

Data Analysis and Insights

Data Findings

From the data visualisations, the development of countries is spotlighted by the Average income per Capita. A key trends is visible between a Countries GDP and there Tonnes of Emmissions highlighted by developing and Under-developed countries.

For Developing countries whilst the Emissions increased for India, Brazil, South Africa and Egypt along with their GDP, Greece's Emissions decreased as their GDP did. For Developed countries the trend is found until 2010, after this date the impacts of renewable energy and carbon taxes are evident in the minimal decreased in emissions despite GDP growing.

By dividing the Total Tonnes of Emissions by Population of Countries, we are able to also calculate the [Tonnes of Emissions Per Capita](#). This very clearly shows that developed Countries are producing more Emissions per Capita then Developing and far more then Under-developed countries as outlined within the visualisation below.

Additionally from the starting data we are able to calculate the [Tonnes of Emissions Per GDP \\$](#) by dividing Total Emissions by Total GDP. This figure represents how cost financially effective each tonne of Emissions produced is by each country. The Tonnes of Emissions per \$ of GDP, shows a clear trend of Under-developed and Developed countries equally producing very large quantities of Emissions per Tonne per \$ of GDP compare to Developed Countries.

The extent of this is highlighted by the largest 5 Emissions per \$ totalling 4787.22 compare to the lowest 5 Emissions per \$ totalling only 1025.62. This calculates to 4.7 times more Emissions per \$ of GDP.

Outliers within the Tonnes of Emissions per \$ of GDP include Under-developed country Ethiopia who had the 3rd lowest value of only \$238.84 per Tonne. This is directly reflective of Ethiopia's large renewable energy usage rate of 90% primarily sourced from their hyrdoelectric power plant. [\[3\] Ethiopia Looks to Tap Its Massive Renewable Energy Potential](#).

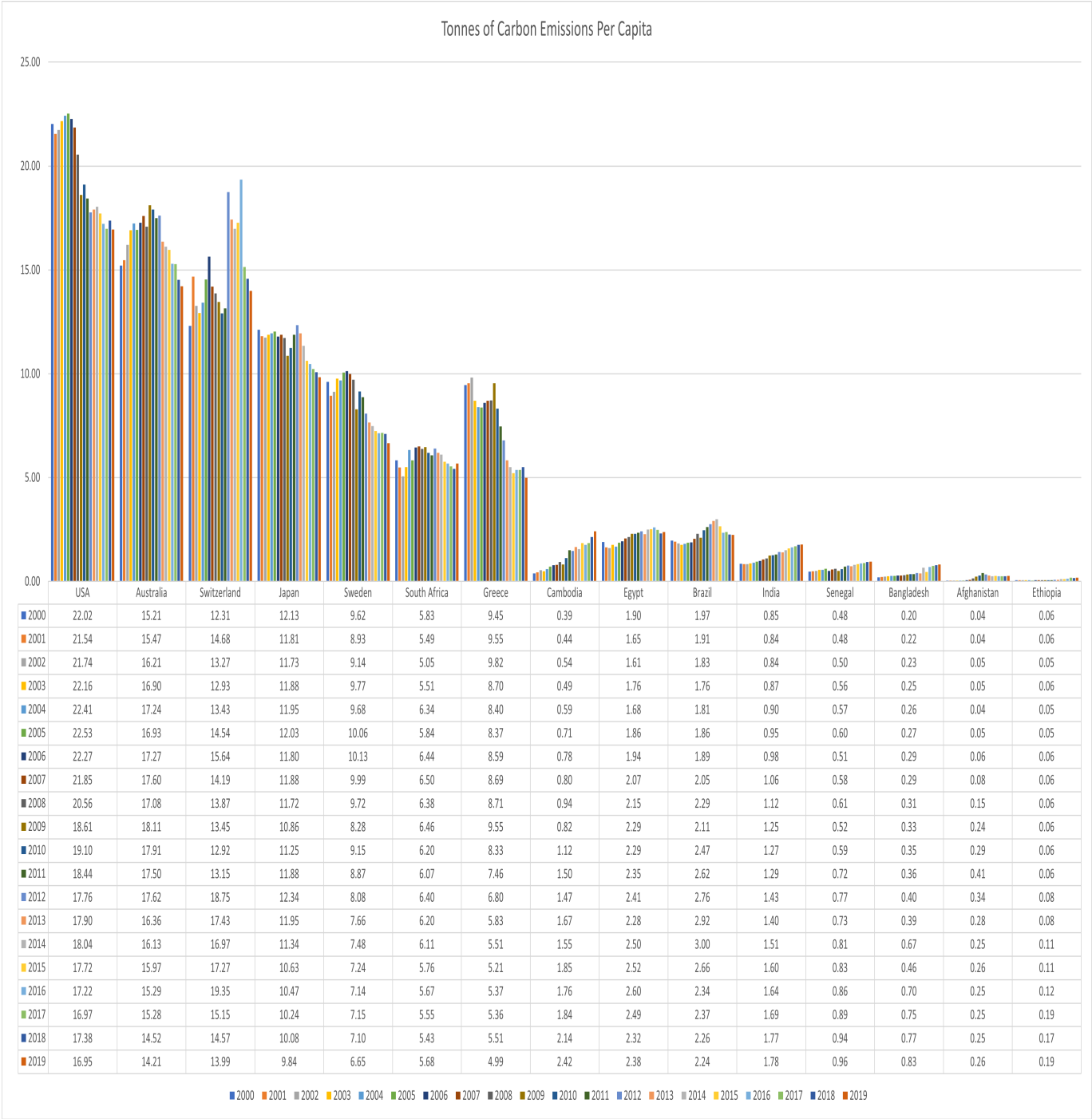
[Tonnes of Emissions Per Capita](#)
[Tonnes of Emissions Per GDP \\$](#)

