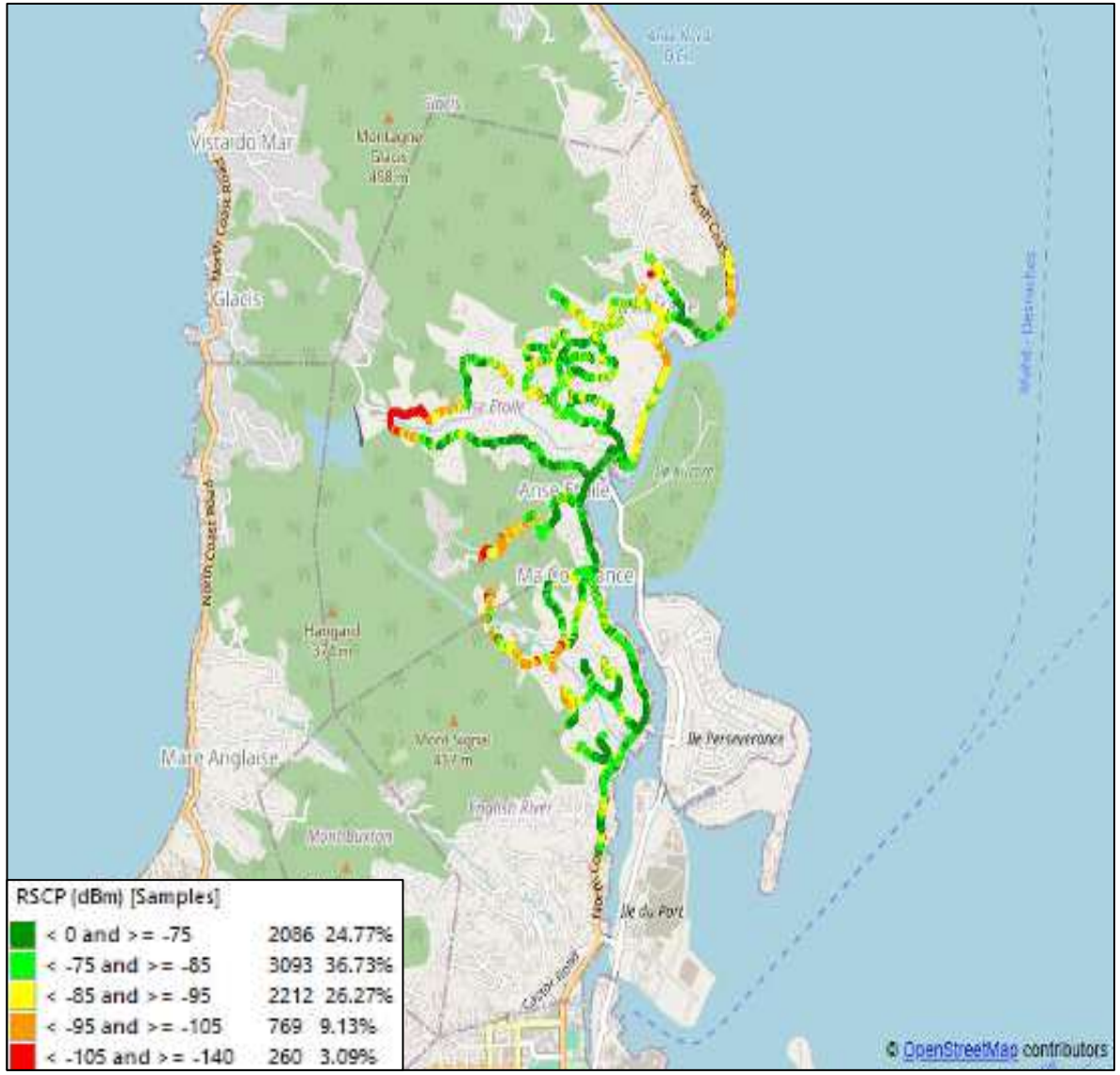


Phase-2 3G PREFERRED DATA TEST - RSCP PLOT

Airtel Data 3G

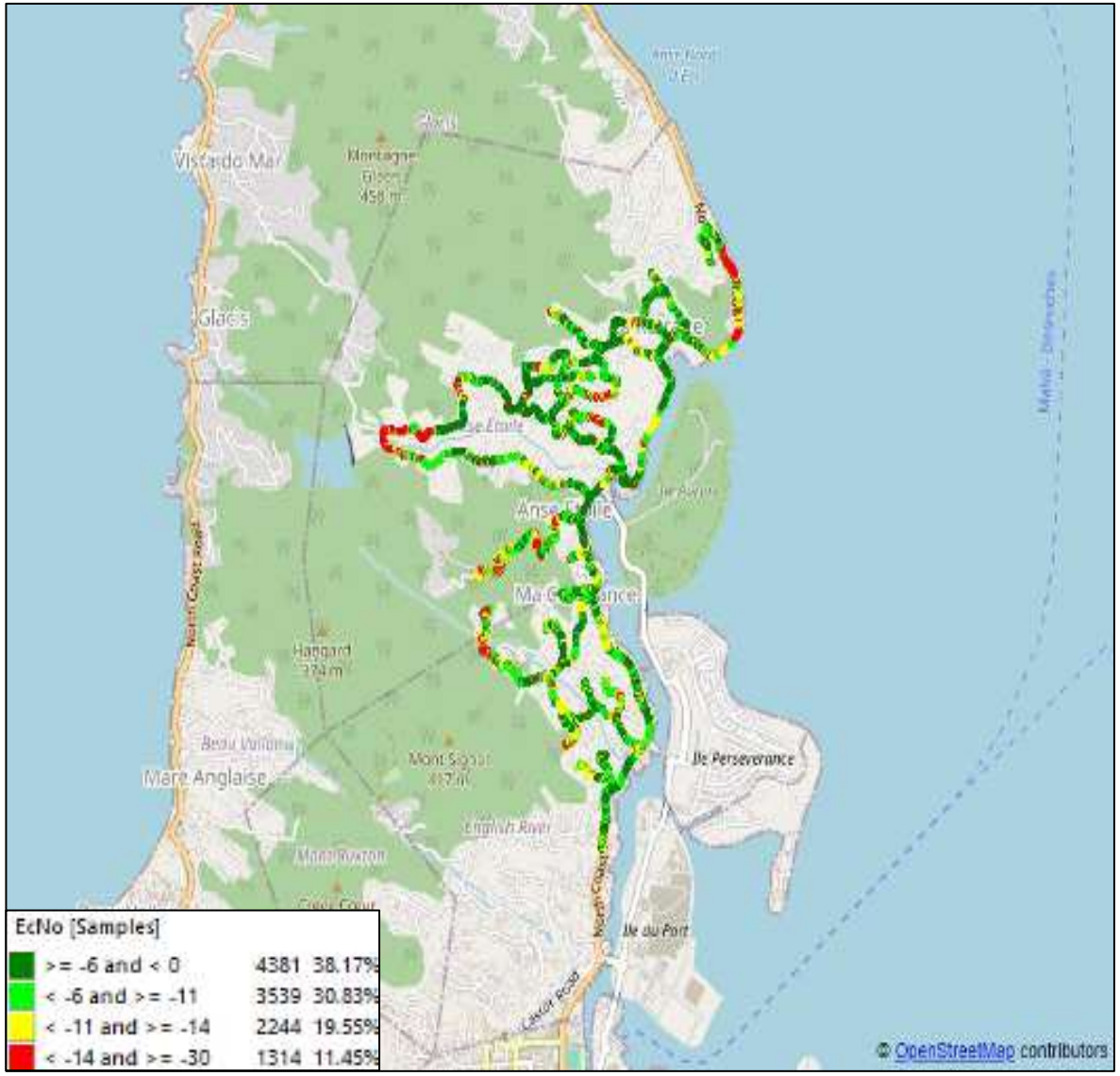


CWS Data 3G

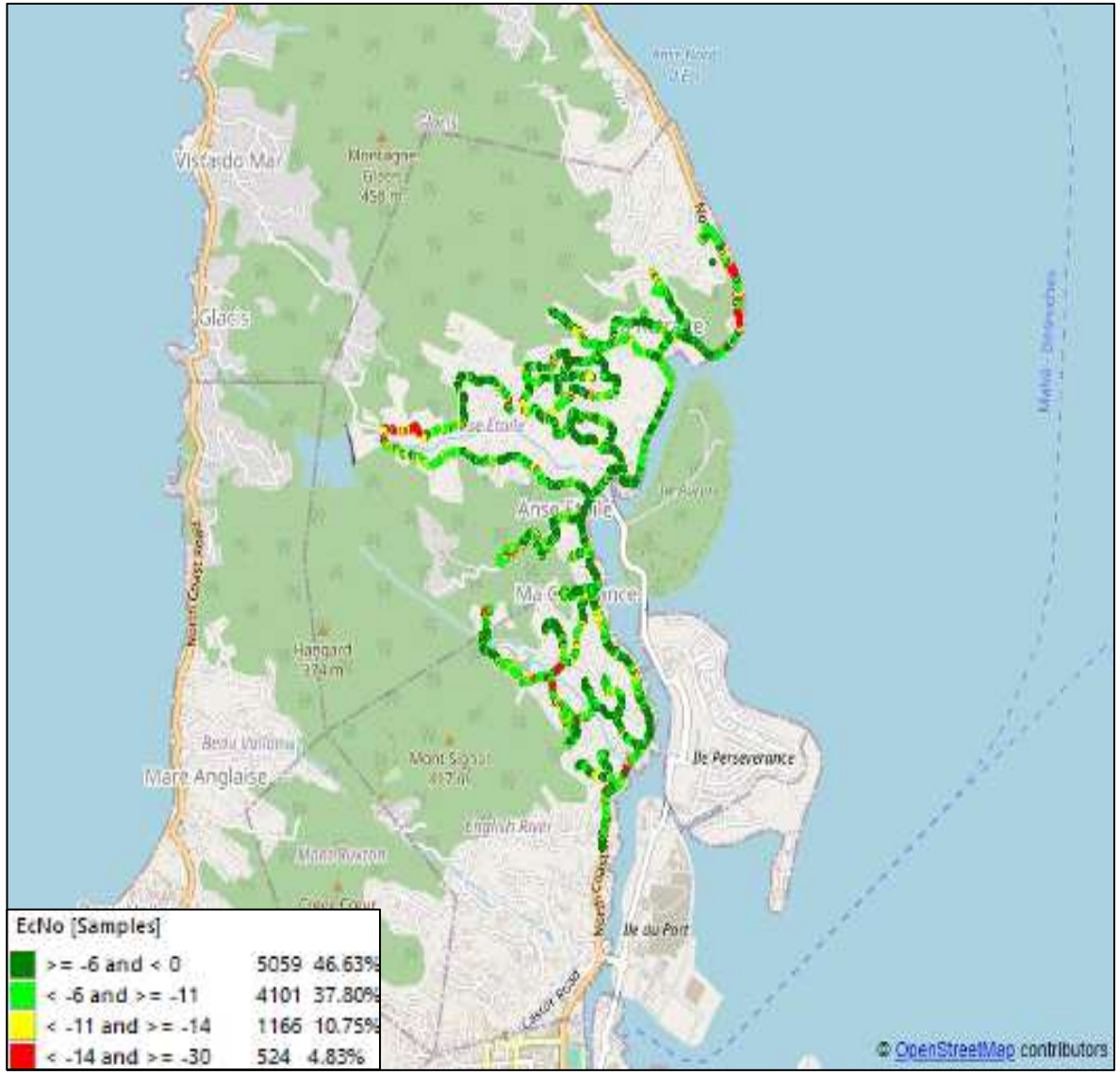


Phase-1 3G PREFERRED DATA TEST - EC/NO PLOT

Airtel Data 3G

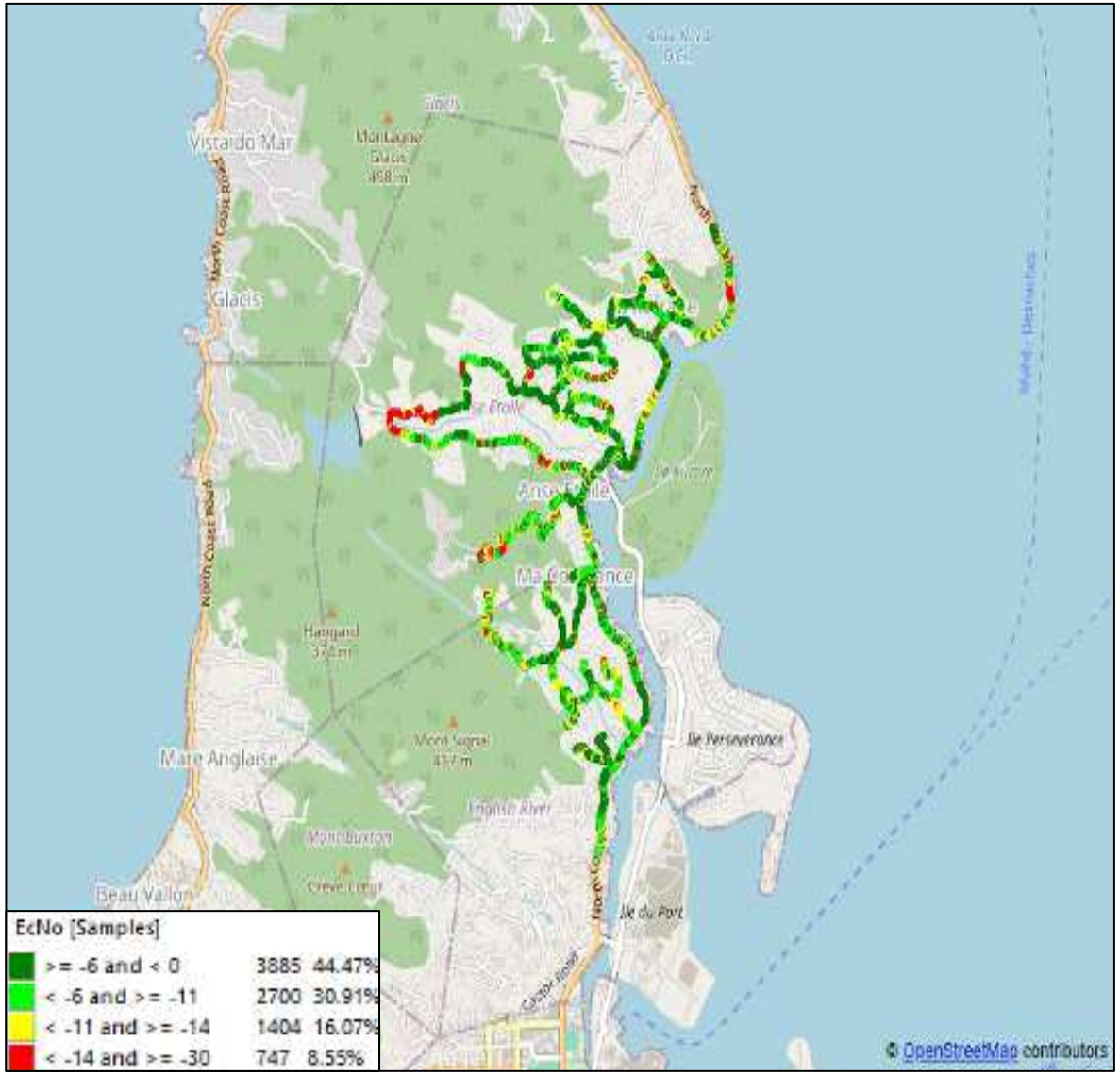


CWS Data 3G

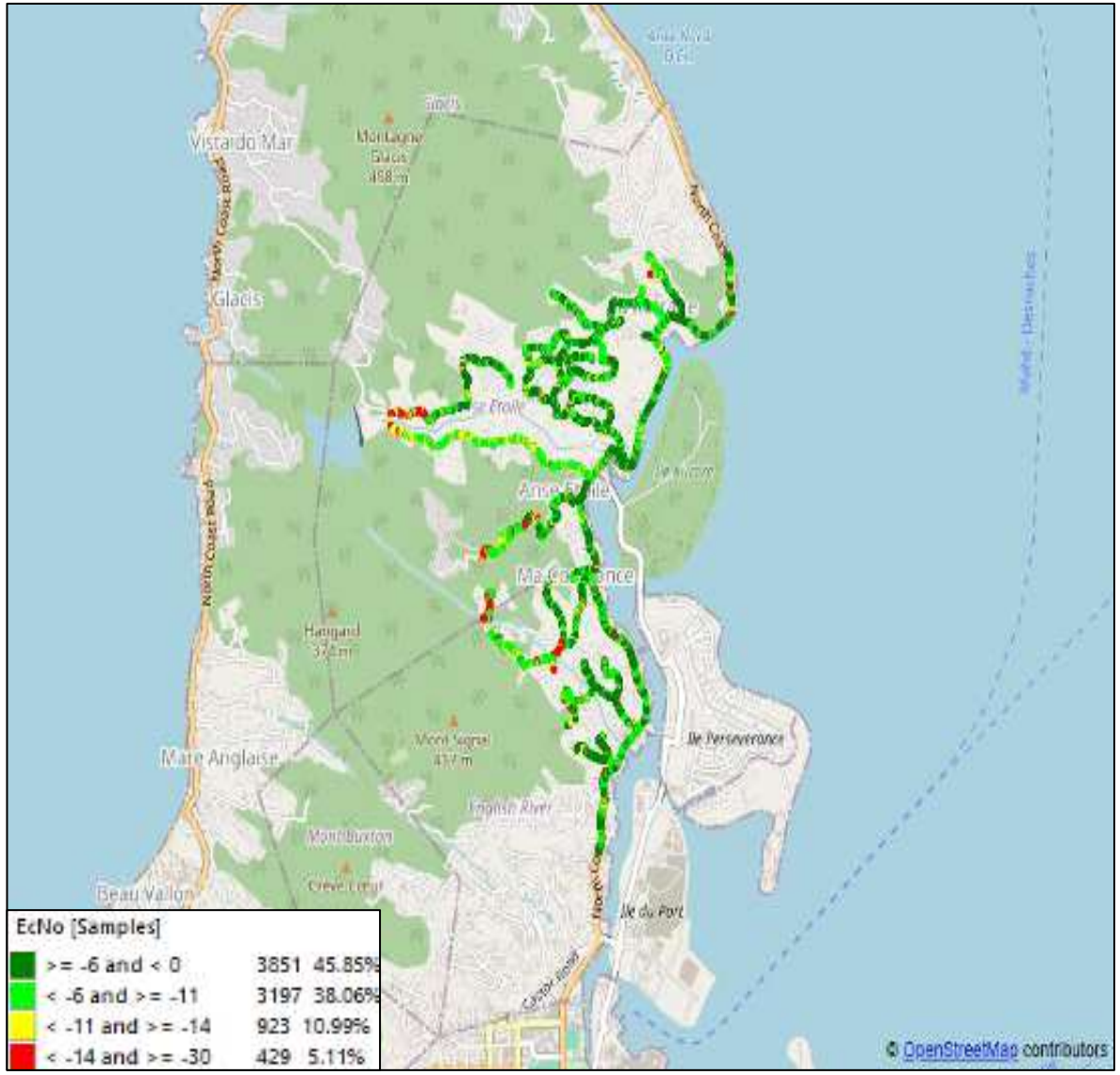


Phase-2 3G PREFERRED DATA TEST - EC/NO PLOT

Airtel Data 3G

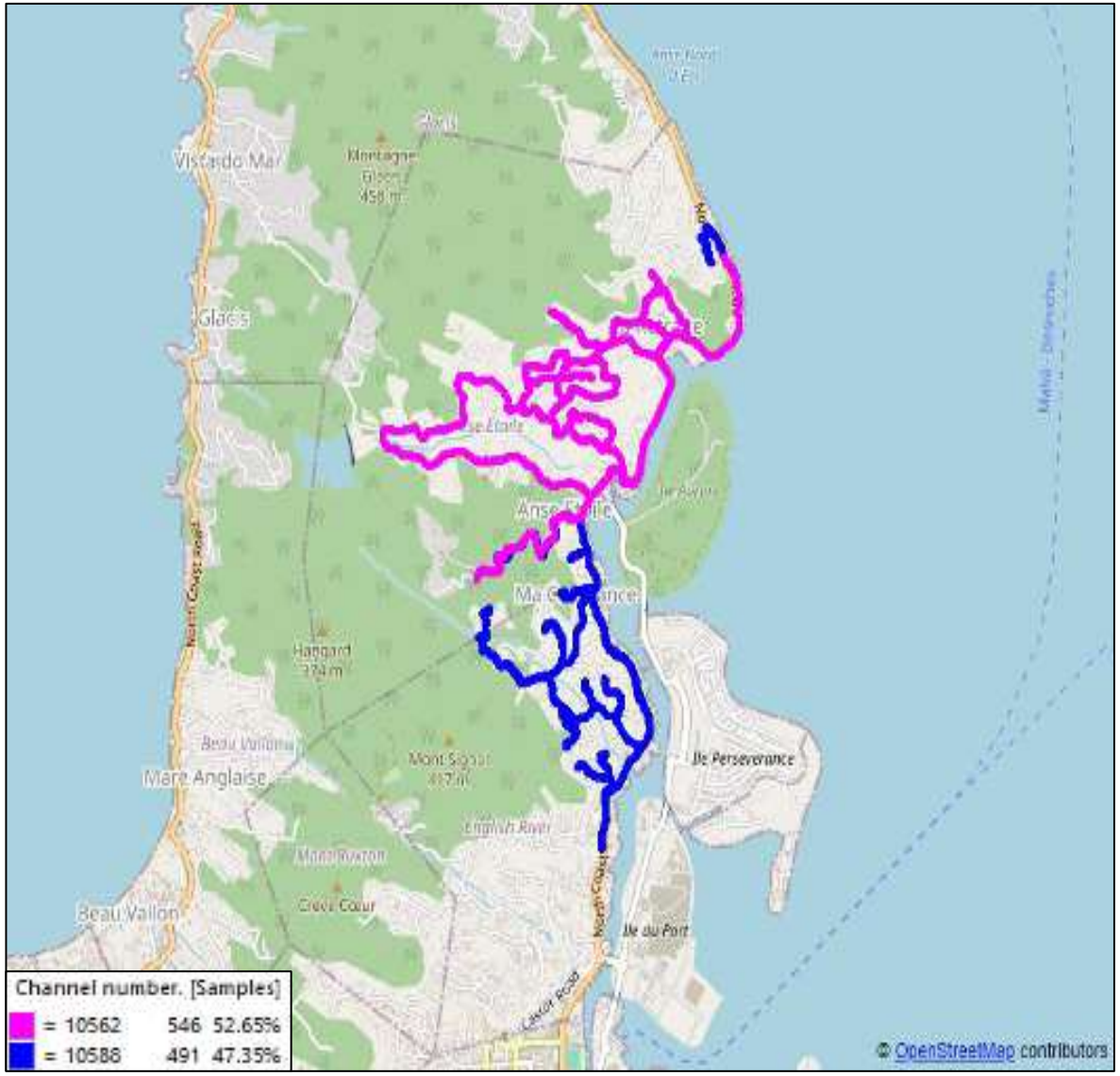


CWS Data 3G

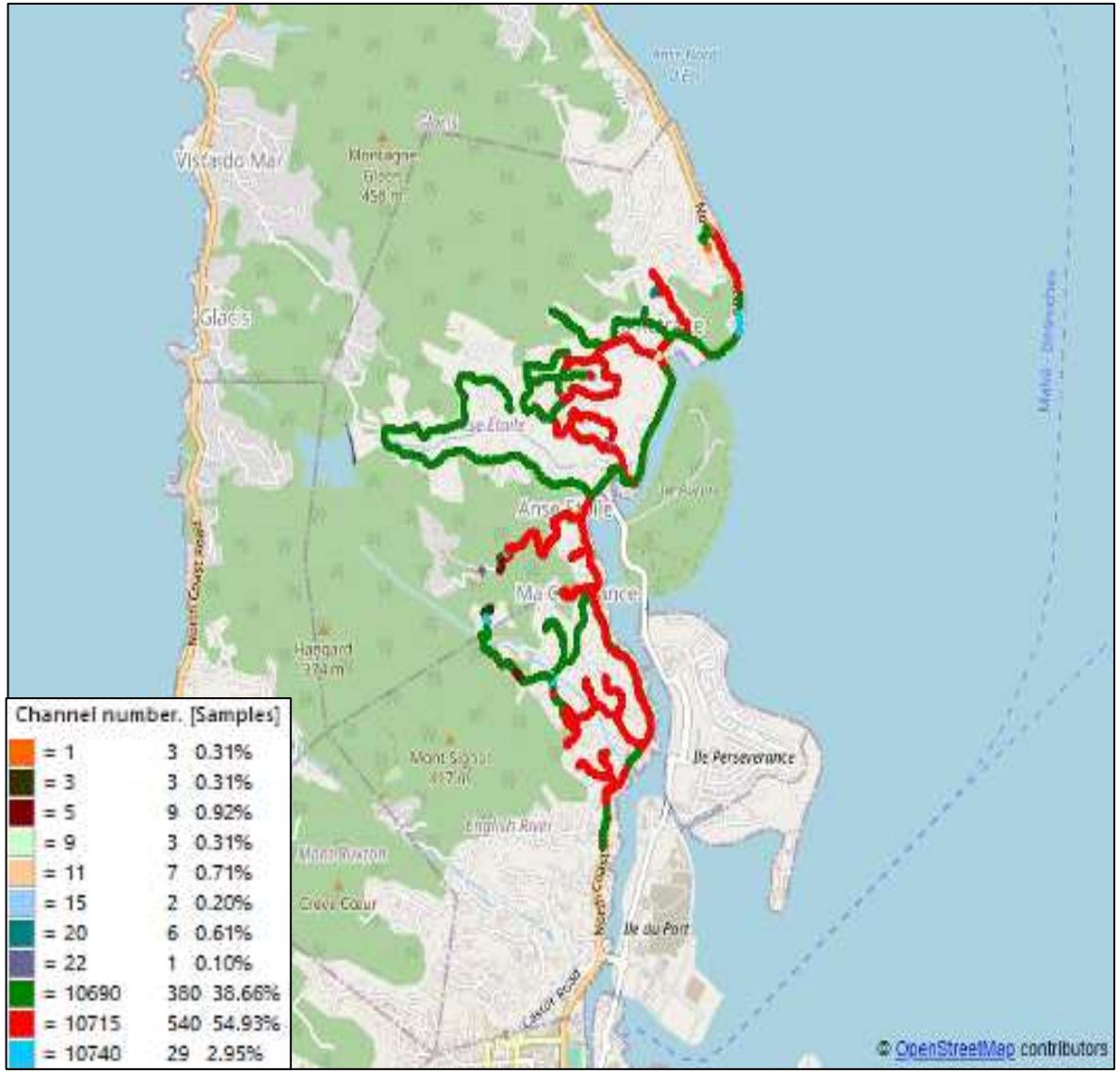


Phase-1 3G PREFERRED DATA TEST - UARFCN PLOT

Airtel Data 3G

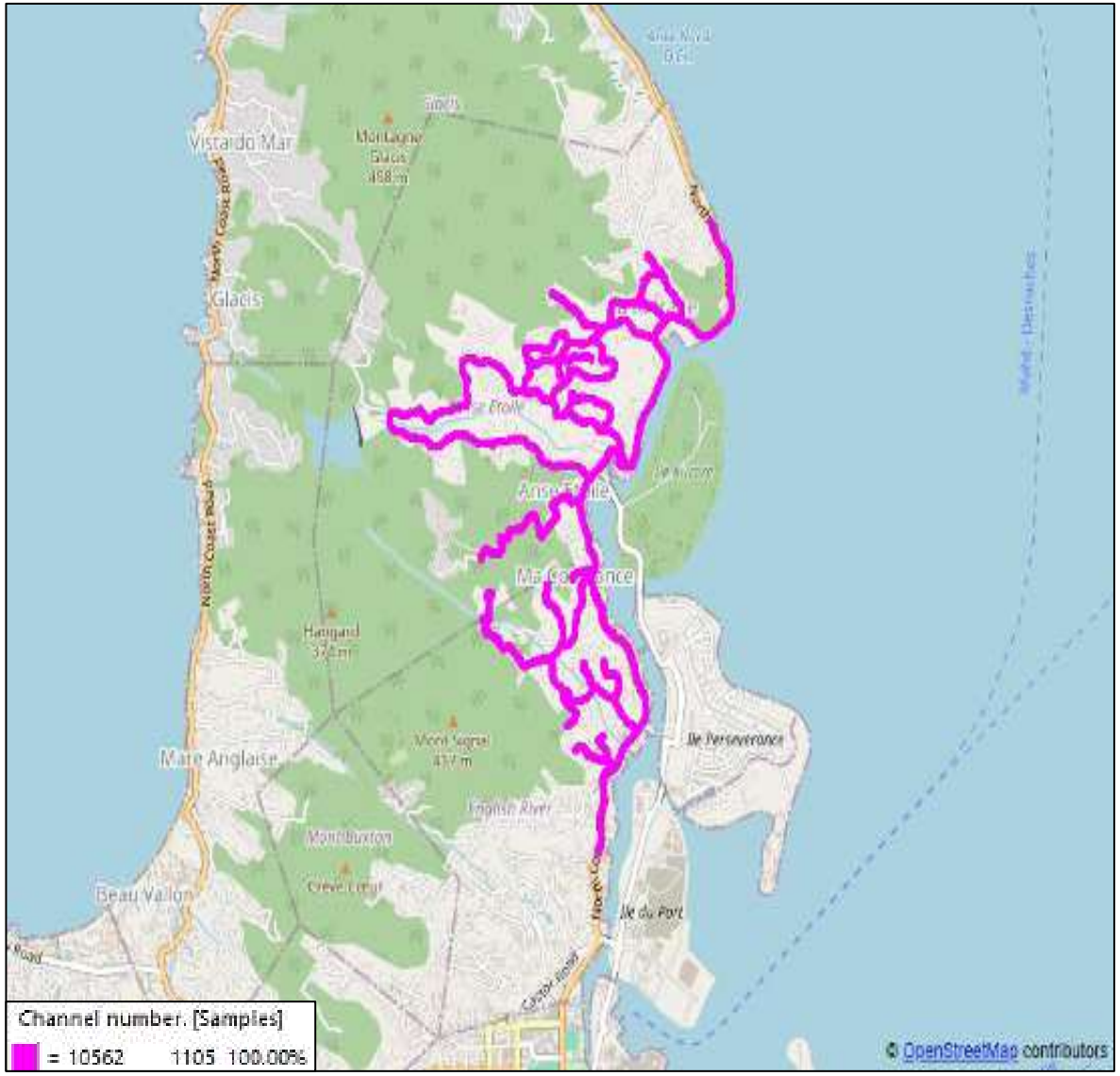


