

# Sustainable Energy Briefing 21: The Politics of Climate Change

In November 2010, the South African government announced that it will host the next meeting of the United Nations Framework Convention on Climate Change (the 17<sup>th</sup> Conference of the Parties) in Durban in December 2011. Government has stated that it hoped to have a ‘people’s COP’ and ensure improved involvement of civil society.

In addition, the world will be looking to South Africa for a binding agreement. However, this may be difficult to achieve given the slow progress that has been made over the past 20 years. During the next year, there will be much reference to the Climate Change Conference. The purpose of this SE briefing is to provide a basic understanding of the international negotiations, the science of climate change and the way forward.

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## I. History of International Climate Change Negotiations

International negotiations between governments have been taking place for almost 20 years. There has been very little progress or significant action by governments to combat climate change. Fundamentally, the fate of the world lies in the hands of governments who are negotiating a deal based on national interests and not on the will to combat climate change. While governments keep ‘talking’, the impacts of climate change are becoming a reality for the most vulnerable populations around the world. This section will touch on some of the milestones in the international negotiations.

The discussions began with the United Nations Framework Convention on Climate Change (UNFCCC) that emerged from the Rio Earth Summit in 1992. The Convention was important as it began to raise awareness on climate change issues and to get member countries to begin to consider what can be done to reduce global warming and to cope with whatever temperature increases are inevitable. One of the main objectives of the UNFCCC “is to achieve the stabilisation of greenhouse gas concentration in the atmosphere at a level that will prevent dangerous anthropogenic interference with the climate system.”<sup>11</sup> A key result of the UNFCCC was the acceptance that the largest share of historical and current global emissions of greenhouse gases has been contributed by the industrialised countries. Since then, the discussions (or negotiations) have retrogressed as the issue of ‘historical responsibility’ has become a contentious issue with developed countries not wanting to include this in the most recent negotiating text and not wanting to own up to their responsibilities – 20 years later.

The first meeting of the Convention, also known as the Conference of the Parties (COP) was held in Berlin in 1995 where three issues dominated the proceedings: the need to clearly define adequate commitments, elaborate on financial mechanisms and set the criteria for joint implementation of projects. At the third COP, held in Kyoto in December 1997, governments adopted the Kyoto Protocol (KP), which set terms for legally binding commitments for

<sup>11</sup> <http://unfccc.int/cop7/issues/briefhistory.html>

the industrialised countries. It also proposed mechanisms to enable countries to move towards cleaner technology. The KP defines a first commitment period of 2008-2012 when developed countries had to reduce their emissions below 1990 levels. These issues were still on the agenda at the sixteenth meeting of the COP, without any sign of being closer to a solution.

There may have been a flicker of hope in 2007 at the thirteenth session of the COP in Bali, December 2007 when the Bali action plan was adopted. This plan was seen as a positive step and the start of negotiations to enhance the Convention and the Kyoto Protocol. It was dubbed as the roadmap for progress. However, the 2009 meeting in Copenhagen would prove to be a huge obstruction to any move forward.

In 2009, many people viewed the meeting in Copenhagen as a defining moment for combating climate change. It was the meeting to negotiate the continuation of the Kyoto protocol from 2012. However, the lack of political will and lack of transparency in the negotiations resulted in a near collapse of the process and ended up with a diluted paper that was referred to as the Copenhagen Accord. The Accord allows for voluntary pledges for countries to reduce their emissions. The pledges are inadequate as it is not possible to hold countries accountable for their emissions. In addition the pledges are insufficient as they will allow global temperatures to rise to between 4 and 5 degrees Celsius. The pledges by developed countries are equal to between 13.2% and 17.8% in emissions reductions by 2020 – far below the required 40%-plus reductions needed to keep global temperature rise to less than two degrees Celsius.<sup>2</sup>

The most recent meeting held in December 2010 in Cancun was seen by many as a lifeline to the climate change negotiations. The UN Climate Change Conference in Cancun ended with the adoption of a “balanced package of decisions” that has been dubbed as the Cancun Agreements. In general the Agreements were welcomed by majority of the member states and Cancun was seen as a success. The UNFCCC Executive Secretary Christiana Figueres stated that the “beacon of hope has been re-ignited and faith in the multilateral climate change process to deliver results has been restored.”<sup>3</sup>

However, Friends of the Earth (Latin America) has labelled the meeting as another failure and dubbed it “Cancunhagen”.<sup>4</sup> They state that the outcome in Cancun “threatens the life of the Kyoto Protocol” and could see global temperature rising by an average of over 5°C as the Copenhagen Accord pledges become formally acknowledged. The pledges add up to 12-18 per cent below 1990 levels to be achieved by 2020.<sup>5</sup> This is way short of the required level of 40 per cent.

