

## Global Climate Governance

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*The article considers the impacts of Climate Change on the Global Economy, the progress that has been made by the global community to address Climate Change, the role of the Paris Agreement and the ways to finance the transition to a low-carbon sustainable economy.*

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Our climate is changing, and compelling scientific evidence attributes this change to human activities, in particular greenhouse gas emissions from fossil fuels combustion.

Temperature increases and other physical effects would translate into significant market impacts, with output losses through effects on climate-sensitive sectors (for example, agriculture, forestry, coastal real estate, tourism). Non-market impacts include ecosystem disruption, health damages, water stress, etc.<sup>1</sup>

Aside from the ethical aspects of climate change, which imply the effect on the biosphere of our planet, it is a global issue that affects all economies and most sectors of the economy.

As for the economy-wide aspects of climate change, there is the way in which the economy and economic agents adjust to climatic shocks. Through the supply chain, climate vulnerability in one sector of the economy, such as agriculture, will spill into others<sup>2</sup>, such as food processing and textiles. Adaptation measures taken in one sector may have repercussions for others, for example, when farmers, hit by such climatic

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<sup>1</sup>IMF. After Paris: Fiscal, Macroeconomic, and Financial Implications of Climate Change. //Staff Discussion Notes No. 16/01, 2016.

<sup>2</sup> Adaptation to Climate Change Sam Fankhauser //Annual Review of Resource Economics, 2017, 9:1

shocks as floods or droughts, move to cities, depressing the wages and the price of rural land. Private adaptation has proven to be inefficient, as farmers opt for switching to more resistant crops, adjust the sizes of their farms or move into non-agricultural activities. Households also adjust their consumption patterns in response to climatic factors, shaping the demand for energy services (air conditioning and central heating in accordance with seasonal and climatic conditions). As for businesses, they view climate change both as a risk and an opportunity, as a climate-resilient supply chain is a comparative edge and the need to adapt can spur demand for risk management services, urban drainage solutions, etc.

In the largely interconnected world, such tendencies may spread globally, which inevitably makes climate change a global problem. Public policy is crucial in managing the market failures of private adaptation and the existing institutional and bureaucratic barriers call for international cooperation in this sphere.

Climate policy making involves a huge variety of governmental and non-governmental actors at the global, the national and the local level. Climate negotiations under the UNFCCC are dominated by national delegations that represent sovereign entities and hold an exclusive right to vote for or against an international treaty. However, their perceptions, positions and decisions are directly and indirectly shaped by the UNFCCC secretariat, NGOs, epistemic communities, city networks, transnational companies and so on. Although the legislative power to adopt or refuse an agreement lies exclusively with the national governments' representatives, the ability to name and shame, the chance to coordinate and the potential to form coalitions lies with different actor groups in the international arena.

At the global level, the existing climate regime under the UNFCCC as well as other international (environmental, trade etc.) regimes form legally binding agreements that also need to be considered. Global NGOs, multinational companies and transnational networks also shape climate policy making through lobbying and mainly informal channels of consultation and information. They put pressure on national governments, coordinate scattered activities around the world or set certain topics on the international agenda that serve their own interests. Regional

organizations like the European Union, the African Union or the Association of Southeast Asian Nations aim to harmonize their member states' climate change policies, activities and attitudes and thus also shape national positions to a certain degree.

At the national level, central governments are the key determinant when it comes to climate policy making, but their actual power can be highly fragmented due to competing ministries and bureaucracies. Depending on the country's political system a coherent position requires strong forms of horizontal coordination. Adding to that, various private and non-governmental interest groups aim to influence the policy making process.

Below the national level, various levels of government (states, municipalities, villages) are crucial especially for implementing climate policy. Their preferences are shaped by community organizations as well as individuals<sup>3</sup>.

Climate change and the impact of human activities on the environment were recognized by the global community a while back. United Nations Conference on the Human Environment (Stockholm Conference), the UN's first major conference on international environmental issues , and marked a turning point in the development of international environmental politics was held in 1972. Much has been done in respect of Global Governance of environmental issues and climate change in particular.