CWS Data 3G

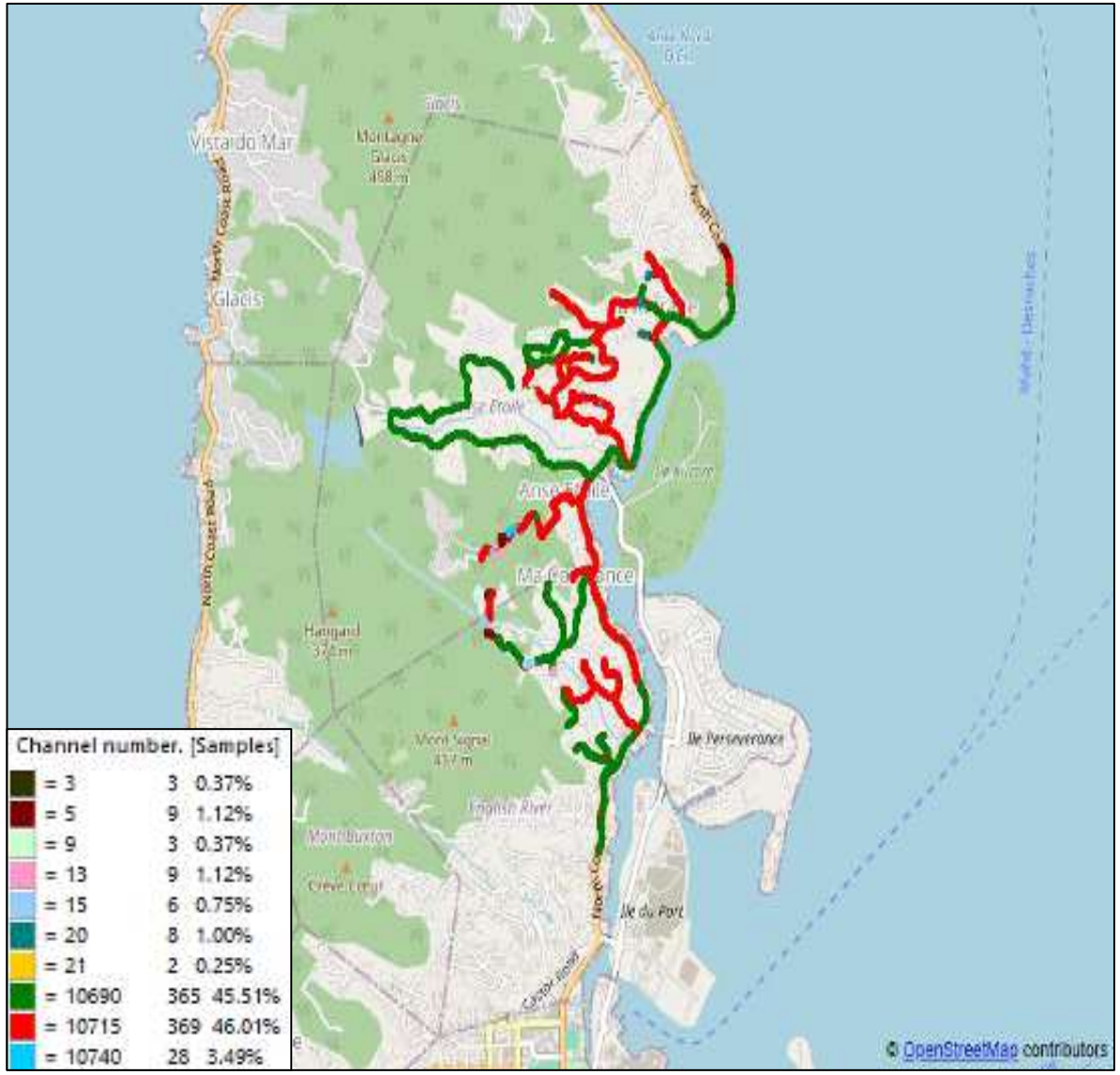


Phase-2 3G PREFERRED DATA TEST - UARFCN PLOT

Airtel Data 3G



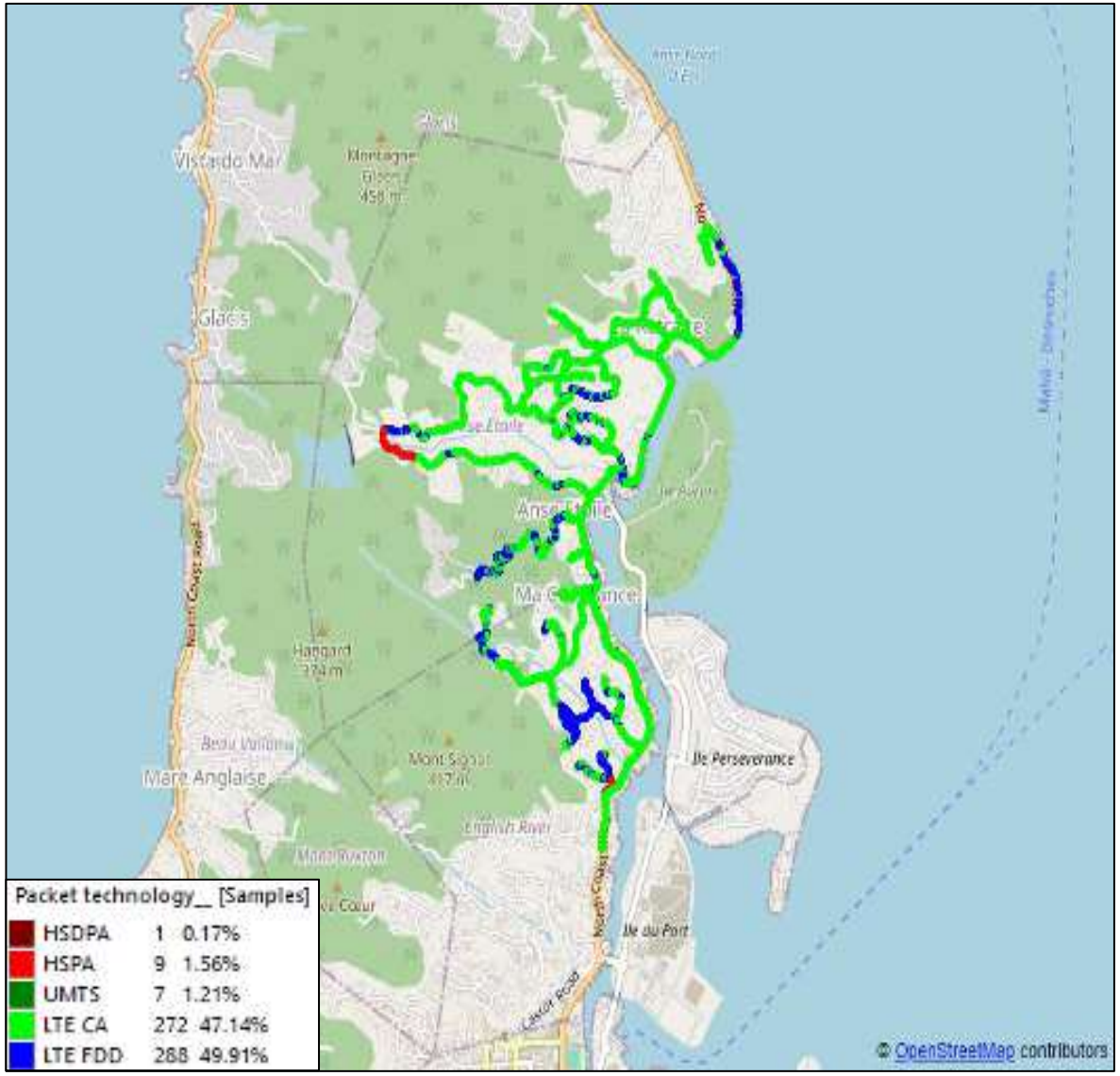
CWS Data 3G



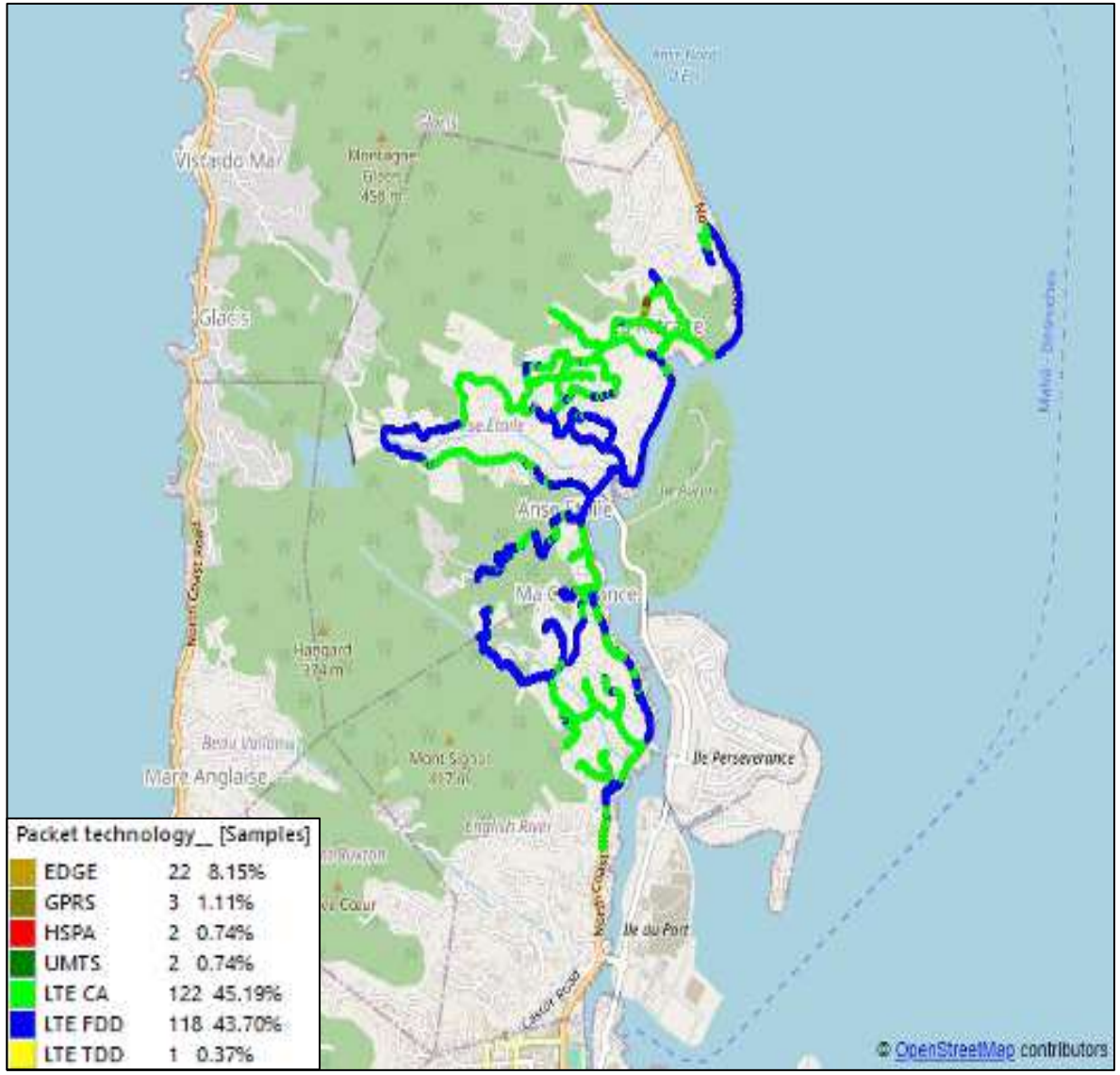
4G PREFERRED
DATA DRIVE PLOTS

Phase-1 4G PREFERRED DATA TEST - TECHNOLOGY PLOT

Airtel Data 4G

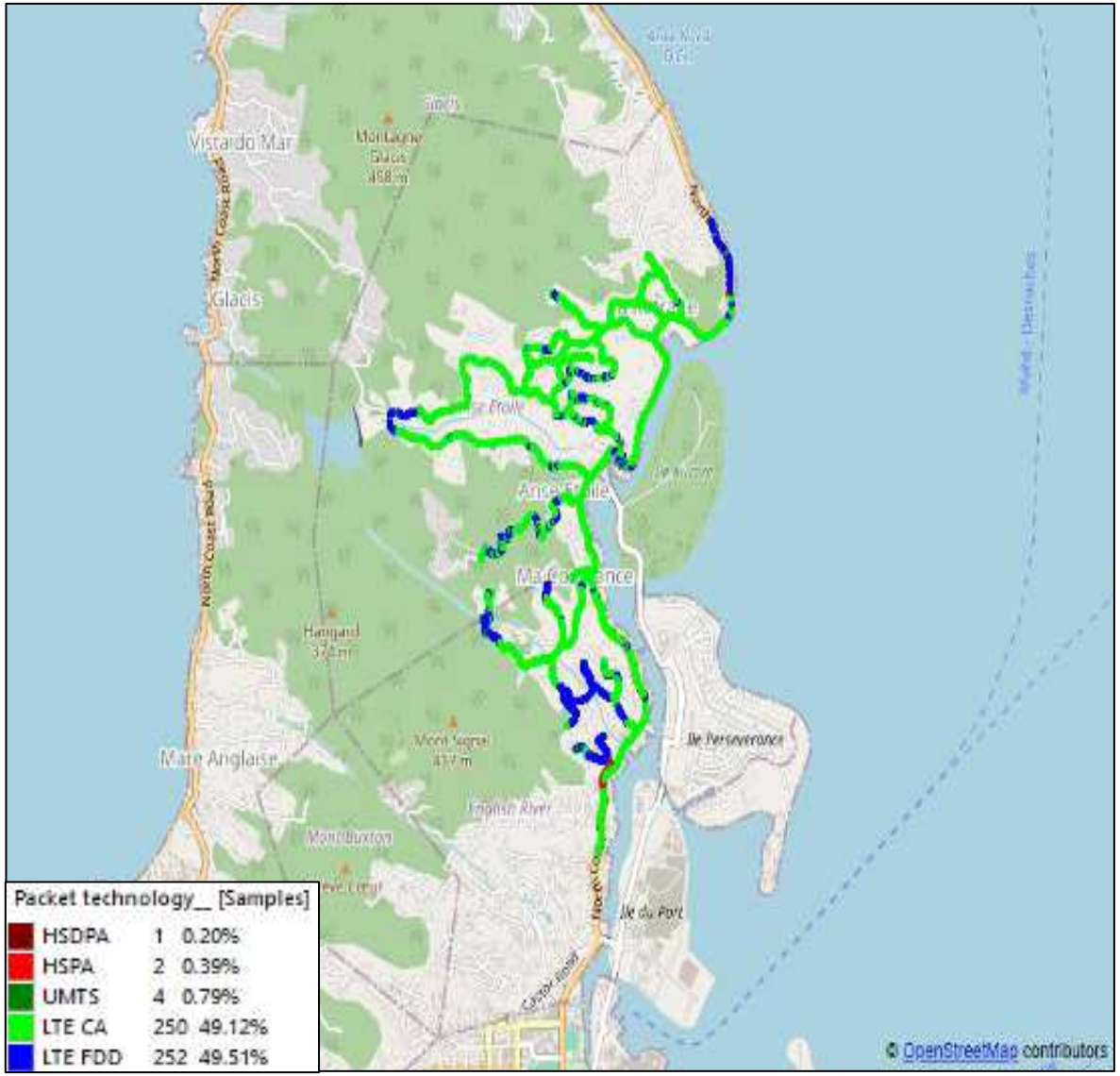


CWS Data 4G

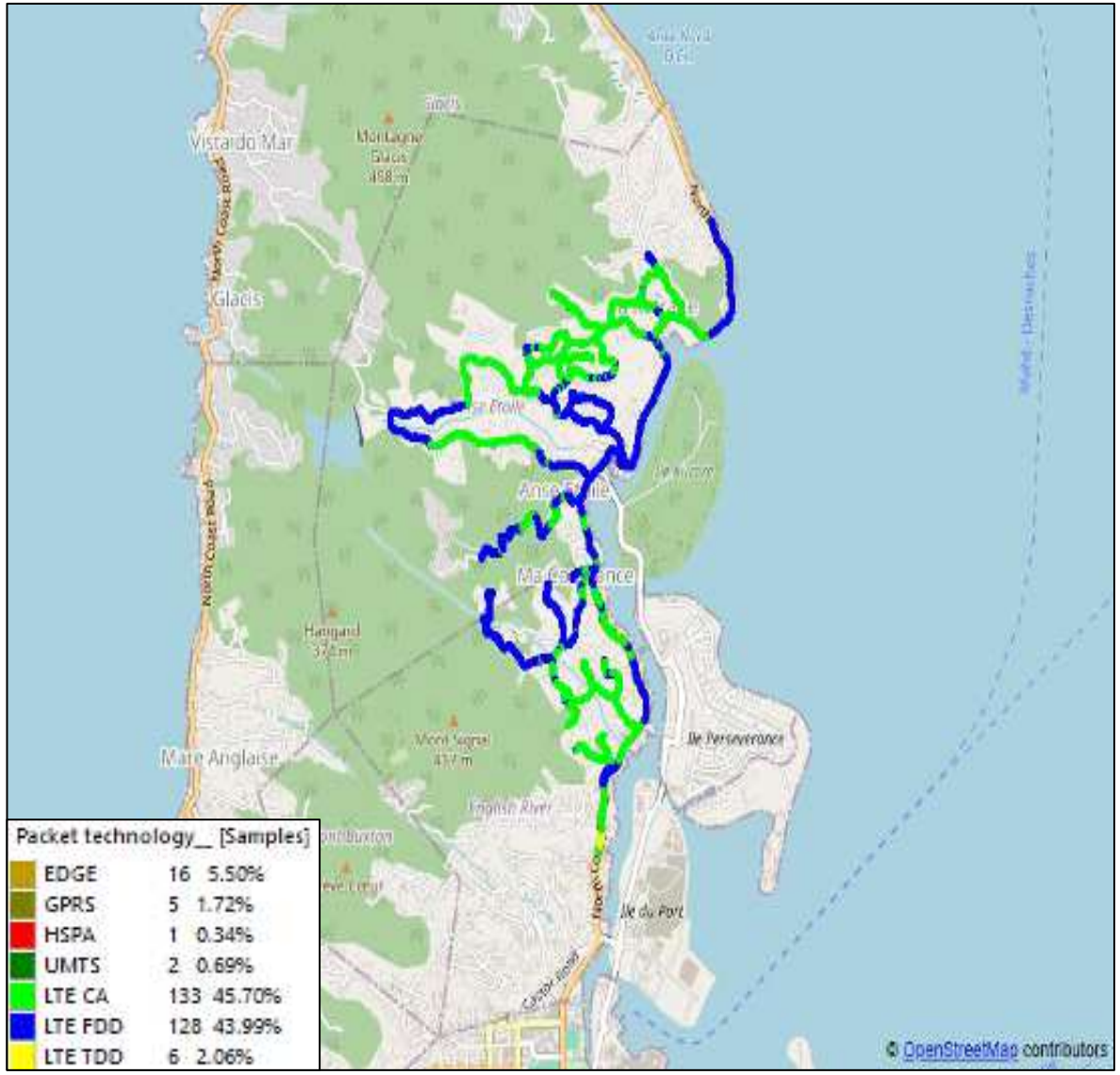


Phase-2 4G PREFERRED DATA TEST - TECHNOLOGY PLOT

Airtel Data 4G

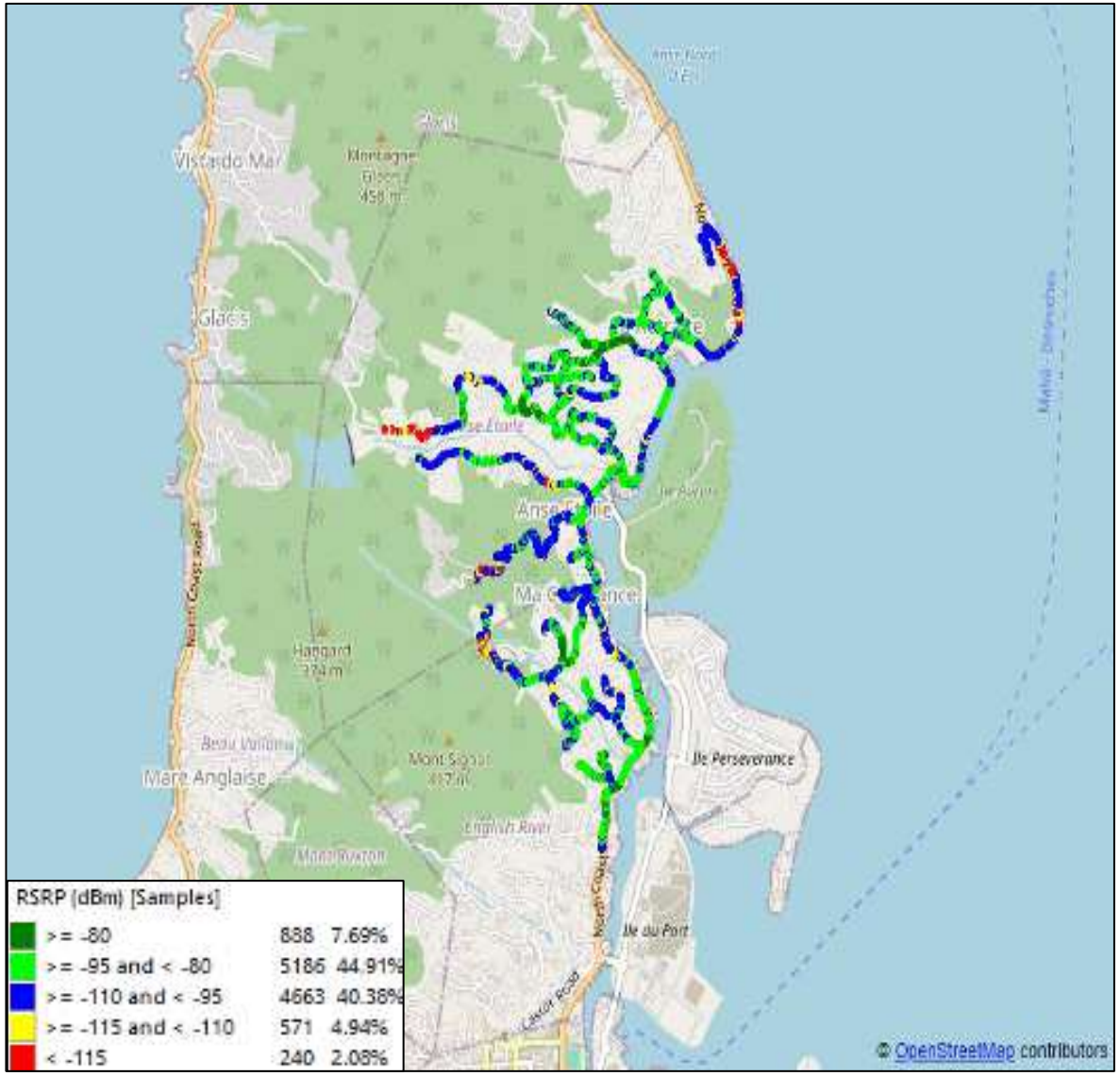


CWS Data 4G

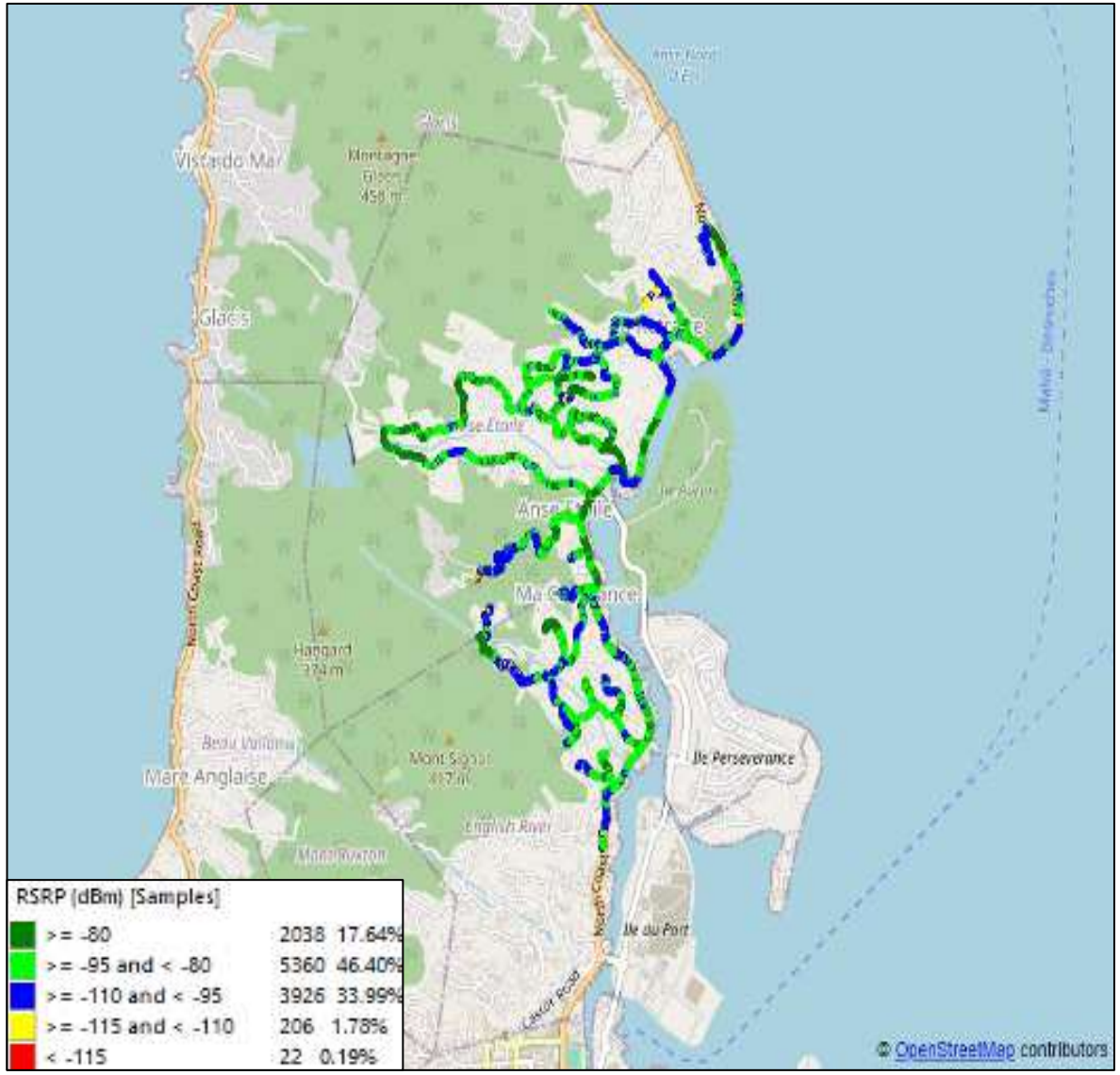


