

The logo features the word "Green" in a black serif font. The letter "G" is stylized with a green leaf icon integrated into its upper curve.

***The Asia-Pacific Region and
Climate Change: A snapshot of the
issues***

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Preface

The Asia-Pacific is the fastest growing source of greenhouse gas emissions globally and yet the region is also home to some of the countries most vulnerable to climate change.

Generally the world agrees that developed countries, who have benefited most from the use of fossil fuels, have the responsibility to lead the way to a zero-carbon future. Yet, in the Asia-Pacific region, we see that the developed countries – New Zealand, Australia, and Japan – have been increasing their emissions. Meanwhile, small Pacific Island nations whose very existence is threatened by climate change, are leading in emissions reductions. For example, Tokelau has 100 percent renewable electricity generation, and the Cook Islands and Tuvalu plan to achieve the same by 2020. This transition has been made possible through Overseas Development Aid money and will have minimal effects on global emissions overall. Nevertheless, these countries provide an inspiring example of transformative change for a carbon free world.

For decades, Green parties have been at the political forefront of addressing climate change. Our voice is needed now more than ever, leading up to the global climate negotiations in Paris in December.

Climate change is a global issue and this Asia Pacific Greens Federation congress highlights that we need to share in a global solution. The congress is about sharing ideas, solutions, and support for each other to tackle this problem. From West Asia to Oceania, we are all in this together.



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Situation

Currently, the Asia-Pacific region is the fastest growing source of greenhouse gas emissions in the world. This trend has been driven by rapid economic growth over the past 20 years, particularly in the larger economies of Asia.

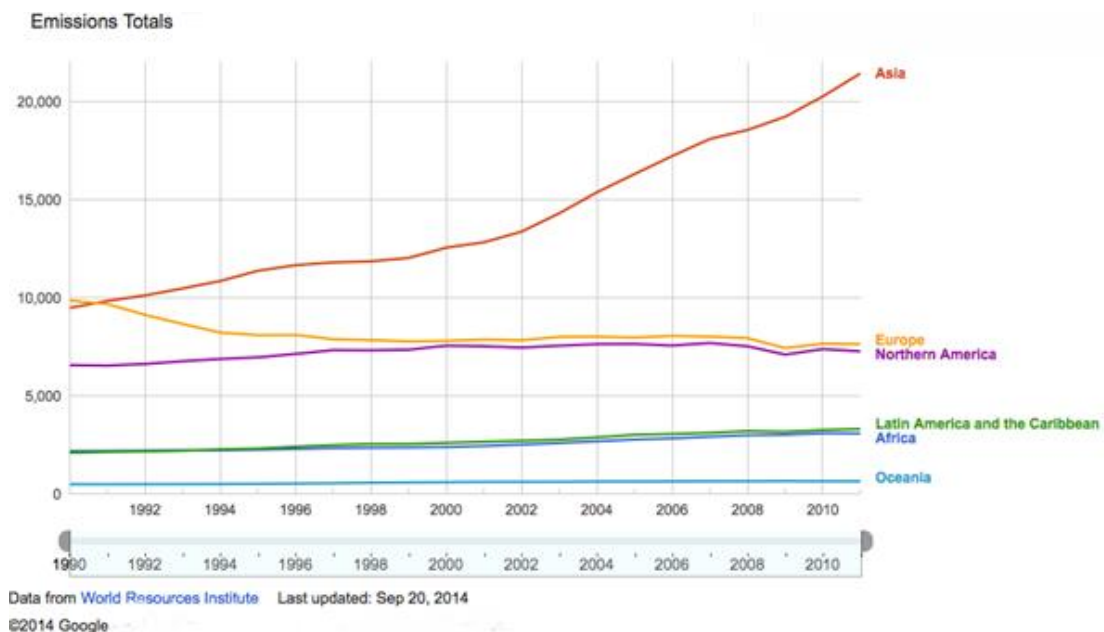


Figure 1: Gross greenhouse gas emissions from 1990–2011

The Asia-Pacific region is now responsible for 50 percent of total global emissions, and this percentage is rising. According to the United Nations Environment Programme GEO-5 assessment, an estimate of the business as usual scenario shows that the region will contribute 60 percent of global carbon emissions by 2100.¹

The Asia-Pacific region also includes several of the countries that are most at risk from climate change impacts.