The 196 parties to the 1992 UN Framework Convention on Climate Change (UNFCCC) have recognized “that human activities have been substantially increasing the atmospheric concentrations of greenhouse gases, that these increases enhance the natural greenhouse effect, and that this will result on average in an additional warming of the Earth's surface and atmosphere and may adversely affect natural ecosystems and humankind.”Neither the UNFCCC, nor successive efforts, such as the 1998 Kyoto Protocol and its 2012 “Doha” Amendment, have done enough to mitigate climate change (global greenhouse gas emissions continue to increase) or to support the adaptation of human societies to on-going or foreseeable changes.

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<sup>3</sup> Jens Marquardt Conceptualizing power in multi-level climate governance//Journal of Cleaner Production Volume 154, 15 June 2017, Pages 167–175

The key point in history was the establishment of the UN Framework Convention on Climate Change (the UNFCCC) during the first Earth Summit in Rio on 1992. The UNFCCC entered into force in 1994 and with 197 Parties has almost universal membership. Parties meet annually at the Conference of the Parties (COP) to negotiate multilateral responses to climate change. COP 21, held in Paris, became a signatory conference, on which an agreement was reached by the Parties to combat climate change and to accelerate and intensify the actions and investments needed for a sustainable low carbon future.

The Paris Agreement has embraced the utmost priority of promoting greater resilience in the ways we conduct our business and daily lives. This will be particularly important for the poorest and most vulnerable countries.

In short, in compliance with the Paris Agreement, the Parties aim to limit global temperature to 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. The Paris Agreement requires all Parties to put forward their best efforts through “nationally determined contributions” (NDCs) and to strengthen these efforts in the years ahead. It entered into force on 4 November 2016, 30 days after the so-called “double threshold” (ratification by 55 countries that account for at least 55% of global emissions) had been met. Since then, more countries have ratified and continue to ratify the Agreement, reaching a total of 142 Parties and 164 intended NDC submissions have been registered.

The Paris Agreement corresponds with Sustainable Development Goal 13 to take urgent action to combat climate change and its impacts.

The Council of Councils awarded global efforts to combat climate change an A in 2015, the highest grade awarded in any issue area and a significant increase from the C+ given in 2014. The high grade largely reflects the success of the Paris agreement, in December 2015.

At its core, the climate challenge is an energy challenge. About 80% of the world’s primary energy comes from carbon-based sources: coal, oil, and gas. When burned, they emit the carbon dioxide that causes global warming. By 2070, we need a world

economy that is nearly 100% carbon-free to prevent global warming from running dangerously out of control<sup>4</sup>.

Of course, there are numerous obstacles, standing in the way of the Global Climate Governance. Among them we can name the need to re-engineer the world-wide energy system, which is a costly and complicated process in itself. There are also the many large technological uncertainties in moving to a low-carbon energy system to be taken into consideration. Fossil-fuel companies are powerful economic and in some countries political forces, so their resistance to transition to a way of doing business, though justifiable from the economic perspective, is a significant barrier to overcome.

At the national level, the fact that governmental policy-making is often short-term and is determined by the political will of those in power at each particular moment is also something worth considering. The most obvious example is the way the US government's attitude to environmental and climate change policy has changed with the Trump administration coming to power and their basically putting a stop to Obama's Climate Action Plan and several other initiatives.

Adaptation to climate change and mitigating its effects requires large-scale private and public financing, which is reflected in the Paris Agreement. The agreement provides that the Financial Mechanism of the Convention, including the Green Climate Fund (GCF), shall serve the Agreement. A total of 43 state governments have made a pledge to the Green Climate Fund (GCF) to date, including 9 representing developing countries to jointly mobilize USD 100 billion per year by 2020. As of March 2017, the Green Climate Fund has raised USD 10.3 billion equivalent in pledges from 43 state governments.