Phase-1 4G PREFERRED DATA TEST - RSRP PLOT

Airtel Data 4G

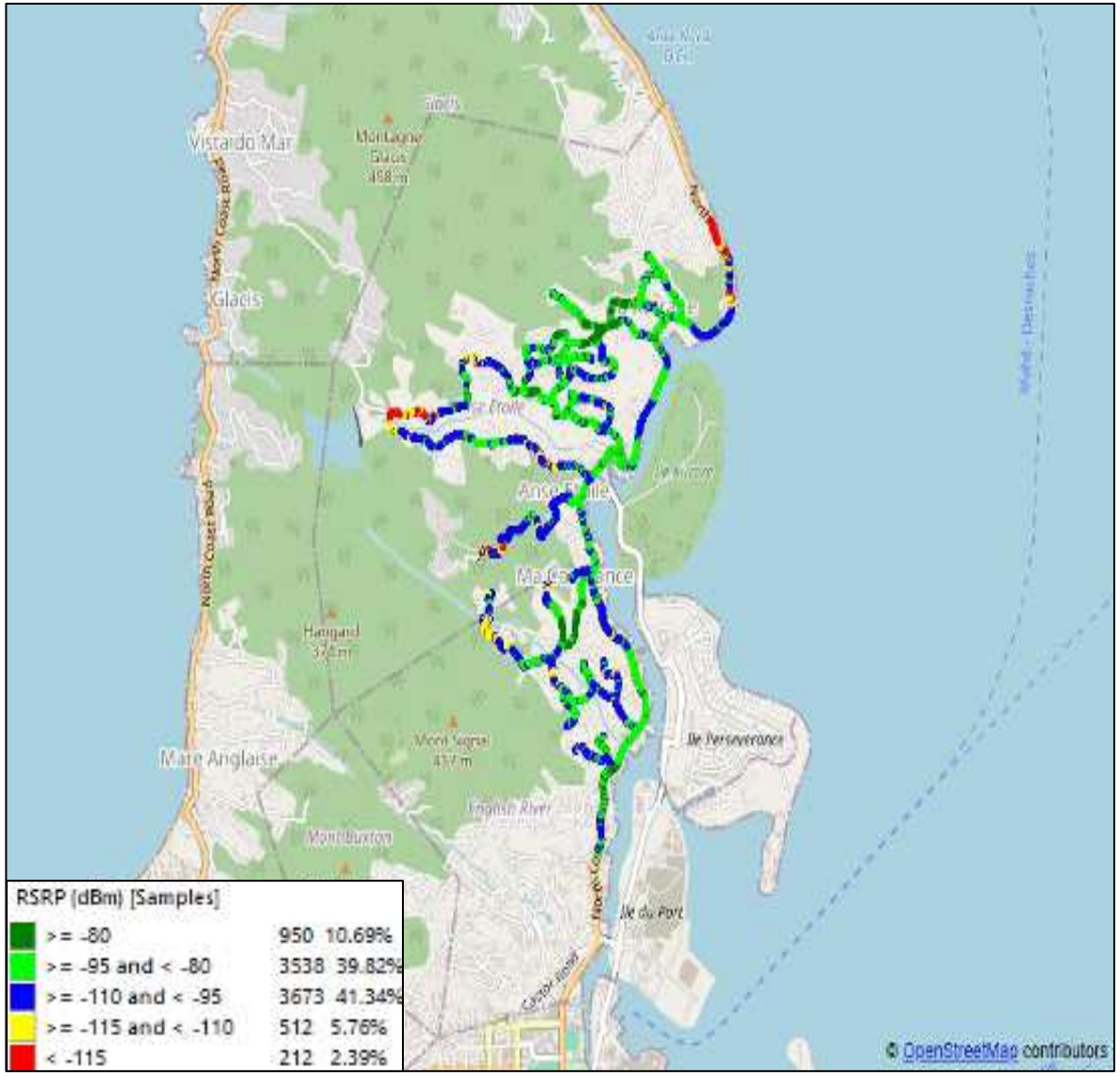


CWS Data 4G



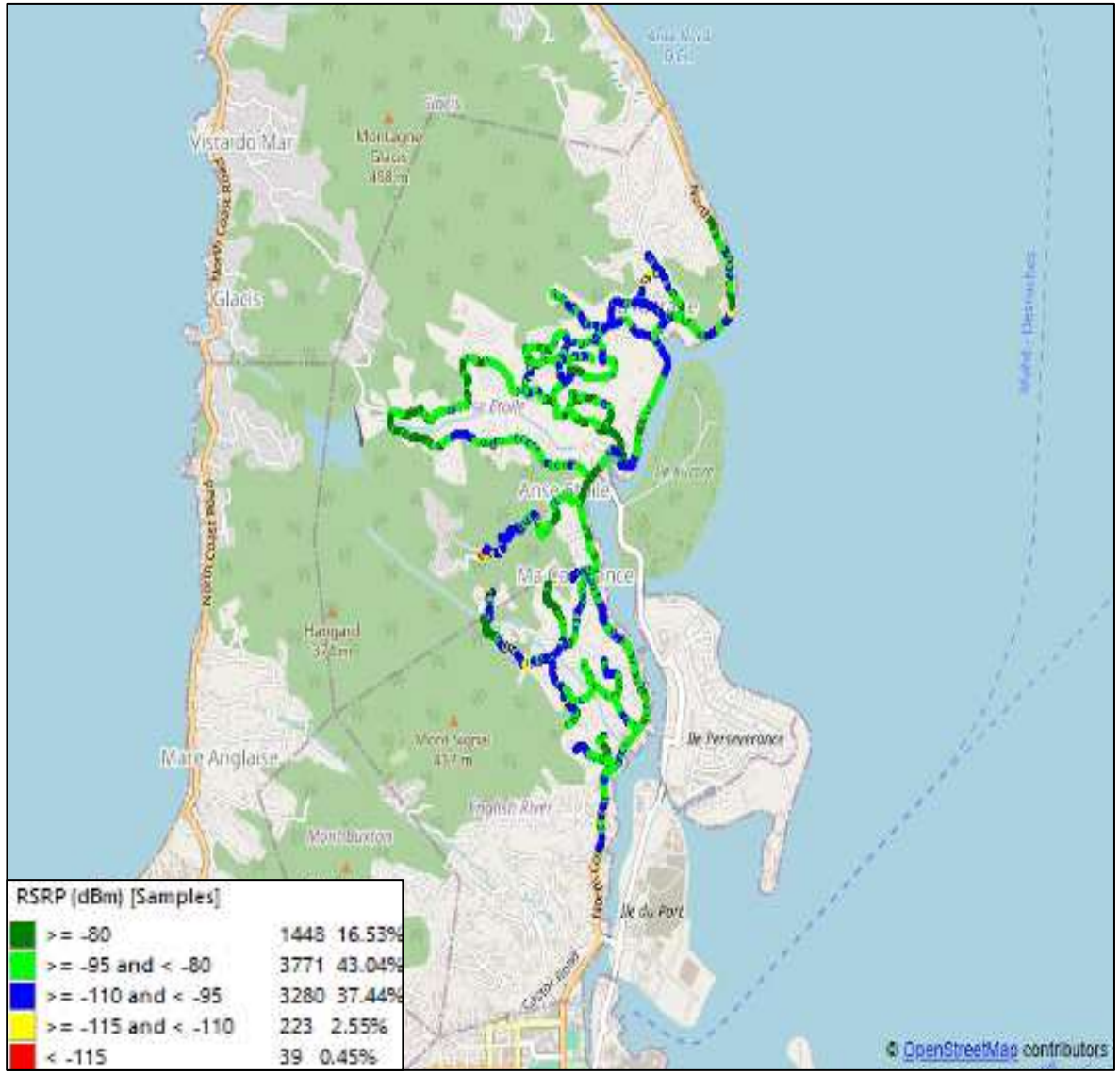
Phase-2 4G PREFERRED DATA TEST - RSRP PLOT

Airtel Data 4G



RSRP (dBm) [Samples]		
>= -80	950	10.69%
>= -95 and < -80	3538	39.82%
>= -110 and < -95	3673	41.34%
>= -115 and < -110	512	5.76%
< -115	212	2.39%

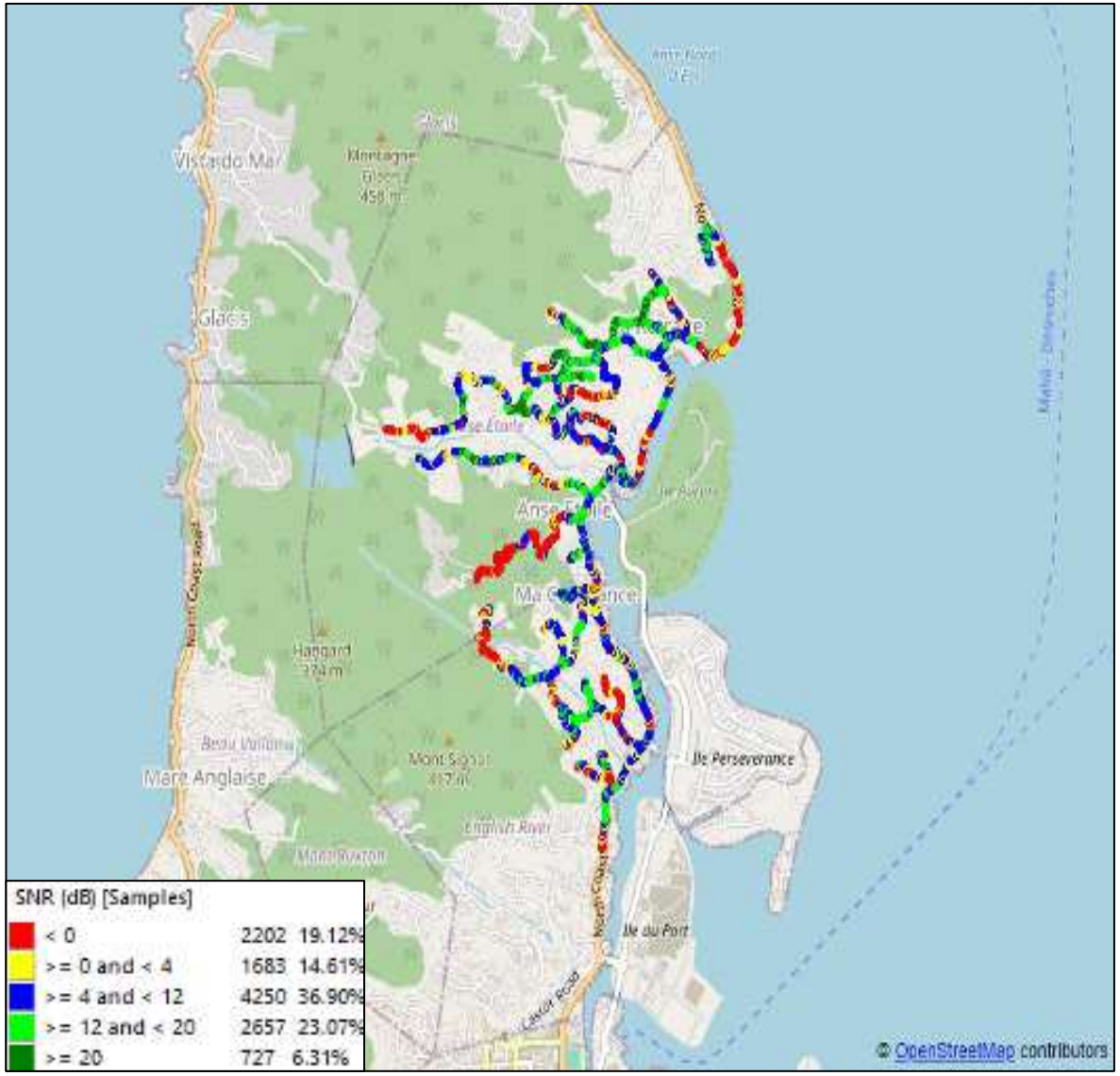
CWS Data 4G



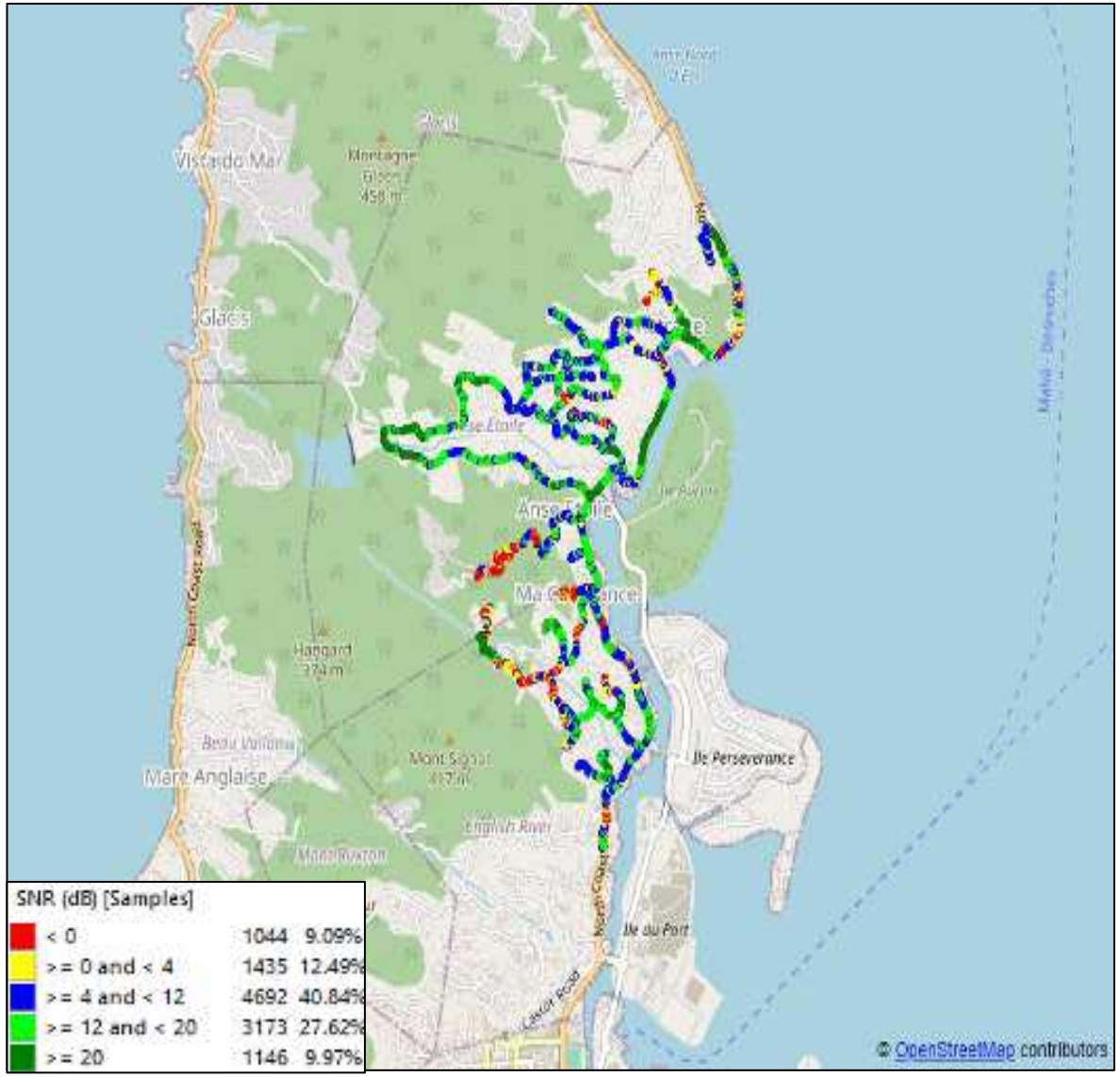
RSRP (dBm) [Samples]		
>= -80	1448	16.53%
>= -95 and < -80	3771	43.04%
>= -110 and < -95	3280	37.44%
>= -115 and < -110	223	2.55%
< -115	39	0.45%

