

## 4. Analysis of slope

### 4.1. Aracá – slope maps

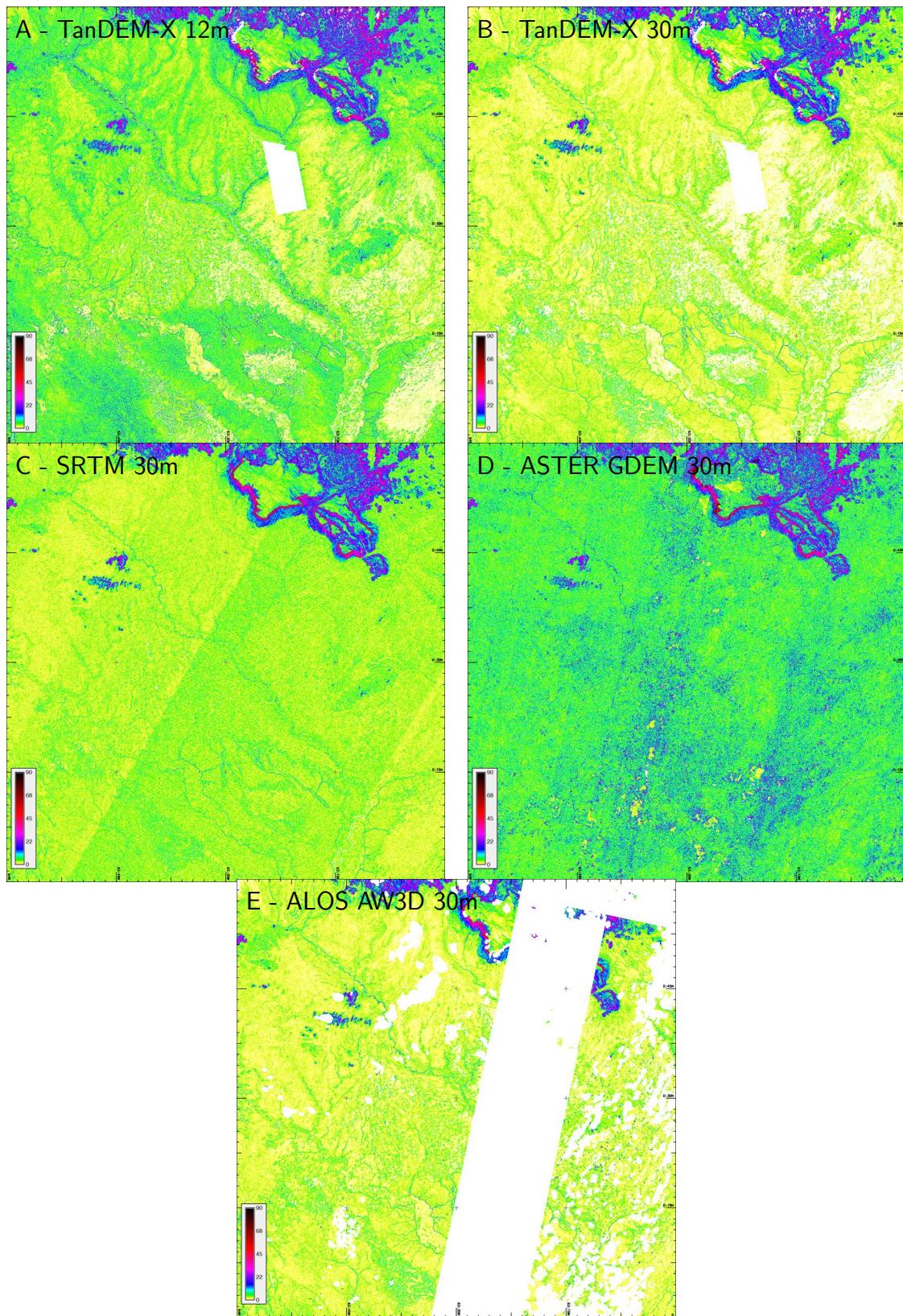


Figure S.4.1. Slope maps for Aracá area. A) TanDEM-X, 12 m resolution; B) TanDEM-X, 30 m resolution; C) SRTM, 30 m resolution; D) ASTER GDEM, 30 m resolution; E) ALOS AW3D, 30 m resolution.

#### 4.2. Barcelos – slope maps

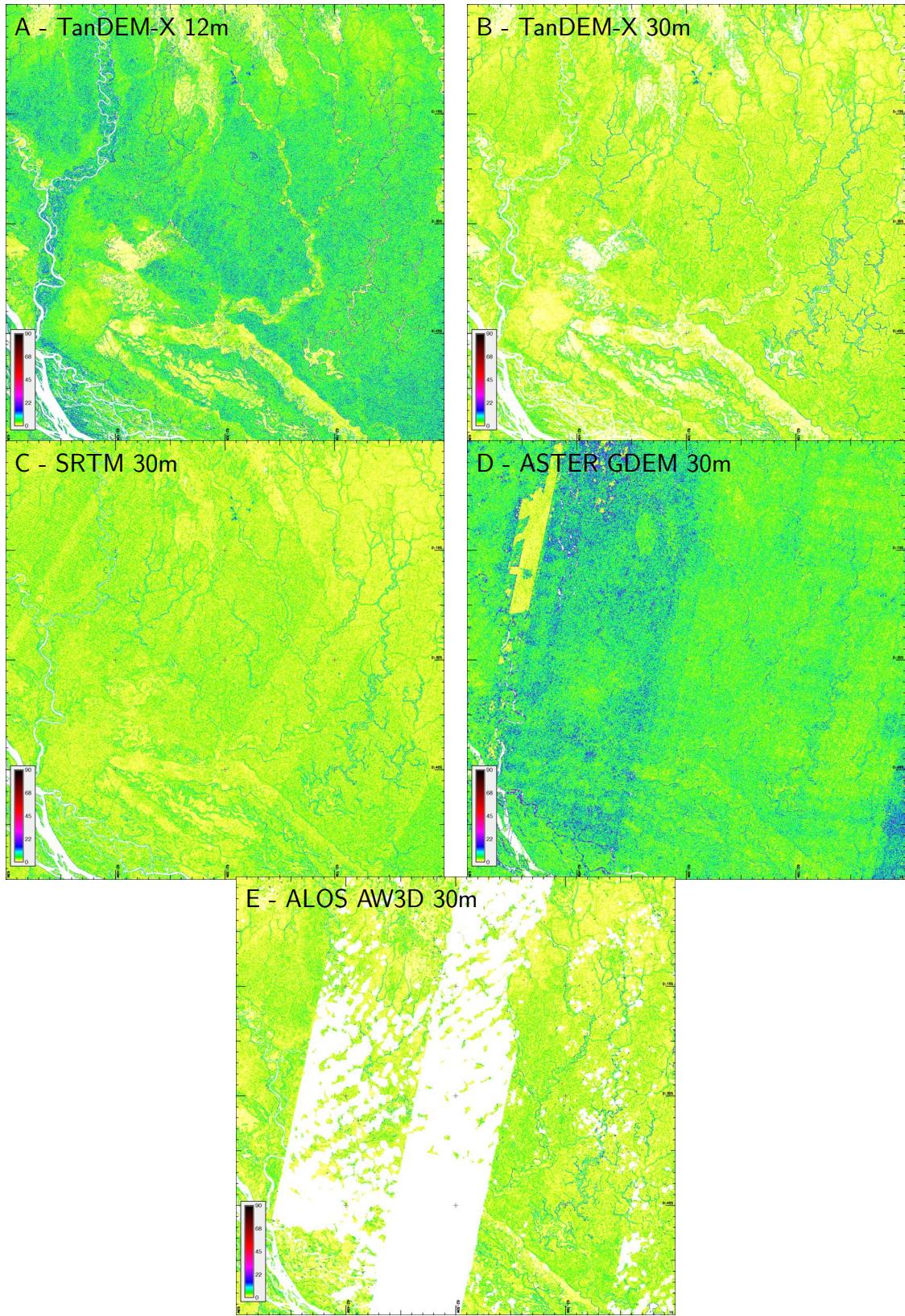


Figure S.4.2. Slope maps for Barcelos area. A) TanDEM-X, 12 m resolution; B) TanDEM-X, 30 m resolution; C) SRTM, 30 m resolution; D) ASTER GDEM, 30 m resolution; E) ALOS AW3D, 30 m resolution.

