

# The Truth Behind the Climate Pledges



FEU-US



Acting on Climate Together

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The Universal Ecological Fund (Fundación Ecológica Universal FEU-US), a non-profit non-governmental organization, seeks to increase awareness that encourages actions through researching, analyzing, producing and disseminating information. It was incorporated under the laws of the District of Columbia, United States of America, in 2005. FEU-US shares its goal, values and objectives with its partner organization, Fundación Ecológica Universal (FEU), founded in Buenos Aires, Argentina in 1990.

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# The Truth Behind the Climate Pledges

## Key Conclusions

An environmental and economic disaster from human-induced climate change is on the horizon.

To achieve the Paris Agreement's most ambitious goal of keeping global warming below 1.5°C (2.7°F) above pre-industrial levels requires reducing global greenhouse gas (GHG) emissions by 50 percent by 2030.

An analysis of current commitments to reduce emissions between 2020 and 2030 shows that 75 percent of the climate pledges are partially or totally insufficient to contribute to reducing GHG emissions by 50 percent by 2030, and some of these pledges are unlikely to be achieved.

Of the 184 climate pledges, 36 were deemed sufficient (19 percent), 12 partially sufficient (6 percent), 8 partially insufficient (10 percent) and 128 insufficient (65 percent).

Because the climate pledges are voluntary, technicalities, loopholes and conditions continue to postpone decisive global action to reduce emissions and address climate change.

All countries need to reduce emissions to meet the Paris Agreement targets, although not all countries have equal responsibility because of the principle of differentiated responsibility, historical emissions, current per person emissions and the need to develop.

Emissions from the top four emitters combined account for 56 percent of global GHG emissions –China (26.8 percent), the United States (13.1 percent), the European Union and its 28 Member States (9 percent) and India (7 percent). The analysis of their pledges show that:

- China, the largest emitter, is expected to meet its pledge of “reducing its carbon intensity by 60-65 percent from 2005 levels by 2030” (or the amount of CO<sub>2</sub> emissions per unit of GDP).  
However, China’s CO<sub>2</sub> emissions increased by 80 percent between 2005 and 2018 and are expected to continue to increase for the next decade given its projected rate of economic growth.
- In 2015 the United States committed to reducing “GHG emissions by 26-28 percent from 2005 levels by 2025”. However, the current administration announced the United States withdrawal from the Paris Agreement and has cut federal regulations meant to curb emissions. State and local efforts are being implemented to try and meet the United States pledge. These efforts are mainly focused on electricity generation and automobile emissions.
- The European Union and its 28 Member States committed to reduce GHG emissions “at least 40 percent from 1990 level” by 2030. The EU and its Member States are on track to cut GHG emissions by 58 percent by 2030.
- India’s emissions are growing rapidly. Its pledge to reduce “the emissions intensity (of all GHGs) of its GDP by 30-35 percent from 2005 level by 2030” is expected be met.  
However, India’s GHG emissions increased by about 76 percent between 2005 and 2017 and, like China, are expected to continue to increase until 2030 due to economic growth.

The Russian Federation, the fifth largest GHG emitter, has not even submitted its plan to cut emissions yet.

From the remaining 152 pledges, 126 are partially or totally dependent on international finance, technology and capacity building for their implementation. A portion of these commitments may not be implemented because little international support has been materialized.

Thus, at least 130 nations, including 4 of the top 5 world's largest emitters, are falling far short of contributing to meeting the 50 percent global emission reductions required by 2030 to limit the global temperature increase to 1.5°C above pre-industrial levels.

The impact of the shortfall are economic losses from weather events influenced by human-induced climate change escalating to at least \$2 billion per day by 2030. In addition to the cost, weather events and patterns will continue to change, and will adversely affect human health, livelihoods, food, water, biodiversity and economic growth.

There are two ways in which emissions can be rapidly and drastically reduced, particularly carbon dioxide (CO<sub>2</sub>) emissions which account for about 70 percent of global GHG emissions due to fossil fuels:

- Switching electricity generation to renewables sources and away from coal. This means a five-fold increase in wind and solar energy as well as phasing out and closing 2,400 coal-fired power stations globally within the next decade, to reduce coal use by 70 percent by 2030. This is viable and cost-effective. Yet, there are 250 additional coal units under construction.
- Improving and increasing energy efficiency can reduce CO<sub>2</sub> emissions by 40 percent by 2040 – something we can all contribute to. Households worldwide could also save more than \$500 billion dollars per year in energy bills (electricity, natural gas for heating and cooking and fuel for transportation).

Efforts must also be made to reduce the emissions of carbon dioxide from land-use change, primarily deforestation in the tropics, and emissions from other GHGs, primarily methane and nitrous oxide.

### **Leadership is required to limit climate change and meet the Paris Agreement targets:**

**Leadership from governments** to make meaningful progress towards the Paris Agreement targets. Holding the increase in the global average temperature to well below 2°C (3.6°F) or 1.5°C (2.7°F) above pre-industrial levels will require Governments to double or triple their current pledges within the next decade by transitioning to a low-carbon economy, reducing deforestation, and reducing emissions of other GHGs. Policy can accelerate the implementation of climate solutions.

**Leadership from the private sector** to do business sustainably and to drive innovation, competitiveness, risk management and growth. Investments from the private sector have the potential to drive policy changes.

**Leadership from individuals** to continue demanding increased climate action as well as to make smarter choices in using energy more efficiently every day. Young people are leading a global mobilization demanding political action to address climate change. These young climate advocates can lead and mobilize individuals to take climate action as well.

## About this Report

The climate pledges under the Paris Agreement represent the first collective effort by all countries to address climate change –the single biggest global threat to our way of life, as well as a major risk to our global environment and the loss of biodiversity.

To achieve the Paris Agreement’s more ambitious goal of keeping global warming below 1.5°C (3.6° F) above pre-industrial levels requires reducing greenhouse gas (GHG) emissions globally by 50 percent by 2030.

This report presents a different approach to the analysis of the climate pledges. It ranks the countries’ commitment to reducing GHG emissions and identifies weaknesses in the voluntary pledges.

It focuses on both the adequacy of the pledges to contribute to reducing greenhouse gas emissions globally by 50 percent by 2030, and whether these pledges are likely to be implemented.

The analysis of the climate pledges addresses the top four emitters, which combined account for more than half of global GHG emissions, as well as on the remaining 152 pledges and those countries that have not yet submitted their pledges.

All countries need to reduce their GHG emissions in the next decade to meet the Paris Agreement targets. This analysis acknowledges the principle of common but differentiated responsibilities, embedded in the Climate Change Convention, but does not try to address it. The analysis also recognizes that historical emissions and current emissions per person vary widely, and that many developing countries lack the financial capability to reduce emissions, as well as the technological and institutional capacity.

Data from various sources other than solely the pledges were used, such as the official reports from the countries to the Climate Change Convention (e.g.: Biennial Update Reports and National Communications) and global datasets from the International Energy Agency, the Global Carbon Project, the Emission Database for Global Atmospheric Research – European Commission Joint Research Center and the Global Energy Monitor’s Global Coal Plant Tracker.

Comprehensive analysis of the climate pledges has been done by climate scientists and scientific organizations, including the Intergovernmental Panel on Climate Change and the United Nations Environment Programme’s Emissions Gap Reports. These assessments share a common conclusion –the initial commitments by governments are an important first step, but will not be enough to reduce global emissions within the next decade, and thus, halt the increase in global temperature which is driving the climate to change.

However, not much has changed yet.

Global emissions are still increasing. As a result, climate change is happening much faster than our efforts to address it.

It is our intention that the information in this report add to the knowledge base and promote an outcry for increased climate action from citizens globally and spark climate leadership from governments, business leaders as well as from individuals.

November, 2019

# The Truth Behind the Climate Pledges

*You cannot escape the responsibility of tomorrow by evading it today*

*Abraham Lincoln, 16<sup>th</sup> President of the United States*

The Paris Agreement represents the first collective effort by **all** countries to address climate change.

It is an historic turning point in the global efforts to reduce greenhouse gas (GHG) emissions. For the first time, the United States, India, China and the European Union and its Member States were all at the table, influencing other nations to join the effort.

The Paris Agreement could have been stronger. Some nations wanted a treaty. Others wanted an agreement. Some nations lobbied for longer interval between reviews of performance in meeting national commitments. Other nations wanted less intrusive verification procedures. Even though imperfect, the Paris Agreement solidly positioned the community of nations to recognize that each could and would contribute in an evolving way to the reduction of emissions to slow the rate of global warming.

The pledges made by all countries are focused on achieving the Paris Agreement goal of holding ‘the increase in the global average temperature to well below 2°C (3.6°F) above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C (2.7°F) above pre-industrial levels’<sup>1</sup>.

Keeping global warming to well below 2°C (3.6°F) above pre-industrial times, or even 1.5°C (2.7°F), can **only** be achieved by significantly and rapidly reducing emissions. About 70 percent of global anthropogenic GHG emissions are from carbon dioxide (CO<sub>2</sub>) from fossil fuel<sup>2</sup>. These CO<sub>2</sub> emissions are primarily driving the observed changes in the climate. Deforestation and other GHGs also contribute to changing the climate<sup>3</sup>.

Global average temperature has already warmed by about 1°C (1.8°F), above pre-industrial levels, and could exceed the goal of the Paris Agreement of limiting the increase to 1.5°C (2.7°F) as early as 2030 **if** global warming continues to increase at the current rate<sup>4</sup>.

But global warming continues to accelerate –global CO<sub>2</sub> emissions are still on the rise, reaching yet another peak in 2017, and are anticipated to continue to increase<sup>5</sup>.

To halt the trend in increasing global emissions, and thus in global temperature increase, 195 parties to the Climate Change Convention have signed the Paris Agreement in 2015, and 187 parties have ratified it<sup>6</sup>. As of October 1<sup>st</sup> 2019, 184 parties to the Climate Change Convention have submitted their climate pledges. After the ratification of the Paris Agreement, the climate pledges were re-submitted, changing their initial denomination from ‘Intended’ to Nationally Determined Contributions (NDC).

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<sup>1</sup> Paris Agreement, Article 2 (2015)

<sup>2</sup> UNEP (2018). The Emissions Gap Report 2018, Global Carbon Atlas, Emission Database for Global Atmospheric Research

<sup>3</sup> Other GHGs are methane and nitrous oxide

<sup>4</sup> Universal Ecological Fund: The Truth About Climate Change (2016), IPCC: Special Report on Global Warming of 1.5°C (2018)

<sup>5</sup> Global Carbon Project, 2018

<sup>6</sup> Status of [ratification](#) of the Paris Agreement

The climate pledges, even if fully implemented, will only cover less than half of the emission reductions needed to limit global temperature increase to 1.5°C by 2030<sup>7</sup>.

Global GHG emissions have increased by about 20 percent in the last decade –from 44.7 GtCO<sub>2</sub>-eq (gigatons of all GHGs combined expressed as CO<sub>2</sub> equivalent) in 2010 to 53.5 GtCO<sub>2</sub>-eq in 2017<sup>8</sup>. Even if all climate pledges are fully implemented, global GHG emissions are projected to be, on average, 54 (50-58) GtCO<sub>2</sub>-eq in 2030<sup>9</sup>.