Tonnes of Emissions Per Capita

Tonnes of Emissions Per Capita / Tonnes of Emissions Per Capita in order from highest to lowest.

Level of Development	Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Under-developed	Afghanistan	0.04	0.04	0.05	0.05	0.04	0.05	0.06	0.08	0.15	0.24	0.29	0.41	0.34	0.28	0.25	0.26	0.25	0.25	0.25	0.26
Under-developed	Bangladesh	0.20	0.22	0.23	0.25	0.26	0.27	0.29	0.29	0.31	0.33	0.35	0.36	0.40	0.39	0.67	0.46	0.70	0.75	0.77	0.83
Under-developed	Cambodia	0.39	0.44	0.54	0.49	0.59	0.71	0.78	0.80	0.94	0.82	1.12	1.50	1.47	1.67	1.55	1.85	1.76	1.84	2.14	2.42
Under-developed	Ethiopia	0.06	0.06	0.05	0.06	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.08	0.08	0.11	0.11	0.12	0.19	0.17	0.19
Under-developed	Senegal	0.48	0.48	0.50	0.56	0.57	0.60	0.51	0.58	0.61	0.52	0.59	0.72	0.77	0.73	0.81	0.83	0.86	0.89	0.94	0.96
Developing	Brazil	1.97	1.91	1.83	1.76	1.81	1.86	1.89	2.05	2.29	2.11	2.47	2.62	2.76	2.92	3.00	2.66	2.34	2.37	2.26	2.24
Developing	Egypt	1.90	1.65	1.61	1.76	1.68	1.86	1.94	2.07	2.15	2.29	2.29	2.35	2.41	2.28	2.50	2.52	2.60	2.49	2.32	2.38
Developing	Greece	9.45	9.55	9.82	8.70	8.40	8.37	8.59	8.69	8.71	9.55	8.33	7.46	6.80	5.83	5.51	5.21	5.37	5.36	5.51	4.99
Developing	India	0.85	0.84	0.84	0.87	0.90	0.95	0.98	1.06	1.12	1.25	1.27	1.29	1.43	1.40	1.51	1.60	1.64	1.69	1.77	1.78
Developing	South Africa	5.83	5.49	5.05	5.51	6.34	5.84	6.44	6.50	6.38	6.46	6.20	6.07	6.40	6.20	6.11	5.76	5.67	5.55	5.43	5.68
Developed	Australia	15.21	15.47	16.21	16.90	17.24	16.93	17.27	17.60	17.08	18.11	17.91	17.50	17.62	16.36	16.13	15.97	15.29	15.28	14.52	14.21
Developed	Japan	12.13	11.81	11.73	11.88	11.95	12.03	11.80	11.88	11.72	10.86	11.25	11.88	12.34	11.95	11.34	10.63	10.47	10.24	10.08	9.84
Developed	Sweden	9.62	8.93	9.14	9.77	9.68	10.06	10.13	9.99	9.72	8.28	9.15	8.87	8.08	7.66	7.48	7.24	7.14	7.15	7.10	6.65
Developed	Switzerland	12.31	14.68	13.27	12.93	13.43	14.54	15.64	14.19	13.87	13.45	12.92	13.15	18.75	17.43	16.97	17.27	19.35	15.15	14.57	13.99
Developed	USA	22.02	21.54	21.74	22.16	22.41	22.53	22.27	21.85	20.56	18.61	19.10	18.44	17.76	17.90	18.04	17.72	17.22	16.97	17.38	16.95