Some of the main elements of the Cancun Agreements include:<sup>6</sup>

- Industrialised country pledges under the Copenhagen Accord are officially recognised under the multilateral process.
- Developing country actions to reduce emissions are officially recognised under the multilateral process. A registry is to be set up to record and match developing country mitigation actions to finance and technology support from by industrialised countries. Developing countries are to publish progress reports every two years.

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<sup>2</sup> <http://climateandcapitalism.com/?p=1940>

<sup>3</sup> [http://unfccc.int/files/press/news\\_room/press\\_releases\\_and\\_advisories/application/pdf/pr\\_20101211\\_cop16\\_closing.pdf](http://unfccc.int/files/press/news_room/press_releases_and_advisories/application/pdf/pr_20101211_cop16_closing.pdf)

<sup>4</sup> Friends of the Earth (Latin America), Press release: **Cancunhagen forces humankind to suicide!** 10 December 2010

<sup>5</sup> <http://www.oxfam.org.nz/what-we-do/issues/climate-change/un-climate-change-conference/cancun-2010-blog>

<sup>6</sup> [www.climateactionprogramme.org](http://www.climateactionprogramme.org)

- Parties meeting under the Kyoto Protocol agree to continue negotiations with the aim of completing their work and ensuring there is no gap between the first and second commitment periods of the treaty.
- The Kyoto Protocol's Clean Development Mechanisms has been strengthened to drive more major investments and technology into environmentally sound and sustainable emission reduction projects in the developing world.
- In the field of climate finance, a process to design a Green Climate Fund under the Conference of the Parties, with a board with equal representation from developed and developing countries, is established.
- A new Cancun Adaptation Framework is established to allow better planning and implementation of adaptation projects in developing countries through increased financial and technical support, including a clear process for continuing work on loss and damage.
- Governments agree to boost action to curb emissions from deforestation and forest degradation in developing countries with technological and financial support.
- Parties have established a technology mechanism with a Technology Executive Committee and Climate Technology Centre and Network to increase technology cooperation to support action on adaptation and mitigation.
- The legal form of the international agreement will be decided next year.

The Cancun Agreement favours the interests of big transnational corporations and disregards the devastating impacts facing many developing countries. While a Green Fund was created, there has been no commitment for where and when the finance for this fund will be sourced. In addition, the World Bank would act as the trustee of the fund. The negative role that the World Bank has played in developing countries as well as their continued funding for coal power has raised concern amongst environmental justice organisations such as Friends of the Earth (Costa Rica) and Via Campesina.<sup>7</sup> With reference to technology transfer, two new institutions to analyze the issue were created, but nothing was said in terms of where the funds for these institutions will come from.

The frustration in the negotiation process led to the World People's Conference on Climate Change in Cochabamba in April 2010. The People's Agreement that was dawn up was seen as a mechanism to give civil society and social movements a voice in the negotiation process. During the year (2010), parts of the People's Agreement on the temperature rise, levels of global emissions and stabilisation of greenhouse (GHG) concentration levels, were considered in the draft UN negotiating text, but by the end of Cancun, that voice had been silenced. The text at the end of Cancun had no reference to the people's Agreement.