Halting the increase of global GHG emissions and keeping them at the current level in 2030 may seem encouraging to some. It is just a first step. But to stay below 1.5°C (2.7°F), global GHG emissions should be, on average, 27 (25-30) GtCO<sub>2</sub>-eq in 2030<sup>10</sup>.

This means that action to half emissions within the next decade need to at least double or triple and increase by five-fold to reach net zero emissions by 2050. The sooner decisive measures to reduce emissions are implemented, the most cost-effective these actions will be.

Without massive changes and active leadership in the very near future, we could be living in a 1.5°C world in about a decade.

## The Climate Pledges

When the Climate Change Convention was adopted, countries were categorized into industrialized and developing (or Annex I and Non-Annex I countries).

This 1992 categorization is based on the principle of common but differentiated responsibilities, which establishes that all countries are responsible for addressing global environmental degradation yet not equally responsible. This key principle acknowledges the different capabilities and differing responsibilities of individual countries in addressing climate change.

More than 20 years ago, industrialized countries accounted for about half of global GHG emissions. Based on the historical share of GHG emissions, only industrialized countries had to comply with emission reduction targets<sup>11</sup>.

Currently, the share of global GHG emissions has changed. Upper and lower middle-income countries currently account collectively for more than half of global GHG emissions<sup>12</sup>.

When the Paris Agreement was adopted in 2015, all countries made pledges to reduce emissions.

The emission reduction commitments stated in the 184 climate pledges are voluntary and not legally binding. These commitments depend on policies, technologies and practices to be adopted and implemented at the national level in each country. For some countries, the implementation of the

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<sup>7</sup> IPCC: Special Report on Global Warming of 1.5°C (2018)

<sup>8</sup> Emission Database for Global Atmospheric Research, UNEP (2018). The Emissions Gap Report 2018

<sup>9</sup> IPCC Special Report on Global Warming of 1.5°C (2018)

<sup>10</sup> IPCC Special Report on Global Warming of 1.5°C (2018)

<sup>11</sup> Under the Kyoto Protocol, industrialized countries committed to emission reductions: 5% below 1990 level between 2008-2012 and 18% below 1990 level between 2013-2020

<sup>12</sup> IPCC, Fifth Assessment Report (AR5), Working Group III, Chapter 1 (2014)

pledges also depends on the provision of international financial or technical support, referred to as conditional pledges.

Of the 184 pledges, 127 (including India) or 69 percent are partially or totally conditional. This means that without international finance or technical support, these pledges may not be implemented.

These conditional pledges were mostly put forward by developing countries that lack the financial capability to reduce emissions as well as the technological and institutional capacity.

The conditionality of these climate pledges is based on the categorization of countries under the Climate Change Convention. However, in their latest assessment, the Intergovernmental Panel on Climate Change (IPCC) has updated the categorization of countries, based on their income. Thus, some countries which are currently categorized as high-income economies<sup>13</sup> are still considered as developing countries for the Convention.

Based on the difference in the categorization of countries between the Convention and the IPCC, some high-income countries have put forward conditional pledges that depend on international funding for its implementation.

Reducing emissions by 50 percent by 2030 will require a significant transformation in the way all countries generate and use energy. Some countries will need international funding to implement the required actions to change their energy generation and use in the framework of sustainable growth.

The ratification of the Paris Agreement could have been an opportunity for countries to review and increase actions to reduce emissions. However, 97 percent of the 184 climate pledges are the same as those initially submitted in 2015-2016, after the Paris Agreement was adopted. Compared to the intended commitments submitted in 2015-16, only six countries have reviewed their pledges: 4 countries increased their plan to cut emissions; 2 countries weakened their commitments:

1. **Argentina** –a 20 percent increase in ambition: from a 30 percent reduction in GHG emissions, to 37 percent; about half of this pledge is conditional.
2. **Morocco** –a 30 percent increase in ambition: from a 32 percent reduction in GHG emissions to 42 percent; about 60 percent of this pledge is conditional.
3. **Ecuador** –revision of the target year and emission reduction target: from 30-46 percent reduction of CO<sub>2</sub> emissions by 2030, to 20.9 percent by 2025; almost 60 percent of this pledge is conditional.
4. **Marshall Islands** (submission of their second climate pledge) –increase in ambition by including ‘at least’ to 32 percent reduction of GHG emissions by 2025 and a 45 percent by 2030. Adding ‘at least’ is consistent with the intention to overachieve the 2025 target and to try to achieve the 2030 indicative target; 100 percent of this pledge is conditional.
5. **Eritrea** –a 50 percent decrease in ambition: from 80 percent of CO<sub>2</sub> emissions to 38.5 percent; about 70 percent of this pledge is conditional.

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<sup>13</sup> The 2014 IPCC Fifth Assessment Report (AR5) analyzed global GHG emissions categorizing countries based on their income, into high-income, upper-middle income, lower-middle income and low-income countries. This categorization is based on the World Bank’s categorization of countries by income: <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>



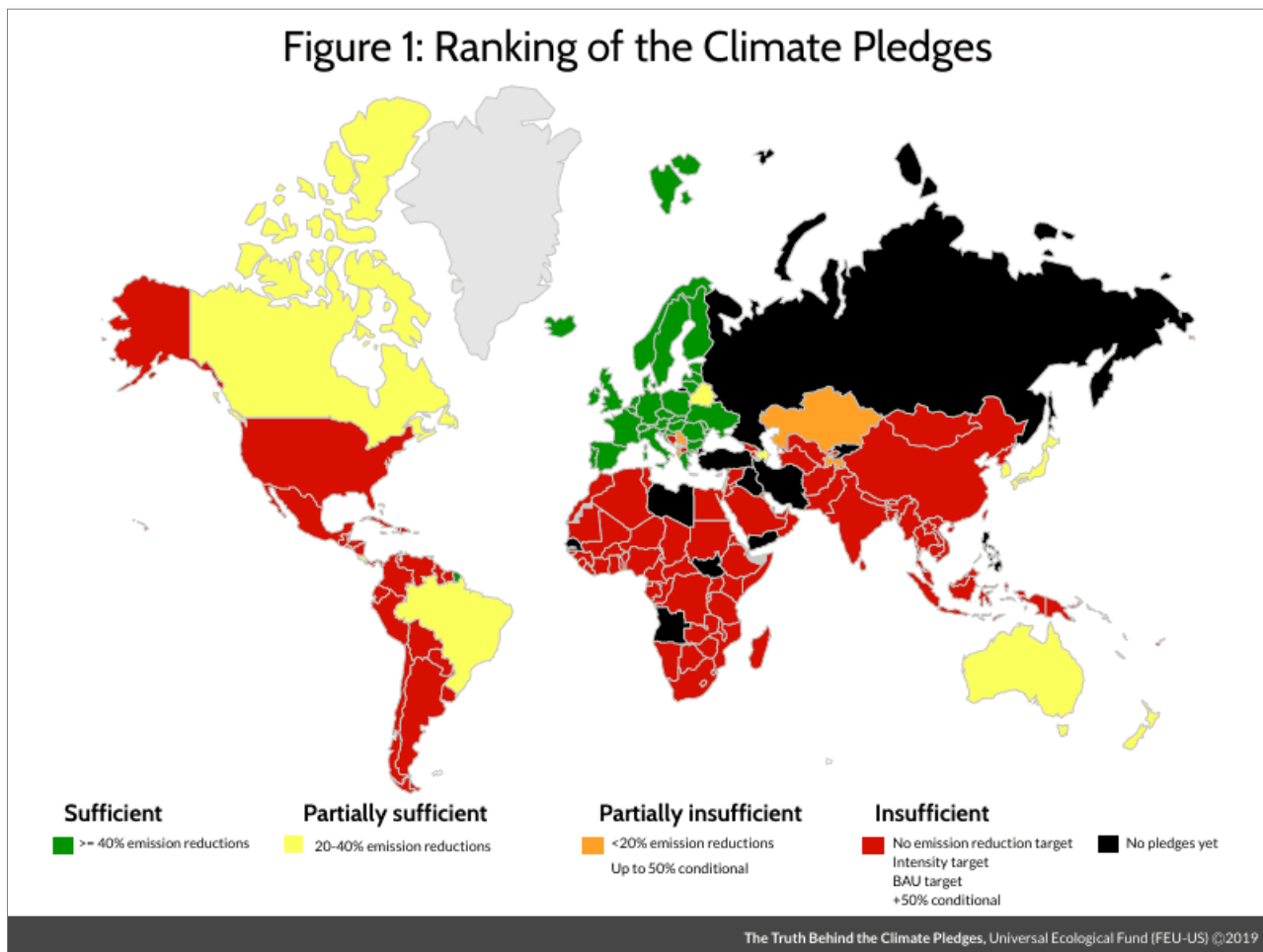
6. **Benin** –a 25 percent decrease in ambition: from 21.4 percent reduction in GHG emissions to 16 percent; more than 75 percent of this pledge is conditional.

## Ranking the Climate Pledges

The climate pledges are voluntary and use different metrics. Not all climate pledges actually commit to reducing emissions between 2020 and 2030. Thus, the 184 climate pledges were categorized based on their emission reduction commitments into:

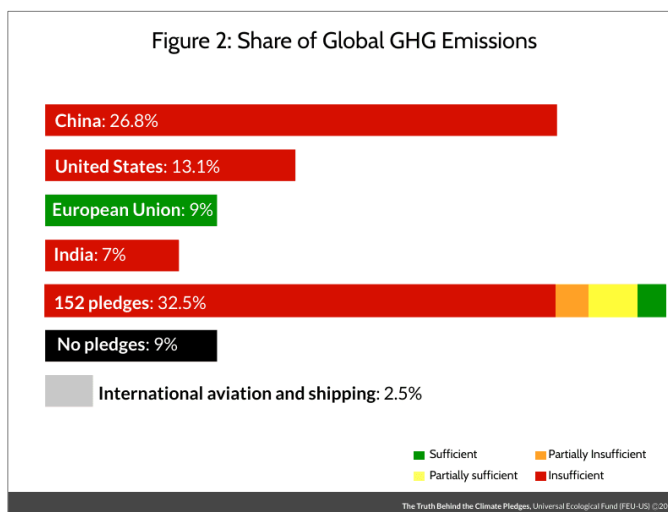
<b>Sufficient</b>	Climate pledges with commitments <b>equal or above 40%</b> emission reductions. These pledges are broadly in line with the need to at least half emissions by 2030.
<b>Partially sufficient</b>	Climate pledges with commitments <b>between 20-40%</b> emission reductions. The countries under this category need to do much better to reduce emissions.
<b>Partially insufficient</b>	Based on two criteria: <ol style="list-style-type: none"><li>1. Pledges <b>below 20%</b> emission reductions show some, but insufficient, ambition to address climate change.</li><li>2. Pledges with conditional commitments where the country is implementing more than <b>50%</b> of the pledge from their own resources (or 50% conditional). It shows some effort from the country to reduce emissions.</li></ol>
<b>Insufficient</b>	Based on four criteria: <ol style="list-style-type: none"><li>1. Pledges with <b>no emission reduction targets</b>, which cannot be quantified or measured.</li><li>2. Pledges with commitments that rely <b>more than 50%</b> on international financial support show minimal effort from the country to reduce emissions.</li><li>3. Pledges with <b>intensity targets</b>. These commitments focus on emissions per unit of Gross Domestic Product (GDP). This metric is measured in CO<sub>2</sub> or GHG emissions per \$1000 dollar GDP. These pledges mostly equal an increase in emissions until 2030 above the current level due to economic growth outstripping the rate of decrease in carbon/GHG intensity.</li><li>4. Pledges using <b>business as usual (BAU)</b> targets. These pledges are based on emission reductions below a projected level of future emissions in 2030 <b>if</b> no actions or policies are implemented. These commitments mostly equal an increase in emission in 2030 above the latest level of emissions reported by each country.</li></ol>

The result of this categorization is that 25 percent of the 184 climate pledges are partially or totally sufficient and 75 percent are totally or partially insufficient to reduce global emissions by 50 percent by 2030 (Figure 1).