Level of Development	Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Developed	USA	22.02	21.54	21.74	22.16	22.41	22.53	22.27	21.85	20.56	18.61	19.10	18.44	17.76	17.90	18.04	17.72	17.22	16.97	17.38	16.95
Developed	Australia	15.21	15.47	16.21	16.90	17.24	16.93	17.27	17.60	17.08	18.11	17.91	17.50	17.62	16.36	16.13	15.97	15.29	15.28	14.52	14.21
Developed	Switzerland	12.31	14.68	13.27	12.93	13.43	14.54	15.64	14.19	13.87	13.45	12.92	13.15	18.75	17.43	16.97	17.27	19.35	15.15	14.57	13.99
Developed	Japan	12.13	11.81	11.73	11.88	11.95	12.03	11.80	11.88	11.72	10.86	11.25	11.88	12.34	11.95	11.34	10.63	10.47	10.24	10.08	9.84
Developed	Sweden	9.62	8.93	9.14	9.77	9.68	10.06	10.13	9.99	9.72	8.28	9.15	8.87	8.08	7.66	7.48	7.24	7.14	7.15	7.10	6.65
Developing	South Africa	5.83	5.49	5.05	5.51	6.34	5.84	6.44	6.50	6.38	6.46	6.20	6.07	6.40	6.20	6.11	5.76	5.67	5.55	5.43	5.68
Developing	Greece	9.45	9.55	9.82	8.70	8.40	8.37	8.59	8.69	8.71	9.55	8.33	7.46	6.80	5.83	5.51	5.21	5.37	5.36	5.51	4.99
Under-developed	Cambodia	0.39	0.44	0.54	0.49	0.59	0.71	0.78	0.80	0.94	0.82	1.12	1.50	1.47	1.67	1.55	1.85	1.76	1.84	2.14	2.42
Developing	Egypt	1.90	1.65	1.61	1.76	1.68	1.86	1.94	2.07	2.15	2.29	2.29	2.35	2.41	2.28	2.50	2.52	2.60	2.49	2.32	2.38
Developing	Brazil	1.97	1.91	1.83	1.76	1.81	1.86	1.89	2.05	2.29	2.11	2.47	2.62	2.76	2.92	3.00	2.66	2.34	2.37	2.26	2.24
Developing	India	0.85	0.84	0.84	0.87	0.90	0.95	0.98	1.06	1.12	1.25	1.27	1.29	1.43	1.40	1.51	1.60	1.64	1.69	1.77	1.78
Under-developed	Senegal	0.48	0.48	0.50	0.56	0.57	0.60	0.51	0.58	0.61	0.52	0.59	0.72	0.77	0.73	0.81	0.83	0.86	0.89	0.94	0.96
Under-developed	Bangladesh	0.20	0.22	0.23	0.25	0.26	0.27	0.29	0.29	0.31	0.33	0.35	0.36	0.40	0.39	0.67	0.46	0.70	0.75	0.77	0.83
Under-developed	Afghanistan	0.04	0.04	0.05	0.05	0.04	0.05	0.06	0.08	0.15	0.24	0.29	0.41	0.34	0.28	0.25	0.26	0.25	0.25	0.25	0.26
Under-developed	Ethiopia	0.06	0.06	0.05	0.06	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.08	0.08	0.11	0.11	0.12	0.19	0.17	0.19