#### 4.3. Pantanal – slope maps

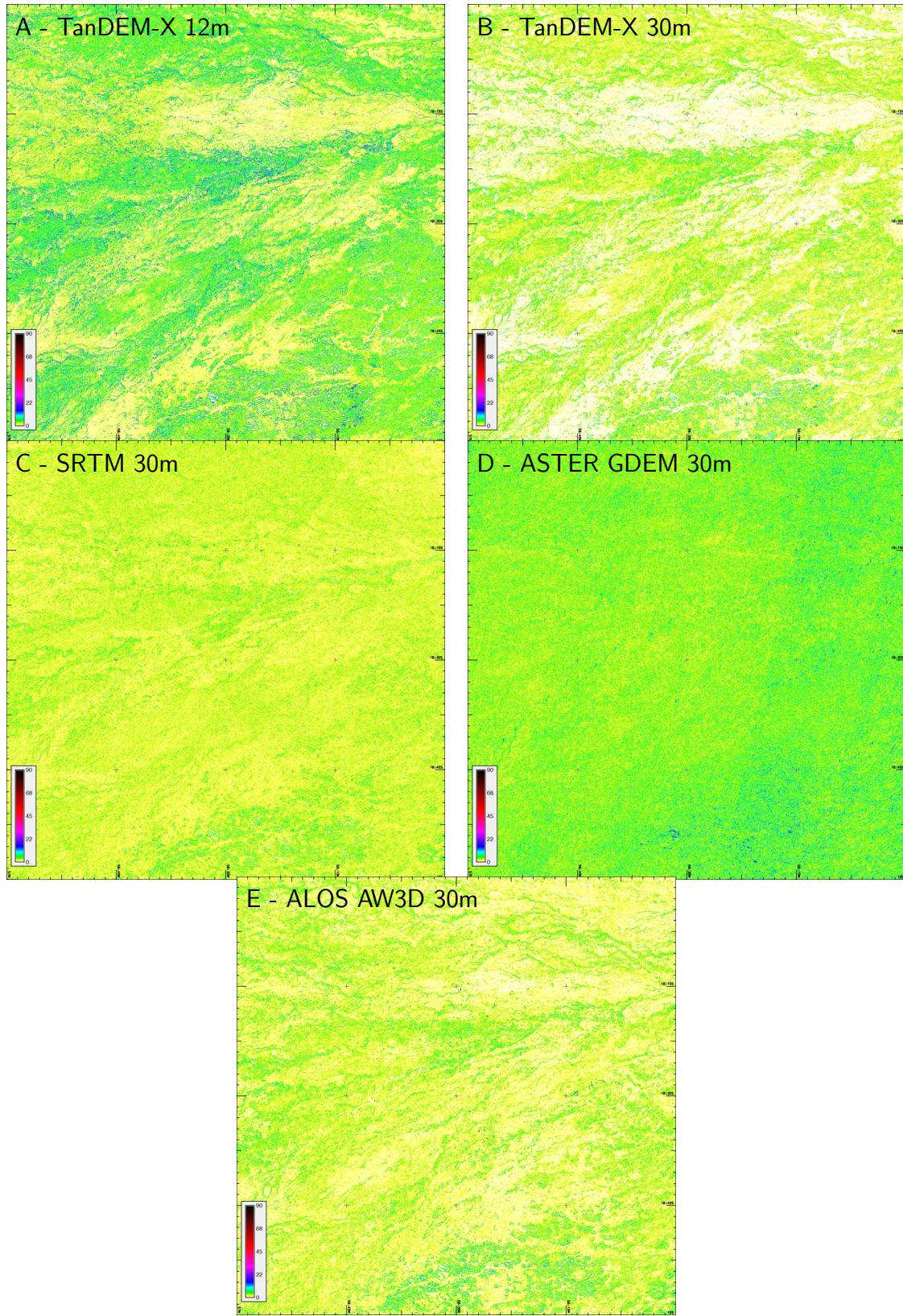


Figure S.4.3. Slope maps for Pantanal area. A) TanDEM-X, 12 m resolution; B) TanDEM-X, 30 m resolution; C) SRTM, 30 m resolution; D) ASTER GDEM, 30 m resolution; E) ALOS AW3D, 30 m resolution.

#### 4.4. Iporanga – slope maps

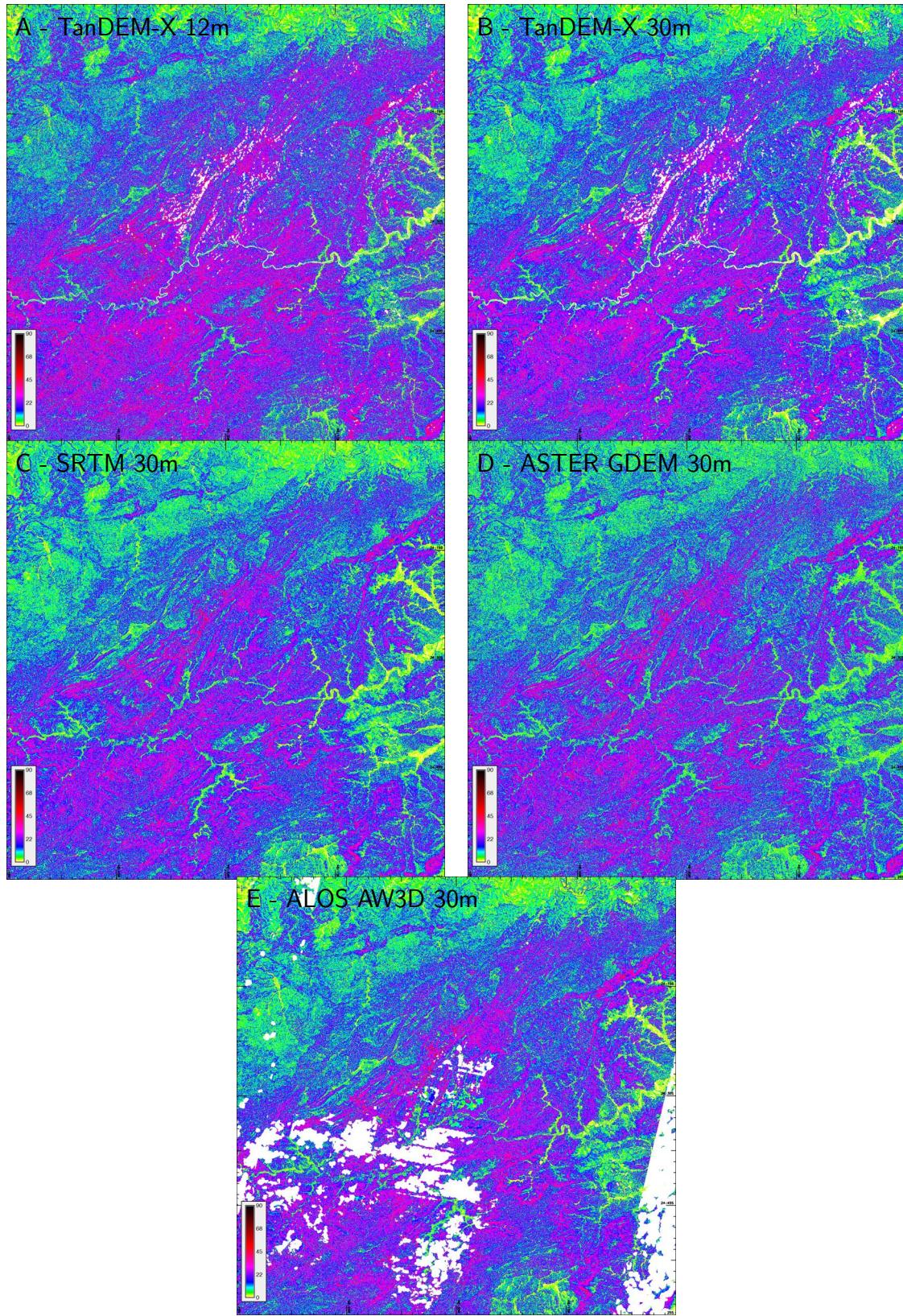


Figure S.4.4. Slope maps for Iporanga area. A) TanDEM-X, 12 m resolution; B) TanDEM-X, 30 m resolution; C) SRTM, 30 m resolution; D) ASTER GDEM, 30 m resolution; E) ALOS AW3D, 30 m resolution.