The emission reduction commitments stated in the 184 climate pledges under each category are detailed in the Annex.

The need to at least double or triple the efforts to reduce emissions require a closer analysis of the pledges from the top emitters –China, the United States, the European Union (and its 28 Member States) and India. Emissions from these countries combined account for 56 percent of global GHG emissions, and 60 percent of global CO<sub>2</sub> emissions<sup>14</sup> (Figure 2).



<sup>14</sup> UNEP, The Emission Gap Report 2018, Global Carbon Project

## China

China is the second largest economy in the world. From 1990 to 2010, the average Gross Domestic Product (GDP) growth rate has been 10 percent a year. Since 2010, the GDP growth rate has slightly declined, to an annual average of 8 percent. This is four times more than the GDP growth rates of the United States and the European Union.

Because China's emissions are linked to its economic growth, China has become the largest emitter of GHGs and CO<sub>2</sub> in the world, currently accounting for about 27 and 29 percent respectively<sup>15</sup>. However, historically China's emissions were much lower than most industrialized countries. Since 1990 and due to the rapid expansion of China's economy, its carbon emissions per person have increased fourfold, reaching 8 tons of CO<sub>2</sub> per person a year in 2018. However, this is still less than half of a person's emissions in the United States or Canada, but more than a person's emissions in the United Kingdom and France<sup>16</sup>.

China made an unconditional climate pledge that includes four targets:

- 1) To reduce CO<sub>2</sub> emissions per unit of GDP by 60-65 percent from 2005 level.

In their pledge, China states that CO<sub>2</sub> emissions per unit of GDP have been lowered by 33.8 percent from 2005 level in 2014. Using two datasets<sup>17</sup>, the decrease is between 26.2 and 27.1 percent reduction in China's carbon intensity from 2005 to 2014. A reason for this discrepancy may be that the unit used for this calculation is not specified in China's pledge. Despite this systemic difference, China has reduced its carbon intensity since 2005. China may reach their carbon intensity target of 60-65 percent reduction before 2030.

However, China's CO<sub>2</sub> emissions have increased by 80 percent from 6.3 GtCO<sub>2</sub> in 2005 to 11.3 GtCO<sub>2</sub> in 2018<sup>18</sup>.

China's pledge is indeed encouraging, but it will not result in a decrease in CO<sub>2</sub> emissions below current levels. Thus, China's pledge was deemed insufficient to contribute to reducing global emissions by 50 percent by 2030.

- 2) To peak CO<sub>2</sub> emissions around 2030, making best efforts to peak earlier.

China's pledge is to reduce its carbon intensity, but this reduction will not stop the increasing trend in CO<sub>2</sub> emissions for at least one more decade. In fact, China's emissions are expected to increase until 2030 due its projected rate of economic growth.

- 3) To increase the share of non-fossil fuels in primary energy consumption to around 20 percent.

More than 85 percent of the primary energy in China is currently produced by fossil fuels. Coal accounts for 60 percent of the total primary energy generation. In 2017, non-fossil sources accounted for 14 percent of China's primary energy –2 percent nuclear, 8 percent hydroelectric and 4 percent

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<sup>15</sup> UNEP, The Emission Gap Report 2018, Global Carbon Project 2018

<sup>16</sup> Fossil CO<sub>2</sub> and GHG emissions of all world countries - 2019 Report, Publications Office of the European Union; Global Carbon Atlas, CO<sub>2</sub> emissions per person

<sup>17</sup> International Energy Agency; Emission Database for Global Atmospheric Research

<sup>18</sup> Fossil CO<sub>2</sub> and GHG emissions of all world countries, 2019 Report, Publications Office of the European Union

renewables<sup>19</sup>. In addition to producing and providing renewable technology for most of the world, China's domestic use of renewables has significantly increased, by more than six-fold since 2010. This trend is continuing, with a 30 percent increase of wind and solar power in 2017<sup>20</sup>.

The target of increasing the share of non-fossil energy to 20 percent could be reached by 2030 by continuing to increase renewables at the current rate, without additional efforts. However, the expansion of renewables cannot compensate the lack of action to reduce China's coal consumption and, thus, increasing CO<sub>2</sub> emissions.

4) To increase the forest stock volume by around 4.5 billion cubic meters from 2005 levels

In their pledge, China states that by 2014 the forest stock volume had increased by 2.188 billion cubic meters compared to 2005 levels –or about half of the pledge's target. The forested area surface has been increased by 21.6 million hectares. This surface is comparable to about half of the surface of California or about a third of France. Such increase in the forest stock volume would store about two percent of China's current CO<sub>2</sub> emissions (about 200 MtCO<sub>2</sub> per year). An additional two-fold increase in the forest stock volume by 2030 means that China would store about four percent of current CO<sub>2</sub> emissions.

## United States

The United States is the largest economy in the world, with an average GDP growth rate of two percent a year since 2000. It is the second largest GHGs and CO<sub>2</sub> emitter in the world, accounting for about 13 and 14 percent respectively<sup>21</sup>. Historically the United States has been the largest emitter in the world.

Its CO<sub>2</sub> emissions per person are among the highest globally, despite the transition from a manufacturing-based to a service-driven economy. The current carbon emissions per person are 16 tons of CO<sub>2</sub> per year. That means that every person in the United States emits double what a person in Malaysia, or four times what a person in Mexico does<sup>22</sup>.

In 2015, and for the first time, the United States committed to reducing "GHG emissions by 26-28 percent from 2005 levels by 2025". In 2017, however, the current administration announced the United States withdrawal from the Paris Agreement<sup>23</sup>. In addition, key federal regulations that would enable the United States to meet its pledge have been recently suspended, revised or rescinded.

Most importantly, the Clean Power Plan has been repealed. It set the first-ever carbon pollution standards for power plants in the United States, giving States flexible, cost-effective tools to cut CO<sub>2</sub> emissions from coal-fired plants by 32 percent from 2005 levels by 2030.

While the original pledge would have been deemed partially sufficient to assist in reducing global emissions by 50 percent by 2030, because of the reversal in federal policy since 2017, the United States' pledge was deemed insufficient.

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<sup>19</sup> BP Statistical Review of World Energy June 2019

<sup>20</sup> Fossil CO<sub>2</sub> emissions of all world countries, 2018 Report

<sup>21</sup> UNEP, The Emission Gap Report 2018, Global Carbon Project

<sup>22</sup> Fossil CO<sub>2</sub> and GHG emissions of all world countries - 2019 Report, Publications Office of the European Union; Global Carbon Atlas, CO<sub>2</sub> emissions per person

<sup>23</sup> Due to a provision in the Paris Agreement, the earliest date for the U.S. to completely withdraw from the agreement is November 4, 2020. Until then, the U.S. climate pledge stands.

Offsetting the reversal in federal policy, states across the U.S. are leading the renewable energy transition. For example, Iowa, South Dakota and Kansas are generating about 30 percent of their electricity from wind; California, Hawaii and Vermont are generating about 10 percent from solar<sup>24</sup>. Cities are also transitioning to renewable sources of energy. More than 130 cities committed to 100 percent renewable electricity, and six small cities have already achieved the target –Aspen, CO (population: 7,500); Burlington, VT (population: 42,000); Georgetown, TX (population: 50,000); Greensburg, KS (population: 778); Rock Port, MO (population: 1,200) and Kodiak Island, AK (population: 6,000)<sup>25</sup>.

Some of these commitments are being implemented under the America’s Pledge initiative<sup>26</sup>. The analysis of these commitments estimates that the United States could reduce emissions by 17 percent below 2005 levels by 2025<sup>27</sup>. In addition, other initiatives and campaigns are focused on retiring coal-fired power plants. More than half of the 530 coal-fired power plants in the United States have been retired or are proposed to be retired by 2030<sup>28</sup>.

These State and local initiatives and campaigns are indeed critical steps in the right direction.

In addition, almost half of the States have also been implementing fuel efficiency and CO<sub>2</sub> emissions standards for cars and light trucks. These fuel efficiency standards would have almost doubled the fuel economy of passenger vehicles by 2025 while saving families and businesses nearly \$2 trillion over the lives of vehicles. New and amended nationwide standards have been recently proposed for vehicles model year 2021 to 2026. Most importantly, the proposed amended standards would further increase emissions from the transportation sector, currently accounting for the majority of CO<sub>2</sub> emissions, with almost 40 percent<sup>29</sup>.

For the last two decades, the U.S. has been and still is producing 80 percent of its energy (for electricity, heating and transportation) from fossil fuels.

Until the share of fossil fuel use in the United States energy mix is significantly reduced, State and local efforts will not compensate for the lack of decisive federal action to reduce emissions.

## **European Union**

Including some of the richest economies in the world, the European Union (28 nations) is the third largest GHGs and CO<sub>2</sub> emitter in the world, accounting for nine and ten percent respectively<sup>30</sup>.

While sustaining its economic growth, at an annual average GDP growth rate of two percent, the EU has already reduced its GHG emissions in 2017 by about 17 percent from 1990 levels<sup>31</sup>. CO<sub>2</sub> emissions decreased by about 22 percent compared to 1990 in 2018. Some European Union Member States, however, are still dependent on fossil fuels for their electricity and heat generation.

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<sup>24</sup> Clean Edge, Inc.: 2017 U.S. Clean Tech Leadership Index: State Index

<sup>25</sup> <https://www.sierraclub.org/ready-for-100/commitments>

<sup>26</sup> America’s Pledge is an initiative led by former mayor Michael Bloomberg and former governor Jerry Brown, uniting commitments made by 17 states, more than 450 cities, businesses and academic institutions: [www.americaspledgeonclimate.com](http://www.americaspledgeonclimate.com)

<sup>27</sup> America’s Pledge Initiative on Climate (2018) “Fulfilling America’s Pledge: How States, Cities, and Business Are Leading the United States to a Low-Carbon Future.”