Tonnes of Emissions Per GDP \$

Tonnes of Emissions Per GDP \$ / Tonnes of Emissions Per GDP \$ in order from highest to lowest.

Level of Development	Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Under-developed	Afghanist	129.11	115.44	136.93	146.12	108.52	142.05	168.98	204.72	361.26	487.31	530.52	772.73	603.45	480.43	438.62	463.35	432.65	438.81	459.11	466.82
Under-developed	Banglade	304.19	332.95	335.89	357.44	365.00	358.88	361.40	343.44	343.41	355.15	363.89	349.67	373.62	348.55	568.31	370.26	535.89	542.60	531.38	531.01
Under-developed	Cambodia	793.57	851.56	1002.93	844.59	938.73	1009.74	1029.41	973.45	1083.33	966.67	1257.81	1598.54	1476.19	1592.36	1396.45	1583.33	1424.87	1405.80	1545.05	1647.06
Under-developed	Ethiopia	214.37	232.98	204.19	216.04	193.40	170.46	169.96	164.16	164.20	158.36	125.69	123.98	155.21	154.80	179.49	176.47	183.88	259.69	232.16	238.84
Under-developed	Senegal	440.00	440.37	467.89	504.35	500.00	527.78	449.61	508.33	525.55	446.10	506.85	625.00	655.84	628.03	676.65	674.16	677.25	665.02	680.56	676.99
Developing	Brazil	291.60	283.33	265.32	257.60	251.13	254.01	251.41	259.60	277.99	260.76	284.71	292.66	306.67	316.67	326.20	303.33	278.74	280.23	263.89	260.99
Developing	Egypt	755.56	645.16	631.58	680.20	634.15	686.92	684.21	693.88	687.02	715.33	694.44	714.29	733.33	693.81	756.33	747.72	752.91	709.50	639.26	633.17
Developing	Greece	517.41	504.76	500.00	418.18	385.12	380.74	369.77	362.78	364.91	417.32	381.67	381.86	374.00	326.15	306.63	287.24	294.87	291.37	292.00	259.31
Developing	India	1124.84	1082.24	1059.70	1038.30	1019.80	1000.00	974.58	992.13	1030.53	1070.42	1019.48	1006.17	1064.71	1000.00	1015.38	1004.76	964.91	938.27	934.36	910.78
Developing	South Afri	1229.73	1135.96	1021.19	1090.53	1212.60	1067.16	1127.21	1090.60	1052.12	1096.03	1028.85	987.58	1033.43	991.10	976.61	927.95	916.91	889.52	866.30	919.22
Developed	Australia	331.04	333.71	341.25	349.06	344.72	332.04	337.14	335.78	320.35	341.74	333.90	323.97	317.46	293.02	287.12	281.48	266.19	264.79	248.63	242.28
Developed	Japan	385.96	375.00	372.50	373.46	368.67	364.07	351.98	349.43	348.84	343.21	341.23	360.19	369.16	350.92	328.77	304.05	296.88	285.71	277.29	271.93
Developed	Sweden	233.70	214.86	215.87	226.10	215.59	219.28	211.95	203.33	200.22	179.91	188.99	179.49	166.02	156.90	150.93	141.19	137.60	136.48	134.32	124.55
Developed	Switzerlar	166.79	197.03	179.55	176.21	179.53	190.48	198.31	174.27	167.99	168.83	158.81	160.49	229.01	211.39	203.51	206.05	228.81	178.27	167.79	160.64
Developed	USA	450.00	441.73	443.97	444.83	436.42	428.85	417.50	403.66	383.54	359.38	362.20	348.80	331.18	330.06	328.25	316.48	304.32	296.30	295.90	284.42