#### 4.5. Rio Claro – slope maps

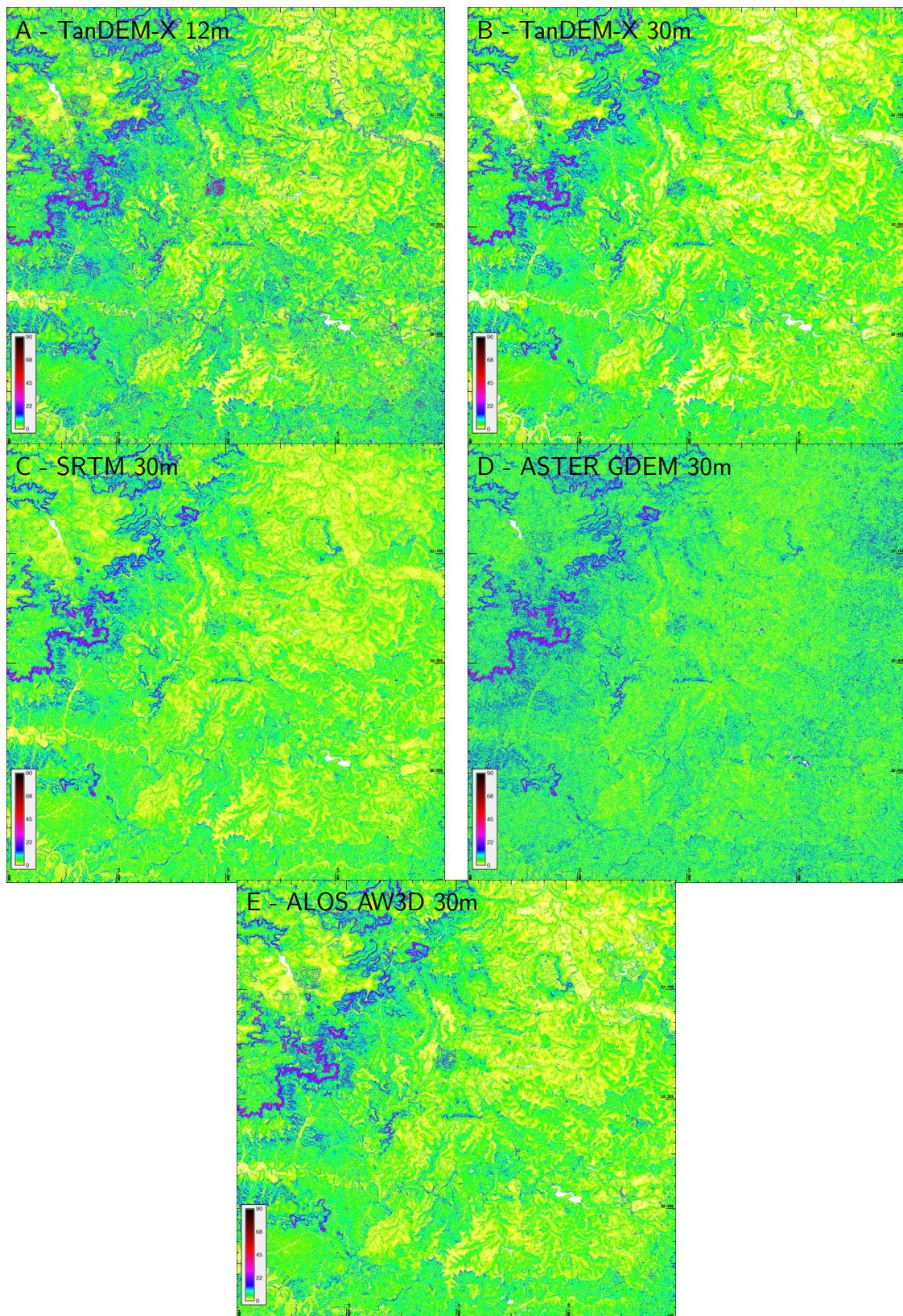


Figure S.4.5. Slope maps for Rio Claro area. A) TanDEM-X, 12 m resolution; B) TanDEM-X, 30 m resolution; C) SRTM, 30 m resolution; D) ASTER GDEM, 30 m resolution; E) ALOS AW3D, 30 m resolution.