So, after all these years of meetings and discussions, the world is no closer to finding a solution to climate change. In fact, it has allowed the problem to become much worse with the impacts being felt in many vulnerable developing countries. In other words, after years of talking, politicians are congratulating themselves for doing nothing in 20 years.<sup>8</sup>

Given the failure of Copenhagen, expectations were low in the lead up to COP16 and thus any small 'agreement' was welcomed and celebrated by member states. Perhaps the biggest success of COP16 was the return of trust amongst countries in the negotiating process. The foundation for negotiations seems to have been restored and South Africa is being seen as the place to take more concrete steps. Many key decisions were postponed for discussions in South Africa. However, the deferment of the question of Kyoto's future and a legally binding emissions reductions agreement to next year's climate summit in South Africa could result in another disaster. Increasing the expectations

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<sup>7</sup> Friends of the Earth (Latin America), Press release: **Cancunhagen forces humankind to suicide!** 10 December 2010

<sup>8</sup> <http://uniteforclimate.org/tag/cop16-2/>

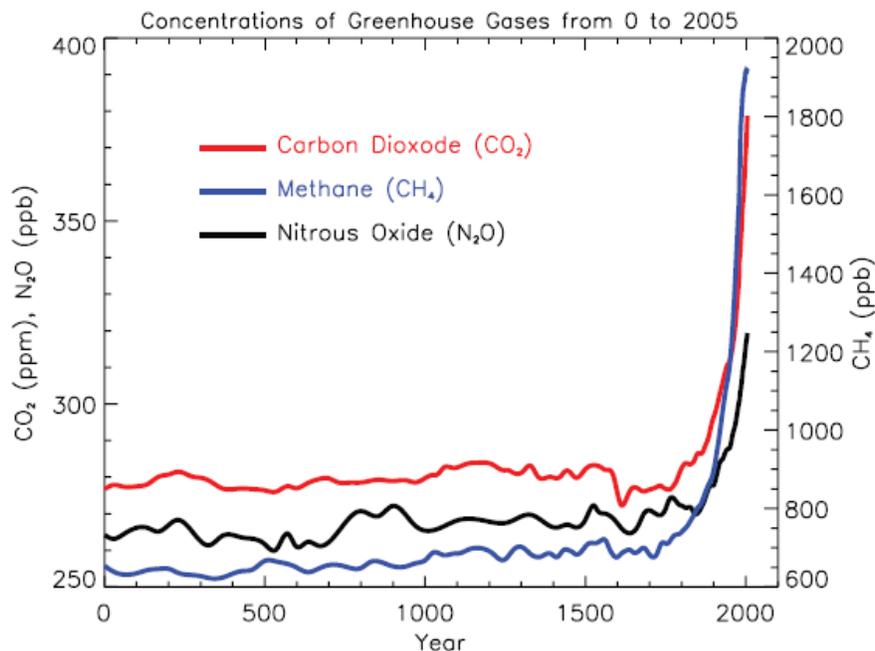
as was the case in Copenhagen could result in another year going by without a solution to climate change. There are a few scenarios that could be expected in Durban. The first is the collapse of the talks due to many countries wanting to 'kill' the Kyoto Protocol. In addition, expectations are to reach a legally binding deal – something that will probably not be achieved in the near future. Another scenario could be the continuation of the Agreements made in Cancun with minute additions that will then be propagated as a success. Civil society and social movements must ensure that their demands win the battle in COP17 and not those of national interests. The battle will be resumed next year in South Africa at COP17.

## II. The Scale of the Problem

The debates on the cause of climate change were finally put to rest in 2007, with the release of the fourth review of the Intergovernmental Panel on Climate Change.<sup>9</sup> The report established that while there are many factors that continue to influence climate, human activities have become a dominant force, and are responsible for most of the warming observed over the past 50 years.

The build-up of GHG in the atmosphere during the twentieth century has resulted from the growing use of energy and expansion of the global economy. The report highlights that over the last century, industrial activity grew 40-fold, and the emissions of gases such as carbon dioxide (CO<sub>2</sub>) and sulphur dioxide (SO<sub>2</sub>) grew 10-fold.

The amount of CO<sub>2</sub> in the air increased from about 280 parts per million by volume (ppmv) at the beginning of the century to 383 ppmv at the end of 2007 [refer to Figure 1 below]. Other important greenhouse gases include the oxides of nitrogen, notably nitrous oxide (NO<sub>2</sub>) and halocarbons, including the chlorofluorocarbons (CFCs) and other chlorine and bromine containing compounds.