Level of Development	Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Under-developed	Cambodia	793.57	851.56	1002.93	844.59	938.73	1009.74	1029.41	973.45	1083.33	966.67	1257.81	1598.54	1476.19	1592.36	1396.45	1583.33	1424.87	1405.80	1545.05	1647.06
Developing	South Afri	1229.73	1135.96	1021.19	1090.53	1212.60	1067.16	1127.21	1090.60	1052.12	1096.03	1028.85	987.58	1033.43	991.10	976.61	927.95	916.91	889.52	866.30	919.22
Developing	India	1124.84	1082.24	1059.70	1038.30	1019.80	1000.00	974.58	992.13	1030.53	1070.42	1019.48	1006.17	1064.71	1000.00	1015.38	1004.76	964.91	938.27	934.36	910.78
Under-developed	Senegal	440.00	440.37	467.89	504.35	500.00	527.78	449.61	508.33	525.55	446.10	506.85	625.00	655.84	628.03	676.65	674.16	677.25	665.02	680.56	676.99
Developing	Egypt	755.56	645.16	631.58	680.20	634.15	686.92	684.21	693.88	687.02	715.33	694.44	714.29	733.33	693.81	756.33	747.72	752.91	709.50	639.26	633.17
Under-developed	Banglade	304.19	332.95	335.89	357.44	365.00	358.88	361.40	343.44	343.41	355.15	363.89	349.67	373.62	348.55	568.31	370.26	535.89	542.60	531.38	531.01
Under-developed	Afghanist	129.11	115.44	136.93	146.12	108.52	142.05	168.98	204.72	361.26	487.31	530.52	772.73	603.45	480.43	438.62	463.35	432.65	438.81	459.11	466.82
Developed	USA	450.00	441.73	443.97	444.83	436.42	428.85	417.50	403.66	383.54	359.38	362.20	348.80	331.18	330.06	328.25	316.48	304.32	296.30	295.90	284.42
Developed	Japan	385.96	375.00	372.50	373.46	368.67	364.07	351.98	349.43	348.84	343.21	341.23	360.19	369.16	350.92	328.77	304.05	296.88	285.71	277.29	271.93
Developing	Brazil	291.60	283.33	265.32	257.60	251.13	254.01	251.41	259.60	277.99	260.76	284.71	292.66	306.67	316.67	326.20	303.33	278.74	280.23	263.89	260.99
Developing	Greece	517.41	504.76	500.00	418.18	385.12	380.74	369.77	362.78	364.91	417.32	381.67	381.86	374.00	326.15	306.63	287.24	294.87	291.37	292.00	259.31
Developed	Australia	331.04	333.71	341.25	349.06	344.72	332.04	337.14	335.78	320.35	341.74	333.90	323.97	317.46	293.02	287.12	281.48	266.19	264.79	248.63	242.28
Under-developed	Ethiopia	214.37	232.98	204.19	216.04	193.40	170.46	169.96	164.16	164.20	158.36	125.69	123.98	155.21	154.80	179.49	176.47	183.88	259.69	232.16	238.84
Developed	Switzerlar	166.79	197.03	179.55	176.21	179.53	190.48	198.31	174.27	167.99	168.83	158.81	160.49	229.01	211.39	203.51	206.05	228.81	178.27	167.79	160.64
Developed	Sweden	233.70	214.86	215.87	226.10	215.59	219.28	211.95	203.33	200.22	179.91	188.99	179.49	166.02	156.90	150.93	141.19	137.60	136.48	134.32	124.55