#### 4.6. Santa Catarina – slope maps

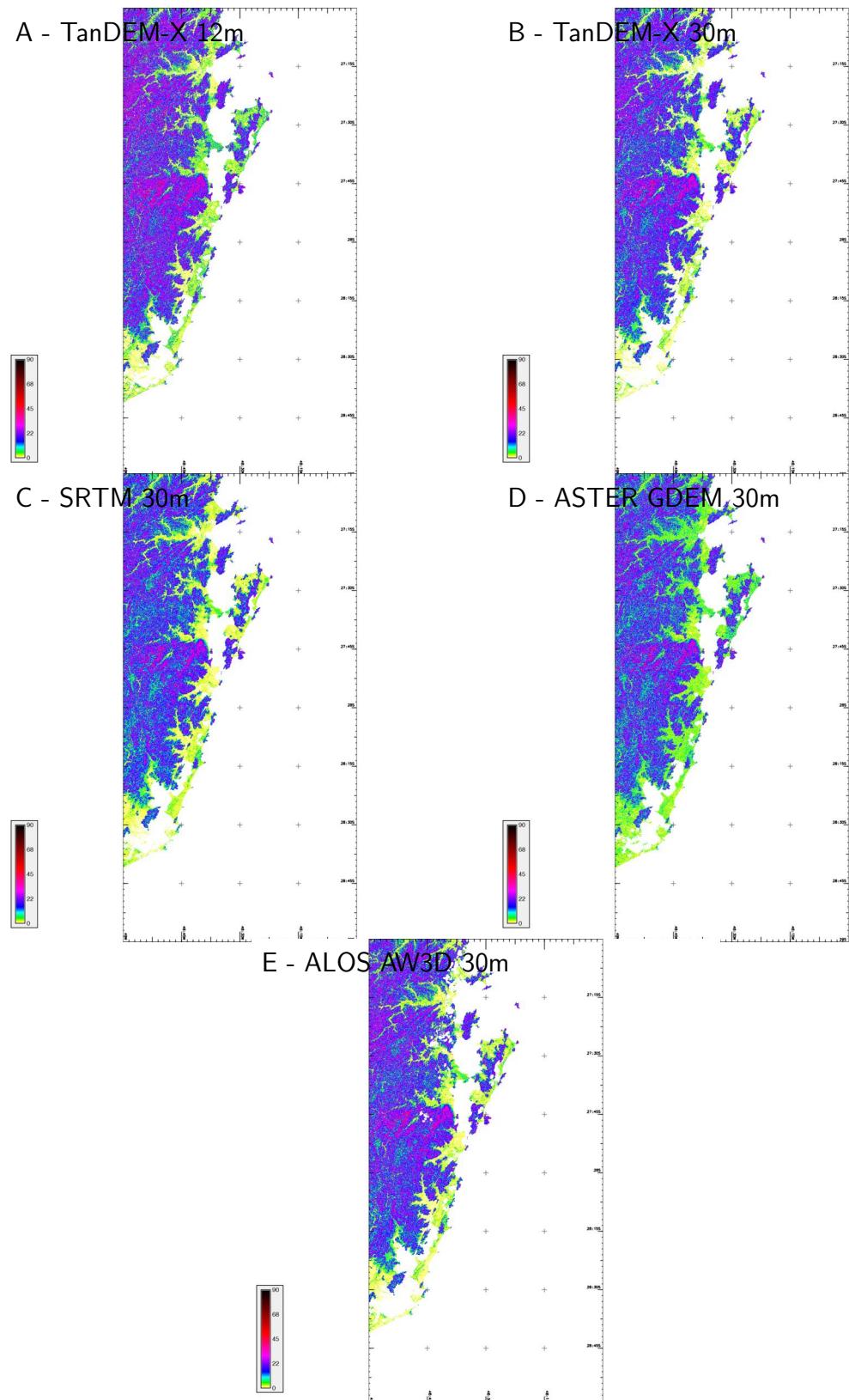


Figure S.4.6. Slope maps for Santa Catarina area. A) TanDEM-X, 12 m resolution; B) TanDEM-X, 30 m resolution; C) SRTM, 30 m resolution; D) ASTER GDEM, 30 m resolution; E) ALOS AW3D, 30 m resolution.

#### 4.7. Serra do Mar – slope maps

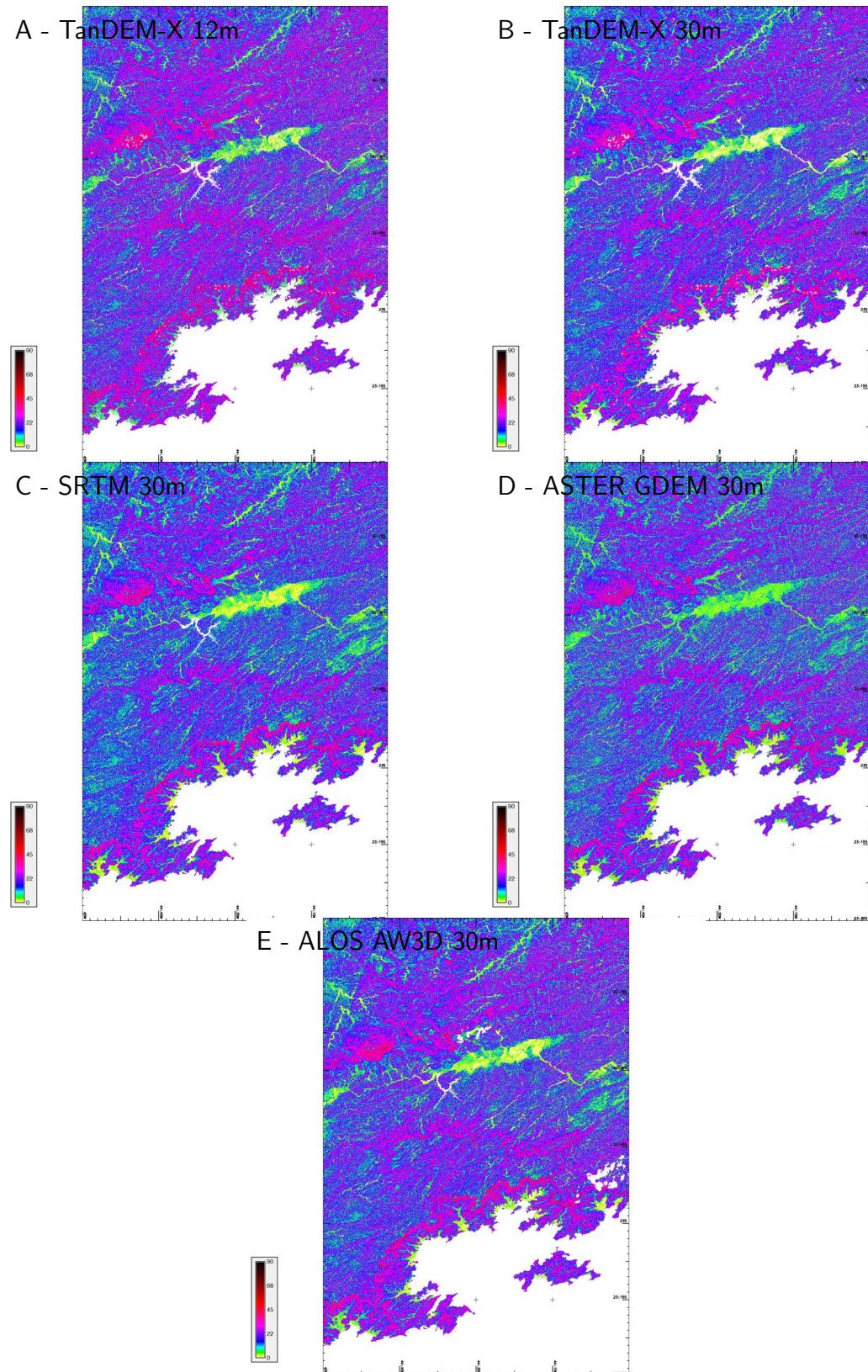


Figure S.4.7. Slope maps for Serra do Mar area. A) TanDEM-X, 12 m resolution; B) TanDEM-X, 30 m resolution; C) SRTM, 30 m resolution; D) ASTER GDEM, 30 m resolution; E) ALOS AW3D, 30 m resolution.

#### 4.8. Summary statistics of slope

Table S.8. Summary statistics of slope - Aracá area

stats	min	max	range	mean	median	stddev	skew	kurt	p25	p75
tdx12	0.00	86.27	86.27	5.11	3.49	5.74	3.39	17.84	1.74	6.26
tdx30	0.00	80.17	80.17	3.17	1.73	4.96	4.33	25.19	0.84	3.27
srtm30	0.00	81.59	81.59	4.01	2.79	4.95	4.79	32.68	1.68	4.29
aster30	0.00	88.75	88.75	7.37	6.03	5.87	3.18	20.03	3.73	9.25
aw3d30	0.00	71.13	71.13	2.80	1.77	3.87	5.37	42.18	1.04	3.04

Table S.9. Summary statistics of slope - Barcelos area

stats	min	max	range	mean	median	stddev	skew	kurt	p25	p75
tdx12	4.22	70.60	70.60	5.64	4.75	4.18	1.55	4.18	2.59	7.65
tdx30	0.00	27.82	27.82	2.45	1.92	2.10	2.17	7.13	1.06	3.17
srtm30	0.00	31.25	31.25	2.79	2.37	2.01	1.86	6.16	1.40	3.66
aster30	0.00	61.26	61.26	5.96	5.11	4.13	1.76	6.06	3.09	7.84
aw3d30	0.00	57.40	57.39	2.48	1.97	2.21	3.08	21.26	1.04	3.23

Table S.10. Summary statistics of slope - Pantanal area

stats	min	max	range	mean	median	stddev	skew	kurt	p25	p75
tdx12	0.00	75.25	75.25	3.60	2.31	3.56	2.09	7.91	1.09	5.04
tdx30	0.00	46.32	46.32	1.65	1.03	1.74	1.91	5.48	0.38	2.34
srtm30	0.00	35.74	35.73	2.11	1.85	1.32	1.39	3.88	1.19	2.77
aster30	0.00	44.60	44.60	3.86	3.40	2.35	1.26	2.81	2.11	5.08
aw3d30	0.00	42.65	42.65	1.88	1.37	1.69	2.37	10.54	0.77	2.40