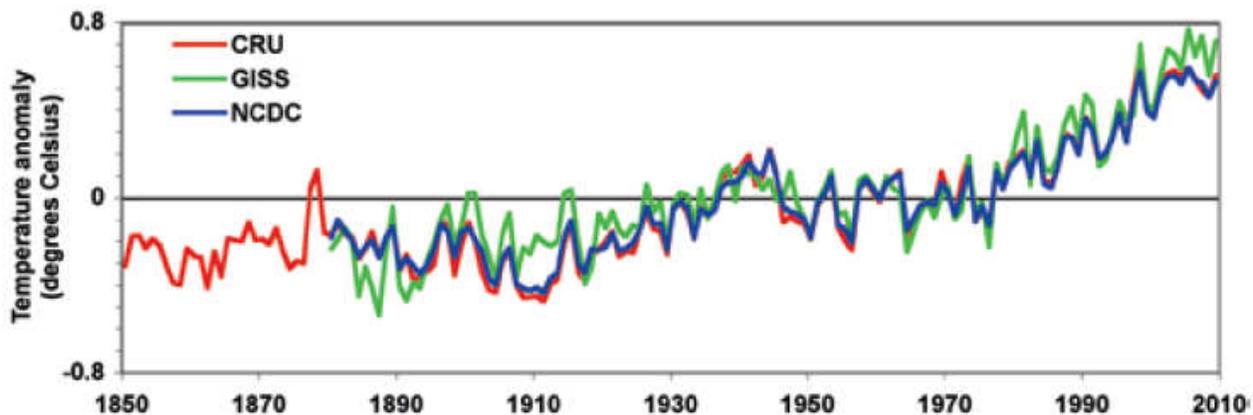


**Figure 1:** Concentrations of GHG [source: IPCC 4th review <http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-ts.pdf>, Pg 100]

<sup>9</sup> <http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-ts.pdf>

The build-up of greenhouse gases results in the warming of the Earth's surface and the lower atmosphere. In addition the report suggests that the global average surface air temperature is estimated to increase from 1990 to 2100 by between 1.4°C and 5.8°C. The UN text suggests the world keep temperature gains below 2 degrees Celsius. Given the delays for real action by governments, the consideration now is whether to make the pledge 1.5 degrees. The current emissions reduction pledges (in the Cancun outcome) could lead temperatures to rise up to 5 degrees by 2100.

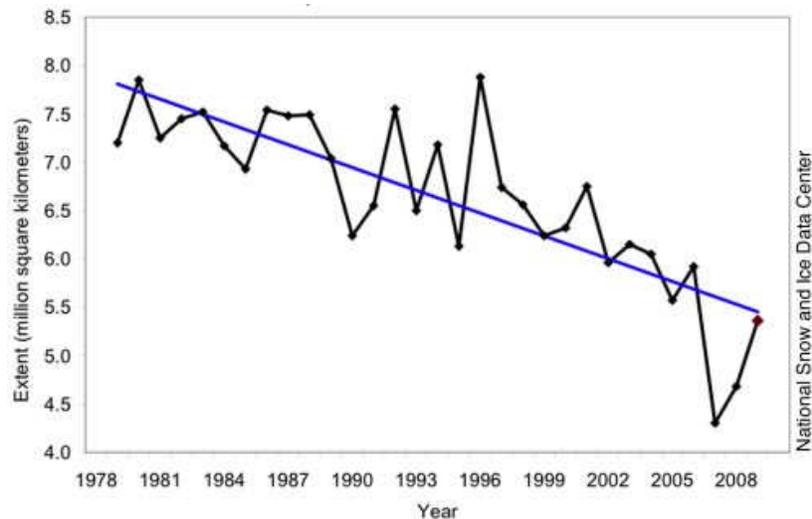
Expressed as a global average, surface temperatures have increased by about 0.74°C over the past hundred years (between 1906 and 2005). However, the warming has been neither steady nor the same in different seasons or in different locations. There was not much overall change from 1850 to about 1915, aside from ups and downs associated with natural variability but which may have also partly arisen from poor sampling. An increase (0.35°C) occurred in the global average temperature from the 1910s to the 1940s, followed by a slight cooling (0.1°C), and then a rapid warming (0.55°C) up to the end of 2006 (**Error! Reference source not found.**). The warmest years of the series are 1998 and 2005 (which are statistically indistinguishable), and 11 of the 12 warmest years have occurred in the last 12 years (1995 to 2006). Warming, particularly since the 1970s, has generally been greater over land than over the oceans.