<sup>28</sup> <https://content.sierraclub.org/coal/coal-plant-map>

<sup>29</sup> Inventory of U.S. Greenhouse Gas Emissions and Sinks (2019)

<sup>30</sup> UNEP, The Emission Gap Report 2018, Global Carbon Project

<sup>31</sup> UNEP, The Emission Gap Report 2018, Emission Database for Global Atmospheric Research, based on the EU commitments under the Kyoto Protocol and its Cancun pledge

The largest CO<sub>2</sub> contributors within the European Union in 2018 were Germany (22 percent), the United Kingdom (10.7 percent), Italy (10 percent), Poland (9.6 percent) and France (9.3 percent)<sup>32</sup>. CO<sub>2</sub> emissions per person in some European Union countries are relatively high. Currently, a person in The Netherlands emits 9.5 tons of CO<sub>2</sub> per year, 9.1 in Germany, 8.8 in Finland and in Poland, and 5.6 in the United Kingdom. On average, a person in the European Union emits 6.8 tons of CO<sub>2</sub> per year or almost three times what a person in Brazil emits<sup>33</sup>.

The EU and its 28 Member States put forward a legally binding climate pledge to reduce GHG emissions by at least 40 percent below 1990 level by 2030.

To meet this target, the EU has adopted a large package of measures in 2018 aimed at accelerating the reduction of GHG emissions, including national coal phase-out plans, increasing renewable energy and energy efficiency, and legally binding annual emission limits for each Member State in the transportation, buildings, agriculture and waste management sectors<sup>34</sup>.

These combined measures and policies are expected to result in GHG emission reductions of 58 percent by 2030<sup>35</sup>, exceeding the emission reduction commitment in the pledge. Thus, the European Union's pledge was deemed sufficient.

## India

India is the seventh largest economy in the world, with an average GDP growth rate of seven percent a year since 2000. It is the fourth largest GHGs and CO<sub>2</sub> emitter in the world, accounting for about 7 percent each respectively<sup>36</sup>. India's CO<sub>2</sub> emissions per person have doubled since 1990, but its historical emissions were very low, and current emissions are significantly lower than most industrialized countries. Currently, a person in India emits less than 2 tons of CO<sub>2</sub> per year, which is less than half of what a person in Sweden or a third of what a person in Italy emits<sup>37</sup>.

Its climate pledge includes three targets:

1. To unconditionally reduce the emission intensity (of all GHGs) of its GDP by 30-35 percent from 2005 level by 2030.

India states that it has already reduced the emission intensity by 12 percent from 2005 level to 2010<sup>38</sup> and by 21 percent over the 2005-2014 period<sup>39</sup>. These reductions have been calculated using GDP at constant 2004-2005 prices (in Rupees), and do not include emissions from agriculture. Using 2011-2012 prices (in Rupees), the reduction percentage is lower<sup>40</sup>. Using a global dataset in US dollars, India has reduced the GHG emission intensity of its GDP by about 18 percent from 2005 level in 2015<sup>41</sup>. Despite the differences in the GDP unit used, India has reduced the emissions intensity of its GDP. By just

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<sup>32</sup> Fossil CO<sub>2</sub> and GHG emissions of all world countries - 2019 Report, Publications Office of the European Union

<sup>33</sup> Fossil CO<sub>2</sub> and GHG emissions of all world countries - 2019 Report, Publications Office of the European Union; Global Carbon Atlas, CO<sub>2</sub> emissions per person

<sup>34</sup> UNEP, The Emission Gap Report 2018

<sup>35</sup> Climate Action Tracker

<sup>36</sup> UNEP, The Emission Gap Report 2018, Global Carbon Project

<sup>37</sup> Fossil CO<sub>2</sub> and GHG emissions of all world countries - 2019 Report, Publications Office of the European Union; Global Carbon Atlas, CO<sub>2</sub> emissions per person

<sup>38</sup> India's First Biennial Update Report to the UNFCCC (2015)

<sup>39</sup> India's Second Biennial Update Report to the UNFCCC (2018)

<sup>40</sup> Ministry of Statistics and Programme Implementation, Government of India (Press Note on National Account Statistics, Nov. 2018)

<sup>41</sup> Fossil CO<sub>2</sub> and GHG emissions of all world countries, 2019 Report, Emissions Database for Global Atmospheric Research

implementing policies already in place, India is likely to achieve a 30-35 percent reduction by 2030 and may even overachieve it<sup>42</sup>.

However, India's GHG emissions have increased by about 76 percent between 2005 and 2017, and are expected to continue to increase due to economic growth. Its CO<sub>2</sub> emissions have more than doubled over the period 2005-2018 –from 1.2 GtCO<sub>2</sub> in 2005 to 2.6 GtCO<sub>2</sub> in 2018<sup>43</sup>.

India's commitment to reduce its emissions intensity is indeed encouraging, but it will not result in a decrease in GHG emissions below current levels. Thus, India's pledge was deemed insufficient to contribute to reducing global emissions by 50 percent in 2030.

2. To conditionally achieve 40 percent of non-fossil fuels electric power installed capacity.

India has increased its installed electricity generation capacity by three-fold since 2005, with 57 percent of its generation still dependent on coal<sup>44</sup>. The share of non-fossil fuels electric power capacity has increased as well –from 30 percent in 2005 to 35 percent in 2018 of which 20 percent are renewables<sup>45</sup>. Thus, by continuing this increasing trend, India could achieve a 40 percent non-fossil-based power capacity earlier than 2030.

Although renewables are becoming more cost-effective than coal-fired power plants in India, the expansion of non-fossil fuels electric power may not compensate the lack of action to reduce the share of electricity generated by coal.

3. To unconditionally create an additional cumulative carbon sink of 2.5–3 GtCO<sub>2</sub>e through additional forest and tree cover.

India forest cover totals about 24 percent of its geographical area. Since 2015, the annual increase of the carbon stock has been 71.5 MtCO<sub>2</sub>-eq (metric tons of all GHGs combined)<sup>46</sup>. The target of creating an additional cumulative carbon sink of 2.5–3 GtCO<sub>2</sub>-eq represents an average annual carbon sink of 167–200 MtCO<sub>2</sub>e over the period 2016–2030<sup>47</sup>. Thus, to reach the target in the climate pledge, India would have to more than double its current rate of forest cover expansion.

## **The remaining 152 climate pledges**

The remaining 152 climate pledges account for 32.5 percent of global GHG emissions, and 40 percent of global CO<sub>2</sub> emissions.

Based on their emission reduction commitments, these 152 pledges are ranked as:

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<sup>42</sup> UNEP, The Emission Gap Report 2018

<sup>43</sup> Fossil CO<sub>2</sub> and GHG emissions of all world countries, 2019 Report, Emission Database for Global Atmospheric Research

<sup>44</sup> India's Second Biennial Update Report to the UNFCCC (2018)

<sup>45</sup> India's Second Biennial Update Report to the UNFCCC (2018)

<sup>46</sup> India's Second Biennial Update Report to the UNFCCC (2018)

<sup>47</sup> Climate Action Tracker

## Sufficient

Besides the European Union and its 28 Member States, seven countries put forward unconditional pledges with emission reductions equal or above 40 percent. These pledges were deemed as **sufficient**. These are Iceland, Liechtenstein, Monaco, Norway, Switzerland and Ukraine. The Republic of Moldova pledged to unconditionally reduce GHG emissions by 64-67 percent below 1990 level, and an additional 11-14 percent conditionally. Because 80 percent of the pledge is independent of international assistance, this pledge is also deemed sufficient.

## Partially Sufficient

Twelve pledges were deemed **partially sufficient**. Emission reduction commitments from these countries range from 20-40 percent. These countries include some of the largest emitters in the world, and need to do much better to reduce emissions. These are Australia, Azerbaijan, Belarus, Brazil, Canada, Costa Rica, Israel, Japan, Montenegro, New Zealand, Republic of Korea and San Marino.

Japan and Brazil are the sixth and seventh largest GHGs emitters<sup>48</sup>. Their share of global GHG emissions is 3 and 2.3 percent respectively.

Japan committed to reduce “GHG emissions by 26 percent below 2013 levels by 2030”, which may be met. Among other measures, Japan adopted a 22–24 percent renewable electricity target by 2030. Currently, renewables account for 17 percent of Japan’s electricity, with a rapid growth of 50 percent since 2010<sup>49</sup>. However, Japan is still dependent on fossil fuels for 81 percent of its electricity and 88 percent of its primary energy<sup>50</sup>. These percentages need to be significantly reduced.

Brazil committed to reduce “GHG emissions by 43 percent below 2005 levels by 2030”. This climate pledge, however, was put forward by the previous administration. The current one, which took office last January, reversed key environmental and climate change-related policies and measures. This political reversal jeopardizes Brazil’s chances of meeting its climate pledge. Furthermore, deforestation in Amazonia as well as destruction of other ecosystems has accelerated the reduction of carbon sinks, impacting regional climate.

The Republic of Korea pledged to reduce “GHG emissions by 37 percent below business as usual in 2030”. By using their business as usual projection for 2030 and their latest reported level of GHG emissions, the Korean pledge equals a 22 percent GHGs reduction below 2014 level in 2030.

## Partially Insufficient

Of the remaining 133 pledges, 8 were ranked as **partially insufficient**. The pledges included in this category are:

<sup>48</sup> UNEP, The Emission Gap Report 2018

<sup>49</sup> Electricity generation by fuel – Japan: IEA Electricity Information 2018

<sup>50</sup> Electricity generation by fuel – Japan: IEA Electricity Information 2018, BP Statistical Review of World Energy June 2019



1. Pledges **below 20 percent** emission reductions. Commitments from these countries show limited ambition to address climate change. These are Albania, Jamaica and Serbia. Also included in this category is Trinidad and Tobago, a high-income country.
2. Pledges with conditional commitments where the country is implementing more than **50 percent** of the pledge from their own resources. These pledges show some effort from the country to reduce emissions. The four countries under this category are Cook Islands, Kazakhstan, Micronesia and Solomon Islands.

## Insufficient

The rest of the climate pledges, totaling 125, were ranked as **insufficient**. The pledges in this category include:

1. Pledges with **no emission reduction target**. These 36 pledges cannot be quantified or measured. These include 30 pledges from Armenia, Belize, Bhutan, Bolivia, Cabo Verde, Cuba, Egypt, El Salvador, Eswatini, Guinea-Bissau, Guyana, Malawi, Mozambique, Myanmar, Nauru, Nepal, Nicaragua, Panama, Papua New Guinea, Rwanda, Samoa, Sierra Leone, Somalia, South Africa, Sudan, Suriname, Syrian Arabic Republic, Timor-Leste, Tonga and Turkmenistan.

In addition, this category includes six high-income countries that lack emission reduction targets in their pledges. These are: Antigua and Barbuda, Bahrain, Kuwait, Qatar, Saudi Arabia and United Arab Emirates.