Phase-1 4G PREFERRED DATA TEST - SINR PLOT

Airtel Data 4G

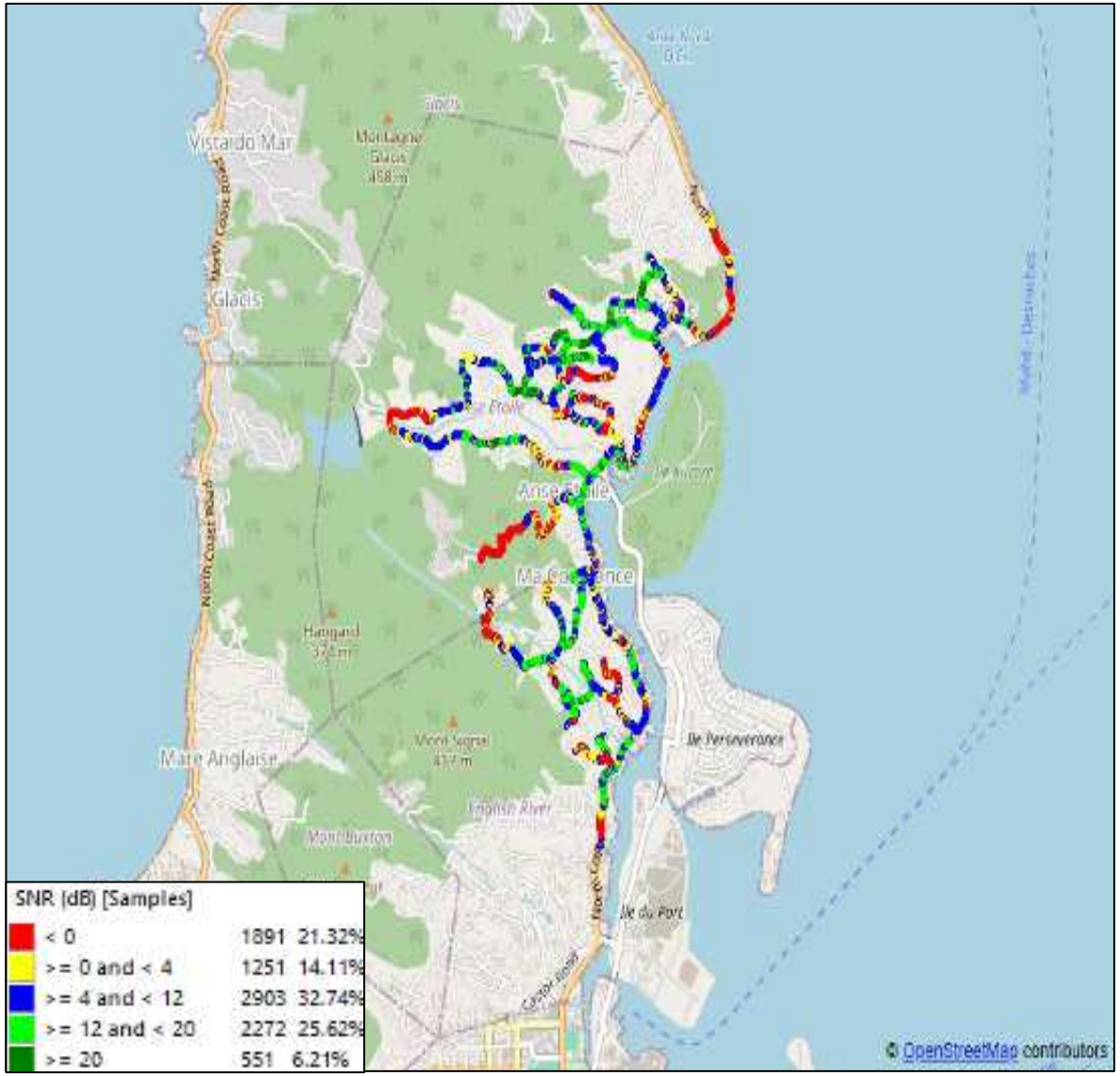


CWS Data 4G

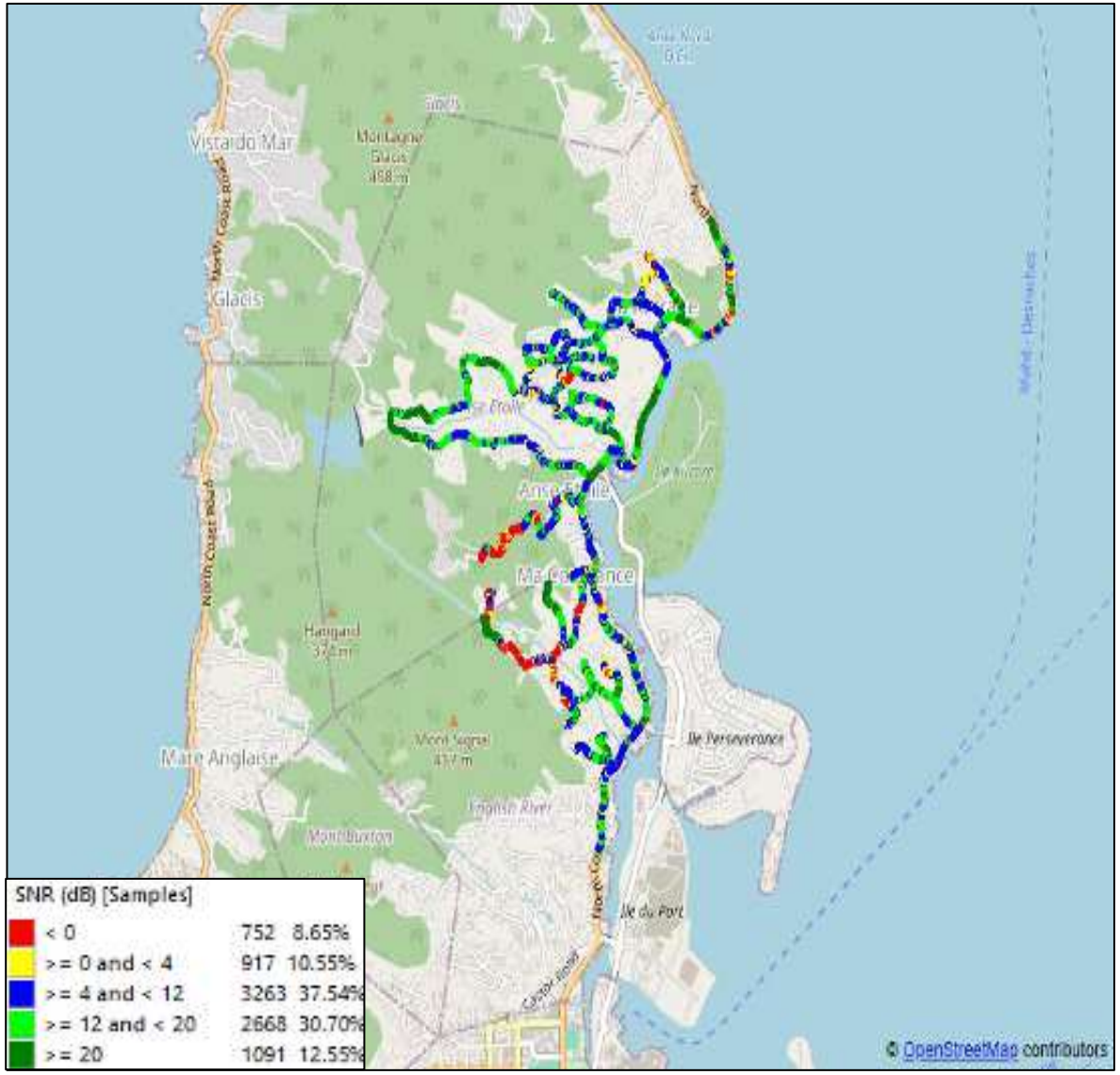


Phase-2 4G PREFERRED DATA TEST - SINR PLOT

Airtel Data 4G

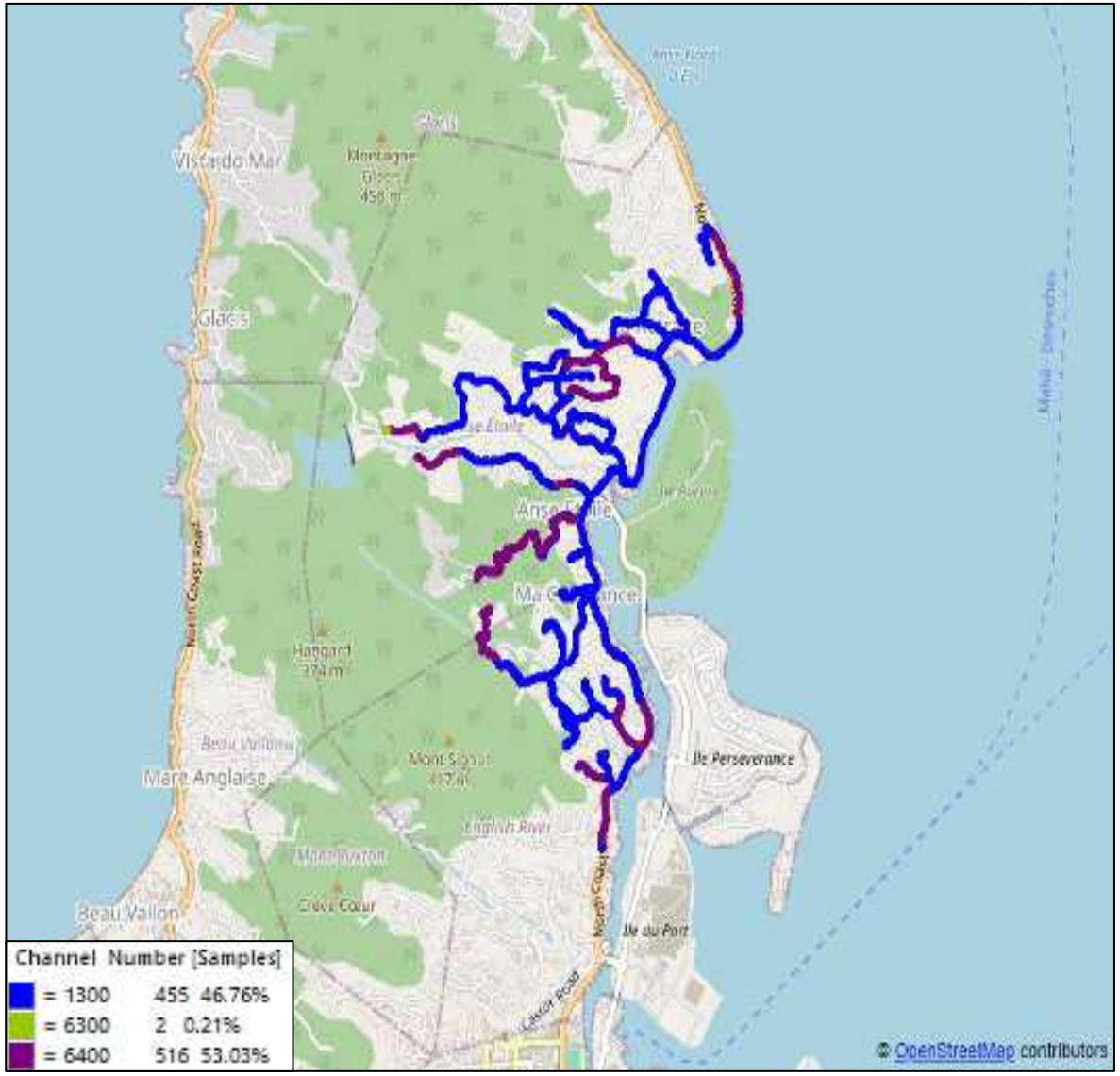


CWS Data 4G

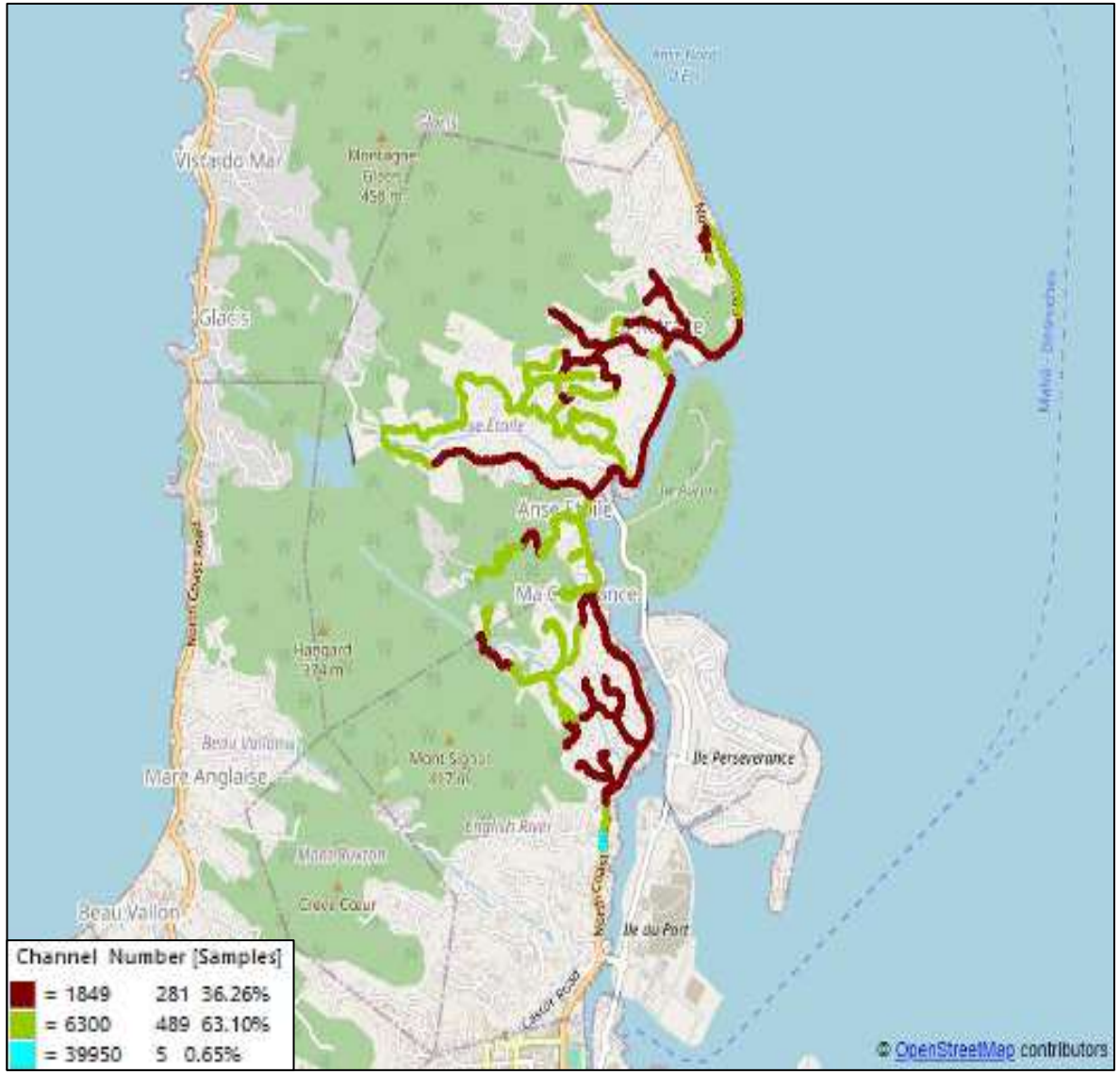


Phase-1 4G PREFERRED DATA TEST - FREQUENCY BAND PLOT

Airtel Data 4G

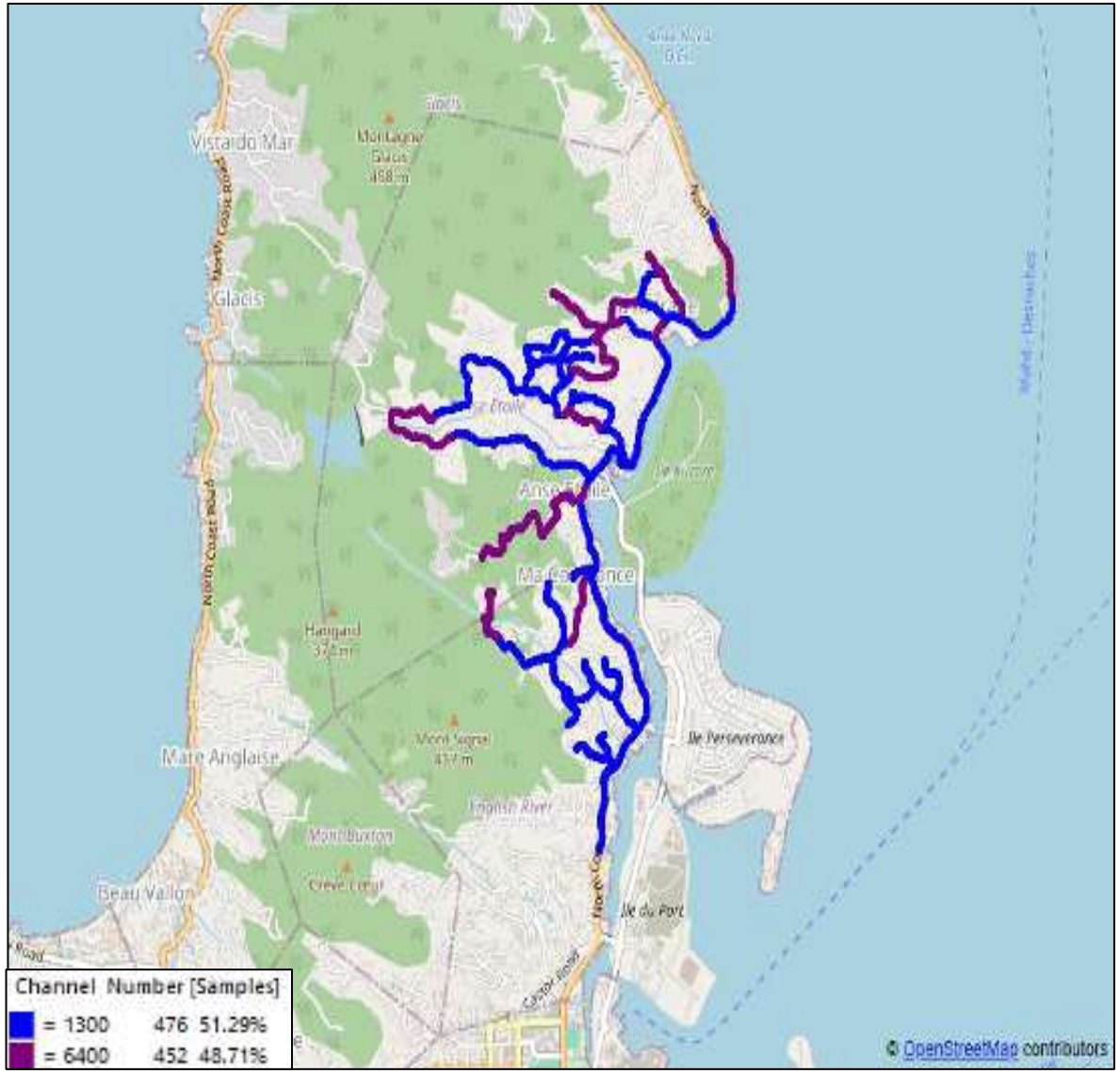


CWS Data 4G

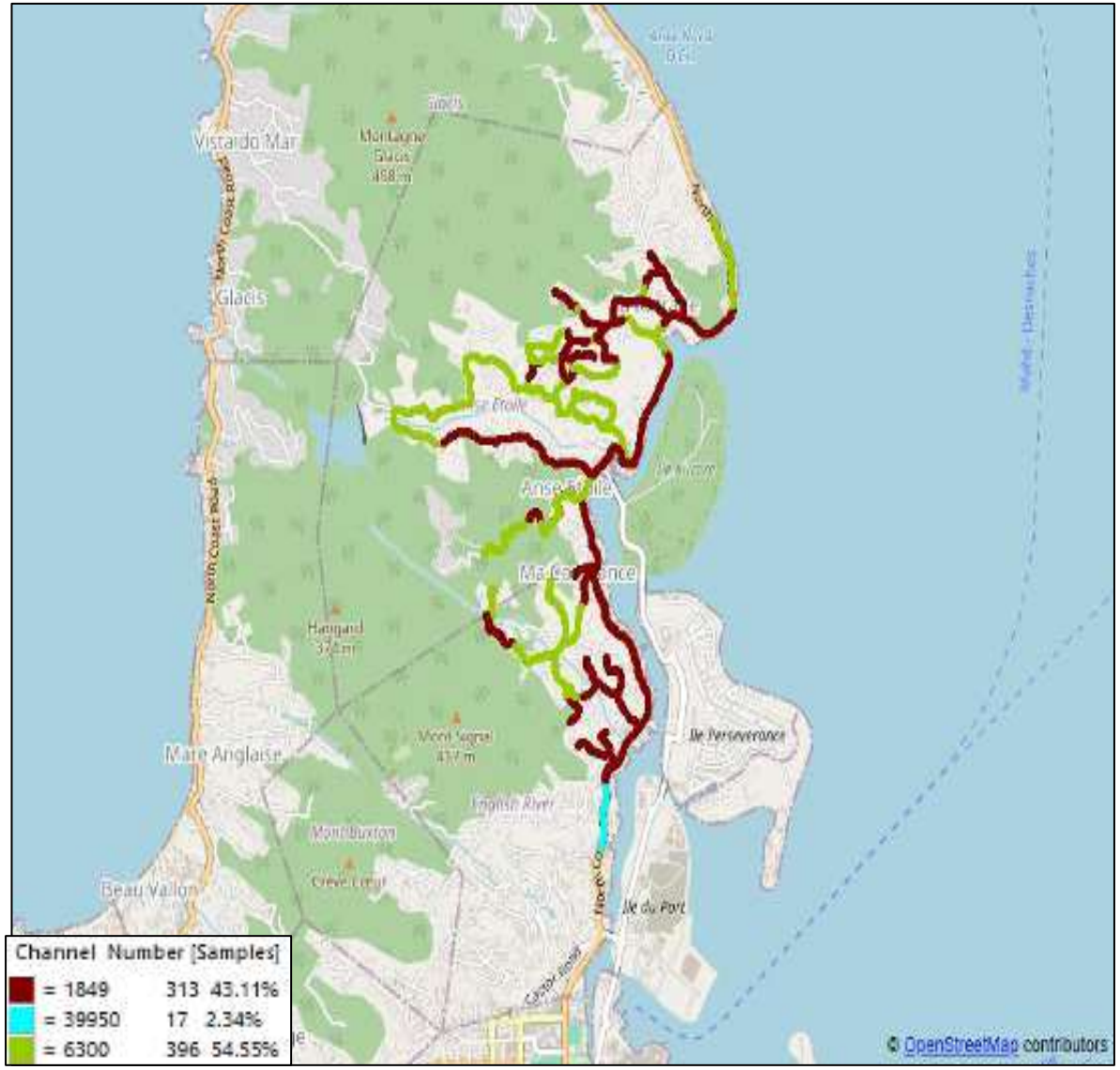


Phase-2 4G PREFERRED DATA TEST - FREQUENCY BAND PLOT

Airtel Data 4G

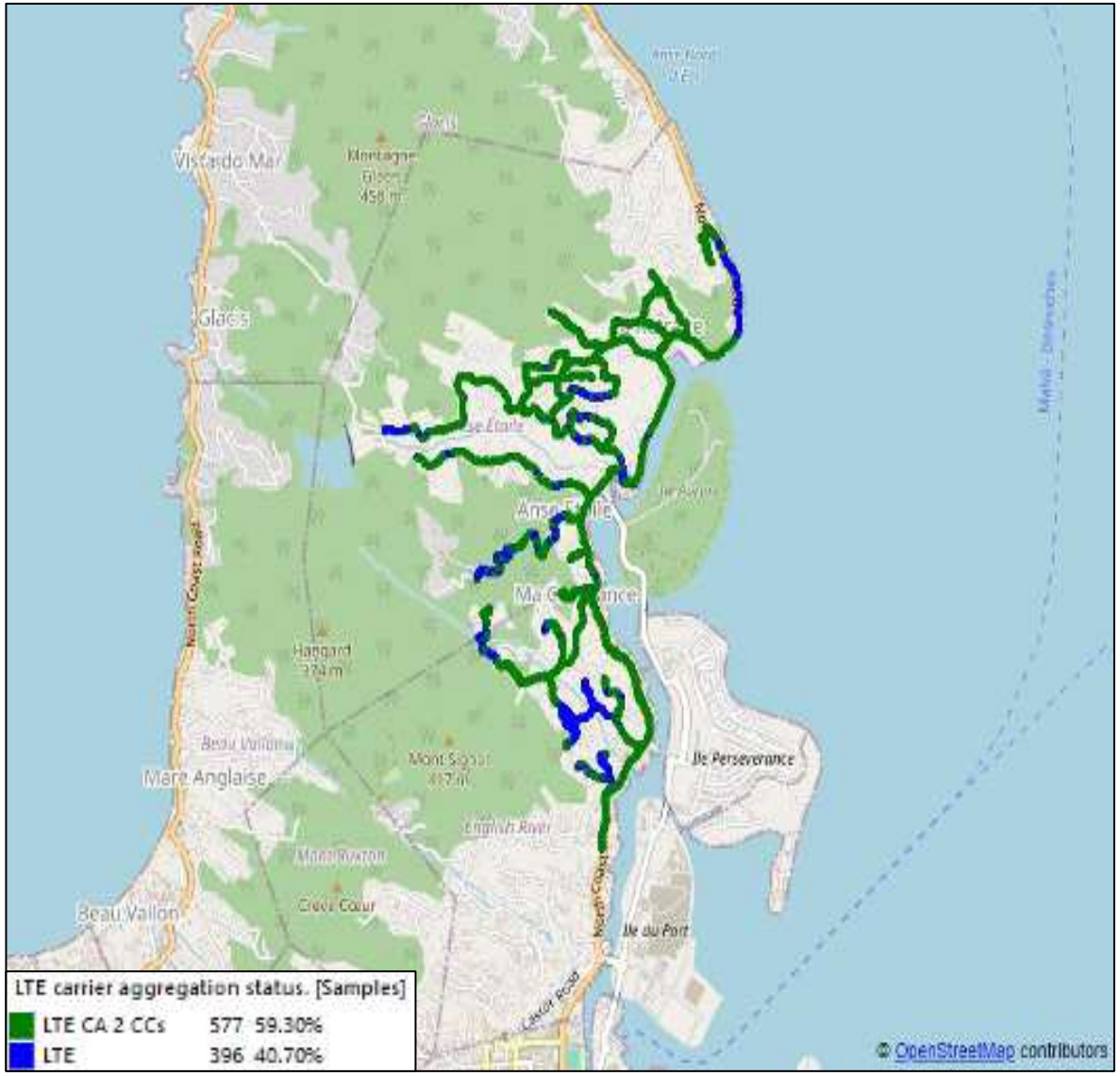


CWS Data 4G

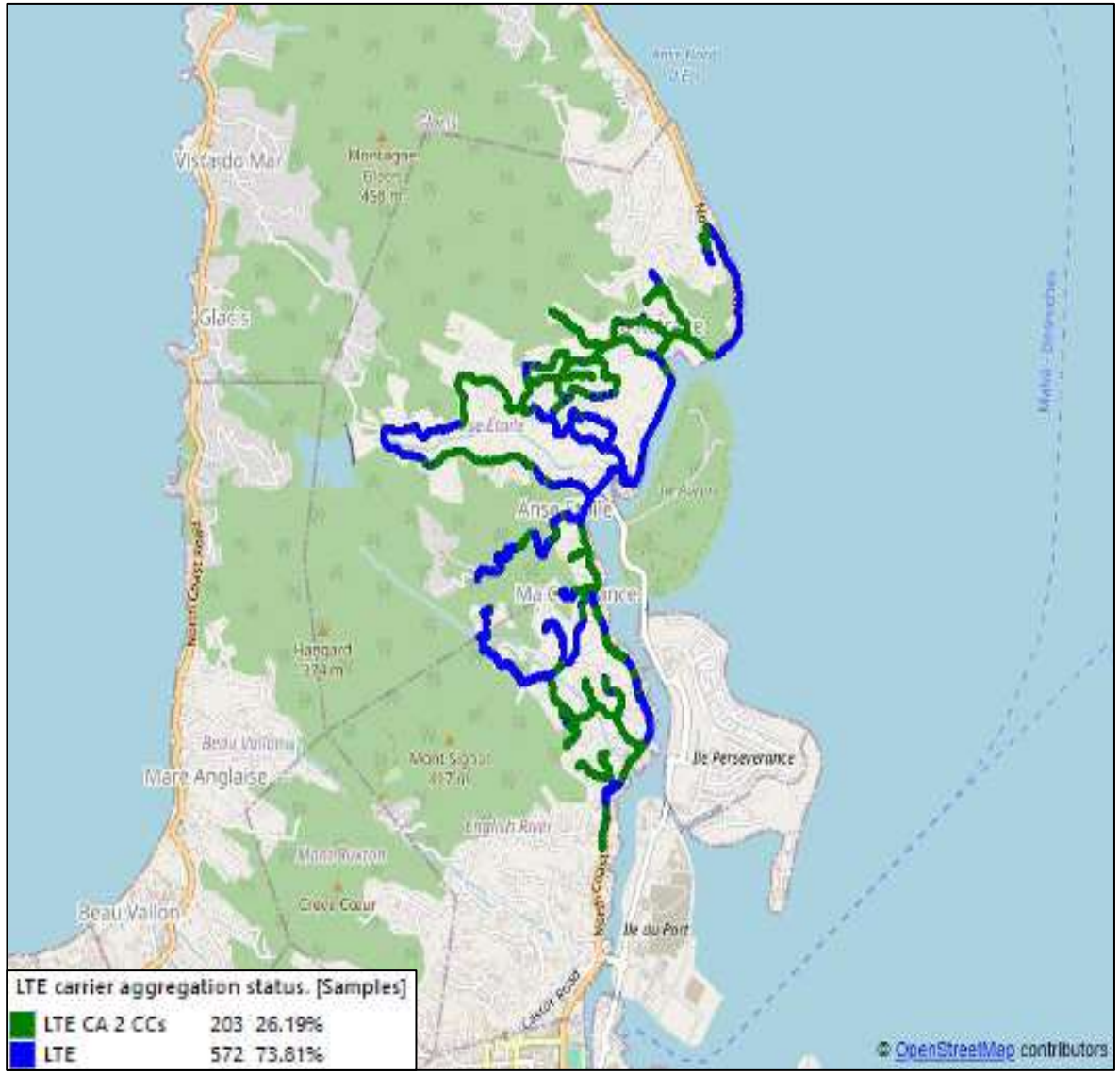


Phase-1 4G PREFERRED DATA TEST - CARRIER AGGREGATION PLOT

Airtel Data 4G

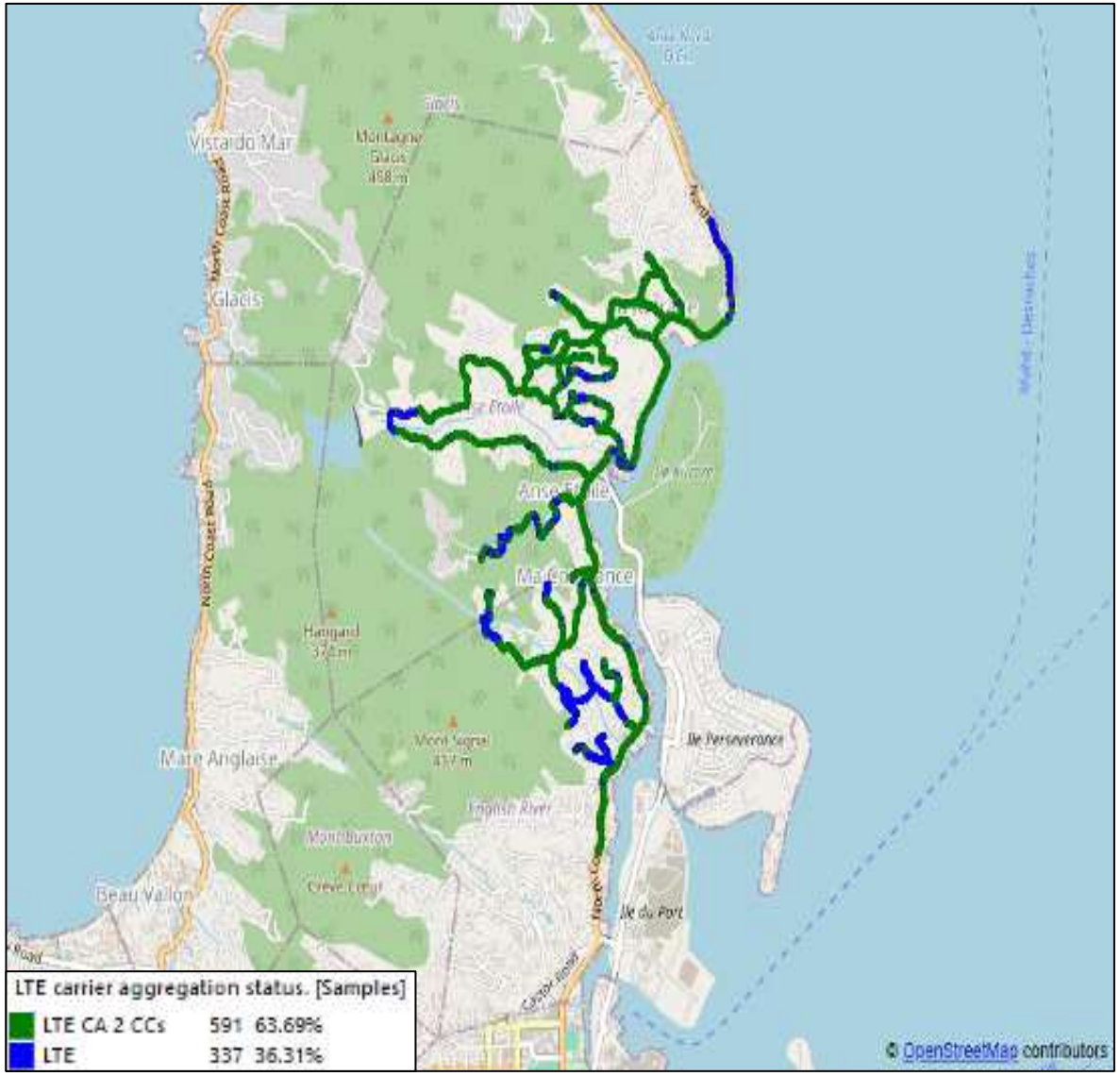


CWS Data 4G

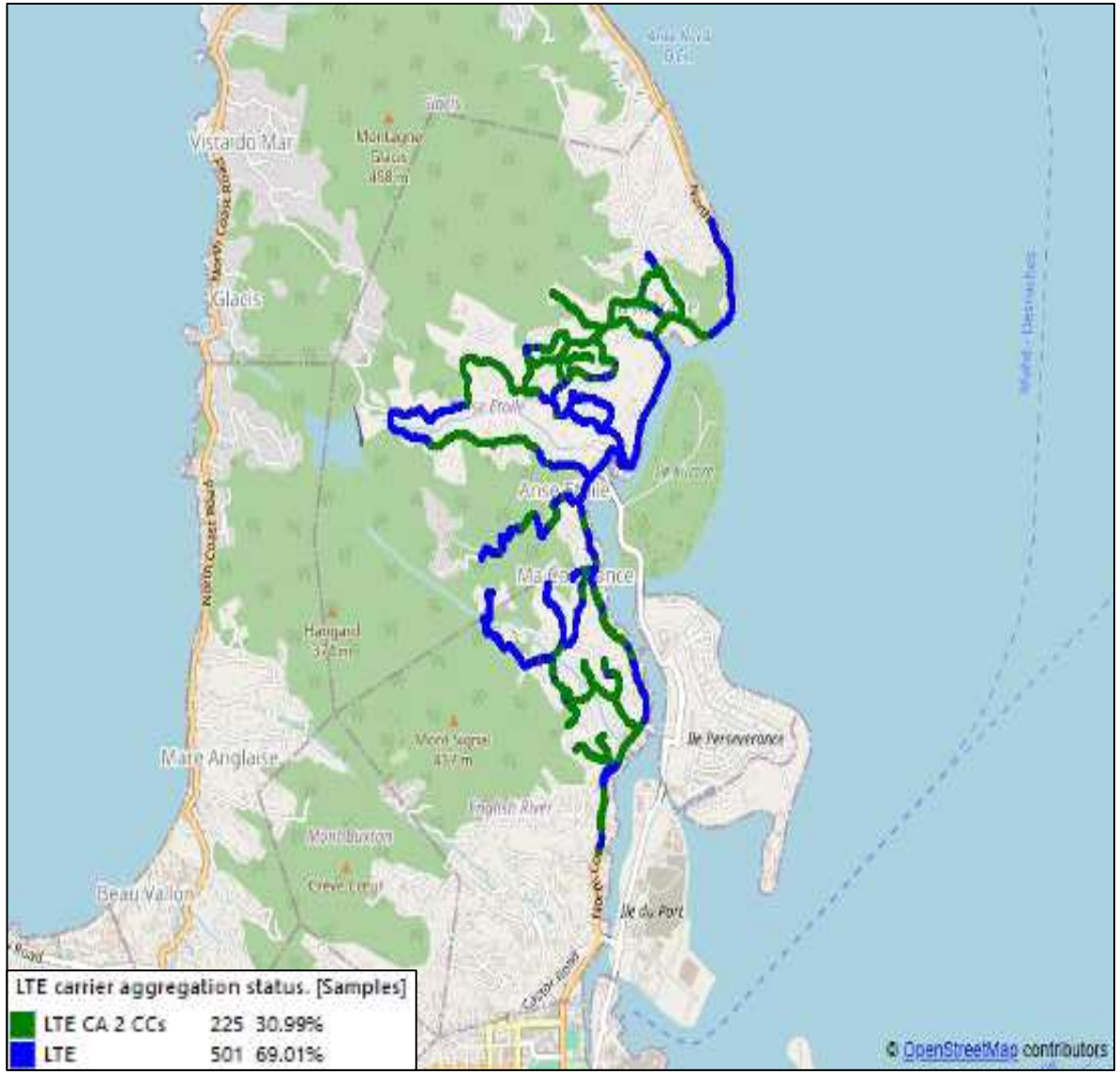


Phase-2 4G PREFERRED DATA TEST - CARRIER AGGREGATION PLOT

Airtel Data 4G

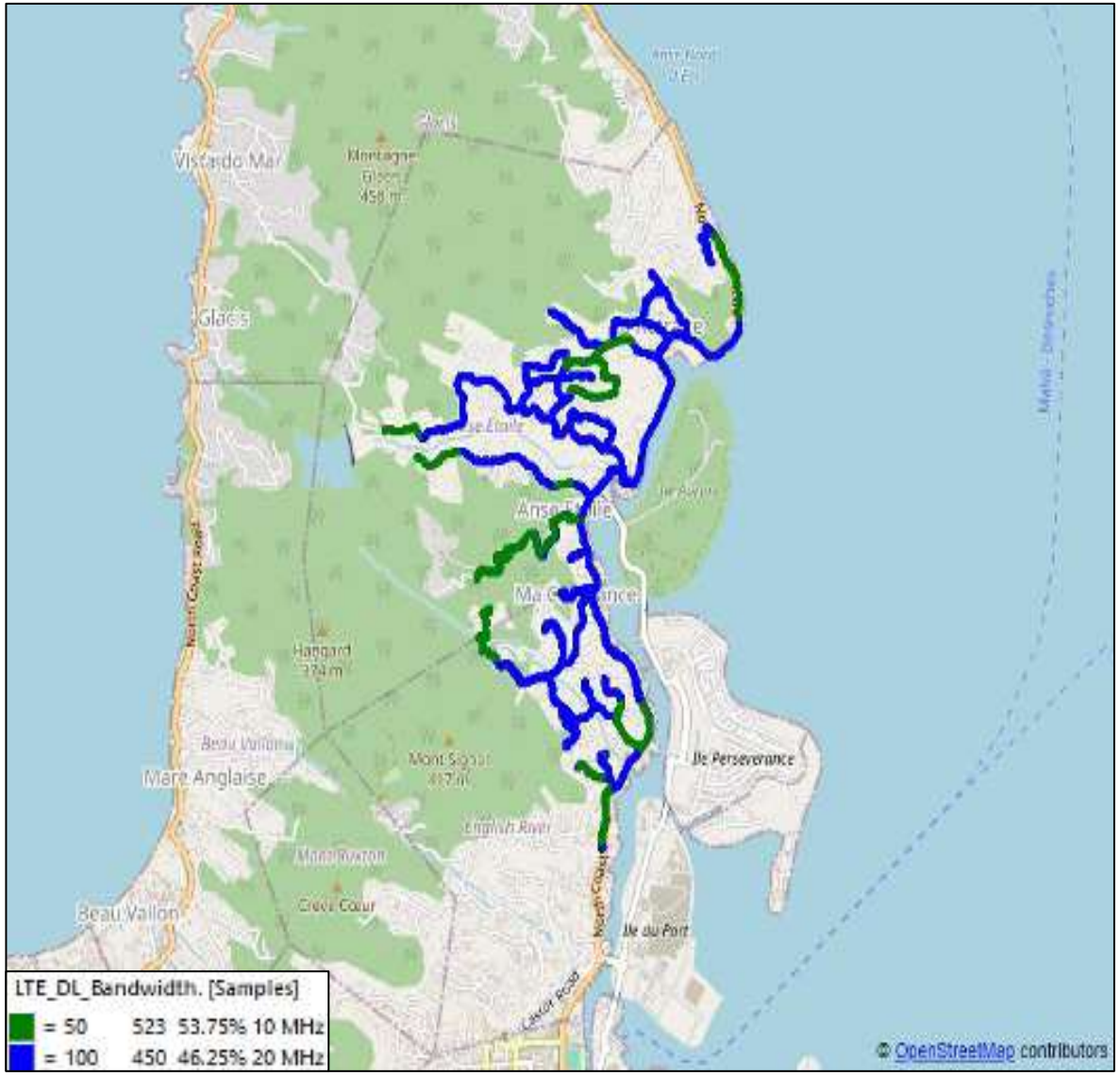


CWS Data 4G

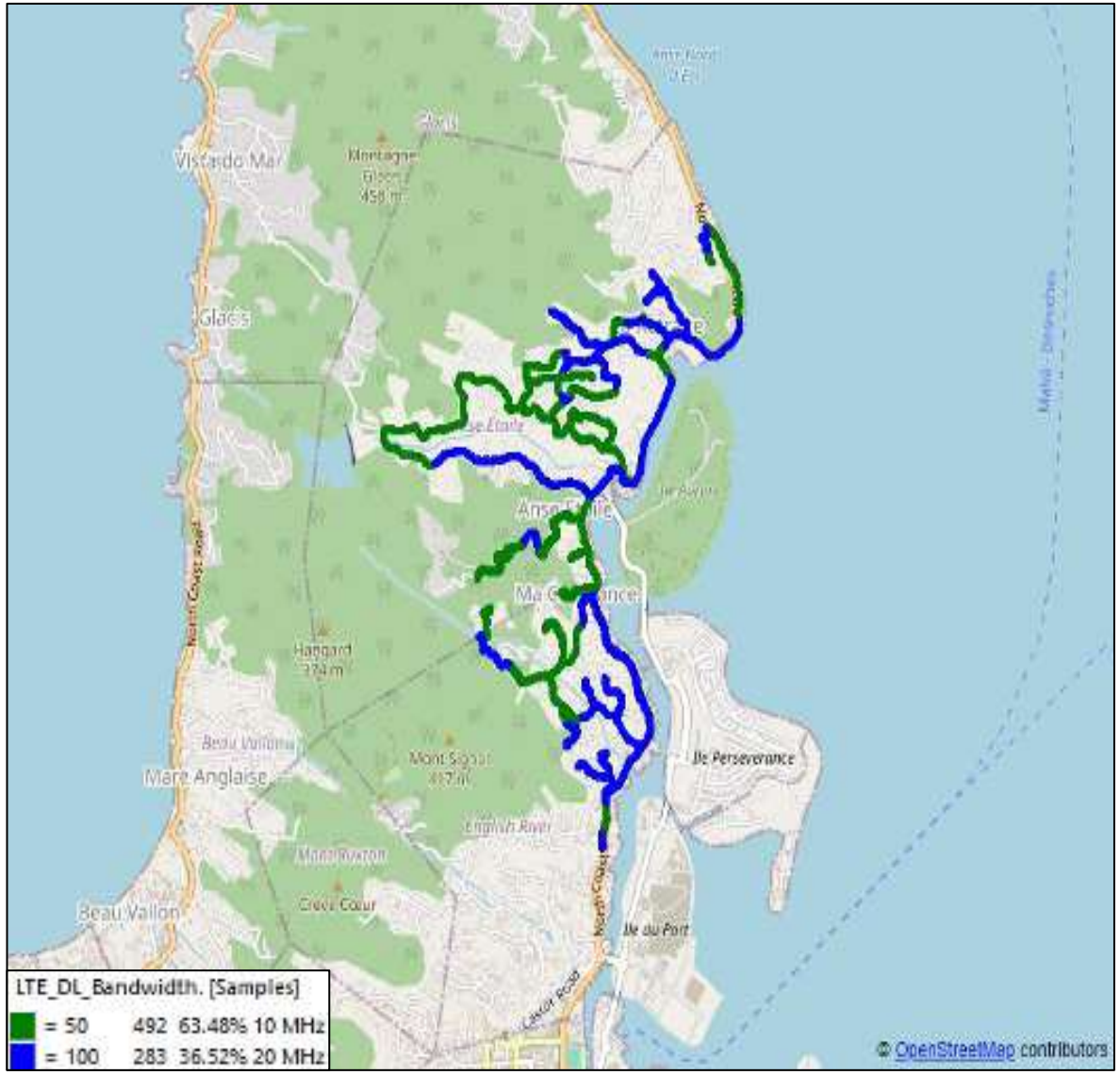


Phase-1 4G PREFERRED DATA TEST – BANDWIDTH PLOT

Airtel Data 4G

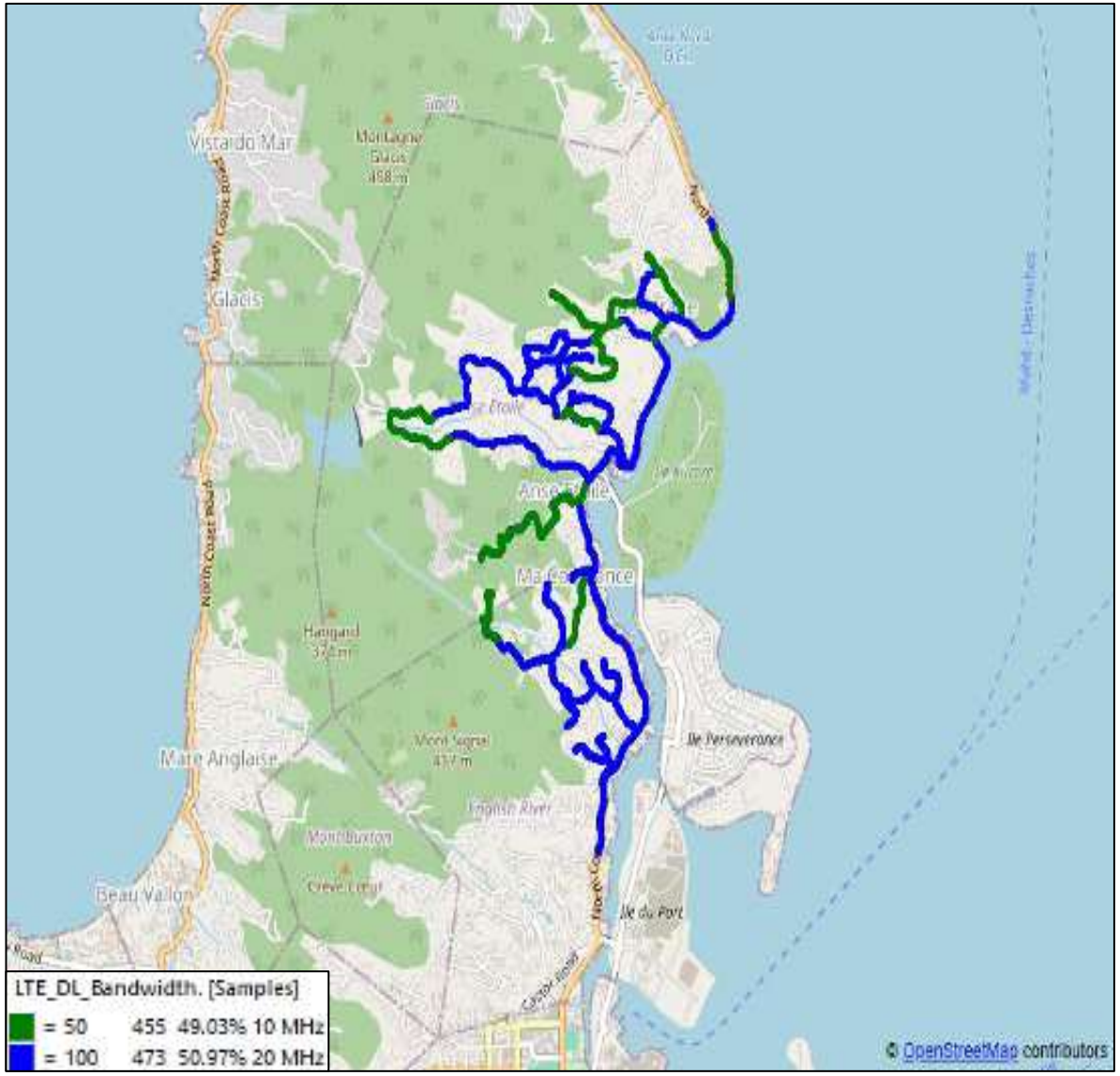


CWS Data 4G

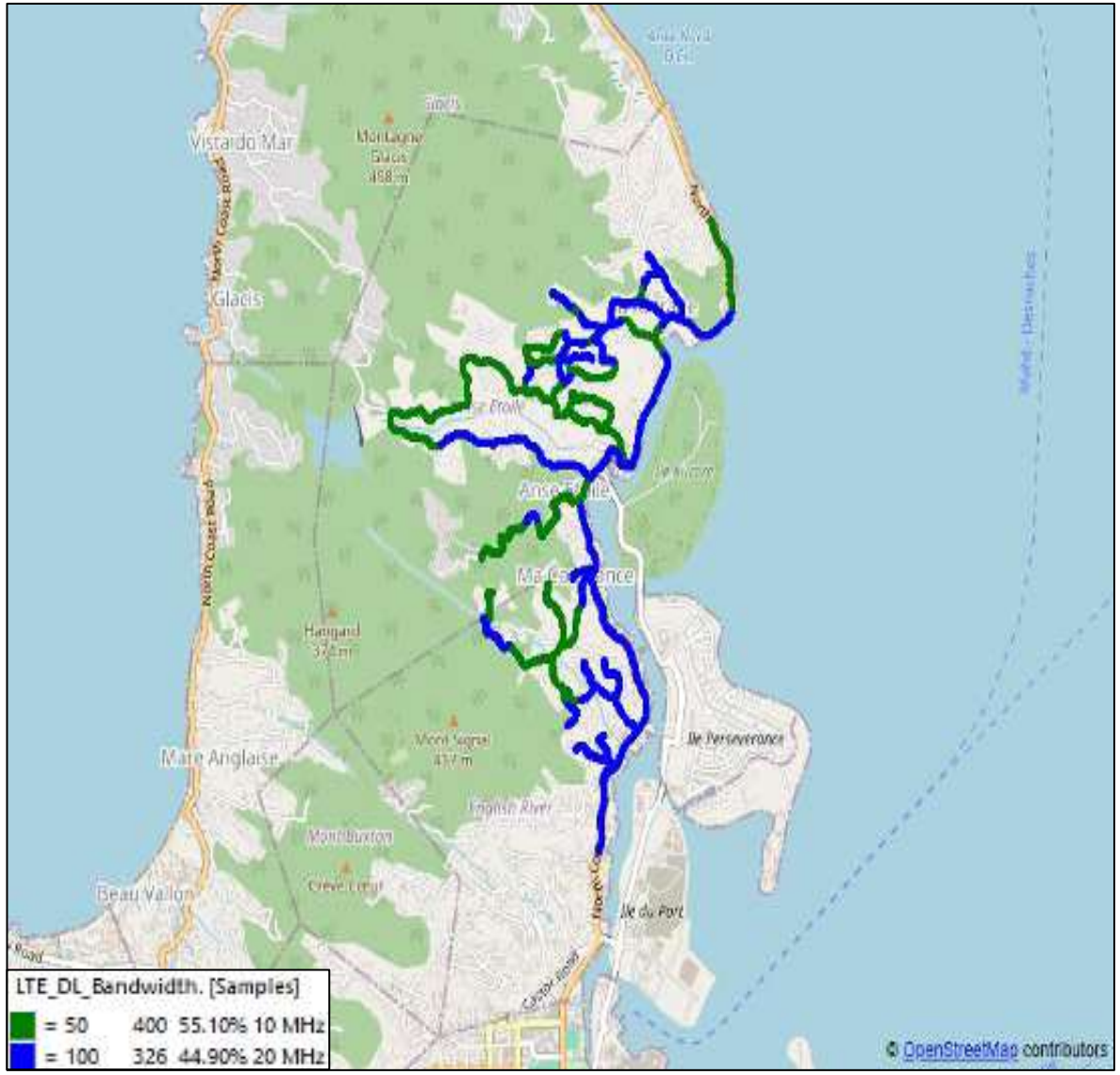


Phase-2 4G PREFERRED DATA TEST – BANDWIDTH PLOT

Airtel Data 4G



CWS Data 4G



Negative Event Analysis

Phase-1 Call Drop & Call Attempt Failure Airtel , CWS Summary

Call Attempt Failure cause from Airtel	Count
Total Call Attempt Failure	**1**
Poor Quality	1

Call Attempt Failure cause from CWS	Count
Total Call Attempt Failure	**3**
Poor Quality	2
Network End	1

Call Drop cause from Airtel	Count
Total Call Drop	**0**

Call Drop cause from CWS	Count
Total Call Drop	**0**

Phase-1 Call Attempt Failure Analysis 1 From MS5 Airtel MO

	Time	System	Serving band	Cal
1.	11:04:34.736	UMTS FDD	900	Not

	1. best active RSCP	Time	Ch	SC	1. best a
7227.		11:04:29.647	3050	145	-10.7
7228.	-83.5	11:04:30.166	3050	145	
7229.		11:04:30.166	3050	137	-12
7230.	-85.4	11:04:30.746	3050	145	
7231.		11:04:30.746	3050	145	-14.6
7232.	-88	11:04:31.286	3050	145	
7233.		11:04:31.286	3050	145	-20
7234.	-86.2	11:04:31.833	3050	145	
7235.		11:04:31.833	3050	145	-21.6
7236.	-83.4	11:04:32.386	3050	145	
7237.		11:04:32.386	3050	145	-20.6
7238.	-88.2	11:04:32.908	3050	145	
7239.		11:04:32.908	3050	145	-22.5
7240.	-73.9	11:04:33.299	3050	335	
7241.		11:04:33.299	3050	335	-10.5
7242.	-83.7	11:04:33.879	3050	335	
7243.		11:04:33.879	3050	335	-10.5
7244.	-86.1	11:04:34.415	3050	335	
7245.		11:04:34.415	3050	335	-11.5
7246.	-85.7	11:04:34.916	3050	335	
7247.		11:04:34.916	3050	335	-9.3
7248.	-88.1	11:04:35.586	3050	335	
7249.		11:04:35.586	3050	335	-13.9
7250.	-83.8	11:04:35.986	3050	145	
7251.		11:04:35.986	3050	145	-10.9
7252.	-86.9	11:04:36.541	3050	335	
7253.		11:04:36.541	3050	335	-18.8
7254.	-83.1	11:04:37.092	3050	232	
7255.		11:04:37.092	3050	232	-14.8
7256.	-78.1	11:04:37.614	3050	335	
7257.		11:04:37.614	3050	335	-11.8
7258.	-79.9	11:04:38.172	3050	335	
7259.		11:04:38.172	3050	335	-10.1
7260.	-78.3	11:04:38.772	3050	335	
