Climate Change and Sustainable Investment in Natural Resources:
From Consensus to Action

Outcomes from the 2016 Columbia International Investment Conference

The Paris Agreement on Climate Change[1] and the globally agreed Sustainable Development Goals (SDGs)[2] clearly lay out the global consensus on the need to curb human-induced climate change and to achieve sustainable development. These concepts are linked. Not only does curbing global warming underpin the success of the other SDGs, but the Paris Agreement itself also recognizes that the reduction of emissions should be "on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty."[3] In other words, the urgency of addressing climate change is critical for global efforts to reduce poverty and advance sustainable development, but climate change mitigation must also be pursued in a manner consistent with ending poverty, promoting economic development, respecting human rights, and ensuring social inclusion.

The linkages between climate change action and sustainable development have important implications for the world's approach to natural resource investment. However, no coherent vision has yet emerged to guide the ways in which global actors can shift the trajectory of natural resource investments to lead to reduced greenhouse gas emissions while also addressing the development needs of resource-rich low-income countries, and to promote a global governance structure that supports rather than inhibits national-level actions on climate change and development.

These linkages were the focus of the eleventh annual Columbia International Investment Conference (CIIC), held on November 2 to 3,

[1] Conference of the Parties on its Twenty-First Session, Adoption of the Paris Agreement, Decision 1/CP.21, UN Doc. FCCC/CP/2015/L.9/Rev.1 (Dec. 12, 2015) [hereinafter Paris Agreement].

[2] For a list of the sustainable development goals, see United Nations Development Program, *Sustainable Development Goals*, http://www.undp.org/content/undp/en/home/sustainable-development-goals/ (last visited Dec. 9, 2016).

[3] Paris Agreement, *supra* note 1, at cl. 4(1).

2016.[4] The Conference brought together representatives of national governments, international organizations, the private sector, and public interest bodies to discuss "Climate Change and Sustainable Investment in Natural Resources: From Consensus to Action." Distinguished panelists tackled challenging questions such as: what does the future hold for global energy systems? How can land use be managed so as to minimize climate impacts and maximize development benefits? What role can and should the private sector play in shaping energy and land use transformation? How will global governance frameworks influence this transformation? These questions were considered in a series of panels, which featured insights from leaders in the field, followed by discussions with audience members. Key takeaways from the discussions are summarized below, along with issues identified as requiring further research.

Summary of Conclusions

The CIIC began with a presentation by Professor Jeffrey Sachs, Director of the Center for Sustainable Development at Columbia University and of the United Nations Sustainable Development Solutions Network. Professor Sachs discussed the importance of mitigating climate change, noting that the Paris Agreement set a goal of limiting the increase in average global temperatures to "well below" 2°C above pre-industrial levels.[5] Professor Sachs further noted that the Paris Agreement requires "efforts to limit the temperature increase to 1.5°C"[6] because, in his words, exceeding that level is "very dangerous and possibly devastating."

There is broad agreement among scientists that rising temperatures are caused by anthropogenic greenhouse gas emissions. The most important greenhouse gas is carbon dioxide (CO2) which is emitted in larger quantities, and remains in the atmosphere longer, than other major heat-trapping gases. CO2 emissions primarily result from the combustion of fossil fuels for energy production and transportation. Deforestation and other land conversion have also contributed to climate change given that trees are 'natural sinks' capturing CO2 and converting it into oxygen. The CIIC considered what energy and land use transformations will be needed to adequately reduce net emissions and how this objective can be achieved without sacrificing progress towards the SDGs. Key conclusions are summarized below:

- CIIC participants recognized the need to rapidly decarbonize electricity systems. Participants welcomed recent increases in renewable generating capacity and called for the immediate phase out of coal-fired power generation in countries where alternative methods for power generation are commercially feasible. Opinions differed on whether natural gas should be used as a short-term bridge fuel. Many felt that in the context of energy hungry low income countries, natural gas should be deployed to underpin the scale up of modern energy services and that given the relatively small size of these economies, such bridge usage would not have a major impact on overall global emissions.[7] There was a consensus among participants that natural gas and other fossil fuels cannot be used in the long-term in any economy unless carbon capture and sequestration technologies are developed.

- Several participants called for the deployment of biological carbon storage through improved land use practices. These participants emphasized the need to encourage reforestation of previously cleared land and prevent further land clearing (e.g., for large–scale industrial agriculture). Strengthening land

[4] The Columbia International Investment Conference was organized by the Columbia Center on Sustainable Investment, in partnership with the Sabin Center for Climate Change Law and the United Nations Sustainable Development Solutions Network, and with support from Norges Bank Investment Management.

[5] Paris Agreement, *supra* note 1, at cl. 2(1)(a).

[6] *Id*.

[7] http://blogs.ei.columbia.edu/2016/10/14/leaving-fossil-fuels-in-the-ground-who-what-and-when/

rights was highlighted as one way to ensure the protection and restoration of land. Protecting land rights, as well as other human rights, was also discussed as critical to ensuring that climate change policies benefit, rather than harm, local communities and vulnerable groups. There were also calls for market reforms to ensure compensation for the services provided by land, such as carbon storage.

- There was broad agreement among participants that land use and energy system transformation will require coordinated action by national governments, the private sector, and civil society. Many emphasized the role that private companies can play. With respect to land use transformation, for example, it was noted that consumer-facing companies can push for stronger land rights and more sustainable land use in the context of their supply chains. There were calls for oil and gas companies to support the energy transformation both with respect to individual projects (e.g., by developing renewable sources of energy to power their operations and meet the needs of surrounding communities), and in the context of broad strategic planning efforts focused on a net-zero greenhouse gas emissions future.[8] Participants acknowledged that individuals, as consumers and investors, may play a role in encouraging companies to act progressively on these issues.