The Climate Risk Index for 2013: the 10 most affected countries

Ranking 2013 (2012)	Country	CRI score	Death toll	Deaths per 100,000 inhabitants	Absolute losses (in million US\$ PPP)	Losses per unit GDP in %	Human Development Index ¹⁰
1 (2)	Philippines	2.17	6479	6.65	24538.56	3.82	117
2 (65)	Cambodia	6.67	184	1.22	1495.52	3.24	136
3 (46)	India	12.67	7437	0.60	15147.02	0.22	135
4 (58)	Mexico	15.00	224	0.19	10589.70	0.51	71
5 (143)	St. Vincent and the Grenadines	15.33	9	8.18	96.58	8.33	91
6 (3)	Pakistan	15.50	301	0.16	5419.77	0.65	146
7 (143)	Lao PDR	17.67	23	0.34	263.51	0.83	139
8 (32)	Vietnam	17.83	152	0.17	2397.04	0.50	121
9 (40)	Argentina	20.33	122	0.29	2010.00	0.22	49
10 (16)	Mozambique	21.67	119	0.46	88.21	0.33	178

Table 1: The Global Climate Risk Index analyses the quantified impacts of extreme weather such as tropical storms, winter storms, severe weather, hail, tornados, local storms; hydrological events such as storm surges, river floods, flash floods, mass movement (landslide); climatological events such as freezing, wildfires, and droughts.²

Data from the Climate Risk Index for 2013 shows that of the ten countries most affected by extreme weather events, six were in the Asia-Pacific region: Philippines, Cambodia, India, Pakistan, Laos, and Vietnam. Given that climate change will increase the severity and frequency of extreme weather events, these countries are especially at risk from climate change.

In addition to these at-risk countries identified by the Climate Risk Index 2013, the Asia-Pacific region is home to several low-lying Pacific Island nations which are at risk from climate change. Low-lying nations such as the Maldives, Kiribati, Vanuatu, the Cook Islands, Nauru, and Palau are at risk of becoming uninhabitable or even disappearing due to sea level rise and extreme weather events. Some of these countries are already experiencing loss of land along coastlines due to sea-level rise and erosion, freshwater resources are threatened due to saltwater intrusion, and increased occurrences of tropical cyclones, floods and droughts threaten food security.³

So whose responsibility is it to reduce emissions? Who is best placed to do so? If we look at country profiles in terms of emissions (total and per capita) we see there is high diversity within the Asia-Pacific region. The region is home to the world's largest greenhouse gas emitter, China, as well as the smallest emitters. In general, the developed countries have high emissions per capita, but so do some of the small Pacific Island nations that use diesel-powered generators.