7261.		11:04:38.772	3050	335	-10
7262.	-84.9	11:04:39.277	3050	232	

	System	Transf. dir.	Time	Subchannel	Message name
26089.	UMTS FDD	Downlink	11:04:29.296	DCCH	PHYSICAL_CHANNEL_RECONFIGURATION
26090.	UMTS FDD	Downlink	11:04:29.376	DCCH	DOWNLINK_DIRECT_TRANSFER
26091.	UMTS FDD	Downlink	11:04:29.376	DCCH	MODIFY_PDP_CONTEXT_REQUEST
26092.	UMTS FDD	Uplink	11:04:29.377	DCCH	UPLINK_DIRECT_TRANSFER
26093.	UMTS FDD	Uplink	11:04:29.377	DCCH	MODIFY_PDP_CONTEXT_ACCEPT
26094.	UMTS FDD	Uplink	11:04:29.657	DCCH	PHYSICAL_CHANNEL_RECONFIGURATION_COMPLETE
26095.	UMTS FDD	Downlink	11:04:29.856	DCCH	DOWNLINK_DIRECT_TRANSFER
26096.	UMTS FDD	Downlink	11:04:29.856	DCCH	PROGRESS
26097.	UMTS FDD	Uplink	11:04:30.011	DCCH	MEASUREMENT_REPORT
26098.	UMTS FDD	Downlink	11:04:30.296	DCCH	ACTIVE_SET_UPDATE
26099.	UMTS FDD	Uplink	11:04:30.308	DCCH	ACTIVE_SET_UPDATE_COMPLETE
26100.	UMTS FDD	Downlink	11:04:30.576	DCCH	PHYSICAL_CHANNEL_RECONFIGURATION
26101.	UMTS FDD	Uplink	11:04:30.618	DCCH	PHYSICAL_CHANNEL_RECONFIGURATION_COMPLETE
26102.	UMTS FDD	Uplink	11:04:30.670	DCCH	MEASUREMENT_REPORT
26103.	UMTS FDD	Uplink	11:04:30.698	DCCH	MEASUREMENT_REPORT
26104.	UMTS FDD	Downlink	11:04:31.056	DCCH	MEASUREMENT_CONTROL
26105.	UMTS FDD	Downlink	11:04:31.096	DCCH	ACTIVE_SET_UPDATE
26106.	UMTS FDD	Uplink	11:04:31.127	DCCH	ACTIVE_SET_UPDATE_COMPLETE
26107.	UMTS FDD	Uplink	11:04:31.352	DCCH	MEASUREMENT_REPORT
26108.	UMTS FDD	Downlink	11:04:31.456	DCCH	MEASUREMENT_CONTROL
26109.	UMTS FDD	Downlink	11:04:31.496	DCCH	ACTIVE_SET_UPDATE
26110.	UMTS FDD	Uplink	11:04:31.528	DCCH	ACTIVE_SET_UPDATE_COMPLETE
26111.	UMTS FDD	Uplink	11:04:31.637	DCCH	MEASUREMENT_REPORT
26112.	UMTS FDD	Uplink	11:04:31.934	DCCH	MEASUREMENT_REPORT
26113.	UMTS FDD	Uplink	11:04:31.934	DCCH	MEASUREMENT_REPORT
26114.	UMTS FDD	Downlink	11:04:31.936	DCCH	MEASUREMENT_CONTROL
26115.	UMTS FDD	Downlink	11:04:32.496	DCCH	PHYSICAL_CHANNEL_RECONFIGURATION
26116.	UMTS FDD	Uplink	11:04:32.656	DCCH	PHYSICAL_CHANNEL_RECONFIGURATION_COMPLETE
26117.	UMTS FDD	Downlink	11:04:32.896	DCCH	ACTIVE_SET_UPDATE
26118.	UMTS FDD	Uplink	11:04:32.928	DCCH	ACTIVE_SET_UPDATE_COMPLETE
26119.	UMTS FDD	Uplink	11:04:33.003	DCCH	MEASUREMENT_REPORT
26120.	UMTS FDD	Downlink	11:04:33.296	DCCH	MEASUREMENT_CONTROL
26121.	UMTS FDD	Downlink	11:04:33.336	DCCH	ACTIVE_SET_UPDATE
26122.	UMTS FDD	Uplink	11:04:33.368	DCCH	ACTIVE_SET_UPDATE_COMPLETE
26123.	UMTS FDD	Uplink	11:04:33.651	DCCH	MEASUREMENT_REPORT
26124.	UMTS FDD	Uplink	11:04:33.651	DCCH	MEASUREMENT_REPORT

Analysis:

- This call failure event occurred on short call at 11:04:34:736 time when UE was latched with 3G network.
- After sending “CM Service Request” message to core network, then core network responds with “Call Proceeding ” message. After that call setup has been failed.
- During the failure, UE was latched with PSC 335 and RF condition RSCP -73.9 dBm is good but Ec/No -22.5 dB are very poor.
- As per the analysis call failed happened due to poor Poor Quality of the network.