Table S.11. Summary statistics of slope - Iporanga area

stats	min	max	range	mean	median	stddev	skew	kurt	p25	p75
tdx12	0.00	80.03	80.03	18.41	17.75	10.13	0.40	-0.31	10.27	25.62
tdx30	0.00	66.90	66.90	16.33	15.66	9.09	0.34	-0.57	8.96	23.03
srtm30	0.00	71.40	71.40	15.14	14.17	8.70	0.52	-0.18	8.21	21.14
aster30	0.00	65.89	65.89	15.53	14.30	8.94	0.61	-0.08	8.43	21.51
aw3d30	0.00	79.71	79.71	15.91	15.01	9.15	0.49	-0.10	8.55	22.43

Table S.12. Summary statistics of slope - Rio Claro area

stats	min	max	range	mean	median	stddev	skew	kurt	p25	p75
tdx12	0.00	77.86	77.86	6.23	4.80	5.50	2.65	11.09	2.74	7.84
tdx30	0.00	60.40	60.40	4.96	4.01	4.12	2.73	12.83	2.33	6.35
srtm30	0.00	68.34	68.34	4.91	4.08	3.83	2.77	14.80	2.40	6.30
aster30	0.00	58.69	58.69	6.73	5.89	4.39	1.82	6.77	3.72	8.79
aw3d30	0.00	70.56	70.56	5.10	4.13	4.23	2.80	13.58	2.40	6.49

Table S.13. Summary statistics of slope - Santa Catarina area

stats	min	max	range	mean	median	stddev	skew	kurt	p25	p75
tdx12	0.00	82.15	82.15	16.31	16.46	10.86	0.31	-0.54	6.50	24.30
tdx30	0.00	62.97	62.97	14.37	14.84	9.84	0.16	-0.91	5.02	22.03
srtm30	0.00	68.29	68.29	13.45	13.57	9.01	0.27	-0.73	4.91	20.25
aster30	0.00	66.12	66.12	13.86	13.11	9.07	0.48	-0.48	5.80	20.47
aw3d30	0.00	74.07	74.07	14.77	15.10	9.79	0.18	-0.86	5.62	22.32

Table S.14. Summary statistics of slope - Serra do Mar area

stats	min	max	range	mean	median	stddev	skew	kurt	p25	p75
tdx12	0.00	84.57	84.57	20.76	20.74	10.33	0.30	0.12	13.18	27.79
tdx30	0.00	74.35	74.35	18.79	18.86	9.32	0.20	-0.17	11.95	25.29
srtm30	0.00	77.96	77.96	17.21	16.93	9.05	0.42	0.25	10.53	23.20
aster30	0.00	71.96	71.96	17.77	17.24	9.56	0.41	-0.15	10.30	24.34
aw3d30	0.00	74.56	74.56	18.82	18.86	9.63	0.22	-0.19	11.65	25.57

#### 4.9. Histograms of slope

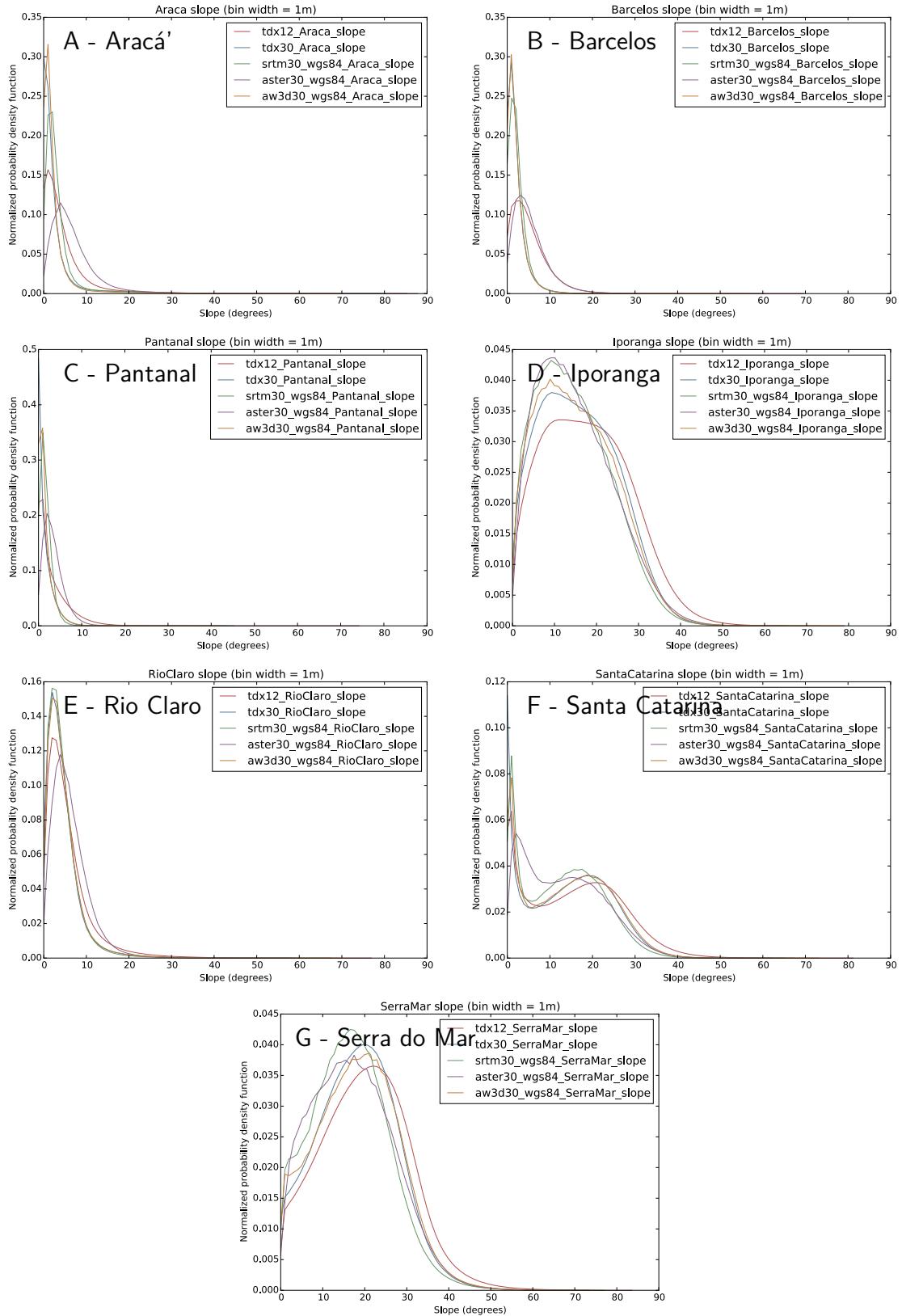


Figure S.4.8. Histograms of slope for each study area. A) Aracá; B) Barcelos; C) Pantanal; D) Iporanga; E) Rio Claro; F) Santa Catarina; G) Serra do Mar.