At the international level such institutions as the World Bank Group have also committed to contribute to the climate-related efforts. According to their Climate Change Action Plan 2016-2020, the WBG states their commitment to increase the climate-related share of its portfolio from 21 to 28 percent by 2020 in response to

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<sup>4</sup>Jeffrey D. Sachs New Politics for Clean Energy, APR 27, 2016. URL: <https://www.project-syndicate.org/commentary/clean-energy-implementation-politics-by-jeffrey-d-sachs-2016-04>

client demand, with total financing (including leveraged co-financing) of potentially \$29 billion per year by 2020. Meeting these targets is conditional on sustained aggregate WBG lending volumes, access to concessional finance, and client demand. By 2020, the WBG aims to have assisted 20 countries in enhancing their capacity to innovate in climate sectors and increase industrial competitiveness in response to climate change, including through greening global value chains and trade practices, developing eco-industrial zones, and introducing best practices for standards and labelling. The WBG will increase its share of energy efficiency operations and aim to invest \$1 billion to promote energy efficiency and resilient building in urban areas. The World Bank will aim to mobilize \$25 billion in commercial funding for clean energy over the next five years.

To serve the purpose of financing environmentally sustainable projects, so-called Green Investment Banks<sup>5</sup> are being set up in many countries all over the world. Governments are using GIBs to channel private investment, including from institutional investors, into low-carbon projects such as commercial and residential energy efficiency retrofits, large-scale onshore and offshore wind, rooftop solar photovoltaic systems and municipal-level, energy-efficient street lighting. Unlike grant-making public institutions, GIBs focus on financial sustainability and some are required to be profitable. For example, the UK Green Investment Bank must invest on commercial terms and has to meet a minimum 3.5% annual nominal return on total investments, after operating costs but before tax. Through their interventions and investments, GIBs are demonstrating to private investors that commercially successful investments are possible and happening now.

Governments have capitalized GIBs using a variety of funding sources:

- Appropriations (Australia)
- Carbon tax revenue (Japan)
- Reallocation of funds from existing programs (New York)
- Emissions trading schemes revenue (Connecticut, New York)

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<sup>5</sup> OECD. Green Investment Banks. Environment Policy Paper no. 6, January 2017// Paris, OECD, 2017

- Utility bill surcharges, Renewable Portfolio Standards, Energy Efficiency Resource Standards (Connecticut, New York)
- Loans (Connecticut)
- Bond issuance (Hawaii)
- National government funding (UK, New Jersey)

As for some indicators of the progress already made in relation to the Paris Agreement goal, it's worth mentioning, that global energy-related carbon dioxide emissions were flat for a third straight year in 2016 even as the global economy grew, according to the International Energy Agency, signaling a continuing decoupling of emissions and economic activity. This was the result of growing renewable power generation, switches from coal to natural gas, improvements in energy efficiency, as well as structural changes in the global economy.<sup>6</sup>

In 2016, renewables supplied more than half the global electricity demand growth, with hydro accounting for half of that share. The overall increase in the world's nuclear net capacity last year was the highest since 1993, with new reactors coming online in China, the United States, South Korea, India, Russia and Pakistan. Coal demand fell worldwide but the drop was particularly sharp in the United States, where demand was down 11% in 2016. For the first time, electricity generation from natural gas was higher than from coal last year in the United States.

Official development aid (ODA) for environmental purposes continued to rise; its share in total ODA increased from 9.6% in 2002 to 12.6% and aid for renewable energy surpassed aid for non-renewables.

Renewable energy is increasingly used, particularly in Europe. Renewables account for 21% of OECD electricity production (15.6% in 2000), and for almost 9% of total supply (6% in 2000), even though fossil fuels still dominate supply (80%).

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<sup>6</sup> IEA. IEA finds CO2 emissions flat for third straight year even as global economy grew in 2016, 2017. URL: <https://www.iea.org/newsroom/news/2017/march/iea-finds-co2-emissions-flat-for-third-straight-year-even-as-global-economy-grew.html>

The use of environmentally related taxes is growing but remains limited compared to labor taxes. The revenue they raised represented about 1.6% of GDP in 2013. It is dominated by taxes on energy (69%) and on motor vehicles and transport (28%). Variations in energy tax rates, uneven price signals, low levels of taxation on fuels with high environmental impacts, and exemptions for fuel used in some sectors impede the transition to a low-carbon economy. Many countries still apply higher taxes for petrol than for diesel, and the share of taxes in end-use prices is generally higher for households than for industry.<sup>7</sup>

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<sup>7</sup> OECD. Climate Change Adaptation and Disaster Risk Reduction: Overview of issues and Challenges, 2015.