Phase-1 Call Attempt Failure Analysis 1 From MS7 CWS MO

	Time	System	Serving band	
1.	10:25:09.194	GSM	900	Cal
2.	10:25:53.509	GSM	900	Dro
3.	10:34:17.653	UMTS FDD	2100	Dro

	RxLev sub	ARFCN	BSIC	C1	C2	LAC	RAC	RXQ sub
667.						1	0	
668.						1	0	
669.						1	0	
670.	-95	11	18			1	0	
671.								7
672.								6
673.	-95	11	18			1	0	
674.	-93	11	18			1	0	
675.								7
676.	-98	11	18			1	0	
677.								0
678.	-95	11	18			1	0	
679.								0
680.	-92	11	18			1	0	
681.								0
682.								3
683.	-99	11	18			1	0	
684.	-96	11	18			1	0	
685.								2
686.								0
687.	-92	11	18			1	0	
688.								7
689.	-94	11	18			1	0	
690.								
691.						1	0	
692.						1	0	
693.	-94	11	18	12	12	1	0	
694.	-98	11	18	8	8	1	0	
695.	-97	11	18	9	9	1	0	
696.	-96	11	18	10	10	1	0	
697.	-96	11	18	10	10	1	0	
698.	-96	11	18	10	10	1	0	
699.	-97	11	18	9	9	1	0	
700.	-96	11	18	10	10	1	0	
701.	-96	11	18	10	10	1	0	
702.	-96	11	18	10	10	1	0	
703.	-96	11	18	10	10	1	0	

	System	Transf. dir.	Time	Subchannel	Message name
12994.	GSM	Uplink	10:25:02.293	DCCH	UTRAN_CLASSMARK_CHANGE
12995.	GSM	Uplink	10:25:02.293	DCCH	GPRS_SUSPENSION_REQUEST
12996.	GSM	Downlink	10:25:02.528	DCCH	IDENTITY_REQUEST
12997.	GSM	Uplink	10:25:02.528	DCCH	IDENTITY_RESPONSE
12998.	GSM	Uplink	10:25:02.740	SACCH	MEASUREMENT_REPORT
12999.	GSM	Downlink	10:25:02.911	SACCH	SYSTEM_INFORMATION_TYPE_5TER
13000.	GSM	Uplink	10:25:03.211	SACCH	MEASUREMENT_REPORT
13001.	GSM	Downlink	10:25:03.382	SACCH	SYSTEM_INFORMATION_TYPE_6
13002.	GSM	Downlink	10:25:03.469	DCCH	CLASSMARK_ENQUIRY
13003.	GSM	Uplink	10:25:03.469	DCCH	CLASSMARK_CHANGE
13004.	GSM	Uplink	10:25:03.470	DCCH	UTRAN_CLASSMARK_CHANGE
13005.	GSM	Uplink	10:25:03.682	SACCH	MEASUREMENT_REPORT
13006.	GSM	Uplink	10:25:04.153	SACCH	MEASUREMENT_REPORT
13007.	GSM	Downlink	10:25:04.411	DCCH	CIPHERING_MODE_COMMAND
13008.	GSM	Uplink	10:25:04.416	DCCH	CIPHERING_MODE_COMPLETE
13009.	GSM	Uplink	10:25:04.416	DCCH	SETUP
13010.	GSM	Uplink	10:25:04.623	SACCH	MEASUREMENT_REPORT
13011.	GSM	Downlink	10:25:04.794	SACCH	MEASUREMENT_INFORMATION
13012.	GSM	Uplink	10:25:05.094	SACCH	MEASUREMENT_REPORT
13013.	GSM	Downlink	10:25:05.265	SACCH	MEASUREMENT_INFORMATION
13014.	GSM	Uplink	10:25:05.565	SACCH	MEASUREMENT_REPORT
13015.	GSM	Downlink	10:25:05.736	SACCH	MEASUREMENT_INFORMATION
13016.	GSM	Uplink	10:25:06.036	SACCH	MEASUREMENT_REPORT
13017.	GSM	Downlink	10:25:06.206	SACCH	MEASUREMENT_INFORMATION
13018.	GSM	Uplink	10:25:06.506	SACCH	MEASUREMENT_REPORT
13019.	GSM	Downlink	10:25:06.677	SACCH	MEASUREMENT_INFORMATION
13020.	GSM	Uplink	10:25:06.977	SACCH	MEASUREMENT_REPORT
13021.	GSM	Downlink	10:25:07.148	SACCH	MEASUREMENT_INFORMATION
13022.	GSM	Uplink	10:25:07.448	SACCH	MEASUREMENT_REPORT
13023.	GSM	Uplink	10:25:07.919	SACCH	MEASUREMENT_REPORT
13024.	GSM	Downlink	10:25:07.942	DCCH	CHANNEL_RELEASE
13025.	GSM	Downlink	10:25:11.186	BCCH	SYSTEM_INFORMATION_TYPE_3
13026.	GSM	Downlink	10:25:11.279	BCCH	SYSTEM_INFORMATION_TYPE_1
13027.	GSM	Downlink	10:25:11.279	BCCH	SYSTEM_INFORMATION_TYPE_2
13028.	GSM	Downlink	10:25:11.279	BCCH	SYSTEM_INFORMATION_TYPE_2QUATER
13029.	GSM	Downlink	10:25:11.280	BCCH	SYSTEM_INFORMATION_TYPE_4
13030.	GSM	Downlink	10:25:11.280	BCCH	SYSTEM_INFORMATION_TYPE_3

Analysis:

- This call failure event occurred on short call at 10:25:09:194 time when UE was latched with 2G network.
- During the session before the call failure UE send “CM Service Request “ and “Setup” message to core network. Then call setup has been failed.
- During the session UE was latched with ARFCN 11 and RF condition Rx lev -94 dBm is poor and Rx qual 7 dB was very poor.
- As per the Analysis the call setup failure event occurred due to poor quality in the network.

Phase-1 Call Attempt Failure Analysis 2 From MS7 CWS MO

	Time	System	Serving band	
1.	10:25:09.194	GSM	900	Call
2.	10:25:53.509	GSM	900	Dro
3.	10:34:17.653	UMTS FDD	2100	Dro

	RxLev sub	ARFCN	BSIC	C1	C2	LAC	RAC	RXQ sub
715.						1	0	
716.						1	0	
717.	-93	11	18	13	13	1	0	
718.	-93	11	18	13	13	1	0	
719.						1	0	
720.								7
721.	-94	26	18			10	10	
722.								6
723.	-92	26	18			10	10	
724.								5
725.	-88	26	18			1	10	
726.								4
727.	-93	26	18			1	10	
728.								3
729.								0
730.	-88	26	18			1	10	
731.	-91	26	18			1	10	
732.								6
733.								6
734.								6
735.	-95	26	18			1	10	
736.								
737.						1	0	
738.	-81	13	10			1	0	
739.								0
740.	-84	13	10			1	0	
741.								0
742.	-88	13	10			1	0	
743.								0
744.	-83	13	10			1	0	
745.								6
746.	-87	13	10			1	0	
747.								0
748.	-84	13	10			1	0	
749.								0
750.	-87	13	10			1	0	
751.								0

	System	Transf. dir.	Time	Subchannel	Message name
13254.	UMTS FDD	Uplink	10:25:49.001	DCCH	MEASUREMENT_REPORT
13255.	UMTS FDD	Uplink	10:25:49.365	DCCH	MEASUREMENT_REPORT
13256.	UMTS FDD	Uplink	10:25:49.442	DCCH	MEASUREMENT_REPORT
13257.	UMTS FDD	Uplink	10:25:49.455	DCCH	MEASUREMENT_REPORT
13258.	UMTS FDD	Downlink	10:25:49.840	DCCH	HANDOVER_FROM_UTRAN_COMMAND_GSM
13259.	UMTS FDD	Downlink	10:25:49.840	DCCH	HANDOVER_COMMAND
13260.	GSM	Downlink	10:25:49.858	DCCH	HANDOVER_COMMAND
13261.	GSM	Downlink	10:25:49.975	DCCH	PHYSICAL_INFORMATION
13262.	GSM	Uplink	10:25:49.975	DCCH	HANDOVER_COMPLETE
13263.	GSM	Uplink	10:25:50.105	DCCH	GPRS_SUSPENSION_REQUEST
13264.	GSM	Uplink	10:25:50.169	SACCH	MEASUREMENT_REPORT
13265.	GSM	Downlink	10:25:50.234	DCCH	IDENTITY_REQUEST
13266.	GSM	Uplink	10:25:50.234	DCCH	IDENTITY_RESPONSE
13267.	GSM	Downlink	10:25:50.603	SACCH	SYSTEM_INFORMATION_TYPE_5
13268.	GSM	Uplink	10:25:50.649	SACCH	MEASUREMENT_REPORT
13269.	GSM	Downlink	10:25:51.083	SACCH	SYSTEM_INFORMATION_TYPE_5TER
13270.	GSM	Uplink	10:25:51.129	SACCH	MEASUREMENT_REPORT
13271.	GSM	Downlink	10:25:51.563	SACCH	SYSTEM_INFORMATION_TYPE_6
13272.	GSM	Uplink	10:25:51.609	SACCH	MEASUREMENT_REPORT
13273.	GSM	Downlink	10:25:52.043	SACCH	MEASUREMENT_INFORMATION
13274.	GSM	Uplink	10:25:52.089	SACCH	MEASUREMENT_REPORT
13275.	GSM	Downlink	10:25:52.523	SACCH	MEASUREMENT_INFORMATION
13276.	GSM	Uplink	10:25:52.569	SACCH	MEASUREMENT_REPORT
13277.	GSM	Downlink	10:25:53.003	SACCH	MEASUREMENT_INFORMATION
13278.	GSM	Uplink	10:25:53.049	SACCH	MEASUREMENT_REPORT
13279.	GSM	Downlink	10:25:53.437	DCCH	DISCONNECT
13280.	GSM	Downlink	10:25:53.483	SACCH	MEASUREMENT_INFORMATION
13281.	GSM	Uplink	10:25:53.509	DCCH	RELEASE
13282.	GSM	Uplink	10:25:53.529	SACCH	MEASUREMENT_REPORT
13283.	GSM	Downlink	10:25:53.635	DCCH	RELEASE_COMPLETE
13284.	GSM	Downlink	10:25:53.755	DCCH	CHANNEL_RELEASE
13285.	GSM	Downlink	10:25:54.893	BCCH	SYSTEM_INFORMATION_TYPE_13
13286.	GSM	Downlink	10:25:56.305	BCCH	SYSTEM_INFORMATION_TYPE_3
13287.	GSM	Downlink	10:25:56.324	BCCH	SYSTEM_INFORMATION_TYPE_13
13288.	GSM	Downlink	10:25:56.325	BCCH	SYSTEM_INFORMATION_TYPE_3
13289.	GSM	Downlink	10:25:56.538	BCCH	SYSTEM_INFORMATION_TYPE_4
13290.	GSM	Downlink	10:25:57.004	BCCH	SYSTEM_INFORMATION_TYPE_2QUATER

Analysis:

- This call failure event occurred on short call at 10:25:53:509 time when UE was latched with 2G network.
- After sending “CM Service Request” message to core network, then core network responds with “Call Proceeding ” message. failed with the Reject Cause (27): Destination out of order.
- During the session UE was latched with ARFCN 26 and RF condition Rx lev -91 dBm is good and Rx qual 6 dB was very poor.
- As per the Analysis the call setup failure event occurred due to poor quality in the network.

Phase-1 Call Attempt Failure Analysis 3 From MS7 CWS MO

	Time	System	Serving band	
1.	10:25:09.194	GSM	900	Call
2.	10:25:53.509	GSM	900	Dro
3.	10:34:17.653	UMTS FDD	2100	Dro

	1. best active RSCP	Time	Ch	SC	1. bes
4535.		10:33:42.832	10740	38	-6.3
4536.	-97.7	10:33:43.532	10740	38	
4537.		10:33:43.532	10740	38	-9.2
4538.	-89	10:33:43.832	10740	38	
4539.		10:33:43.832	10740	38	-4.6
4540.	-66	10:34:14.517	10690	38	
4541.		10:34:14.517	10690	38	-4
4542.	-66	10:34:14.942	10690	38	
4543.		10:34:14.942	10690	38	-3.2
4544.	-66	10:34:15.585	10690	38	
4545.		10:34:15.585	10690	38	-3.1
4546.	-66	10:34:16.043	10690	38	
4547.		10:34:16.043	10690	38	-4.2
4548.	-66	10:34:16.527	10690	38	
4549.		10:34:16.527	10690	38	-2.9
4550.	-66	10:34:16.942	10690	38	
4551.		10:34:16.942	10690	38	-3.5
4552.	-66	10:34:17.653	10690	38	
4553.		10:34:17.653	10690	38	-3.9
4554.	-65.7	10:34:17.984	10690	38	
4555.		10:34:17.984	10690	38	-3.5
4556.	-78.7	10:34:18.634	10690	38	
4557.		10:34:18.634	10690	38	-4.8
4558.	-80.9	10:34:19.376	10690	38	
4559.		10:34:19.376	10690	38	-6.6
4560.	-80.2	10:34:48.596	10690	116	
4561.		10:34:48.596	10690	116	-8.3
4562.	-75.2	10:34:49.106	10690	116	
4563.		10:34:49.106	10690	116	-6.7
4564.	-84.3	10:34:49.568	10690	116	
4565.		10:34:49.568	10690	116	-11.1
4566.	-85.5	10:34:49.806	10690	116	
4567.		10:34:49.806	10690	116	-13.8
4568.	-88.6	10:34:50.598	10690	38	
4569.		10:34:50.598	10690	38	-6

	Event ID	System	Transf. dir.	Time	Subchannel	Message name
15326.	RRCSM	UMTS FDD	Downlink	10:34:14.44	CCCH	RRC_CONNECTION_SETUP
15327.	RRCSM	UMTS FDD	Uplink	10:34:14.49	DCCH	RRC_CONNECTION_SETUP_COMPLETE
15328.	RRCSM	UMTS FDD	Uplink	10:34:14.49	DCCH	INITIAL_DIRECT_TRANSFER
15329.	L3SM	UMTS FDD	Uplink	10:34:14.49	DCCH	CM_SERVICE_REQUEST
15330.	RRCSM	UMTS FDD	Uplink	10:34:14.49	DCCH	INITIAL_DIRECT_TRANSFER
15331.	L3SM	UMTS FDD	Uplink	10:34:14.49	DCCH	ROUTING_AREA_UPDATE_REQUEST
15332.	RRCSM	UMTS FDD	Downlink	10:34:14.75	DCCH	MEASUREMENT_CONTROL
15333.	RRCSM	UMTS FDD	Downlink	10:34:14.81	DCCH	SECURITY_MODE_COMMAND
15334.	RRCSM	UMTS FDD	Uplink	10:34:14.81	DCCH	SECURITY_MODE_COMPLETE
15335.	RRCSM	UMTS FDD	Uplink	10:34:14.89	DCCH	UPLINK_DIRECT_TRANSFER
15336.	L3SM	UMTS FDD	Uplink	10:34:14.89	DCCH	SETUP
15337.	RRCSM	UMTS FDD	Downlink	10:34:14.91	DCCH	DOWNLINK_DIRECT_TRANSFER
15338.	L3SM	UMTS FDD	Downlink	10:34:14.91	DCCH	TMSI_REALLOCATION_COMMAND
15339.	RRCSM	UMTS FDD	Uplink	10:34:14.91	DCCH	UPLINK_DIRECT_TRANSFER
15340.	L3SM	UMTS FDD	Uplink	10:34:14.91	DCCH	TMSI_REALLOCATION_COMPLETE
15341.	RRCSM	UMTS FDD	Downlink	10:34:15.04	DCCH	DOWNLINK_DIRECT_TRANSFER
15342.	L3SM	UMTS FDD	Downlink	10:34:15.04	DCCH	CALL_PROCEEDING
15343.	RRCSM	UMTS FDD	Downlink	10:34:16.62	DCCH	RADIO_BEARER_SETUP
15344.	RRCSM	UMTS FDD	Uplink	10:34:16.85	DCCH	RADIO_BEARER_SETUP_COMPLETE
15345.	RRCSM	UMTS FDD	Downlink	10:34:17.10	DCCH	MEASUREMENT_CONTROL
15346.	RRCSM	UMTS FDD	Downlink	10:34:17.14	DCCH	MEASUREMENT_CONTROL
15347.	RRCSM	UMTS FDD	Downlink	10:34:17.18	DCCH	MEASUREMENT_CONTROL
15348.	RRCSM	UMTS FDD	Downlink	10:34:17.22	DCCH	MEASUREMENT_CONTROL
15349.	RRCSM	UMTS FDD	Downlink	10:34:17.30	DCCH	DOWNLINK_DIRECT_TRANSFER
15350.	L3SM	UMTS FDD	Downlink	10:34:17.30	DCCH	DISCONNECT
15351.	RRCSM	UMTS FDD	Downlink	10:34:17.42	DCCH	DOWNLINK_DIRECT_TRANSFER
15352.	L3SM	UMTS FDD	Downlink	10:34:17.42	DCCH	AUTHENTICATION_AND_CIPHERING_REQUEST
15353.	RRCSM	UMTS FDD	Uplink	10:34:17.45	DCCH	UPLINK_DIRECT_TRANSFER
15354.	L3SM	UMTS FDD	Uplink	10:34:17.45	DCCH	AUTHENTICATION_AND_CIPHERING_RESPONSE
15355.	RRCSM	UMTS FDD	Uplink	10:34:17.46	DCCH	UPLINK_DIRECT_TRANSFER
15356.	L3SM	UMTS FDD	Uplink	10:34:17.46	DCCH	RELEASE
15357.	RRCSM	UMTS FDD	Downlink	10:34:17.90	DCCH	RADIO_BEARER_RELEASE
15358.	RRCSM	UMTS FDD	Downlink	10:34:17.98	DCCH	DOWNLINK_DIRECT_TRANSFER
15359.	L3SM	UMTS FDD	Downlink	10:34:17.98	DCCH	RELEASE_COMPLETE
15360.	RRCSM	UMTS FDD	Uplink	10:34:18.39	DCCH	MEASUREMENT_REPORT

Analysis:

- This call failure event occurred on short short call at 10:34:17:653 time when UE was latched with 3G network.
- During the session before the call failure UE send “CM Service Request “ and “Setup” message to core network. Then call setup has been failed.
- During the session UE was latched with PSC 38 and RF condition RSCP -66 dBm and ECNO -3.9 dB are very good.
- Need to check MT End.

Phase-1 Call Attempt Failure Analysis 3 From MS8 CWS MT

	Time	Band	Band (MHz)	Ch	PCI	RSRP	SNR
7745.	10:34:07.904						13.4
7746.	10:34:08.774	B20	800	6300	133	-78.8	
7747.	10:34:08.774						12.9
7748.	10:34:09.586	B20	800	6300	133	-76.5	
7749.	10:34:09.586						15.5
7750.	10:34:09.714	B20	800	6300	133	-76.5	
7751.	10:34:10.974	B20	800	6300	133	-80.9	
7752.	10:34:10.974						12.8
7753.	10:34:12.594	B20	800	6300	133	-83.5	
7754.	10:34:12.594						17.5
7755.	10:34:13.599	B20	800	6300	133	-77.4	
7756.	10:34:13.599						7.5
7757.	10:34:14.945	B20	800	6300	133	-77	
7758.	10:34:14.945						5.7
7759.	10:34:15.594	B20	800	6300	133	-78.2	
7760.	10:34:15.594						-1.4
7761.	10:34:18.642						
7762.	10:34:22.127	B20	800	6300	275	-83.3	
7763.	10:34:22.650	B20	800	6300	275	-78.2	
7764.	10:34:22.650						12.6
7765.	10:34:23.175	B20	800	6300	275	-75.8	
7766.	10:34:23.175						13.8
7767.	10:34:23.670	B20	800	6300	275	-79.5	
7768.	10:34:23.670						8.8
7769.	10:34:24.228	B20	800	6300	275	-77.9	
7770.	10:34:24.228						9
7771.	10:34:24.760	B20	800	6300	275	-78.5	
7772.	10:34:24.760						11.2
7773.	10:34:25.263	B20	800	6300	275	-82.4	
7774.	10:34:25.263						10.8
7775.	10:34:25.805	B20	800	6300	275	-81.6	
7776.	10:34:25.805						9.1
7777.	10:34:26.330	B20	800	6300	275	-78.1	
7778.	10:34:26.330						12.9
7779.	10:34:26.839	B20	800	6300	275	-77.6	

	Event ID	System	Transf. dir.	Time	Subchannel	Message name
15439.	RRCSM	LTE FDD	Uplink	10:33:49.285	DCCH	RRCConnectionReconfigurationComplete
15440.	RRCSM	LTE FDD	Downlink	10:33:49.302	DCCH	RRCConnectionReconfiguration
15441.	RRCSM	LTE FDD	Uplink	10:33:49.303	DCCH	RRCConnectionReconfigurationComplete
15442.	RRCSM	LTE FDD	Uplink	10:33:49.849	DCCH	MeasurementReport
15443.	RRCSM	LTE FDD	Uplink	10:33:49.849	DCCH	MeasurementReport
15444.	RRCSM	LTE FDD	Downlink	10:33:51.134	PCCH	Paging
15445.	RRCSM	LTE FDD	Downlink	10:33:52.414	PCCH	Paging
15446.	RRCSM	LTE FDD	Downlink	10:33:53.694	PCCH	Paging
15447.	RRCSM	LTE FDD	Downlink	10:33:54.974	PCCH	Paging
15448.	RRCSM	LTE FDD	Downlink	10:33:58.814	PCCH	Paging
15449.	RRCSM	LTE FDD	Downlink	10:34:01.374	PCCH	Paging
15450.	RRCSM	LTE FDD	Downlink	10:34:02.654	PCCH	Paging
15451.	RRCSM	LTE FDD	Downlink	10:34:05.214	PCCH	Paging
15452.	RRCSM	LTE FDD	Downlink	10:34:07.768	DCCH	RRCConnectionReconfiguration
15453.	RRCSM	LTE FDD	Uplink	10:34:07.774	DCCH	RRCConnectionReconfigurationComplete
15454.	RRCSM	LTE FDD	Downlink	10:34:07.774	PCCH	Paging
15455.	RRCSM	LTE FDD	Downlink	10:34:09.054	PCCH	Paging
15456.	RRCSM	LTE FDD	Downlink	10:34:09.369	DCCH	RRCConnectionRelease
15457.	RRCSM	LTE FDD	Downlink	10:34:09.524	PCCH	Paging
15458.	RRCSM	LTE FDD	Downlink	10:34:13.366	PCCH	Paging
15459.	RRCSM	LTE FDD	Downlink	10:34:14.646	PCCH	Paging
15460.	L3SM	LTE FDD	Uplink	10:34:15.446		DETACH_REQUEST
15461.	RRCSM	LTE FDD	Uplink	10:34:15.447	CCCH	RRCConnectionRequest
15462.	RRCSM	LTE FDD	Downlink	10:34:15.500	CCCH	RRCConnectionSetup
15463.	RRCSM	LTE FDD	Uplink	10:34:15.504	DCCH	RRCConnectionSetupComplete
15464.	RRCSM	LTE FDD	Downlink	10:34:22.036	BCCH-BCH	MasterInformationBlock
15465.	RRCSM	LTE FDD	Downlink	10:34:22.060	BCCH-SCH	SystemInformationBlockType1
15466.	RRCSM	LTE FDD	Downlink	10:34:22.157	BCCH-SCH	SystemInformation - SIB2,SIB3
15467.	L3SM	LTE FDD	Uplink	10:34:22.177		ATTACH_REQUEST
15468.	L3SM	LTE FDD	Uplink	10:34:22.177		PDN_CONNECTIVITY_REQUEST
15469.	RRCSM	LTE FDD	Uplink	10:34:22.178	CCCH	RRCConnectionRequest
15470.	RRCSM	LTE FDD	Downlink	10:34:22.197	BCCH-SCH	SystemInformation - SIB5
15471.	RRCSM	LTE FDD	Downlink	10:34:22.231	CCCH	RRCConnectionSetup
15472.	RRCSM	LTE FDD	Uplink	10:34:22.235	DCCH	RRCConnectionSetupComplete
15473.	RRCSM	LTE FDD	Downlink	10:34:22.251	DCCH	DLInformationTransfer

Analysis:

- On MT End, During the setup fail, UE was latched with PCI 133 and RF condition RSRP -78.2 dBm and SINR -1.4 dB both are ok.
- On both MO And MT Side, RF Conditions seems OK Also there is no abnormal message regarding failure.
- Need to check from Network End.