#### 4.10. Plots of mean slope × elevation

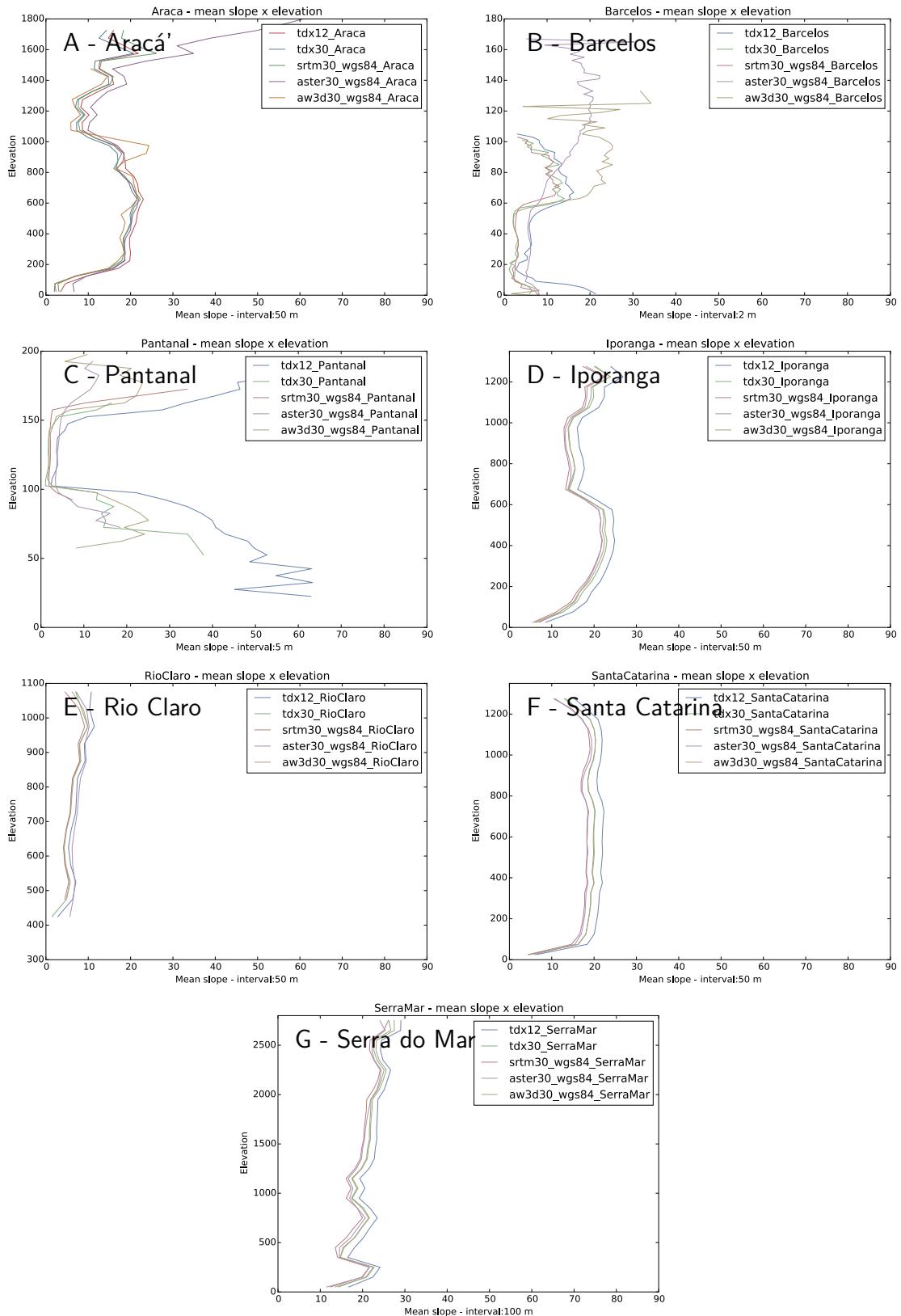


Figure S.4.9. Plots of mean slope × elevation for each studied area. A) Aracá; B) Barcelos; C) Pantanal; D) Iporanga; E) Rio Claro; F) Santa Catarina; G) Serra do Mar.

## 5. Analysis of Contour Lines

### 5.1. Statistics of Contour Lines

Table S.15. Total length (m) and count of contour lines for each study area and DEM.

Area	DEM	Length (m)	Count
Aracá	TanDEM-X 12 m	86,748,607.44	371,146.00
	TanDEM-X 30 m	55,369,042.31	66,750.00
	SRTM 30 m	53,617,971.43	84,568.00
	ASTER GDEM 30 m	106,875,410.67	275,517.00
	ALOS AW3D30 30 m	30,982,884.33	33,750.00
Barcelos	TanDEM-X 12 m	938,437,383.88	7,090,074.00
	TanDEM-X 30 m	415,281,159.49	1,200,918.00
	SRTM 30 m	375,218,910.47	771,736.00
	ASTER GDEM 30 m	934,862,869.04	2,673,073.00
	ALOS AW3D30 30 m	300,747,709.55	632,105.00
Pantanal	TanDEM-X 12 m	330,674,016.69	190,253.00
	TanDEM-X 30 m	293,147,091.25	76,871.00
	SRTM 30 m	164,602,801.83	55,201.00
	ASTER GDEM 30 m	174,436,075.85	93,250.00
	ALOS AW3D30 30 m	249,150,838.77	75,857.00
Iporanga	TanDEM-X 12 m	582,855,749.83	4,705,276.00
	TanDEM-X 30 m	265,157,750.79	737,400.00
	SRTM 30 m	273,367,223.61	625,720.00
	ASTER GDEM 30 m	545,407,779.51	1,531,747.00
	ALOS AW3D30 30 m	275,272,253.13	862,243.00
Rio Claro	TanDEM-X 12 m	225,034,769.38	491,128.00
	TanDEM-X 30 m	172,039,905.30	62,545.00
	SRTM 30 m	106,592,046.59	42,043.00
	ASTER GDEM 30 m	173,276,553.41	299,405.00
	ALOS AW3D30 30 m	127,445,394.07	75,160.00
Santa Catarina	TanDEM-X 12 m	650,174,787.00	486,468.00
	TanDEM-X 30 m	563,861,735.46	144,899.00
	SRTM 30 m	343,752,179.64	96,233.00
	ASTER GDEM 30 m	385,544,976.65	241,186.00
	ALOS AW3D30 30 m	525,238,014.84	152,340.00
Serra do Mar	TanDEM-X 12 m	405,117,115.51	199,959.00
	TanDEM-X 30 m	361,539,740.71	76,445.00
	SRTM 30 m	220,852,368.06	60,300.00
	ASTER GDEM 30 m	234,933,010.64	96,928.00
	ALOS AW3D30 30 m	306,467,889.55	82,794.00