Country	Gross GHG Emissions (MtCO ₂ e)	Net GHG Emissions (MtCO ₂ e)	Gross emissions per capita (tonnes per person)	Net emissions per capita (tonnes per person)	Net emissions per unit GDP (tonnes GHG per \$m GDP)	Global RANK net emissions per capita	Global RANK net emissions per unit GDP	Global RANK net GHG Emissions
Brunei Darussalam	20.0	22.1	50.1	55.2	1301.8	1	75	118
Niue	0.1	0.1	51.1	46.5	5475.2	3	10	182
<u>Australia</u>	648.2	685.1	28.3	29.9	440.3	9	145	12
Bahrain	33.3	33.3	28.9	28.9	1084.5	10	87	99
<u>Mongolia</u>	32.9	59.1	11.6	20.8	4808.7	16	14	76
New Zealand	76.6	58.5	17.4	13.2	337.5	31	154	78
South Korea	693.3	661.4	13.9	13.2	540.9	32	131	13
Japan	1344.6	1207.3	10.5	9.5	202.8	50	171	7
Indonesia	760.8	1981.0	3.1	8.1	2155.6	65	43	5
China	10975.5	10684.3	8.1	7.9	1274.0	69	77	1
Solomon Is.	0.6	2.3	1.1	4.2	2250.0	110	42	159
India	3013.8	2887.1	2.5	2.4	1572.6	145	61	3
Pakistan	320.0	341.6	1.8	1.9	1518.0	156	62	26
Philippines	159.2	157.6	1.7	1.6	629.8	161	122	47
Nepal	34.2	40.3	1.2	1.5	2139.7	163	45	93
Kiribati	0.1	0.1	0.8	0.7	408.0	180	147	181
Tuvalu	0.0	0.0	0.5	0.5	150.0	181	177	183
Kyrgyzstan	15.0	-0.2	2.7	0.0	-36.1	184	184	185
Cook Islands	0.1	-0.1	7.9	-7.3	-404.7	187	186	184
Bhutan	0.9	-8.0	1.2	-10.7	-4011.9	188	188	187

Table 2: Emissions data for the five largest net emitters of greenhouse gases per capita (in red) and the five smallest net emitters (or sinks) per capita of greenhouse gasses (in blue) for the Asia-Pacific region. Countries in green (or with an underline) are those with representatives at the 2015 Asia Pacific Greens Federation Congress. Data compiled by the New Zealand Parliamentary Library. For the full list of Asia-Pacific countries, see Appendix A.

In terms of responsibility for addressing climate change, there is an evolution underway from an expectation that developed countries “take the lead” to all countries “doing their fair share”.

The United Nations Framework Convention on Climate Change (UNFCCC) is the global climate treaty signed in 1992. The Framework distinguished between developed countries and developing countries. The text of the non-binding treaty asked developing countries to take the lead in reducing their greenhouse gas emissions to 1990 levels by the end of the 1990s:

“The Framework obligates the developed country Parties and other Parties included in Annex I to adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs. These policies and measures will demonstrate that developed countries are taking the lead in modifying longer-term trends in anthropogenic emissions consistent with the objective of the Convention, recognizing that the return by the end of the present decade to earlier levels of anthropogenic emissions of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol would contribute to such modification.”⁴

The UNFCCC was the parent treaty to the 1997 Kyoto Protocol that created a legal obligation for developed (Annex 1) countries to cut their emissions for the period 2008-2012.⁵ There was always an intention for a second commitment period from 2012-2020, but negotiations in Copenhagen failed to deliver a binding global agreement.

This brings us to today. We have moved from a non-binding treaty that asked developed countries to take the lead on reducing emissions, to a binding treaty that required developed countries to cut emissions, to now where all countries are being asked, ahead of the climate negotiations in Paris in December, to create their own emissions targets, and then to meet them. These Intended Nationally Determined Contributions are being sought from all countries, developed and developing.

If we look at global emissions data (Figure 1) we can see that there is a strong need for the Asia-Pacific region to curb its emissions. Clearly the developed countries have an obligation to lead the way, yet Australia, New Zealand and Japan have not been leading. As Figure 2 (below)

shows, the developed countries in the Asia-Pacific have all increased their net greenhouse gas emissions from 1990-2012.