Qatar, Kuwait, the United Arab Emirates and Bahrain have the highest CO<sub>2</sub> emissions per person in the world, with 38, 23.9, 22.4 and 21.8 tons of CO<sub>2</sub> per person respectively. On average, that is about 50 percent higher than the United States and three times more than in Germany<sup>51</sup>.

2. Pledges with commitments that rely **more than 50 percent** on international funding for their implementation. Many of these countries have limited capacity to reduce their emissions and are reliant on financial and technical assistance, which may not materialize. These pledges, especially for the upper middle income countries, show minimal effort from the country to reduce emissions. Among this category, 27 pledges made commitments ranging from 50-90% conditional. These are: Algeria, Bangladesh, Benin, Bosnia and Herzegovina, Burkina Faso, Burundi, Chad, Democratic People's Republic of Korea, Ecuador, Eritrea, Fiji, Ghana, Guatemala, Haiti, Jordan, Kiribati, Lesotho, Maldives, Mauritania, Morocco, Niger, Nigeria, Niue, Sri Lanka, Tajikistan, Togo and Viet Nam. Of these pledges, 33 percent are from upper middle-income countries, 30 percent from lower middle-income countries and 37 percent from low income countries.

In addition, 38 pledges are 100 percent conditional to international support for their full implementation. These are: Afghanistan, Barbados, Botswana, Cambodia, Cameroon, Central African Republic, Comoros, Congo (Republic of), Cote d'Ivoire, Democratic Republic of the Congo, Dominica, Dominican Republic, Equatorial Guinea, Ethiopia, Gabon, Gambia, Grenada, Guinea, Honduras, Kenya, Lao People's Democratic Republic, Liberia, Madagascar, Marshall Islands, Mauritius, Mongolia, Namibia, Oman, Pakistan, Palau, Saint Kitts and Nevis, Saint Lucia, Sao Tome

<sup>51</sup> Fossil CO<sub>2</sub> and GHG emissions of all world countries - 2019 Report, Publications Office of the European Union; Global Carbon Atlas, CO<sub>2</sub> emissions per person

and Principe, Seychelles, State of Palestine, Tuvalu, Uganda, United Republic of Tanzania, Vanuatu, Venezuela, Zambia and Zimbabwe. Of these pledges, 30 percent are from upper middle-income countries, 32 percent from lower middle-income countries and 26 percent from low income countries.

Five high-income countries also made totally conditional pledges: Bahamas, Barbados, Oman, Saint Kitts and Nevis and Seychelles.

3. Pledges with **intensity targets**. As with China and India, climate pledges based on intensity targets mostly equal an increase in emissions in 2030 above the current level. These six pledges using intensity targets are: Malaysia, Uzbekistan, Tunisia, and three high income countries –Chile, Singapore and Uruguay.
4. Pledges using **business as usual (BAU)** targets, as well as partially conditional using more than **50 percent** of their own resources. These pledges are based on emission reductions below a projected level of future emissions in 2030 **if** no actions or policies are implemented. Thus, these commitments mostly equal an increase in emission in 2030 above the latest level of emissions reported by each country.

There are 13 pledges under this group.

For example, Indonesia, the eighth largest global emitter, pledged to unconditionally “reduce GHG emissions by 29 percent below business as usual” by 2030, and an additional 12 percent conditionally. By using their business as usual projection for 2030 and their latest reported level of GHG emissions, the Indonesian pledge equals a 40 percent GHG increase above 2016 level in 2030<sup>52</sup>.

The 12 additional countries using the same BAU target, which increases emissions by 2030, are: Andorra, Argentina, Colombia, Djibouti, Georgia, Mexico, North Macedonia, Paraguay, Peru, Saint Vincent and the Grenadines and Thailand.

**Countries with no pledges.** Thirteen countries have not yet submitted their climate pledges. These are Angola, Brunei Darussalam, Iran, Iraq, Kyrgyz Republic, Libya, Lebanon, Philippines, Russia Federation, Senegal, South Sudan, Turkey and Yemen.

All of these countries have signed the Paris Agreement. Brunei Darussalam, Philippines and Senegal have also ratified it and are revising their initial commitments before they become their climate pledges. The rest of the countries are still in the ratification process of the Paris Agreement.

Emissions from these countries combined account for about 9 percent of global GHG emissions. Of particular importance among these countries is the Russian Federation –the fifth largest global GHG emitter, contributing 4.6 percent of global GHG emissions<sup>53</sup>.

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<sup>52</sup> Indonesia’s NDC (2016) and Biennial Update Report (2018)

<sup>53</sup> UNEP, The Emission Gap Report 2018

## The price

As long as global emissions are not rapidly reduced, global warming will continue to accelerate. This means that we could be living in 1.5°C world as early as the 2030s<sup>54</sup>. As a result, weather events and patterns will continue to change, and will adversely affect human health, livelihoods, food, water, biodiversity and economic growth.

Weather events are the result of natural factors. A warming climate has altered the intensity and frequency of heat waves, droughts, wildfires, and severe storms (or heavy precipitation) and hurricanes –both of which lead to flooding<sup>55</sup>. Once-a-century severe weather events are now becoming the new norm.

These weather events influenced by human-induced climate change are becoming more frequent and intense. They are also becoming more costly.

Economic losses and damages from 690 weather events were \$330 billion dollars globally in 2017. These figures have almost doubled in number and in losses compared to 2005, when 347 weather events caused \$274 billion dollars in economic losses worldwide –almost half of the economic losses were caused by Hurricane Katrina in the United States<sup>56</sup>.

Because global warming is accelerating, the number and economic losses from weather events are projected to at least double again by 2030. That comes to \$660 billion dollars a year or almost \$2 billion a day within the next decade.

The world cannot afford these costs on lives, livelihoods and economic growth. This massive price tag is part of the cost of inaction.

## Limiting climate change

Limiting climate change requires rapidly reducing emissions. For more than two decades, climate scientists have reiterated the same message. Yet, emissions continued to increase.

Today, fossil fuels provide 81 percent of the world's primary energy<sup>57</sup> and the CO<sub>2</sub> released with their use is responsible for 70 percent of the observed warming<sup>58</sup>. The climate pledges are indeed a critical first step to reduce emissions; but will only address less than half of emission reductions needed<sup>59</sup>, if fully implemented.

There are two ways in which CO<sub>2</sub> emissions can be rapidly reduced to double climate action.

One of the fastest ways to reduce energy-related CO<sub>2</sub> emissions is to shift electricity generation. Currently, 38 percent of electricity in the world is generated by burning coal and 26 percent by oil and

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<sup>54</sup> Universal Ecological Fund: The Truth About Climate Change (2016), IPCC: Special Report on Global Warming of 1.5°C (2018)

<sup>55</sup> Explaining Extreme Events of 2015 from a Climate Perspective, Bulletin of the American Meteorological Society (2015); Attribution of Extreme Weather Events in the Context of Climate Change, The National Academies of Sciences, Engineering, and Medicine (2016)

<sup>56</sup> NatCatService, Munich RE: <https://natcatservice.munichre.com/>

<sup>57</sup> International Energy Agency: IEA World Energy Balances 2018

<sup>58</sup> UNEP (2018). The Emissions Gap Report 2018, Global Carbon Atlas, Emission Database for Global Atmospheric Research

<sup>59</sup> IPCC: Special Report on Global Warming of 1.5°C (2018)

gas. That totals 64 percent of global electricity being generated by fossil fuels, while about 7 percent by solar and wind<sup>60</sup>.

To drastically reduce CO<sub>2</sub> emissions in the next decade, a 70 percent reduction in coal use for electricity generation will be necessary as well as a five-fold increase in wind and solar energy<sup>61</sup>. Yet, about 60 percent of the world's primary energy will still be dependent on fossil fuels (mainly natural gas and oil) to power, heat and fuel the world in 2030<sup>62</sup>.

The implementation of the current pledges is far from the necessary reduction in coal use and promotion of renewable energy targets needed to limit human-induced climate change.

Worldwide, there are more than 2,400 coal-fired power stations<sup>63</sup>. Phasing out and closing these coal-fired power plants within the next decade is essential to reducing CO<sub>2</sub> emissions. This option is viable, cost-effective and certainly doable. However, due to the misconception that breaking the dependency on coal may hinder economic growth, vested interests, short-sightedness, bad economics and even denial make this option unlikely to be implemented within the next decade. In fact, 250 additional coal-fired power stations are currently under construction<sup>64</sup>.

Another way to rapidly reduce CO<sub>2</sub> emissions is by improving and increasing energy efficiency. Energy efficiency is one of the key ways the world can meet energy demand with lower energy use. Improving and increasing energy efficiency could achieve more than 40 percent of CO<sub>2</sub> emission reductions by 2040<sup>65</sup>.

Using energy more efficiently is something each one of us can do. It can result in emission reductions as well as significant savings in energy bills (electricity, natural gas and fuel). Households worldwide could save more than \$500 billion dollars by 2040 by adopting energy efficiency measures that are available today, for example, better insulation, choices of glass, 'green' roofs, heating, ventilation, and air conditioning (HVAC) choices. Each dollar spent to make vehicles, buildings, appliances and equipment more efficient pays back, on average, by a factor of three through lower energy bills<sup>66</sup>.

Solving climate change requires leadership. It also requires the collective effort of all of us.

## **Leadership from governments**

Despite the climate pledges, the policies under implementation and those to be adopted, tax credits for renewable electricity, carbon pricing and other measures, national governments need to at least double or triple actions to reduce emissions in the next decade. The next round of new or updated climate pledges is expected to be submitted by 2020<sup>67</sup>.

World leaders also have the opportunity to show their climate leadership by adopting and implementing additional policies to reduce emissions and to use energy more efficiently. Policy can accelerate the implementation of climate solutions.

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<sup>60</sup> International Energy Agency: Electricity generation mix, 2018

<sup>61</sup> IPCC: Special Report on Global Warming of 1.5°C (2018), IAMC 1.5°C Scenario Explorer: International Institute for Applied Systems Analysis (IIASA)

<sup>62</sup> IAMC 1.5°C Scenario Explorer: International Institute for Applied Systems Analysis (IIASA)

<sup>63</sup> Global Energy Monitor's Global Coal Plant Tracker: Number of Coal-fired power stations by county (July 2019)

<sup>64</sup> Global Energy Monitor's Global Coal Plant Tracker: Number of Coal-fired power stations by county (July 2019)

<sup>65</sup> IEA Energy Efficiency 2018 report

<sup>66</sup> IEA Energy Efficiency 2018 report

<sup>67</sup> Paris Agreement, Article 4.9

Stronger leadership is needed to sustain the call for increased climate action, nationally and globally, to meet the Paris Agreement targets. Since the United States announced its intention to withdraw from the Paris Agreement in 2017, a number of other countries appear to be paying little or no attention to the urgent need to reduce emissions. A few world leaders remain strong advocates of the Paris Agreement, and they need to lead other nations to honor and increase their commitments.

### **Leadership from the private sector**

The burden of addressing climate change cannot be left to governments alone. Business leaders can be climate leaders. Some have already shown their leadership –about 200 major companies committed to sourcing 100 percent renewable electricity by 2050<sup>68</sup>. For these companies, climate action is a sustainable way of doing business and a driver of innovation, competitiveness, risk management and growth. This private sector leadership can also have an influential role –investments from businesses also have the potential to drive policy changes.