Phase-2 Call Drop & Call Attempt Failure Airtel , CWS Summary

Call Attempt Failure cause from Airtel	Count
Total Call Attempt Failure	**1**
Poor Quality	1

Call Attempt Failure cause from CWS	Count
Total Call Attempt Failure	**3**
Poor Coverage	1
Poor Quality	2

Call Drop cause from Airtel	Count
Total Call Drop	**1**
Poor Quality	1

Call Drop cause from CWS	Count
Total Call Drop	**1**
Poor Quality	1

Phase-2 Call Attempt Failure Analysis 1 From MS7 Airtel MO

	Time	System	Serving band	
1.	11:23:29.512	GSM	900	Call wa

	Time	RxLev sub	ARFCN	BSIC	LAC	RAC	RXQ sub
239.	11:22:58.158	-97	111	43	50000	1	
240.	11:22:59.157	-97	111	43	50000	1	
241.	11:23:00.279	-94	111	43	50000	1	
242.	11:23:01.728	-93	111	43	50000	1	
243.	11:23:02.631	-93	111	43	50000	1	
244.	11:23:03.952	-93	111	43	50000	1	
245.	11:23:04.829	-93	111	43	50000	1	
246.	11:23:05.618	-95	111	43	50000	1	
247.	11:23:05.618						5
248.	11:23:06.089						4
249.	11:23:06.094	-94	111	43	50000	1	
250.	11:23:06.560	-94	111	43	50000	1	
251.	11:23:06.560						0
252.	11:23:07.031						4
253.	11:23:07.154	-91	111	43	50000	1	
254.	11:23:07.502						7
255.	11:23:07.654	-95	111	43	50000	1	
256.	11:23:07.972						4
257.	11:23:08.157	-94	111	43	50000	1	
258.	11:23:08.443						6
259.	11:23:08.595	-94	111	43	50000	1	
260.	11:23:09.090	-93	111	43	50000	1	
261.	11:23:09.591						0
262.	11:23:09.831	-94	111	43	50000	1	
263.	11:23:10.061						3
264.	11:23:10.362	-95	111	43	50000	1	
265.	11:23:10.532						6
266.	11:23:10.771	-94	111	43	50000	1	
267.	11:23:11.003						7
268.	11:23:11.277	-97	111	43	50000	1	
269.	11:23:11.277						5
270.	11:23:11.747						6
271.	11:23:11.748	-98	111	43	50000	1	
272.	11:23:12.215						7
273.	11:23:12.367	-97	111	43	50000	1	
274.	11:23:12.838	-98	111	43	50000	1	

	Event ID	System	Transf. dir.	Time	Subchannel	Message name
12166.	L3SM	GSM	Downlink	11:23:04.829	SACCH	SYSTEM_INFORMATION_TYPE_5
12167.	L3SM	GSM	Uplink	11:23:05.148	SACCH	MEASUREMENT_REPORT
12168.	L3SM	GSM	Downlink	11:23:05.152	DCCH	AUTHENTICATION_REQUEST
12169.	L3SM	GSM	Uplink	11:23:05.262	DCCH	AUTHENTICATION_RESPONSE
12170.	L3SM	GSM	Downlink	11:23:05.300	SACCH	MEASUREMENT_INFORMATION
12171.	L3SM	GSM	Uplink	11:23:05.618	SACCH	MEASUREMENT_REPORT
12172.	L3SM	GSM	Downlink	11:23:05.623	DCCH	CIPHERING_MODE_COMMAND
12173.	L3SM	GSM	Uplink	11:23:05.627	DCCH	CIPHERING_MODE_COMPLETE
12174.	L3SM	GSM	Uplink	11:23:05.628	DCCH	SETUP
12175.	L3SM	GSM	Downlink	11:23:05.771	SACCH	SYSTEM_INFORMATION_TYPE_6
12176.	L3SM	GSM	Downlink	11:23:05.858	DCCH	IDENTITY_REQUEST
12177.	L3SM	GSM	Uplink	11:23:05.858	DCCH	IDENTITY_RESPONSE
12178.	L3SM	GSM	Uplink	11:23:06.089	SACCH	MEASUREMENT_REPORT
12179.	L3SM	GSM	Downlink	11:23:06.241	SACCH	SYSTEM_INFORMATION_TYPE_5
12180.	L3SM	GSM	Uplink	11:23:06.560	SACCH	MEASUREMENT_REPORT
12181.	L3SM	GSM	Downlink	11:23:06.564	DCCH	CALL_PROCEEDING
12182.	L3SM	GSM	Downlink	11:23:06.712	SACCH	MEASUREMENT_INFORMATION
12183.	L3SM	GSM	Uplink	11:23:07.031	SACCH	MEASUREMENT_REPORT
12184.	L3SM	GSM	Uplink	11:23:07.502	SACCH	MEASUREMENT_REPORT
12185.	L3SM	GSM	Downlink	11:23:07.654	SACCH	SYSTEM_INFORMATION_TYPE_5
12186.	L3SM	GSM	Uplink	11:23:07.972	SACCH	MEASUREMENT_REPORT
12187.	L3SM	GSM	Downlink	11:23:08.125	SACCH	MEASUREMENT_INFORMATION
12188.	L3SM	GSM	Uplink	11:23:08.443	SACCH	MEASUREMENT_REPORT
12189.	L3SM	GSM	Downlink	11:23:08.595	SACCH	SYSTEM_INFORMATION_TYPE_6
12190.	L3SM	GSM	Uplink	11:23:08.914	SACCH	MEASUREMENT_REPORT
12191.	L3SM	GSM	Downlink	11:23:09.066	SACCH	SYSTEM_INFORMATION_TYPE_5
12192.	L3SM	GSM	Uplink	11:23:09.591	SACCH	MEASUREMENT_REPORT
12193.	L3SM	GSM	Downlink	11:23:09.744	SACCH	MEASUREMENT_INFORMATION
12194.	L3SM	GSM	Uplink	11:23:10.061	SACCH	MEASUREMENT_REPORT
12195.	L3SM	GSM	Downlink	11:23:10.213	SACCH	SYSTEM_INFORMATION_TYPE_6
12196.	L3SM	GSM	Uplink	11:23:10.532	SACCH	MEASUREMENT_REPORT
12197.	L3SM	GSM	Uplink	11:23:11.003	SACCH	MEASUREMENT_REPORT
12198.	L3SM	GSM	Downlink	11:23:11.155	SACCH	MEASUREMENT_INFORMATION
12199.	L3SM	GSM	Uplink	11:23:11.277	SACCH	MEASUREMENT_REPORT
12200.	L3SM	GSM	Downlink	11:23:11.429	SACCH	SYSTEM_INFORMATION_TYPE_6
12201.	L3SM	GSM	Uplink	11:23:11.747	SACCH	MEASUREMENT_REPORT

Analysis:

- This call failure event occurred on short call at 11:23:29:512 time when UE was latched with 2G network.
- After sending “CM Service Request” message to core network, then core network responds with “Call Proceeding ” message. After that call setup has been failed.
- During the session UE was latched with ARFCN 111 and RF condition Rx lev -94 dBm is good and Rx qual 6 dB was very poor.
- As per the Analysis the call setup failure event occurred due to poor quality in the network.

Phase-2 Call Attempt Failure Analysis 1 From MS7 CWS MO

	Time	System	Serving band	
1.	11:45:20.854	UMTS FDD	2100	Dro
2.	11:52:36.202	GSM	900	Call
3.	12:03:39.941	UMTS FDD	2100	Dro

	1. best active RSCP	Time	Ch	SC	1. best active Ec/N0
4371.		11:45:14.156	10690	7	-5.8
4372.	-99.8	11:45:14.739	10690	7	
4373.		11:45:14.739	10690	7	-8.9
4374.	-97.9	11:45:15.247	10690	7	
4375.		11:45:15.247	10690	7	-9
4376.	-100.6	11:45:15.728	10690	7	
4377.		11:45:15.728	10690	7	-12.6
4378.	-94.8	11:45:16.263	10690	7	
4379.		11:45:16.263	10690	7	-8
4380.	-91.4	11:45:16.739	10690	7	
4381.		11:45:16.739	10690	7	-5.8
4382.	-98.1	11:45:17.281	10690	7	
4383.		11:45:17.281	10690	7	-9.3
4384.	-95.9	11:45:17.721	10690	7	
4385.		11:45:17.721	10690	7	-8.1
4386.	-95.2	11:45:18.239	10690	7	
4387.		11:45:18.239	10690	7	-8.2
4388.	-96.6	11:45:18.862	10690	7	
4389.		11:45:18.862	10690	7	-9
4390.	-91.3	11:45:19.239	10690	7	
4391.		11:45:19.239	10690	7	-7.3
4392.	-87.8	11:45:20.141	10690	203	
4393.		11:45:20.141	10690	203	-6.4
4394.	-96.3	11:45:20.418	10690	7	
4395.		11:45:20.418	10690	7	-10.5
4396.	-90.9	11:45:21.138	10690	203	
4397.		11:45:21.138	10690	203	-6.4
4398.	-95.1	11:45:21.729	10690	203	
4399.		11:45:21.729	10690	203	-9.3
4400.	-91.5	11:45:22.158	10690	203	
4401.		11:45:22.158	10690	203	-6.8
4402.	-99	11:45:52.439	10690	7	
4403.		11:45:52.439	10690	7	-6.9
4404.	-99	11:45:53.156	10690	7	
4405.		11:45:53.156	10690	7	-12.5
4406.	-98	11:45:53.556	10690	203	

	System	Transf. dir.	Time	Subchannel	Message name
14326.	UMTS FDD	Uplink	11:45:08.229	DCCH	UPLINK_DIRECT_TRANSFER
14327.	UMTS FDD	Uplink	11:45:08.229	DCCH	TMSI_REALLOCATION_COMPLETE
14328.	UMTS FDD	Downlink	11:45:08.349	DCCH	DOWNLINK_DIRECT_TRANSFER
14329.	UMTS FDD	Downlink	11:45:08.349	DCCH	CALL_PROCEEDING
14330.	UMTS FDD	Downlink	11:45:13.138	DCCH	DOWNLINK_DIRECT_TRANSFER
14331.	UMTS FDD	Downlink	11:45:13.138	DCCH	AUTHENTICATION_AND_CIPHERING_REQUEST
14332.	UMTS FDD	Uplink	11:45:13.176	DCCH	UPLINK_DIRECT_TRANSFER
14333.	UMTS FDD	Uplink	11:45:13.176	DCCH	AUTHENTICATION_AND_CIPHERING_RESPONSE
14334.	UMTS FDD	Downlink	11:45:13.468	DCCH	SECURITY_MODE_COMMAND
14335.	UMTS FDD	Uplink	11:45:13.469	DCCH	SECURITY_MODE_COMPLETE
14336.	UMTS FDD	Downlink	11:45:13.868	DCCH	DOWNLINK_DIRECT_TRANSFER
14337.	UMTS FDD	Downlink	11:45:13.868	DCCH	ROUTING_AREA_UPDATE_ACCEPT
14338.	UMTS FDD	Uplink	11:45:13.870	DCCH	UPLINK_DIRECT_TRANSFER
14339.	UMTS FDD	Uplink	11:45:13.870	DCCH	ROUTING_AREA_UPDATE_COMPLETE
14340.	UMTS FDD	Uplink	11:45:17.702	DCCH	MEASUREMENT_REPORT
14341.	UMTS FDD	Downlink	11:45:17.828	DCCH	ACTIVE_SET_UPDATE
14342.	UMTS FDD	Uplink	11:45:17.840	DCCH	ACTIVE_SET_UPDATE_COMPLETE
14343.	UMTS FDD	Downlink	11:45:17.938	DCCH	MEASUREMENT_CONTROL
14344.	UMTS FDD	Downlink	11:45:19.928	DCCH	RADIO_BEARER_SETUP
14345.	UMTS FDD	Uplink	11:45:20.171	DCCH	RADIO_BEARER_SETUP_COMPLETE
14346.	UMTS FDD	Downlink	11:45:20.418	DCCH	MEASUREMENT_CONTROL
14347.	UMTS FDD	Downlink	11:45:20.458	DCCH	MEASUREMENT_CONTROL
14348.	UMTS FDD	Downlink	11:45:20.498	DCCH	MEASUREMENT_CONTROL
14349.	UMTS FDD	Downlink	11:45:20.538	DCCH	MEASUREMENT_CONTROL
14350.	UMTS FDD	Downlink	11:45:20.618	DCCH	DOWNLINK_DIRECT_TRANSFER
14351.	UMTS FDD	Downlink	11:45:20.618	DCCH	DISCONNECT
14352.	UMTS FDD	Uplink	11:45:20.772	DCCH	UPLINK_DIRECT_TRANSFER
14353.	UMTS FDD	Uplink	11:45:20.772	DCCH	RELEASE
14354.	UMTS FDD	Downlink	11:45:20.978	DCCH	DOWNLINK_DIRECT_TRANSFER
14355.	UMTS FDD	Downlink	11:45:20.978	DCCH	RELEASE_COMPLETE
14356.	UMTS FDD	Downlink	11:45:21.138	DCCH	RADIO_BEARER_RELEASE
14357.	UMTS FDD	Uplink	11:45:21.731	DCCH	MEASUREMENT_REPORT
14358.	UMTS FDD	Uplink	11:45:21.971	DCCH	RADIO_BEARER_RELEASE_COMPLETE
14359.	UMTS FDD	Downlink	11:45:22.218	DCCH	SIGNALLING_CONNECTION_RELEASE
14360.	UMTS FDD	Uplink	11:45:22.220	DCCH	INITIAL_DIRECT_TRANSFER
14361.	UMTS FDD	Uplink	11:45:22.220	DCCH	LOCATION_UPDATING_REQUEST

Analysis:

- This call failure event occurred on short call at 11:45:20:854 time when UE was latched on to the 3G network.
- After sending the 'CM Service Request' message to the core network, the core network responded with a 'Call Proceeding' message. However, the call was disconnected with Cause (27): Destination out of order.
- During the failure, UE was latched with PSC 7 and RF condition RSCP -96.3 dBm good but Ec/No -10.5 dB are very poor.
- Need to check MT.

Downlink

DISCONNECT 3GPP TS 24.008 ver 15.4.0 Rel 15 (9.3.7.1)

M Protocol Discriminator (hex data: 3)
(0x3) Call control (call related SS message)
M Transaction Identifier (hex data: 8)
TI flag: 1 (the message is sent to the side that originates the TI)
TI value: 0
M Message Type (hex data: 25)
Message number: 37
M Cause (hex data: 02e09b)
Coding standard: Standard defined for the GSM PLMNs
Location: user
Cause (27): Destination out of order

Phase-2 Call Attempt Failure Analysis 1 From MS8 CWS MT

	Time	Band	Band (MHz)	Ch	PCI	RSRP	SNR
7681.	11:45:02.574						3.2
7682.	11:45:04.161	B3	1800	1849	273	-105.6	
7683.	11:45:04.161						2.5
7684.	11:45:05.128	B3	1800	1849	273	-103.7	
7685.	11:45:05.128						3.9
7686.	11:45:05.525	B3	1800	1849	273	-103.7	
7687.	11:45:06.643	B3	1800	1849	273	-106.8	
7688.	11:45:06.643						0
7689.	11:45:07.769	B3	1800	1849	273	-103.3	
7690.	11:45:07.769						6.2
7691.	11:45:09.161	B3	1800	1849	273	-107.9	
7692.	11:45:09.161						-3.1
7693.	11:45:10.543	B3	1800	1849	273	-106.8	
7694.	11:45:10.543						-3.1
7695.	11:45:11.550	B3	1800	1849	273	-110.9	
7696.	11:45:11.550						-4.7
7697.	11:45:12.159	B3	1800	1849	273	-110.9	
7698.	11:45:13.159	B3	1800	1849	273	-108	
7699.	11:45:13.159						-2.5
7700.	11:45:14.179	B3	1800	1849	273	-109.6	
7701.	11:45:14.179						-1.7
7702.	11:45:15.437	B3	1800	1849	273	-110.6	
7703.	11:45:15.437						-5
7704.	11:45:16.751	B3	1800	1849	273	-112.8	
7705.	11:45:16.751						-6.3
7706.	11:45:17.161	B3	1800	1849	273	-112.8	
7707.	11:45:18.161	B3	1800	1849	273	-109.9	
7708.	11:45:18.161						-5.5
7709.	11:45:19.236	B3	1800	1849	273	-109.9	
7710.	11:45:19.236						-5.9
7711.	11:45:19.268	B3	1800	1849	273	-109.9	
7712.	11:45:20.561	B3	1800	1849	273	-112.3	
7713.	11:45:20.561						-7.9
7714.	11:45:20.797	B3	1800	1849	104	-100.8	
7715.	11:45:22.323	B3	1800	1849	104	-101.6	
7716.	11:45:22.323						4.6
7717.	11:45:23.530	B3	1800	1849	104	-103.7	
7718.	11:45:23.530						3.1

	Event ID	System	Transf. dir.	Time	Subchannel	Message name
14344.	RRCSM	LTE FDD	Downlink	11:44:39.631	DCCH	RRCConnectionReconfiguration
14345.	RRCSM	LTE FDD	Uplink	11:44:39.637	DCCH	RRCConnectionReconfigurationComplete
14346.	RRCSM	LTE FDD	Downlink	11:44:39.650	DCCH	RRCConnectionReconfiguration
14347.	RRCSM	LTE FDD	Uplink	11:44:39.651	DCCH	RRCConnectionReconfigurationComplete
14348.	RRCSM	LTE FDD	Downlink	11:44:39.666	DCCH	DLInformationTransfer
14349.	L3SM	LTE FDD	Downlink	11:44:39.666		MODIFY_EPS_BEARER_CONTEXT_REQUEST
14350.	L3SM	LTE FDD	Uplink	11:44:39.668		MODIFY_EPS_BEARER_CONTEXT_ACCEPT
14351.	RRCSM	LTE FDD	Uplink	11:44:39.668	DCCH	ULInformationTransfer
14352.	RRCSM	LTE FDD	Uplink	11:44:40.312	DCCH	MeasurementReport
14353.	RRCSM	LTE FDD	Uplink	11:44:40.312	DCCH	MeasurementReport
14354.	RRCSM	LTE FDD	Downlink	11:44:40.806	PCCH	Paging
14355.	RRCSM	LTE FDD	Downlink	11:44:43.366	PCCH	Paging
14356.	RRCSM	LTE FDD	Downlink	11:44:44.646	PCCH	Paging
14357.	RRCSM	LTE FDD	Downlink	11:44:45.926	PCCH	Paging
14358.	RRCSM	LTE FDD	Downlink	11:44:47.206	PCCH	Paging
14359.	RRCSM	LTE FDD	Downlink	11:44:51.046	PCCH	Paging
14360.	RRCSM	LTE FDD	Downlink	11:44:52.326	PCCH	Paging
14361.	RRCSM	LTE FDD	Downlink	11:44:56.166	PCCH	Paging
14362.	RRCSM	LTE FDD	Downlink	11:44:58.726	PCCH	Paging
14363.	RRCSM	LTE FDD	Downlink	11:44:59.591	DCCH	RRCConnectionRelease
14364.	RRCSM	LTE FDD	Downlink	11:45:00.006	PCCH	Paging
14365.	RRCSM	LTE FDD	Downlink	11:45:07.688	PCCH	Paging
14366.	RRCSM	LTE FDD	Downlink	11:45:20.612	BCCH-SCH	SystemInformationBlockType1
14367.	RRCSM	LTE FDD	Downlink	11:45:20.649	BCCH-SCH	SystemInformation - SIB5
14368.	RRCSM	LTE FDD	Downlink	11:45:20.769	BCCH-SCH	SystemInformation - SIB2,SIB3
14369.	RRCSM	LTE FDD	Downlink	11:45:21.252	BCCH-SCH	SystemInformationBlockType1
14370.	RRCSM	LTE FDD	Downlink	11:45:25.577	PCCH	Paging
14371.	RRCSM	LTE FDD	Downlink	11:45:26.857	PCCH	Paging
14372.	RRCSM	LTE FDD	Downlink	11:45:29.417	PCCH	Paging
14373.	RRCSM	LTE FDD	Downlink	11:45:30.697	PCCH	Paging
14374.	RRCSM	LTE FDD	Downlink	11:45:31.977	PCCH	Paging
14375.	RRCSM	LTE FDD	Downlink	11:45:34.537	PCCH	Paging
14376.	RRCSM	LTE FDD	Downlink	11:45:35.817	PCCH	Paging
14377.	RRCSM	LTE FDD	Downlink	11:45:38.377	PCCH	Paging
14378.	RRCSM	LTE FDD	Downlink	11:45:39.656	PCCH	Paging
14379.	RRCSM	LTE FDD	Downlink	11:45:41.083	BCCH-SCH	SystemInformationBlockType1
14380.	RRCSM	LTE FDD	Downlink	11:45:41.120	BCCH-SCH	SystemInformation - SIB2,SIB3
14381.	RRCSM	LTE FDD	Downlink	11:45:41.159	BCCH-SCH	SystemInformation - SIB5

Analysis:

- On MT End, During the setup fail, UE was latched with PCI 104 and RF condition RSRP -100.8 dBm is and SINR -7.9 which is poor.
- Call failed at the MT end due to poor network coverage. The terminating device experienced low signal strength, leading to call failure.

Phase-2 Call Attempt Failure Analysis 2 From MS7 CWS MO

	Time	System	Serving band	
1.	11:45:20.854	UMTS FDD	2100	Dro
2.	11:52:36.202	GSM	900	Cal
3.	12:03:39.941	UMTS FDD	2100	Dro

	Time	RxLev sub	ARFCN	BSIC	LAC	RAC	RXQ sub
797.	11:52:24.117						7
798.	11:52:24.338	-85	5	38	1		
799.	11:52:24.588						6
800.	11:52:25.058						1
801.	11:52:25.094	-85	5	38	1		
802.	11:52:25.529						0
803.	11:52:25.621	-83	5	38	1		
804.	11:52:26.000						0
805.	11:52:26.153	-84	5	38	1		
806.	11:52:26.471						7
807.	11:52:26.604	-94	5	38	1		
808.	11:52:27.154	-94	5	38	1		
809.	11:52:27.633	-95	5	38	1		
810.	11:52:28.155	-95	5	38	1		
811.	11:52:28.487	-95	5	38	1		
812.	11:52:29.295	-90	5	38	1		
813.	11:52:29.766	-94	5	38	1		
814.	11:52:30.237	-93	5	38	1		
815.	11:52:31.400	-92	5	38	1		
816.	11:52:31.783	-95	5	38	1		
817.	11:52:32.120						6
818.	11:52:32.341	-95	5	38	1		
819.	11:52:32.591						7
820.	11:52:32.724	-96	5	38	1		
821.	11:52:33.154	-95	5	38	1		
822.	11:52:33.666	-94	5	38	1		
823.	11:52:34.474	-93	5	38	1		
824.	11:52:35.098	-94	5	38	1		
825.	11:52:35.098						
826.	11:52:37.926	-94	5	38	1	0	
827.	11:52:38.253	-61	20	30	1	0	
828.	11:52:38.923	-61	20	30	1	0	
829.	11:52:39.305	-60	20	30	1	0	
830.	11:52:39.997	-60	20	30	1	0	
831.	11:52:40.413	-61	20	30	1	0	
832.	11:52:41.095	-63	20	30	1	0	
833.	11:52:41.156	-63	20	30	1	0	

	System	Transf. dir.	Time	Subchannel	Message name
16052.	GSM	Downlink	11:52:22.838	SACCH	MEASUREMENT_INFORMATION
16053.	GSM	Uplink	11:52:23.175	SACCH	MEASUREMENT_REPORT
16054.	GSM	Downlink	11:52:23.309	SACCH	MEASUREMENT_INFORMATION
16055.	GSM	Uplink	11:52:23.646	SACCH	MEASUREMENT_REPORT
16056.	GSM	Downlink	11:52:23.780	SACCH	MEASUREMENT_INFORMATION
16057.	GSM	Uplink	11:52:24.117	SACCH	MEASUREMENT_REPORT
16058.	GSM	Downlink	11:52:24.251	SACCH	MEASUREMENT_INFORMATION
16059.	GSM	Uplink	11:52:24.588	SACCH	MEASUREMENT_REPORT
16060.	GSM	Downlink	11:52:24.721	SACCH	MEASUREMENT_INFORMATION
16061.	GSM	Uplink	11:52:25.058	SACCH	MEASUREMENT_REPORT
16062.	GSM	Downlink	11:52:25.192	SACCH	MEASUREMENT_INFORMATION
16063.	GSM	Uplink	11:52:25.529	SACCH	MEASUREMENT_REPORT
16064.	GSM	Downlink	11:52:25.663	SACCH	MEASUREMENT_INFORMATION
16065.	GSM	Downlink	11:52:25.986	DCCH	CALL_PROCEEDING
16066.	GSM	Uplink	11:52:26.000	SACCH	MEASUREMENT_REPORT
16067.	GSM	Uplink	11:52:26.471	SACCH	MEASUREMENT_REPORT
16068.	GSM	Uplink	11:52:26.942	SACCH	MEASUREMENT_REPORT
16069.	GSM	Uplink	11:52:27.412	SACCH	MEASUREMENT_REPORT
16070.	GSM	Uplink	11:52:27.883	SACCH	MEASUREMENT_REPORT
16071.	GSM	Uplink	11:52:28.354	SACCH	MEASUREMENT_REPORT
16072.	GSM	Uplink	11:52:28.825	SACCH	MEASUREMENT_REPORT
16073.	GSM	Uplink	11:52:29.295	SACCH	MEASUREMENT_REPORT
16074.	GSM	Uplink	11:52:29.766	SACCH	MEASUREMENT_REPORT
16075.	GSM	Uplink	11:52:30.237	SACCH	MEASUREMENT_REPORT
16076.	GSM	Uplink	11:52:30.708	SACCH	MEASUREMENT_REPORT
16077.	GSM	Uplink	11:52:31.178	SACCH	MEASUREMENT_REPORT
16078.	GSM	Uplink	11:52:31.649	SACCH	MEASUREMENT_REPORT
16079.	GSM	Uplink	11:52:32.120	SACCH	MEASUREMENT_REPORT
16080.	GSM	Uplink	11:52:32.591	SACCH	MEASUREMENT_REPORT
16081.	GSM	Uplink	11:52:33.061	SACCH	MEASUREMENT_REPORT
16082.	GSM	Uplink	11:52:33.532	SACCH	MEASUREMENT_REPORT
16083.	GSM	Uplink	11:52:34.003	SACCH	MEASUREMENT_REPORT
16084.	GSM	Uplink	11:52:34.474	SACCH	MEASUREMENT_REPORT
16085.	GSM	Uplink	11:52:34.944	SACCH	MEASUREMENT_REPORT
16086.	GSM	Downlink	11:52:35.793	BCCH	SYSTEM_INFORMATION_TYPE_3
16087.	GSM	Downlink	11:52:36.029	BCCH	SYSTEM_INFORMATION_TYPE_4
16088.	GSM	Downlink	11:52:36.084	CCCH	PAGING_REQUEST_TYPE_1

Analysis:

- This call failure event occurred on short call at 11:52:36:202 time when UE was latched on to the 2G network.
- After sending “CM Service Request” message to core network, then core network responds with “Call Proceeding ” message. After that call setup has been failed.
- During the session UE was latched with ARFCN 5 and RF condition Rx lev -94 dBm is good and Rx qual 7 dB was very poor.
- As per the Analysis the call setup failure event occurred due to poor quality in the network.