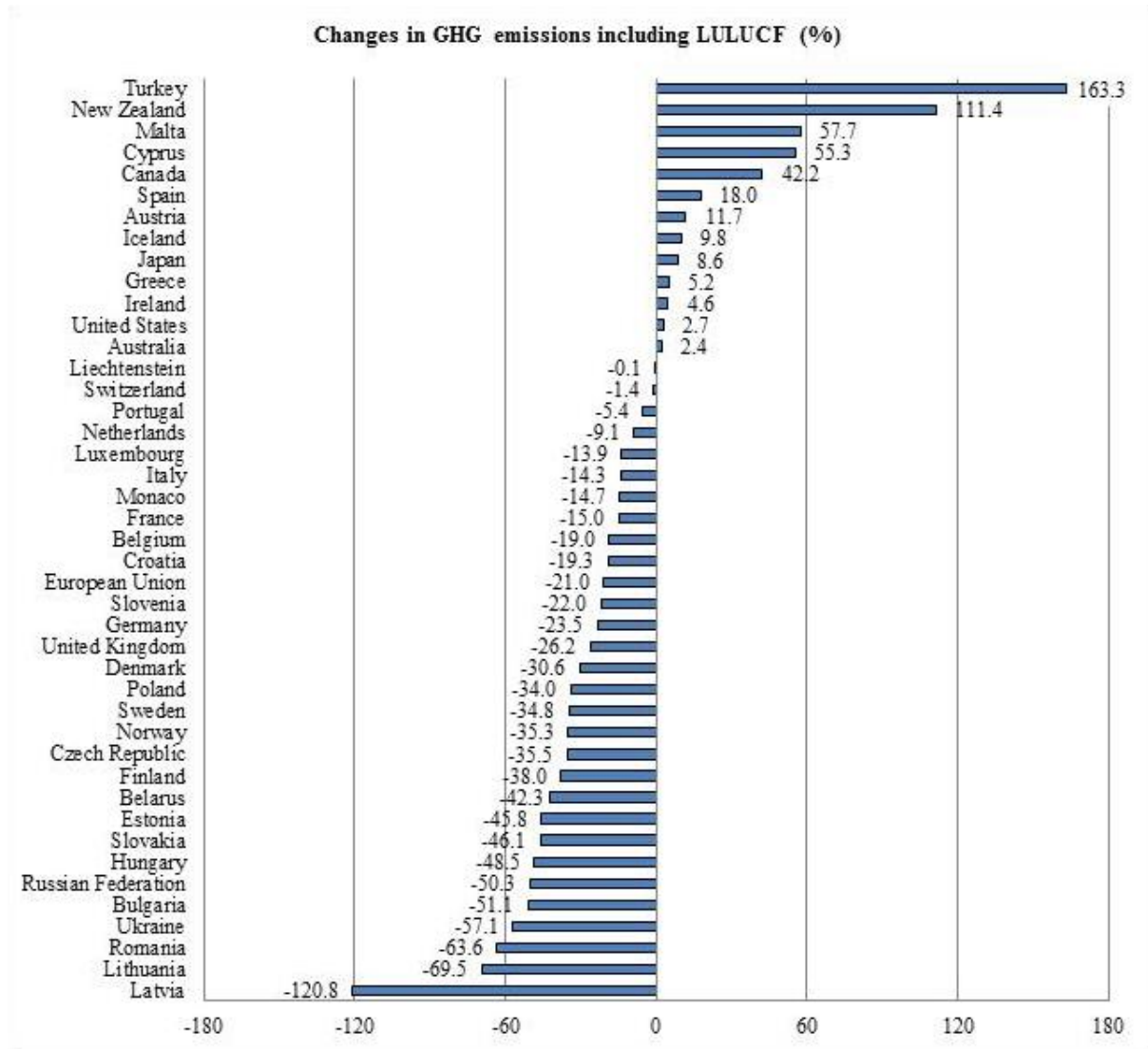


Figure 2: Net greenhouse gas emissions of individual Kyoto Protocol Annex I Parties, 1990-2012 (total aggregate emissions including land use, land-use change and forestry).⁶

While the developed nations are increasing emissions, the small islands – who produce less than 0.1 percent of world emissions – are cutting their emissions.⁷ For example, Tokelau has become the first territory in the world able to meet all its electricity needs with solar power and the Marshall Islands has converted its outer island communities to solar energy.⁸ The Cook Islands and Tuvalu are aiming to get all of their electricity from renewable sources by 2020 and others plan to become self-sufficient in energy within 15 years.