### **Leadership from individuals**

Individuals can be climate leaders too. Communities, both as citizens and consumers, can make a major difference through their coordinated actions. It will only require smarter choices.

We need a paradigm shift in our current culture. Individuals can:

- Choose to demand increased climate action from governments –a necessary and critical element to put pressure on governments for climate leadership and smarter choices. After all, Heads of State have the responsibility of making decisions on behalf of millions of people in their countries;
- Choose to purchase goods and service from businesses that are choosing a sustainable business model over profit;
- Contribute to reducing emissions by using energy more efficiently in our homes, where we work or study, in how we travel, in what we purchase, in what we eat.

Individuals in some countries can have a higher impact in reducing emissions than others, based on their CO<sub>2</sub> emissions per person<sup>69</sup> (Figure 3).

Countries where individuals can have the highest impact in reducing emissions, ordered by their CO<sub>2</sub> emission per person, are Qatar, Trinidad and Tobago, Kuwait, United Arab Emirates, Brunei Darussalam, Bahrain, Saudi Arabia, Australia, United States, Kazakhstan, Luxembourg, Canada, Estonia, Palau, Oman, Turkmenistan, Republic of Korea, Russian Federation, Singapore, Iceland, Czechia, Bermuda, Mongolia, Germany, Netherlands and Japan.

Impact from individual actions to reduce emissions will be also high in Belgium, Poland, Norway, Libya, Ireland, Finland, Iran, Malaysia, South Africa, Niue, Austria, Israel, New Zealand, Bosnia and Herzegovina, Slovenia, China, Bulgaria, Greece, Andorra, Slovakia, Bahamas, Belarus, Seychelles, Cyprus, Spain, Denmark, Italy, United Kingdom, Turkey, Antigua and Barbuda, France, Portugal, Equatorial Guinea, Hungary, Serbia and Iraq.

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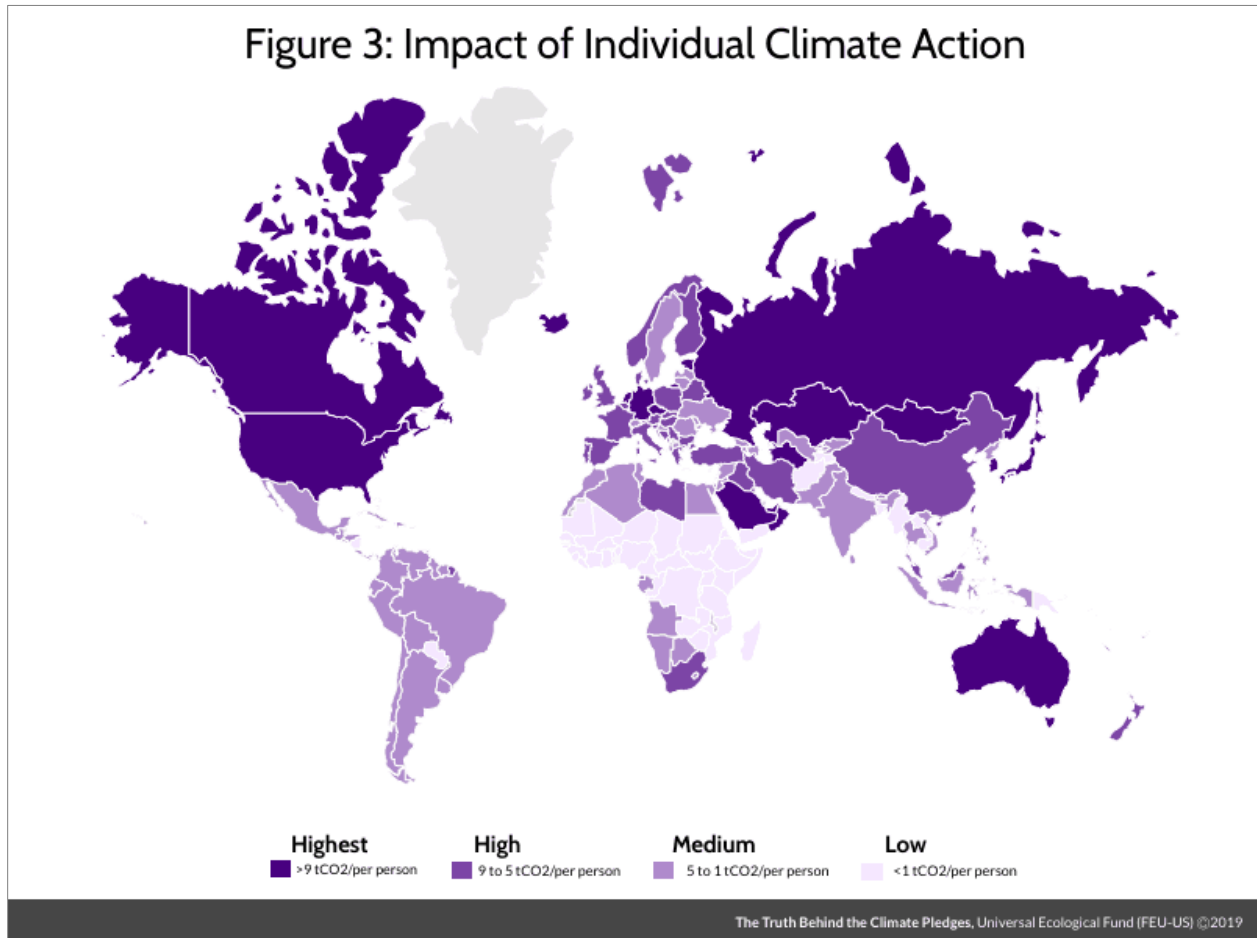
<sup>68</sup> <http://there100.org/>

<sup>69</sup> Fossil CO<sub>2</sub> and GHG emissions of all world countries - 2019 Report, Publications Office of the European Union; Global Carbon Atlas, CO<sub>2</sub> emissions per person

Young people in many of these countries are leading a global mobilization demanding political action to address climate change. These young climate advocates can lead and mobilize individuals to take climate action as well.

Each one of us can be a climate leader.

We all contribute to climate change. We can all help solve it.



## Annex: The Climate Pledges

The 184 climate pledges were ranked based on their emission reduction commitments.

Sources used to develop the ranking are:

- NDC Registry, United Nations Framework Convention on Climate Change Secretariat<sup>70</sup>.
- Biennial Update Reports and National Communications to the UNFCCC<sup>71</sup>.

Additional columns are included with the categorization of countries used by:

- The Climate Change Convention, indicating Industrialized and Developing. Among the developing countries, 47 Least Developing Countries (LDCs) are also indicated<sup>72</sup>.
- The IPCC, indicating country classification by income<sup>73</sup>: high income countries (HIC), upper middle-income countries (UMC), lower middle-income countries (LMC) and low income countries (LIC). This categorization is based on the World Bank's classification of countries by income, and was updated using the latest ranking, where 23 countries changed categories<sup>74</sup>.

SUFFICIENT –36 pledges				
Climate pledges above or equal to 40% emission reductions				
Country / Party	Based on	Category		Unconditional Pledge
		UNFCCC	IPCC	
European Union (EU-28)	+40% emission reduction	Industrialized	High income	At least 40% of GHG emissions below 1990 level
Austria		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Belgium		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Bulgaria		Industrialized	Upper-middle income	At least 40% of GHG emissions below 1990 level
Croatia		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Cyprus		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Czechia		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Denmark		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Estonia		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Finland		Industrialized	High income	At least 40% of GHG emissions below 1990 level
France		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Germany		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Greece		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Hungary		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Ireland		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Italy		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Latvia		Industrialized	High income	At least 40% of GHG emissions below 1990 level

<sup>70</sup> Nationally Determined Contributions: [NDC Registry](#), United Nations Framework Convention on Climate Change

<sup>71</sup> [Biennial Update Report](#) (BUR) and [National Communication](#) (NC) to the Climate Change Convention

<sup>72</sup> There are [47 LDCs](#) under the Climate Change Convention.

<sup>73</sup> The 2014 IPCC Fifth Assessment Report (AR5) analyzed global GHG emissions categorizing countries based on their income into high-income, upper-middle income, lower-middle income and low-income countries: [AR5, WGIII, Annex II: Metrics and Methodologies](#).

<sup>74</sup> This categorization of countries by income was updated using the [2020 ranking](#). Compared to the 2014 IPCC assessment, 23 countries changed categories: Angola, Armenia, Bangladesh, Comoros, Equatorial Guinea, Georgia, Guatemala, Guyana, Hungary, Kenya, Kyrgyz Republic, Myanmar, Nauru, Paraguay, Russian Federation, Samoa, Seychelles, South Sudan, Sri Lanka, Syrian Arab Republic, Tunisia, Yemen and Zimbabwe

Lithuania		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Luxembourg		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Malta		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Netherlands		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Poland		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Portugal		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Romania		Industrialized	Upper-middle income	At least 40% of GHG emissions below 1990 level
Slovakia		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Slovenia		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Spain		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Sweden		Industrialized	High income	At least 40% of GHG emissions below 1990 level
United Kingdom		Industrialized	High income	At least 40% of GHG emissions below 1990 level
Iceland	40% emission reduction	Industrialized	High income	40% of GHG emissions below 1990 level
Liechtenstein	40% emission reduction	Industrialized	High income	40% of GHG emissions below 1990 level
Monaco	+40% emission reduction	Industrialized	High income	50% of GHG emissions below 1990 level
Norway	+40% emission reduction	Industrialized	High income	At least 40% of GHG emissions below 1990 level
Switzerland	+40% emission reduction	Industrialized	High income	50% of GHG emissions below 1990 level
Ukraine	+40% emission reduction	Industrialized	Lower-middle income	Not to exceed 60% of GHG emissions below 1990 level
Republic of Moldova	+40% emission reduction	Developing	Lower-middle income	64-67% of GHG emissions below 1990 level <sup>75</sup>

## PARTIALLY SUFFICIENT –12 pledges

Climate pledges between 20-40% emission reductions

Country	Based on	Category		Unconditional Pledge
		UNFCCC	IPCC	
Australia	20-40% emission reduction	Industrialized	High income	26-28% of GHG emission below 2005 level
Azerbaijan	20-40% emission reduction	Developing	Upper-middle income	35% of GHG emissions below 1990 level
Belarus	20-40% emission reduction	Industrialized	Upper-middle income	At least 28% of GHG emissions below 1990 level
Brazil	20-40% emission reduction	Developing	Upper-middle income	37% of GHG emissions below 2005 level (by 2025)
Canada	20-40% emission reduction	Industrialized	High income	30% of GHG emissions below 2005 level
Costa Rica	20-40% emission reduction	Developing	Upper-middle income	25% of GHG emissions below 2012
Israel	20-40% emission reduction	Developing	High income	26% of GHG emissions per capita below 2005 level
Japan	20-40% emission reduction	Industrialized	High-income	26% of GHG emissions below 2013 level
Montenegro	20-40% emission reduction	Developing	Upper-middle income	30% of GHG emissions below 1990 level
New Zealand	20-40% emission reduction	Industrialized	High income	30% of GHG emissions below 2005 level

<sup>75</sup> The Republic of Moldova also made a conditional pledge to reduce an additional 11-14% of GHG emissions below 1990 level (total up to 78%). Because 80 percent of the pledge depends on national actions, equal or above 40% emission reductions, this pledge was deemed sufficient.