## 5.2. Cumulative Sum of Contour Length

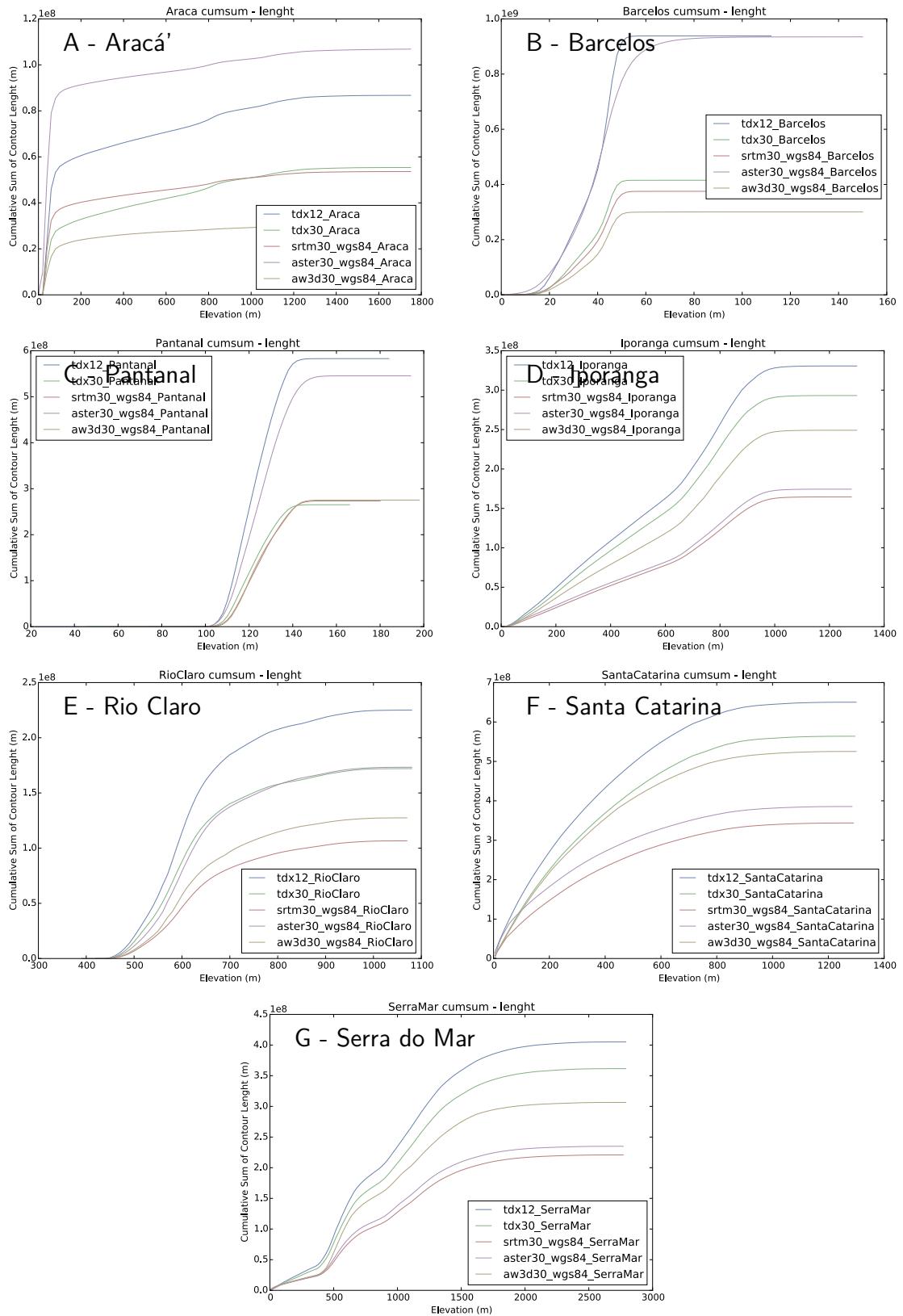


Figure S.5.1. Plots of cumulative sum of contour length for each study area. A) Aracá; B) Barcelos; C) Pantanal; D) Iporanga; E) Rio Claro; F) Santa Catarina; G) Serra do Mar.

### 5.3. Cumulative Sum of Contour Count

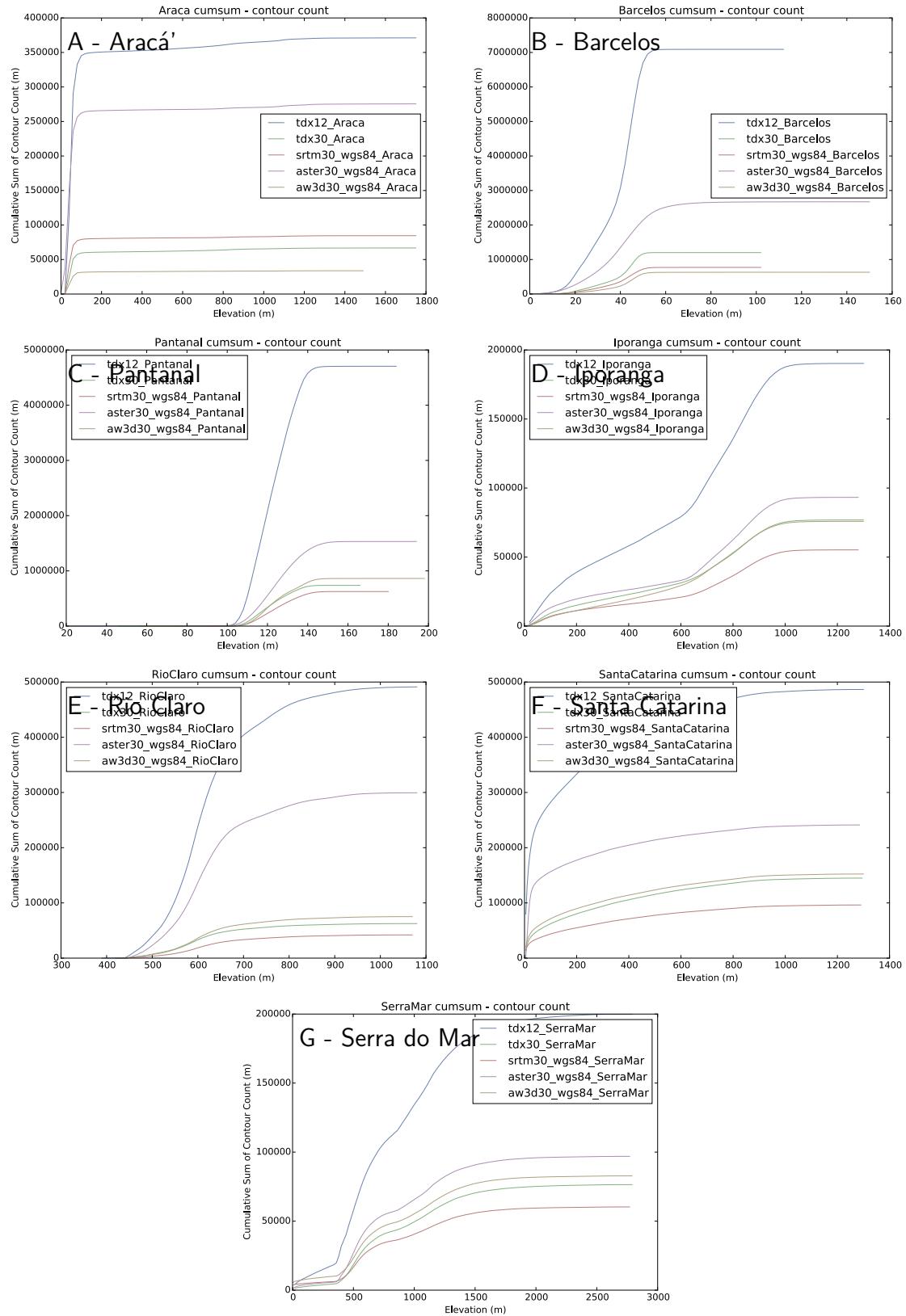


Figure S.5.2. Plots of cumulative sum of contour count for each study area. A) Aracá; B) Barcelos; C) Pantanal; D) Iporanga; E) Rio Claro; F) Santa Catarina; G) Serra do Mar.