Conclusion

The Asia-Pacific region has a pivotal role to play in stabilising the climate. The region, which is responsible for almost half of the world's greenhouse gas emissions, is also home to the countries most vulnerable to the effects of climate change.

Global climate frameworks have required developed countries to cut their emissions since 1992, and yet the developed countries in the Asia-Pacific – New Zealand, Australia, and Japan – have all increased emissions. Now these countries have the opportunity to live up to their responsibilities and table strong emissions reduction targets before the climate negotiations in Paris.

Although New Zealand, Australia, and Japan aren't the largest emitters of greenhouse gases in the region, they have a historical obligation that they have been avoiding. The emerging economies of the Asia-Pacific, whose contributions to stabilising the climate are vital, will be looking to us to do our part. If we don't, why should they?

Small island nations whose very existence is threatened by climate change have been leading emissions reductions in the Asia-Pacific region. But they know that their existence depends on the actions of others and they are imploring us to do our bit. The president of the Marshall Islands has said, "New Zealand can and should do more... [yet] Kiwi emissions continue to climb."⁹

Emissions reduction pledges have been submitted to the UNFCCC by 36 countries ahead of the Paris negotiations in December, 2015. But research, led by a former lead author on the UN's climate science panel, has just found that these pledges mean that the world would likely pass the threshold for dangerous global warming in 2038, rather than 2036.¹⁰ This is a challenge for the remaining 150 countries yet to submit pledges to be bolder.

Appendix A: Emissions data for the Asia-Pacific region¹¹

Country	Year of emissions data	Gross GHG Emissions (MtCO ₂ e)	Net GHG Emissions (MtCO ₂ e)	GDP (2012, Billion US\$ nominal)	Population (2012 millions)	Gross emissions per capita (tonnes per person)	Net emissions per capita (tonnes per person)	net emissions per unit GDP (tonnes GHG per \$m GDP)	Global RANK net emissions per capita	Global RANK net emissions per unit GDP	Global RANK net GHG Emissions
Afghanistan	2012	30.8	30.8	20.3	29.8	1.0	1.0	1515.5	173	63	103
Australia	2012	648.2	685.1	1555.9	22.9	28.3	29.9	440.3	9	145	12
Bahrain	2012	33.3	33.3	30.7	1.2	28.9	28.9	1084.5	10	87	99
Bangladesh	2012	158.5	189.9	141.7	154.7	1.0	1.2	1339.7	166	71	41
Bhutan	2012	0.9	-8.0	2.0	0.7	1.2	-10.7	-4011.9	188	188	187
Brunei Darussalam	2012	20.0	22.1	17.0	0.4	50.1	55.2	1301.8	1	75	118
Burma	2012	98.9	184.7	55.8	50.5	2.0	3.7	3312.7	117	30	43
Cambodia	2012	25.8	49.1	14.1	14.9	1.7	3.3	3494.1	121	26	85
China	2012	10975.5	10684.3	8386.7	1354.0	8.1	7.9	1274.0	69	77	1
Cook Islands	2004	0.1	-0.1	0.2	0.0	7.9	-7.3	-404.7	187	186	184
Federated States of Micronesia	1994	0.2	0.2	0.3	0.1	2.4	2.4	754.6	143	112	177
Fiji	2012	2.6	1.7	3.9	0.9	3.0	2.0	448.5	155	143	162
India	2012	3013.8	2887.1	1835.8	1227.2	2.5	2.4	1572.6	145	61	3
Indonesia	2012	760.8	1981.0	919.0	244.5	3.1	8.1	2155.6	65	43	5
Japan	2012	1344.6	1207.3	5954.5	127.6	10.5	9.5	202.8	50	171	7
Kazakhstan	2012	290.9	291.4	203.5	16.9	17.2	17.2	1431.8	22	67	29
Kiribati	2012	0.1	0.1	0.2	0.1	0.8	0.7	408.0	180	147	181
Kyrgyzstan	2012	15.0	-0.2	6.6	5.6	2.7	0.0	-36.1	184	184	185
Laos	2012	10.9	36.3	9.4	6.6	1.6	5.5	3859.7	92	24	95
Malaysia	2012	288.1	433.3	305.0	29.5	9.8	14.7	1421.0	27	68	18
Maldives	2012	1.2	1.2	2.5	0.3	3.7	3.7	478.0	116	138	165
Mauritius	2012	5.5	5.5	11.2	1.3	4.4	4.4	492.1	104	137	148
Mongolia	2012	32.9	59.1	12.3	2.8	11.6	20.8	4808.7	16	14	76