Republic of Korea	20-40% emission reduction <b>BAU target</b>	Developing	High income	37% of GHG emissions below BAU <i>(equals a 22.4% reduction below 2014 level by 2030<sup>76</sup>)</i>
San Marino	20-40% emission reduction	Developing	High income	20% of GHG emissions below 2005 level

## PARTIALLY INSUFFICIENT –8 pledges

Climate pledges below 20% emission reductions and/or up to 50% conditional

Country	Based on	Category		Unconditional pledge	Conditional pledge
		UNFCCC	IPCC		
Albania	Below 20% emission reduction	Developing	Upper-middle income	11.5% of CO <sub>2</sub> emissions below 2016 level	
Cook Islands	Up to 50% conditional	Developing	Upper-middle income	38% of CO <sub>2</sub> emissions from electricity generation below 2006 level	43% of CO <sub>2</sub> emissions from electricity generation below 2006 level (total 81%)
Jamaica	Below 20% emission reduction	Developing	Upper-middle income	7.8% of GHG emissions below BAU	Additional 2.2% of GHG emissions below BAU (total 10%)
Kazakhstan	Up to 50% conditional	Developing	Upper-middle income	15% of GHG emissions below 1990 level	Additional 10% of GHG emissions below 1990 level (total 25%)
Micronesia	Up to 50% conditional	Developing	Lower-middle income	28% of GHG emissions below 2000 level (by 2025)	Additional 7% of GHG emissions below BAU (by 2025) (total 35%)
Serbia	Below 20% emission reduction	Developing	Upper-middle income	9.8% of GHG emissions below 1990 level	
Solomon Islands	Up to 50% conditional	Developing LDC	Lower-middle income	30% of GHG emissions below 2015 level	Additional 15% of GHG emissions below 2015 level (total 45%)
Trinidad and Tobago	Below 20% emission reduction	Developing	High income	30% of GHG emissions in public transportation below BAU	15% of GHG emissions below BAU

## INSUFFICIENT – 128 pledges

Climate pledges with no emission reduction target, more than 50% conditional, with intensity target and/or with Business as Usual (BAU) target

For +pledges with BAU targets, the percentage of actual emission reduction or increase below the latest level of emissions is included under each pledge, indicated in *italics*. Sources are included in footnotes.

Country	Based on	Category		Unconditional pledge	Conditional Pledge
		UNFCCC	IPCC		
Afghanistan	100% conditional	Developing LDC	Low income		13.6% of GHG emissions below BAU
Algeria	+50% conditional	Developing	Upper-middle income	7% of GHG emissions below BAU	Additional 15% of GHG emissions below BAU (total 22%)
Andorra	BAU target	Developing	High income	37% of GHG emissions below BAU <i>(equals a 14% reduction below 2017 level by 2030<sup>77</sup>)</i>	
Antigua and Barbuda	No emission reduction target	Developing	High income	Policies and measures below BAU	Policies and measures below BAU
Argentina	BAU target	Developing	Upper-middle income	18% of GHG emissions below BAU <i>(equals a 31% increase above 2014 level by 2030<sup>78</sup>)</i>	Additional 19% of GHG emissions below BAU (total 37%)
Armenia	No emission reduction target	Developing	Upper-middle income	Policies and measures	Policies and measures

<sup>76</sup> Republic of Korea NDC (2016) and BUR (2017)

<sup>77</sup> Andorra NDC (2017) and BUR (2019)

<sup>78</sup> Argentina NDC (2016) and BUR (2017)

Bahamas	100% conditional	Developing	High income		30% of GHG emissions below BAU <sup>79</sup>
Bahrain	No emission reduction target	Developing	High income		Policies and measures
Bangladesh	+50% conditional	Developing LDC	Lower-middle income	5% of GHG emissions below BAU	Additional 10% of GHG emissions below BAU (total 15%)
Barbados	100% conditional	Developing	High income		44% of GHG emissions below BAU
Belize	No emission reduction target	Developing	Upper-middle income		Policies and measures
Benin	+50% conditional	Developing LDC	Low income	3.6% of GHG emissions below BAU	Additional 12.5% of GHG emissions below BAU (total 16%)
Bhutan	No emission reduction target	Developing LDC	Lower-middle income	Policies and measures towards carbon neutrality	Policies and measures towards carbon neutrality
Bolivia	No emission reduction target	Developing	Lower-middle income	Policies and measures	Policies and measures
Bosnia and Herzegovina	+50% conditional	Developing	Upper-middle income	2% of GHG emissions below BAU	Additional 21% of GHG emissions below BAU (total 23%)
Botswana	100% conditional	Developing	Upper-middle income		15% of GHG emissions below 2010 level
Burkina Faso	+50% conditional	Developing LDC	Low income	6% of GHG emissions below BAU	Additional 11.6% of GHG emissions below BAU (total 18%)
Burundi	+50% conditional	Developing LDC	Low income	3% of GHG emissions below BAU	Additional 17% of GHG emissions below BAU (total 20%)
Cabo Verde	No emission reduction target	Developing	Lower-middle income	Policies and measures	Policies and measures
Cambodia	100% conditional	Developing LDC	Low income	Policies and measures	27% of GHG emissions below BAU
Cameroon	100% conditional	Developing	Lower-middle income		32% of GHG emissions below 2010 level (by 2035)
Central African Republic	100% conditional	Developing LDC	Low income	Policies and measures	5% of GHG emissions below BAU
Chad	+50% conditional	Developing LDC	Low income	18.2% of GHG emissions below BAU	Additional 53% of GHG emissions below BAU (total 71%)
Chile	Intensity target	Developing	High income	30% of emissions per unit of GDP below 2007 level	Additional 5-15% of CO <sub>2</sub> emissions per unit of GDP below 2007 level (total 35-45%)
China	Intensity target	Developing	Upper-middle income	60-65% of CO <sub>2</sub> emissions per unit of GDP below 2005 level	
Colombia	BAU target	Developing	Upper-middle income	20% of GHG emissions below BAU (equals a 13% increase above 2014 level by 2030 <sup>80</sup> )	Additional 10% of GHG emissions below BAU (total 30%)
Comoros	100% conditional	Developing LDC	Lower-middle income		84% of GHG emissions below BAU
Congo (Republic of)	100% conditional	Developing	Lower-middle income		48% of GHG emissions below BAU (by 2025)
Cote d'Ivoire	100% conditional	Developing	Lower-middle income		28% of GHG emissions below BAU
Cuba	No emission reduction target	Developing	Upper-middle income		Policies and measures
Democratic People's Republic of Korea	+50% conditional	Developing	Low income	8% of GHG emissions below BAU	Additional 32% of GHG emissions below BAU (total 40%)
Democratic Republic of the Congo	100% conditional	Developing LDC	Low income		17% of GHG emissions below BAU
Djibouti	BAU target	Developing LDC	Lower-middle income	40% of GHG emissions below BAU (equals a 36% increase above 2010 level by 2030 <sup>81</sup> )	Additional 20% of GHG emissions below BAU (total 60%)
Dominica	100% conditional	Developing	Upper-middle income		44.7% of GHG emissions below 2014 level
Dominican Republic	100% conditional	Developing	Upper-middle income		25% of GHG emissions below 2010 level
Ecuador	+50% conditional	Developing	Upper-middle income	9% of GHG emissions below BAU (by 2025)	Additional 11.9% of GHG emissions below BAU (total 20.9%) (by 2025)
Egypt	No emission reduction target	Developing	Lower-middle income		Policies and measures

<sup>79</sup> Bahamas NDC indicates a 30% GHG emission reduction below BAU target (on page 4) and a 30% GHG emission reduction below 2010 level (on page 11)

<sup>80</sup> Colombia NDC (2018) and BUR (2018)

<sup>81</sup> Djibouti NDC (2016)

El Salvador	No emission reduction target	Developing	Lower-middle income	Policies and measures	Policies and measures
Equatorial Guinea	100% conditional	Developing	Upper-middle income		20% of GHG emissions below 2010 level
Eritrea	+50% conditional	Developing LDC	Low income	12% of CO <sub>2</sub> emissions below BAU	Additional 26.5% of CO <sub>2</sub> emissions below BAU (total 38.5%)
Eswatini	No emission reduction target	Developing	Lower-middle income	Policies and measures	Policies and measures
Ethiopia	100% conditional	Developing LDC	Low income		64% of GHG emissions below BAU
Fiji	+50% conditional	Developing	Upper-middle income	10% of CO <sub>2</sub> emissions below BAU	Additional 20% of CO <sub>2</sub> emissions below BAU (total 30%)
Gabon	100% conditional	Developing	Upper-middle income	Policies and measures	At least 50% of GHG emissions below 2000 level (by 2025)
Gambia	100% conditional	Developing LDC	Low income	Policies and measures	45.4% of GHG emissions below BAU
Georgia	BAU target	Developing	Upper-middle income	15% of GHG emissions below BAU (equals an 85% increase above 2015 level by 2030 <sup>82</sup> )	Additional 10% of GHG emissions below BAU (total 25%)
Ghana	+50% conditional	Developing	Lower-middle income	15% of GHG emissions below BAU	Additional 30% of GHG emissions below BAU (total 45%)
Grenada	100% conditional	Developing	Upper-middle income		30% of GHG emissions below 2010 level (by 2025)
Guatemala	+50% conditional	Developing	Upper-middle income	11.2% of GHG emissions below BAU	Additional 11.4% of GHG emissions below BAU (total 22.6%)
Guinea	100% conditional	Developing LDC	Low income		13% of GHG emissions below 1994 level
Guinea-Bissau	No emission reduction target	Developing LDC	Low income		Policies and measures
Guyana	No emission reduction target	Developing	Upper-middle income	Policies and measures for CO <sub>2</sub> emission reduction (by 2025)	Policies and measures for CO <sub>2</sub> emission reduction (by 2025)
Haiti	+50% conditional	Developing LDC	Low income	5% of GHG emissions below BAU	Additional 21% of GHG emissions below BAU (total 26%)
Honduras	100% conditional	Developing	Lower-middle income		15% of GHG emissions below BAU
India	Intensity target	Developing	Lower-middle income	33-35% of CO <sub>2</sub> emission intensity of GDP below 2005 level	40% of non-fossil fuels electric power installed capacity
Indonesia	BAU target	Developing	Lower-middle income	29% of GHG emissions below BAU (equals a 40% increase above 2016 level by 2030 <sup>83</sup> )	Additional 12% of GHG emissions below BAU (total 41%)
Jordan	+50% conditional	Developing	Upper-middle income	1.5% of GHG emissions below BAU	Additional 12.5% of GHG emissions below BAU (total 14%)
Kenya	100% conditional	Developing	Lower-middle income		30% of GHG emissions below BAU
Kiribati	+50% conditional	Developing LDC	Lower-middle income	12.8% of GHG emissions below BAU	Additional 49% of GHG emissions below BAU (total 61.8%)
Kuwait	No emission reduction target	Developing	High income		Policies and measures
Lao People's Democratic Republic	100% conditional	Developing LDC	Lower-middle income		Policies and measures
Lesotho	+50% conditional	Developing LDC	Lower-middle income	10% of GHG emissions below BAU	Additional 25% of GHG emissions below BAU (total 35%)
Liberia	100% conditional	Developing LDC	Low income		15% of GHG emissions below BAU
Madagascar	100% conditional	Developing LDC	Low income		14% of GHG emissions below BAU
Malawi	No emission reduction target	Developing LDC	Low income	Policies and measures	Policies and measures
Malaysia	Intensity target	Developing	Upper-middle income	35% of GHG emissions intensity below 2005 level	Additional 10% of GHG emissions intensity below 2005 level (total 45%)
Maldives	+50% conditional	Developing	Upper-middle income	10% of GHG emissions below BAU	Additional 14% of GHG emissions below BAU (total 24%)
Mali	BAU target	Developing LDC	Low-income	GHG emission targets by sector below BAU <sup>84</sup>	GHG emission targets by sector below BAU