## 5.4. Contour maps

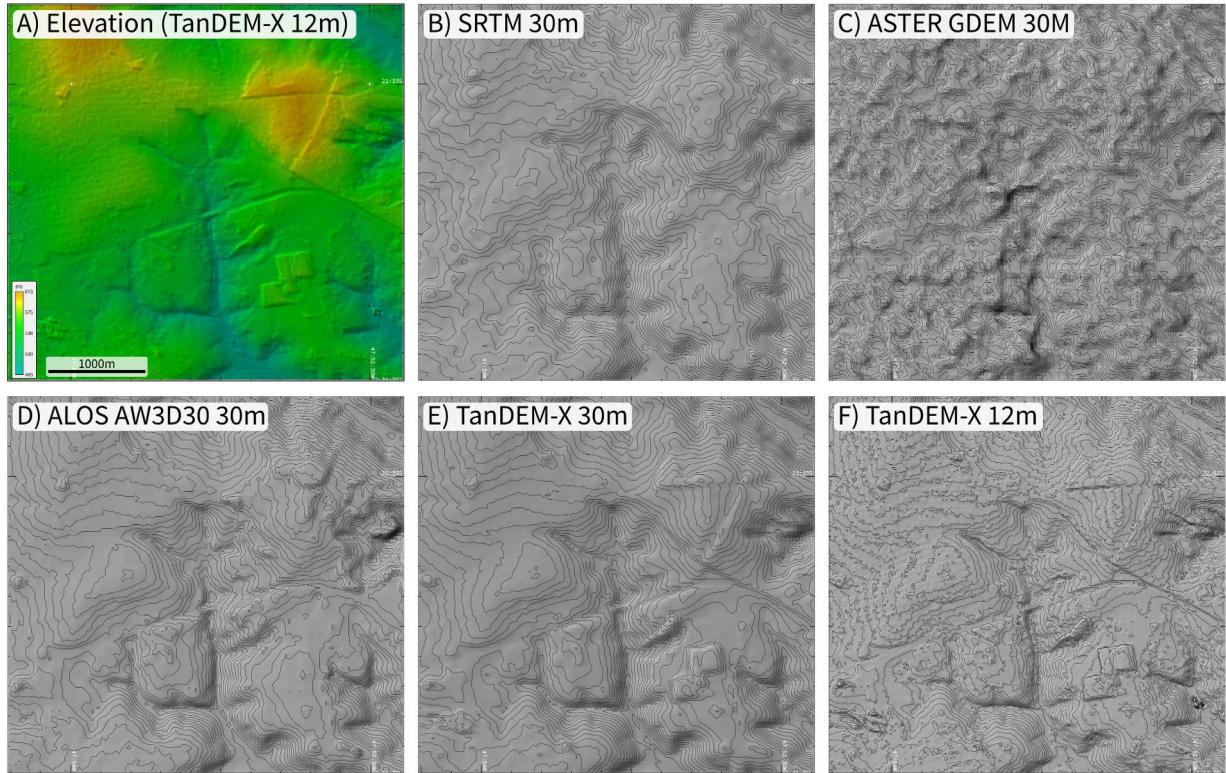


Figure S.5.3. Contour lines derived from all DEMs, Rio Claro region. Location of area in Figure S1E.

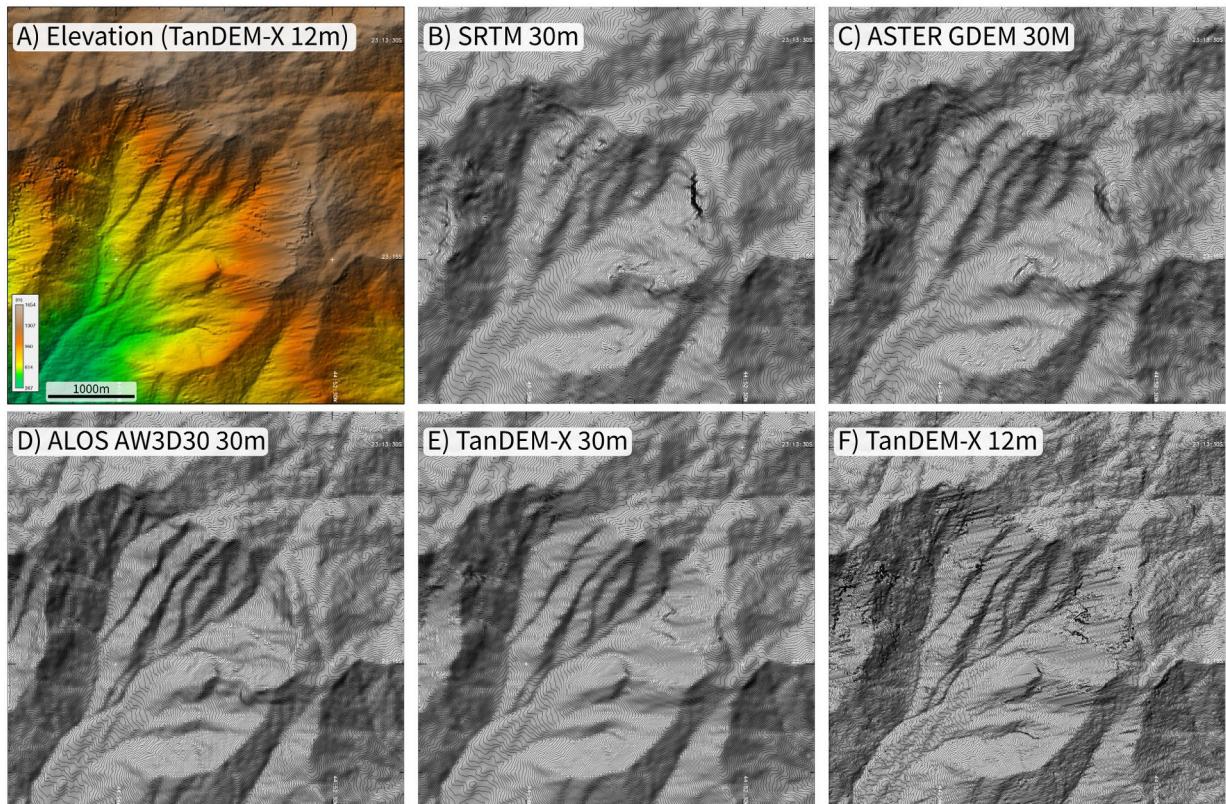


Figure S.5.4. Contour lines derived from all DEMs, Serra do Mar region. Location of area in Figure S1G.

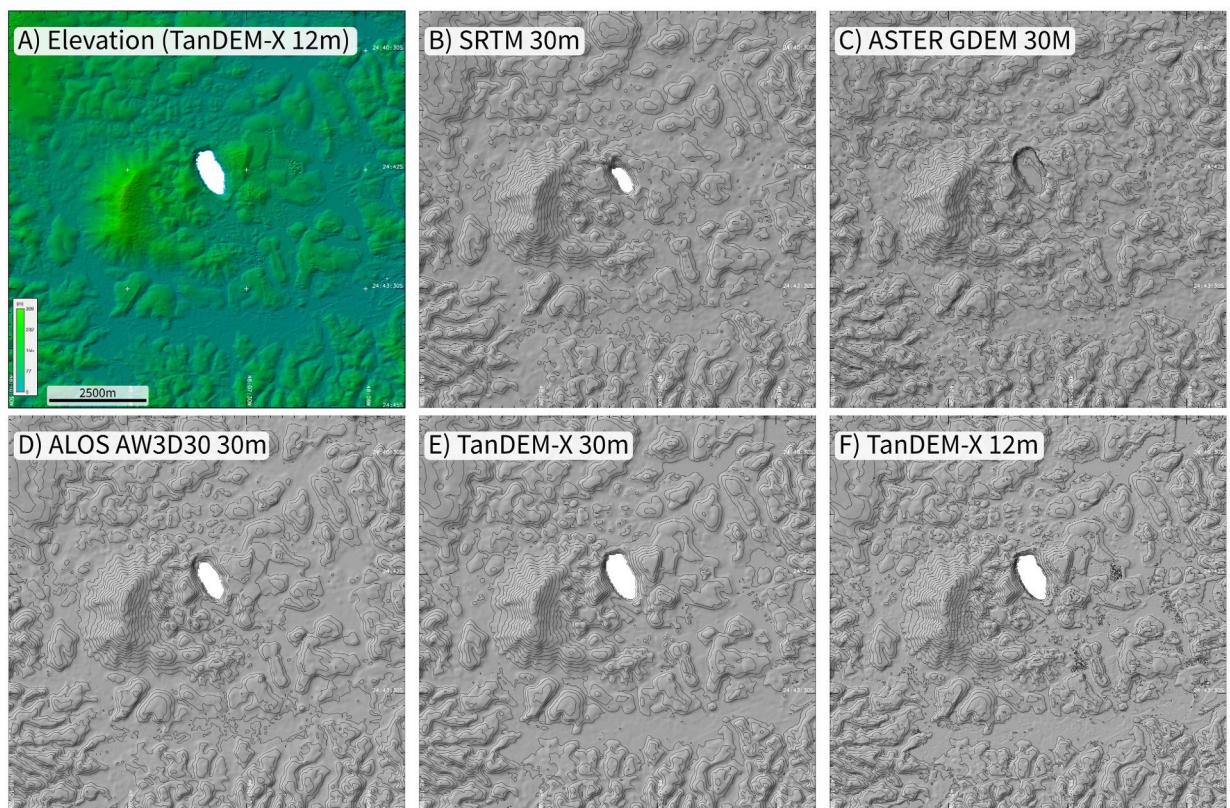


Figure S.5.5. Contour lines derived from all DEMs, Iporanga region. Location of area in Figure S1D.