**Figure 2:** Global Surface temperature anomalies [source: *The Science of Climate Change*, Australian Academy of Science Pg 7]

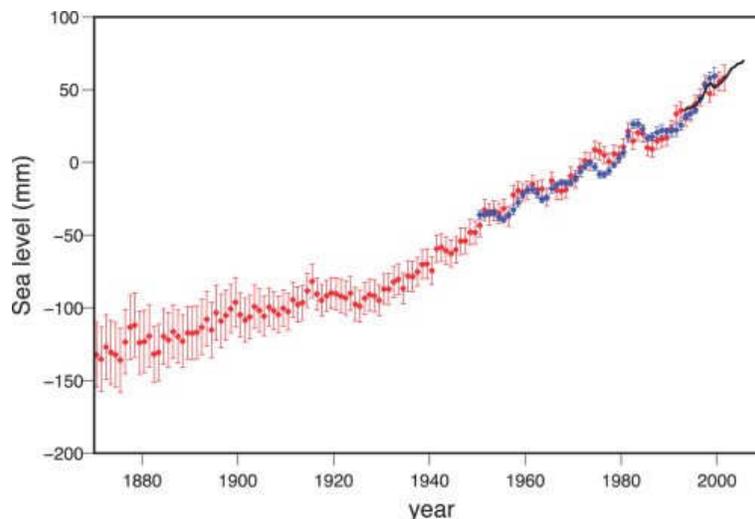
A global-scale decline of snow and ice over many years, especially since 1980 and increasing during the past decade can be seen in **Figure 3**. Since 1978, satellite data have provided continuous coverage of sea ice extent in both Polar Regions. For the Arctic, average annual sea ice extent has decreased by  $2.7 \pm 0.6\%$  per decade, while summer sea ice extent has decreased by  $7.4 \pm 2.4\%$  per decade.<sup>10</sup>

<sup>10</sup> <http://royalsociety.org/climate-change-summary-of-science/>



**Figure 3:** Average Arctic sea ice extent in September from 1979 to 2009 [Source: <http://royalsociety.org/climate-change-summary-of-science>]

In addition, there is strong evidence that global sea level gradually rose in the 20th century and is currently rising at an increased rate, after a period of little change between AD 0 and AD 1900. Sea level is projected to rise at an even greater rate in this century. It is estimated that sea level could rise between 0.09 and 0.88 m above the 1990 level by 2100. The two major causes of global sea level rise are thermal expansion of the oceans (water expands as it warms) and the loss of land-based ice due to increased melting.



**Figure 4:** Annual averages of the global mean sea level based on reconstructed sea level fields since 1870 (red), tide gauge measurements since 1950 (blue) and satellite altimetry since 1992 (black). Units are in mm relative to the average for 1961 to 1990. Error bars are 90% confidence intervals. (Source: IPCC AR4)

The impacts of predicted climate change include increased droughts, floods, retreat of glaciers and ice caps and sea level rise. The global mean temperature and sea level would continue to increase beyond 2100 because of the slow thermal response of the oceans, even if carbon dioxide concentrations in the atmosphere had stabilised by then.

Some of these impacts can already be seen with increasing coral bleaching; species range shifts; water scarcity and

drought, wildfires; and coastal damage from floods combined with sea-level rise. The Fourth Assessment concluded that some weather events and extremes will become more frequent, more widespread and/or more intense during the 21st century. The Assessment identifies that some regions such as Africa and Small Island states are particularly vulnerable because of projected climate-change impacts and low adaptive capacity. Events such as the recent floods and landslides in Colombia, affecting two million people - and more in neighbouring countries – could become a ‘normal’ event. This highlights the vulnerability of people who are facing increasingly extreme and unpredictable weather.