<sup>82</sup> Georgia NDC (2017) and BUR (2019). Georgia's GHG emissions have been reduced by 60% below 1990 level in 2015

<sup>83</sup> Indonesia NDC (2016) and BUR (2018)

<sup>84</sup> Mali GHG emission reductions by sector: 29% agriculture, 31% energy and 21% forest. The percentage of conditionality is expressed in US dollars, not GHG emission reductions.

Marshall Islands	100% conditional	Developing	Upper-middle income		At least 45% of GHG emissions below 2010 level
Mauritania	+50% conditional	Developing LDC	Lower-middle income	2.6% of GHG emissions below BAU	Additional 19.6% of GHG emissions below BAU (total 22.3%)
Mauritius	100% conditional	Developing	Upper-middle income		30% of GHG emissions below BAU
Mexico	BAU target	Developing	Upper-middle income	22% of GHG emissions below BAU (equals a 9% increase above 2015 level by 2030 <sup>85</sup> )	Additional 14% of GHG emissions below BAU (total 36%)
Mongolia	100% conditional	Developing	Lower-middle income		14% of GHG emissions below BAU
Morocco	+50% conditional	Developing	Lower-middle income	17% of GHG emissions below BAU	Additional 25% of GHG emissions below BAU (total 42%)
Mozambique	No emission reduction target	Developing LDC	Low income		Policies and measures
Myanmar	No emission reduction target	Developing LDC	Lower-middle income		Policies and measures
Namibia	100% conditional	Developing	Upper-middle income		89% of GHG emissions below BAU
Nauru	No emission reduction target	Developing	Upper-middle income	Policies and measures	Policies and measures
Nepal	No emission reduction target	Developing LDC	Low income		Policies and measures
Nicaragua	No emission reduction target	Developing	Lower-middle income	Policies and measures	Policies and measures
Niger	+50% conditional	Developing LDC	Low income	3.5% of GHG emissions below BAU	Additional 31% of GHG emissions below BAU (total 34.6%)
Nigeria	+50% conditional	Developing	Lower-middle income	20% of GHG emissions below BAU	Additional 25% of GHG emissions below BAU (total 45%)
North Macedonia	BAU target	Developing	Upper-middle income	30-36% of CO <sub>2</sub> emissions below BAU (equals a 34-47% increase above 2014 level by 2030 <sup>86</sup> )	
Niue	+50% conditional	Developing	Upper-middle income	38% share of renewable electricity (by 2020)	Additional 42% share of renewable electricity (total 80%) (by 2025)
Oman	100% conditional	Developing	High income		2% of GHG emission below BAU
Pakistan	100% conditional	Developing	Lower-middle income		Up to 20% of GHG emissions below BAU
Palau	100% conditional	Developing	Upper-middle income		22% of CO <sub>2</sub> emissions in the energy sector below 2005 level (by 2025)
Panama	No emission reduction target	Developing	Upper-middle income	Policies and measures	Policies and measures
Papua New Guinea	No emission reduction target	Developing	Lower-middle income	Policies and measures	Policies and measures
Paraguay	BAU target	Developing	Upper-middle income	10% of GHG emissions below BAU (equals a 61% increase above the projected 2020 level by 2030 <sup>87</sup> )	Additional 10% of GHG emissions below BAU (total 20%)
Peru	BAU target	Developing	Upper-middle income	20% of GHG emissions below BAU (equals a 27% increase above 2012 level by 2030 <sup>88</sup> )	Additional 10% of GHG emissions below BAU (total 30%)
Qatar	No emission reduction target	Developing	High income	Policies and measures	Policies and measures
Rwanda	No emission reduction target	Developing LDC	Low income		Policies and measures
Saint Kitts and Nevis	100% conditional	Developing	High income		35% of GHG emissions below BAU
Saint Lucia	100% conditional	Developing	Upper-middle income		23% of GHG emissions below BAU
Saint Vincent and the Grenadines	BAU target	Developing	Upper-middle income	22% of GHG emissions below BAU (by 2025) (equals a 15% increase above 2010 level by 2025 <sup>89</sup> )	

<sup>85</sup> Mexico NDC (2016) and BUR (2018). Mexico also pledged to unconditionally reduce 51% of Short Lived Climate Pollutants (black carbon)

<sup>86</sup> North Macedonia has already reduced CO<sub>2</sub> emissions by 10% below 1990 level in 2014: NDC (2015) and BUR (2018)

<sup>87</sup> Paraguay NDC (2016)

<sup>88</sup> Peru NDC (2015) and NC (2015)

<sup>89</sup> St. Vincent and the Grenadines NDC (2016) and NC (2016)

Samoa	No emission reduction target	Developing	Upper-middle income		100% renewable electricity (by 2025)
Sao Tome and Principe	100% conditional	Developing LDC	Lower-middle income		24% of GHG emissions below BAU
Saudi Arabia	No emission reduction target	Developing	High income	Policies and measures	
Seychelles	100% conditional	Developing	High income	Policies and measures	29% of GHG emissions below BAU
Sierra Leone	No emission reduction target	Developing LDC	Low income		Policies and measures
Singapore	Intensity target	Developing	High income	36% of GHG emissions intensity below 2005 level	
Somalia	No emission reduction target	Developing LDC	Low income		Policies and measures
South Africa	No emission reduction target	Developing	Upper-middle income	Policies and measures	Policies and measures
Sri Lanka	+50% conditional	Developing	Upper-middle income	7% of GHG emissions below BAU	Additional 23% of GHG emissions below BAU (total 30%)
State of Palestine	100% conditional	Developing	Lower-middle income	Policies and measures	12.8% of GHG emissions below BAU (under Status Quo of Israeli occupation) (by 2040)
Sudan	No emission reduction target	Developing LDC	Lower-middle income		Policies and measures
Suriname	No emission reduction target	Developing	Upper-middle income	Policies and measures (by 2025)	Policies and measures (by 2025)
Syrian Arab Republic	No emission reduction target	Developing	Low income	Policies and measures	Policies and measures
Tajikistan	+50% conditional	Developing	Low income	15% of GHG emissions below BAU	Additional 65-75% of GHG emissions below BAU (total 80-90%)
Thailand	BAU target	Developing	Upper-middle income	20% of GHG emissions below BAU (equals a 39% increase above 2013 level by 2030 <sup>90</sup> )	Additional 5% of GHG emissions below BAU (total 25%)
Timor-Leste	No emission reduction target	Developing LDC	Lower-middle income		Policies and measures (by 2025)
Togo	+50% conditional	Developing LDC	Low income	11.14% of GHG emissions below BAU	Additional 20% of GHG emissions below BAU (total 31.14%)
Tonga	No emission reduction target	Developing	Upper-middle income	Policies and measures	Policies and measures
Tunisia	Intensity target	Developing	Lower-middle income	13% of carbon intensity below 2010 level	Additional 28% of carbon intensity below 2010 level (total 41%)
Turkmenistan	No emission reduction target	Developing	Upper-middle income	Policies and measures	Policies and measures
Tuvalu	100% conditional	Developing LDC	Upper-middle income	Policies and measures	60% of GHG emissions from energy sector below 2010 level (by 2025)
Uganda	100% conditional	Developing LDC	Low income	Policies and measures	22% of GHG emissions below BAU
United Arab Emirates	No emission reduction target	Developing	High income	Policies and measures	
United Republic of Tanzania	100% conditional	Developing LDC	Low income	Policies and measures	10-20% of GHG emissions below BAU
United States of America	Reversal in federal policy	Industrialized	High-income	26-28% of GHG emissions below 2005 level (by 2025)	
Uruguay	Intensity target	Developing	High-income	Emission intensity targets by GHGs below 1990 level <sup>91</sup> (by 2025)	Emission intensity targets by GHGs below 1990 level (by 2025)
Uzbekistan	Intensity target	Developing	Lower-middle income	Policies and measures	10% of GHG emissions by unit of GDP below 2010 level
Vanuatu	100% conditional	Developing LDC	Lower-middle income		30% of CO <sub>2</sub> emissions in the energy sector below BAU
Venezuela	100% conditional	Developing	Upper-middle income		At least 20% of GHG emissions below BAU
Viet Nam	+50% conditional	Developing	Lower-middle income	8% of GHG emissions below BAU	Additional 17% of GHG emissions below BAU (total 25%)

<sup>90</sup> Thailand NDC (2016) and BUR (2017)

<sup>91</sup> Uruguay: 24% reduction in CO<sub>2</sub> emission intensity per GDP unit, 57% reduction in methane (CH<sub>4</sub>) emission intensity per GDP unit, and 48% reduction in nitrous oxide (N<sub>2</sub>O) emission intensity per GDP unit

Zambia	100% conditional	Developing LDC	Lower-middle income		47% of GHG emissions below 2010 level
Zimbabwe	100% conditional	Developing	Lower-middle income		33% GHG energy emissions per capita below BAU

<b>NO CLIMATE PLEDGE</b>		
Countries that have signed and/or ratified the Paris Agreement but have not yet submitted their climate pledges		
Country	Category	
	UNFCCC	IPCC
Angola	Developing LDC	Lower-middle income
Brunei Darussalam	Developing	High income
Iran	Developing	Upper-middle income
Iraq	Developing	Upper-middle income
Kyrgyz Republic	Developing	Low income
Lebanon	Developing	Upper-middle income
Libya	Developing	Upper-middle income
Philippines	Developing	Lower-middle income
Russian Federation	Industrialized	Upper-middle income
Senegal	Developing LDC	Lower-middle income - LDC
South Sudan	Developing LDC	Low income
Turkey	Industrialized	Upper-middle income
Yemen	Developing LDC	Low income