Phase-2 Call Attempt Failure Analysis 3 From MS7 CWS MO

	Time	System	Serving band	
1.	11:45:20.854	UMTS FDD	2100	Dro
2.	11:52:36.202	GSM	900	Call
3.	12:03:39.941	UMTS FDD	2100	Dro

	1. best active RSCP	Time	Ch	SC	1. best active Ec/N0
5698.	-83.6	12:03:34.777	10690	38	
5699.		12:03:34.777	10690	38	-9.5
5700.	-86	12:03:35.417	10690	203	
5701.		12:03:35.417	10690	203	-13.8
5702.	-86	12:03:35.832	10690	203	
5703.		12:03:35.832	10690	38	-11.5
5704.	-78.8	12:03:36.413	10690	203	
5705.		12:03:36.413	10690	203	-7.1
5706.	-82.7	12:03:36.960	10690	203	
5707.		12:03:36.960	10690	203	-7
5708.	-91.1	12:03:37.494	10690	203	
5709.		12:03:37.494	10690	203	-13
5710.	-86.9	12:03:37.913	10690	38	
5711.		12:03:37.913	10690	38	-10.7
5712.	-82.5	12:03:38.413	10690	203	
5713.		12:03:38.413	10690	203	-9.5
5714.	-76.6	12:03:39.103	10690	38	
5715.		12:03:39.103	10690	38	-5.9
5716.	-79.8	12:03:39.355	10690	203	
5717.		12:03:39.355	10690	203	-8.5
5718.	-81.8	12:03:40.146	10690	203	
5719.		12:03:40.146	10690	203	-8
5720.	-79.7	12:03:40.596	10690	38	
5721.		12:03:40.596	10690	38	-5.4
5722.	-75.2	12:03:41.109	10690	38	
5723.		12:03:41.109	10690	38	-5.3
5724.	-94.6	12:03:41.808	10690	219	
5725.		12:03:41.808	10690	219	-21.1
5726.	-103	12:04:11.771	10690	203	
5727.		12:04:11.771	10690	203	-8.4
5728.	-103	12:04:12.163	10690	203	
5729.		12:04:12.163	10690	203	-6.4
5730.	-103	12:04:12.717	10690	203	
5731.		12:04:12.717	10690	203	-6.2
5732.	-103	12:04:13.161	10690	203	
5733.		12:04:13.161	10690	203	-6.8

	System	Transf. dir.	Time	Subchannel	Message name
18569.	UMTS FDD	Uplink	12:03:32.603	DCCH	SECURITY_MODE_COMPLETE
18570.	UMTS FDD	Downlink	12:03:32.972	DCCH	DOWNLINK_DIRECT_TRANSFER
18571.	UMTS FDD	Downlink	12:03:32.972	DCCH	ROUTING_AREA_UPDATE_ACCEPT
18572.	UMTS FDD	Uplink	12:03:32.974	DCCH	UPLINK_DIRECT_TRANSFER
18573.	UMTS FDD	Uplink	12:03:32.974	DCCH	ROUTING_AREA_UPDATE_COMPLETE
18574.	UMTS FDD	Downlink	12:03:33.172	DCCH	MEASUREMENT_CONTROL
18575.	UMTS FDD	Uplink	12:03:34.526	DCCH	MEASUREMENT_REPORT
18576.	UMTS FDD	Uplink	12:03:34.634	DCCH	MEASUREMENT_REPORT
18577.	UMTS FDD	Downlink	12:03:34.772	DCCH	ACTIVE_SET_UPDATE
18578.	UMTS FDD	Uplink	12:03:34.784	DCCH	ACTIVE_SET_UPDATE_COMPLETE
18579.	UMTS FDD	Uplink	12:03:35.256	DCCH	MEASUREMENT_REPORT
18580.	UMTS FDD	Downlink	12:03:35.412	DCCH	ACTIVE_SET_UPDATE
18581.	UMTS FDD	Uplink	12:03:35.424	DCCH	ACTIVE_SET_UPDATE_COMPLETE
18582.	UMTS FDD	Downlink	12:03:36.222	DCCH	MEASUREMENT_CONTROL
18583.	UMTS FDD	Uplink	12:03:36.227	DCCH	MEASUREMENT_REPORT
18584.	UMTS FDD	Downlink	12:03:36.342	DCCH	MEASUREMENT_CONTROL
18585.	UMTS FDD	Uplink	12:03:36.907	DCCH	MEASUREMENT_REPORT
18586.	UMTS FDD	Uplink	12:03:38.166	DCCH	MEASUREMENT_REPORT
18587.	UMTS FDD	Downlink	12:03:39.092	DCCH	RADIO_BEARER_SETUP
18588.	UMTS FDD	Uplink	12:03:39.355	DCCH	RADIO_BEARER_SETUP_COMPLETE
18589.	UMTS FDD	Downlink	12:03:39.642	DCCH	MEASUREMENT_CONTROL
18590.	UMTS FDD	Downlink	12:03:39.682	DCCH	MEASUREMENT_CONTROL
18591.	UMTS FDD	Downlink	12:03:39.722	DCCH	MEASUREMENT_CONTROL
18592.	UMTS FDD	Downlink	12:03:39.762	DCCH	MEASUREMENT_CONTROL
18593.	UMTS FDD	Downlink	12:03:39.842	DCCH	DOWNLINK_DIRECT_TRANSFER
18594.	UMTS FDD	Downlink	12:03:39.842	DCCH	DISCONNECT
18595.	UMTS FDD	Uplink	12:03:39.941	DCCH	UPLINK_DIRECT_TRANSFER
18596.	UMTS FDD	Uplink	12:03:39.941	DCCH	RELEASE
18597.	UMTS FDD	Downlink	12:03:40.322	DCCH	RADIO_BEARER_RELEASE
18598.	UMTS FDD	Downlink	12:03:40.362	DCCH	DOWNLINK_DIRECT_TRANSFER
18599.	UMTS FDD	Downlink	12:03:40.362	DCCH	RELEASE_COMPLETE
18600.	UMTS FDD	Uplink	12:03:40.767	DCCH	MEASUREMENT_REPORT
18601.	UMTS FDD	Uplink	12:03:40.946	DCCH	MEASUREMENT_REPORT
18602.	UMTS FDD	Uplink	12:03:40.977	DCCH	MEASUREMENT_REPORT
18603.	UMTS FDD	Uplink	12:03:41.057	DCCH	MEASUREMENT_REPORT
18604.	UMTS FDD	Uplink	12:03:41.115	DCCH	RADIO_BEARER_RELEASE_COMPLETE

Analysis:

- This call failure event occurred on short call at 12:03:39:941 time when UE was latched on to the 3G network.
- After sending the 'CM Service Request' message to the core network, the core network responded with a 'Call Proceeding' message. However, the call was disconnected with Cause (27): Destination out of order.
- During the failure, UE was latched with PSC 203 and RF condition RSCP -79.8 dBm good but Ec/No -8.5 dB are very good.
- Need to check MT.

Downlink

DISCONNECT 3GPP TS 24.008 ver 15.4.0 Rel 15 (9.3.7.1)

M Protocol Discriminator (hex data: 3)
(0x3) Call control (call related SS message)
M Transaction Identifier (hex data: 8)
TI flag: 1 (the message is sent to the side that originates the TI)
TI value: 0
M Message Type (hex data: 25)
Message number: 37
M Cause (hex data: 02e09b)
Coding standard: Standard defined for the GSM PLMNs
Location: user
Cause (27): Destination out of order

Phase-2 Call Attempt Failure Analysis 3 From MS8 CWS MT

	Time	RxLev sub	ARFCN	BSIC	LAC	RAC	RXQ sul
434.	12:03:31.353	-76	20	30	1		
435.	12:03:32.091						1
436.	12:03:32.162	-82	20	30	1		
437.	12:03:32.562						7
438.	12:03:32.677	-87	20	30	1		
439.	12:03:33.032						0
440.	12:03:33.228	-88	20	30	1		
441.	12:03:33.295	-88	20	30	1		
442.	12:03:33.503						4
443.	12:03:33.974						7
444.	12:03:34.101	-89	20	30	1		
445.	12:03:34.560	-90	20	30	1		
446.	12:03:34.916						6
447.	12:03:35.114	-88	20	30	1		
448.	12:03:35.386						7
449.	12:03:35.857	-88	20	30	1		
450.	12:03:36.328	-89	20	30	1		
451.	12:03:37.269	-87	20	30	1		
452.	12:03:37.740	-87	20	30	1		
453.	12:03:38.326	-90	20	30	1		
454.	12:03:38.808	-88	20	30	1		
455.	12:03:39.355	-89	20	30	1		
456.	12:03:40.162	-91	20	30	1		
457.	12:03:40.680	-91	20	30	1		
458.	12:03:41.506	-91	20	30	1		
459.	12:03:42.164	-94	20	30	1		
460.	12:03:42.563	-93	20	30	1		
461.	12:03:43.163	-93	20	30	1		
462.	12:03:43.504	-93	20	30	1		
463.	12:03:44.163	-93	20	30	1		
464.	12:03:44.163						
465.	12:03:47.299	-48	17	25	1	0	
466.	12:03:47.299						0
467.	12:03:47.770	-50	17	25	1	0	
468.	12:03:48.241	-51	17	25	1	0	
469.	12:03:48.808	-55	17	25	1	0	

	Event ID	System	Transf. dir.	Time	Subchannel	Message name
18601.	L3SM	GSM	Downlink	12:03:32.206	SACCH	MEASUREMENT_INFORMATION
18602.	L3SM	GSM	Uplink	12:03:32.562	SACCH	MEASUREMENT_REPORT
18603.	L3SM	GSM	Downlink	12:03:32.677	SACCH	MEASUREMENT_INFORMATION
18604.	L3SM	GSM	Uplink	12:03:33.032	SACCH	MEASUREMENT_REPORT
18605.	L3SM	GSM	Downlink	12:03:33.148	SACCH	MEASUREMENT_INFORMATION
18606.	L3SM	GSM	Uplink	12:03:33.503	SACCH	MEASUREMENT_REPORT
18607.	L3SM	GSM	Uplink	12:03:33.974	SACCH	MEASUREMENT_REPORT
18608.	L3SM	GSM	Uplink	12:03:34.445	SACCH	MEASUREMENT_REPORT
18609.	L3SM	GSM	Downlink	12:03:34.560	SACCH	MEASUREMENT_INFORMATION
18610.	L3SM	GSM	Uplink	12:03:34.916	SACCH	MEASUREMENT_REPORT
18611.	L3SM	GSM	Uplink	12:03:35.386	SACCH	MEASUREMENT_REPORT
18612.	L3SM	GSM	Uplink	12:03:35.857	SACCH	MEASUREMENT_REPORT
18613.	L3SM	GSM	Uplink	12:03:36.328	SACCH	MEASUREMENT_REPORT
18614.	L3SM	GSM	Uplink	12:03:36.798	SACCH	MEASUREMENT_REPORT
18615.	L3SM	GSM	Uplink	12:03:37.269	SACCH	MEASUREMENT_REPORT
18616.	L3SM	GSM	Uplink	12:03:37.740	SACCH	MEASUREMENT_REPORT
18617.	L3SM	GSM	Uplink	12:03:38.211	SACCH	MEASUREMENT_REPORT
18618.	L3SM	GSM	Downlink	12:03:38.414	DCCH	IDENTITY_REQUEST
18619.	L3SM	GSM	Uplink	12:03:38.414	DCCH	IDENTITY_RESPONSE
18620.	L3SM	GSM	Uplink	12:03:38.682	SACCH	MEASUREMENT_REPORT
18621.	L3SM	GSM	Uplink	12:03:39.152	SACCH	MEASUREMENT_REPORT
18622.	L3SM	GSM	Uplink	12:03:39.623	SACCH	MEASUREMENT_REPORT
18623.	L3SM	GSM	Uplink	12:03:40.094	SACCH	MEASUREMENT_REPORT
18624.	L3SM	GSM	Uplink	12:03:40.565	SACCH	MEASUREMENT_REPORT
18625.	L3SM	GSM	Uplink	12:03:41.036	SACCH	MEASUREMENT_REPORT
18626.	L3SM	GSM	Uplink	12:03:41.506	SACCH	MEASUREMENT_REPORT
18627.	L3SM	GSM	Uplink	12:03:41.977	SACCH	MEASUREMENT_REPORT
18628.	L3SM	GSM	Uplink	12:03:42.448	SACCH	MEASUREMENT_REPORT
18629.	L3SM	GSM	Uplink	12:03:42.918	SACCH	MEASUREMENT_REPORT
18630.	L3SM	GSM	Uplink	12:03:43.389	SACCH	MEASUREMENT_REPORT
18631.	L3SM	GSM	Uplink	12:03:43.860	SACCH	MEASUREMENT_REPORT
18632.	L3SM	GSM	Downlink	12:03:44.348	BCCH	SYSTEM_INFORMATION_TYPE_3
18633.	L3SM	GSM	Downlink	12:03:44.907	BCCH	SYSTEM_INFORMATION_TYPE_3
18634.	L3SM	GSM	Downlink	12:03:45.054	BCCH	SYSTEM_INFORMATION_TYPE_3
18635.	L3SM	GSM	Downlink	12:03:45.375	BCCH	SYSTEM_INFORMATION_TYPE_13
18636.	L3SM	GSM	Downlink	12:03:45.611	BCCH	SYSTEM_INFORMATION_TYPE_2QUATER

Analysis:

- On MT End, During the setup fail, UE was latched with ARFCN 20 and RF condition Rxlev -89 dBm is good and Rxqual 7 which is poor.
- As per the Analysis the call setup failure event occurred due to poor quality in the network.

Call Drop Analysis 1 From MS9 Airtel MO

	Time	System	Serving band	Call type	Cal
1.	11:06:23.274	GSM	900	Voice call	Orig

	Time	RxLev sub	ARFCN	BSIC	LAC	RAC	RXQ sub
359.	11:05:19.477						2
360.	11:05:20.082	-91	96		50000	1	
361.	11:05:20.082						4
362.	11:05:20.538	-90	96		50000	1	
363.	11:05:20.538						6
364.	11:05:21.147	-93	96		50000	1	
365.	11:05:21.147						4
366.	11:05:21.401	-93	96		50000	1	
367.	11:05:21.401						5
368.	11:05:22.147	-95	96		50000	1	
369.	11:05:22.147						4
370.	11:05:22.837	-91	96		50000	1	
371.	11:05:22.837						4
372.	11:05:23.502	-89	96		50000	1	
373.	11:05:23.502						1
374.	11:05:24.145	-90	96		50000	1	
375.	11:05:24.145						3
376.	11:05:24.757	-81	96		50000	1	
377.	11:05:24.757						0
378.	11:05:25.717	-88	96		50000	1	
379.	11:05:25.717						3
380.	11:05:26.783	-93	96		50000	1	
381.	11:05:26.783						6
382.	11:05:27.157	-92	96		50000	1	
383.	11:05:27.157						4
384.	11:05:27.641	-91	96		50000	1	
385.	11:05:27.641						6
386.	11:05:28.265	-90	96		50000	1	
387.	11:05:28.265						0
388.	11:05:29.082	-87	96		50000	1	
389.	11:05:29.082						0
390.	11:05:29.584	-90	96		50000	1	
391.	11:05:29.584						3
392.	11:05:30.037	-90	96		50000	1	
393.	11:05:30.037						4
394.	11:05:30.997	-91	96		50000	1	
395.	11:05:30.997						5
396.	11:05:31.477	-93	96		50000	1	

	Event ID	System	Transf. dir.	Time	Subchannel	Message name	Ms
2752.	L3SM	GSM	Uplink	11:05:23.317	SACCH	MEASUREMENT_REPORT	
2753.	L3SM	GSM	Downlink	11:05:23.751	SACCH	MEASUREMENT_INFORMATION	
2754.	L3SM	GSM	Uplink	11:05:23.797	SACCH	MEASUREMENT_REPORT	
2755.	L3SM	GSM	Downlink	11:05:24.231	SACCH	SYSTEM_INFORMATION_TYPE_6	
2756.	L3SM	GSM	Uplink	11:05:24.277	SACCH	MEASUREMENT_REPORT	
2757.	L3SM	GSM	Downlink	11:05:24.711	SACCH	SYSTEM_INFORMATION_TYPE_5	
2758.	L3SM	GSM	Uplink	11:05:24.757	SACCH	MEASUREMENT_REPORT	
2759.	L3SM	GSM	Downlink	11:05:25.191	SACCH	MEASUREMENT_INFORMATION	
2760.	L3SM	GSM	Uplink	11:05:25.237	SACCH	MEASUREMENT_REPORT	
2761.	L3SM	GSM	Downlink	11:05:25.671	SACCH	SYSTEM_INFORMATION_TYPE_6	
2762.	L3SM	GSM	Uplink	11:05:25.717	SACCH	MEASUREMENT_REPORT	
2763.	L3SM	GSM	Downlink	11:05:26.151	SACCH	SYSTEM_INFORMATION_TYPE_5	
2764.	L3SM	GSM	Uplink	11:05:26.197	SACCH	MEASUREMENT_REPORT	
2765.	L3SM	GSM	Downlink	11:05:26.631	SACCH	MEASUREMENT_INFORMATION	
2766.	L3SM	GSM	Uplink	11:05:26.677	SACCH	MEASUREMENT_REPORT	
2767.	L3SM	GSM	Downlink	11:05:27.111	SACCH	SYSTEM_INFORMATION_TYPE_6	
2768.	L3SM	GSM	Uplink	11:05:27.157	SACCH	MEASUREMENT_REPORT	
2769.	L3SM	GSM	Downlink	11:05:27.591	SACCH	SYSTEM_INFORMATION_TYPE_5	
2770.	L3SM	GSM	Uplink	11:05:27.637	SACCH	MEASUREMENT_REPORT	
2771.	L3SM	GSM	Downlink	11:05:28.071	SACCH	MEASUREMENT_INFORMATION	
2772.	L3SM	GSM	Uplink	11:05:28.117	SACCH	MEASUREMENT_REPORT	
2773.	L3SM	GSM	Downlink	11:05:28.551	SACCH	SYSTEM_INFORMATION_TYPE_6	
2774.	L3SM	GSM	Uplink	11:05:28.597	SACCH	MEASUREMENT_REPORT	
2775.	L3SM	GSM	Downlink	11:05:29.031	SACCH	SYSTEM_INFORMATION_TYPE_5	
2776.	L3SM	GSM	Uplink	11:05:29.077	SACCH	MEASUREMENT_REPORT	
2777.	L3SM	GSM	Downlink	11:05:29.511	SACCH	MEASUREMENT_INFORMATION	
2778.	L3SM	GSM	Uplink	11:05:29.557	SACCH	MEASUREMENT_REPORT	
2779.	L3SM	GSM	Downlink	11:05:29.991	SACCH	SYSTEM_INFORMATION_TYPE_6	
2780.	L3SM	GSM	Uplink	11:05:30.037	SACCH	MEASUREMENT_REPORT	
2781.	L3SM	GSM	Downlink	11:05:30.471	SACCH	SYSTEM_INFORMATION_TYPE_5	
2782.	L3SM	GSM	Uplink	11:05:30.517	SACCH	MEASUREMENT_REPORT	
2783.	L3SM	GSM	Downlink	11:05:30.951	SACCH	MEASUREMENT_INFORMATION	
2784.	L3SM	GSM	Uplink	11:05:30.997	SACCH	MEASUREMENT_REPORT	
2785.	L3SM	GSM	Downlink	11:05:31.431	SACCH	SYSTEM_INFORMATION_TYPE_6	
2786.	L3SM	GSM	Uplink	11:05:31.477	SACCH	MEASUREMENT_REPORT	
2787.	L3SM	GSM	Downlink	11:05:31.911	SACCH	SYSTEM_INFORMATION_TYPE_5	
2788.	L3SM	GSM	Uplink	11:05:31.957	SACCH	MEASUREMENT_REPORT	

Analysis:

- This call drop event occurred on long call at 11:06:23:274 time when UE was latched with 2G network.
- After getting Alerting message at 11:04:48:402 time than Call drop happened.
- During the session UE was latched with ARFCN 96 and RF condition Rx lev -91 dBm is good and Rx qual 6 dB was very poor.
- As per the Analysis the call setup drop event occurred due to poor quality in the network.

Call Drop Analysis 1 From MS11 CWS MO

	Time	System	Serving band	Call type	Cal
1.	11:05:31.099	GSM	900	Voice call	Orig

	Time	RxLev sub	ARFCN	BSIC	LAC	RAC	RXQ sub
319.	11:03:46.082	-90	24	18	1	10	
320.	11:03:46.513						0
321.	11:03:47.081	-93	24	18	1	10	
322.	11:03:47.473	-92	24	18	1	10	
323.	11:03:47.953						3
324.	11:03:48.121	-94	24	18	1	10	
325.	11:03:48.387						
326.	11:05:04.585						2
327.	11:05:05.065	-90	24	15	10	10	
328.	11:05:05.065						0
329.	11:05:05.545						7
330.	11:05:06.025						6
331.	11:05:06.078	-94	24	15	1	10	
332.	11:05:06.505						7
333.	11:05:06.528	-95	24	15	1	10	
334.	11:05:06.985						5
335.	11:05:07.148	-94	24	15	1	10	
336.	11:05:07.465						6
337.	11:05:07.589	-95	24	15	1	10	
338.	11:05:07.945						7
339.	11:05:08.032	-94	24	15	1	10	
340.	11:05:08.429	-96	24	15	1	10	
341.	11:05:09.149	-96	24	15	1	10	
342.	11:05:09.611	-95	24	15	1	10	
343.	11:05:10.144	-95	24	15	1	10	
344.	11:05:10.571	-95	24	15	1	10	
345.	11:05:11.129	-95	24	15	1	10	
346.	11:05:11.531	-95	24	15	1	10	
347.	11:05:12.143	-96	24	15	1	10	
348.	11:05:12.790	-95	24	15	1	10	
349.	11:05:13.266	-97	24	15	1	10	
350.	11:05:13.792	-97	24	15	1	10	
351.	11:05:14.185	-97	24	15	1	10	
352.	11:05:14.665	-97	24	15	1	10	
353.	11:05:15.311	-96	24	15	1	10	
354.	11:05:16.086	-96	24	15	1	10	

	System	Transf. dir.	Time	Subchannel	Message name
2631.	GSM	Uplink	11:05:03.929	DCCH	HANDOVER_COMPLETE
2632.	GSM	Downlink	11:05:03.989	DCCH	PHYSICAL_INFORMATION
2633.	GSM	Downlink	11:05:04.072	DCCH	PHYSICAL_INFORMATION
2634.	GSM	Downlink	11:05:04.132	DCCH	PHYSICAL_INFORMATION
2635.	GSM	Downlink	11:05:04.211	DCCH	PHYSICAL_INFORMATION
2636.	GSM	Uplink	11:05:04.237	DCCH	GPRS_SUSPENSION_REQUEST
2637.	GSM	Downlink	11:05:04.350	DCCH	IDENTITY_REQUEST
2638.	GSM	Uplink	11:05:04.350	DCCH	IDENTITY_RESPONSE
2639.	GSM	Downlink	11:05:04.539	SACCH	SYSTEM_INFORMATION_TYPE_5TER
2640.	GSM	Uplink	11:05:04.585	SACCH	MEASUREMENT_REPORT
2641.	GSM	Downlink	11:05:05.018	SACCH	SYSTEM_INFORMATION_TYPE_5
2642.	GSM	Uplink	11:05:05.065	SACCH	MEASUREMENT_REPORT
2643.	GSM	Uplink	11:05:05.545	SACCH	MEASUREMENT_REPORT
2644.	GSM	Downlink	11:05:05.978	SACCH	SYSTEM_INFORMATION_TYPE_6
2645.	GSM	Uplink	11:05:06.025	SACCH	MEASUREMENT_REPORT
2646.	GSM	Downlink	11:05:06.458	SACCH	MEASUREMENT_INFORMATION
2647.	GSM	Uplink	11:05:06.505	SACCH	MEASUREMENT_REPORT
2648.	GSM	Downlink	11:05:06.938	SACCH	MEASUREMENT_INFORMATION
2649.	GSM	Uplink	11:05:06.985	SACCH	MEASUREMENT_REPORT
2650.	GSM	Downlink	11:05:07.418	SACCH	MEASUREMENT_INFORMATION
2651.	GSM	Uplink	11:05:07.465	SACCH	MEASUREMENT_REPORT
2652.	GSM	Uplink	11:05:07.945	SACCH	MEASUREMENT_REPORT
2653.	GSM	Uplink	11:05:08.425	SACCH	MEASUREMENT_REPORT
2654.	GSM	Uplink	11:05:08.905	SACCH	MEASUREMENT_REPORT
2655.	GSM	Downlink	11:05:09.338	SACCH	SYSTEM_INFORMATION_TYPE_5TER
2656.	GSM	Uplink	11:05:09.385	SACCH	MEASUREMENT_REPORT
2657.	GSM	Uplink	11:05:09.865	SACCH	MEASUREMENT_REPORT
2658.	GSM	Uplink	11:05:10.345	SACCH	MEASUREMENT_REPORT
2659.	GSM	Uplink	11:05:10.825	SACCH	MEASUREMENT_REPORT
2660.	GSM	Uplink	11:05:11.305	SACCH	MEASUREMENT_REPORT
2661.	GSM	Uplink	11:05:11.785	SACCH	MEASUREMENT_REPORT
2662.	GSM	Uplink	11:05:12.265	SACCH	MEASUREMENT_REPORT
2663.	GSM	Uplink	11:05:12.745	SACCH	MEASUREMENT_REPORT
2664.	GSM	Uplink	11:05:13.225	SACCH	MEASUREMENT_REPORT
2665.	GSM	Downlink	11:05:13.658	SACCH	SYSTEM_INFORMATION_TYPE_6
2666.	GSM	Uplink	11:05:13.705	SACCH	MEASUREMENT_REPORT

Analysis:

- This call drop event occurred on long call at 11:05:31:099 time when UE was latched with 2G network.
- After getting Alerting message at 11:04:49:466 time than Call drop happened.
- During the session UE was latched with ARFCN 24 and RF condition Rx lev -95 dBm is good and Rx qual 7 dB was very poor.
- As per the Analysis the call setup drop event occurred due to poor quality in the network.

THANKS