**Human activities result in emissions of four principal greenhouse gases:**

- **Carbon dioxide** has increased from fossil fuel use in transportation, building heating and cooling and the manufacture of cement and other goods. Deforestation releases CO<sub>2</sub> and reduces its uptake by plants. Carbon dioxide is also released in natural processes such as the decay of plant matter.
- **Methane** has increased as a result of human activities related to agriculture, natural gas distribution and landfills. Methane is also released from natural processes that occur, for example, in wetlands. Methane concentrations are not currently increasing in the atmosphere because growth rates decreased over the last two decades.
- **Nitrous oxide** is also emitted by human activities such as fertilizer use and burning of fossil fuels. Natural processes in soils and the oceans also release N<sub>2</sub>O.
- **Halocarbon gas** concentrations have increased primarily owing to human activities. Natural processes are also a small source. Principal halocarbons include the chlorofluorocarbons (e.g., CFC-11 and CFC-12), which were used extensively as refrigeration agents and in other industrial processes before their presence in the atmosphere was found to cause stratospheric ozone depletion. The abundance of chlorofluorocarbon gases is decreasing as a result of international regulations designed to protect the ozone layer.
- **Ozone** is a greenhouse gas that is continually produced and destroyed in the atmosphere by chemical reactions. In the troposphere, human activities have increased ozone through the release of gases such as carbon monoxide, hydrocarbons and nitrogen oxide, which chemically react to produce ozone. As mentioned above, halocarbons released by human activities destroy ozone in the stratosphere and have caused the ozone hole over Antarctica.
- **Water vapour** is the most abundant and important greenhouse gas in the atmosphere. However, human activities have only a small direct influence on the amount of atmospheric water vapour. Indirectly, humans have the potential to affect water vapour substantially by changing climate. For example, a warmer atmosphere contains more water vapour. Human activities also influence water vapour through CH<sub>4</sub> emissions, because CH<sub>4</sub> undergoes chemical destruction in the stratosphere, producing a small amount of water vapour.
- **Aerosols** are small particles present in the atmosphere with widely varying size, concentration and chemical composition. Some aerosols are emitted directly into the atmosphere while others are formed from emitted compounds. Aerosols contain both naturally occurring compounds and those emitted as a result of human activities. Fossil fuel and biomass burning have increased aerosols containing sulphur compounds, organic compounds and black carbon (soot). Human activities such as surface mining and industrial processes have increased dust in the atmosphere. Natural aerosols include mineral dust released from the surface, sea salt aerosols, biogenic emissions from the land and oceans and sulphate and dust aerosols produced by volcanic eruptions.

Source: <http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-ts.pdf>, Pg 100

The science is clear - climate change will not wait for governments to come to an agreement. The impacts are being felt now and thus action is required now. It has become necessary for society to effect change and to find the way forward.

### III. Taking back people's power?

The outcomes of the international negotiations have been dismal and there is a growing realisation that perhaps it is time for people to force the change they want to see. How this happens has not been agreed nor reflected in detail. As the COP17 comes to South African shores it is perhaps the opportune time for civil society to debate how to influence the outcome of these meetings. There are a few points to start the debate:

- Denounce the UNFCCC process

If this process has not been able to achieve much in the past 20 years, then perhaps this may be the wrong place to enact any meaningful change. It is time to leave the halls of government diplomacy and act from the outside. This would depend on a strong movement that could influence progress. Would it be possible to develop a strong civil society voice that finds its seeds in grassroots movements to force governments to act? The Cochabamba Agreement could be viewed as one such example of working outside the UN process. While this was a powerful move to find a united civil society voice, it has still been left powerless in terms of enacting change – for now. In general, civil society and social movements are a diverse group of people and often these divisions could be its own impediment to action.

- The 'inside-outside' lobbying tactic

Perhaps it is better to attack from all sides. So, we need to have people on the inside of the process to follow the negotiations and share the information and actions with the world. This must occur parallel to civil society action on the outside. Governments must realise that they cannot make decisions on behalf of people without being accountable. An example of this is the action by Canadian civil society during the Cancun COP16 meeting. Canada was awarded the 'fossil fool' award by NGOs within the conference. Canadian civil society took this information to their legislators in Canada, which resulted in Canadian politicians raising the issue in Parliament demanding to know why the country had been embarrassed by policy makers at the meeting.

Whatever is decided, the role of civil society must be strengthened, not only for COP17 but beyond just an annual event. It is time to build an environmental justice movement that will ensure governments and business cannot act without the best outcome for Mother Earth.

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