Country	Year	Gross GHG Emissions (MtCO ₂ e)	Net GHG Emissions (MtCO ₂ e)	GDP (2012, Billion US\$ nominal)	Population (2012 millions)	Gross emissions per capita (tonnes per person)	Net emissions per capita (tonnes per person)	net emissions per unit GDP (tonnes GHG per \$m GDP)	Global RANK net emissions per capita	Global RANK net emissions per unit GDP	Global RANK net GHG Emissions
Nepal	2012	34.2	40.3	18.9	27.5	1.2	1.5	2139.7	163	45	93
New Caledonia	approx	1.0	1.0	0.0	0.3	3.7	3.7	93472.1	115	1	168
New Zealand	2012	76.6	58.5	173.2	4.4	17.4	13.2	337.5	31	154	78
Niue	2011	0.1	0.1	0.0	0.0	51.1	46.5	5475.2	3	10	182
North Korea	2012	72.0	86.1	40.0	24.9	2.9	3.5	2153.5	119	44	63
Pakistan	2012	320.0	341.6	225.1	178.9	1.8	1.9	1518.0	156	62	26
Palau	2000	0.1	0.1	0.2	0.0	5.1	5.1	398.7	96	148	180
Papua New Guinea	2012	13.7	99.9	15.4	7.2	1.9	13.9	6492.2	28	8	59
Philippines	2012	159.2	157.6	250.2	95.8	1.7	1.6	629.8	161	122	47
Samoa	2012	0.4	0.4	0.8	0.2	2.3	2.0	472.3	153	139	173
Singapore	2012	56.1	56.1	289.9	5.3	10.6	10.6	193.6	44	173	82
Solomon Islands	2012	0.6	2.3	1.0	0.6	1.1	4.2	2250.0	110	42	159
South Korea	2012	693.3	661.4	1222.8	50.0	13.9	13.2	540.9	32	131	13
Sri Lanka	2012	38.6	45.2	59.4	20.7	1.9	2.2	761.4	148	109	89
Tajikistan	2012	9.1	9.1	7.6	8.0	1.1	1.1	1197.6	168	80	136
Thailand	2012	375.7	375.7	366.0	68.0	5.5	5.5	1026.6	90	88	24
Timor-Leste	2010	1.3	1.5	5.6	1.2	1.1	1.3	265.8	165	160	163
Tonga	2012	0.4	0.4	0.5	0.1	3.9	3.9	866.9	112	100	172
Turkmenistan	2012	108.3	108.3	35.2	5.6	19.3	19.3	3080.4	17	31	58
Tuvalu	1994	0.0	0.0	0.0	0.0	0.5	0.5	150.0	181	177	183
Uzbekistan	2012	239.0	237.8	51.2	29.7	8.0	8.0	4645.5	67	16	33
Vanuatu	2012	0.7	0.6	0.8	0.3	2.9	2.4	763.7	141	108	170
Vietnam	2012	264.2	251.2	155.6	88.8	3.0	2.8	1614.6	131	57	32

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- ¹¹ Data compiled by the New Zealand Parliamentary Library primarily using 2012 emissions data from International Monetary Fund's 2015 World Economic Outlook database at <http://www.imf.org/external/ns/cs.aspx?id=28>