- While participants generally agreed that, at a minimum, international trade and investment treaties must not impede achievement of climate change goals, they expressed different opinions regarding whether and to what extent the provisions of such treaties would in fact act as such a barrier. They recognized that no systematic way for identifying potential conflicts or tensions had yet emerged, and that negotiation of economic treaties was generally pursued separately from, and absent much interaction with or analysis of, climate policy.

Further information on these topics is provided in the following sections.

The Need to Transform Global Energy Systems

In his opening address at the CIIC, Professor Sachs indicated that, to achieve the temperature goals in the Paris Agreement, carbon dioxide emissions must be reduced to zero by 2070. CIIC participants agreed that meeting this target would require fundamental changes in the global energy system. The required changes were discussed in two panels during the first day of the CIIC. The first panel, entitled "The Future of Fossil Fuels," addressed the need to transition away from carbon-intensive fossil fuels for energy production. The second panel, on "Extraction and Use of Fossil Fuels by Developing Countries," explored whether, how, and to what extent low-carbon strategies can and should be adapted to the development needs of low-income countries.

Many CIIC participants were of the view that governments in both high- and low-income countries have not yet demonstrated an appreciation for the scope and depth of energy system changes needed to achieve climate change goals. Participants expressed concern that few countries have begun planning sufficiently for those changes. They called for the development of more coherent long-term (20- to 40-year) national energy plans. Those plans should not, according to some participants, be developed by politicians as they lack the required knowledge and long-term focus. Rather, plans should be developed by independent experts and submitted to politicians for approval.

CIIC participants generally agreed that countries should plan for the phase-out of fossil fuels by mid-century. This will present challenges as fossil fuels currently underpin much economic activity and must be phased out in a manner that does not

[8] For more on how fossil fuel companies can help meet the global goals on energy and climate, see http://ccsi.columbia.edu/2017/01/23/how-oil-and-gas-companies-can-help-meet-the-global-goals-on-energy-and-climate-change/

adversely affect growth. Thus, in the words of one participant, phasing out fossil fuels is like “doing a heart transplant while your patient is running a marathon.” Most participants were optimistic that a phase-out can be achieved, but emphasized that it will require simultaneous effort on multiple fronts. They called for action to (1) decarbonize and invest in the electric grid; (2) increase energy efficiency; and (3) electrify end uses that currently rely on fossil fuels (e.g. the transportation sector).

Much of the discussion at the CIIC focused on decarbonizing the electric grid and scaling up renewable generating capacity. Most CIIC participants agreed that, due to its high carbon content, coal use should be phased out in electricity generation in the short-term. Opinions differed on whether natural gas should be used as a short-term “bridge fuel” while renewable energy technologies develop. Some participants emphasized the relative climate benefits of natural gas, noting that it contains approximately forty-five percent less carbon than coal. One representative of an oil and gas major noted that many low-income countries are continuing to develop coal-fired generating units and argued that, if those units are not replaced with technologically feasible natural gas-fired plants, “we will miss an important opportunity to reduce emissions.”

Other participants were more skeptical of the climate benefits of switching to natural gas. Many participants argued that, while the combustion of natural gas results in fewer carbon dioxide emissions than coal, these benefits may be offset by methane emissions during gas production. Furthermore, the construction of gas infrastructure, which requires long payback periods and reduces the costs of continuing to rely on gas, may further delay the roll-out of renewable energy sources. Given these arguments, according to some participants, countries should move directly to cleaner renewable energy technologies. They argued that, for high-income countries, moving from coal to gas and then to renewables is likely to be a costly detour from both an economic and climate perspective. They accepted, however, that gas may make sense for low-income countries seeking to accelerate their access to modern energy services, in particular for those that have plentiful gas supplies and limited access to renewable energy technologies.

There was broad agreement that, if gas use is to continue in high- and/or low-income countries, the production process must be improved. Participants noted that gas production is currently a major source of greenhouse gases, particularly methane, which is released through gas leaks, venting, and flaring. Many participants called on producers of natural gas to take steps to reduce their emissions. One representative of an oil and gas company announced that his company was working to eliminate flaring in all of its operations worldwide by 2025. Others discussed efforts to make greater use of renewable energy in production (e.g., for pumping, compression, refrigeration, heating etc.). One company representative reported, for example, that his company was successfully using solar energy for enhanced oil and gas recovery in Oman thereby reducing the overall carbon footprint of the natural gas use and production cycle.

CIIC participants agreed that, in the long-term, all fossil fuels will need to be replaced with zero-carbon energy sources or used in combination with carbon capture and sequestration technologies. Many noted that carbon capture and sequestration is not currently economically viable. One representative of an electric utility indicated that, for this reason, his company was focusing on developing renewable energy technologies. He and others welcomed the progress that has been made in recent years, noting that renewable energy is or soon will be competitive with fossil fuels in most areas. They acknowledged, however, that increasing the use of renewable energy would necessitate significant infrastructure investment. For example, transmission infrastructure will need to be upgraded and energy storage technologies developed. These upgrades will require coordinated action by governments and industry. Some advocated joint government / industry funding of research, while others suggested a role

for public international funds (e.g., the Global Environment Fund).

Significant discussion at the CIIC focused on how to address equity (fairness) concerns associated with the phase out of fossil fuels. Various options were discussed, including:

- ***Developing fossil fuels on a merit order basis***: CIIC participants discussed the fact that fossil fuels projects are developed on a merit order basis with the least cost projects being developed first. Many participants agreed that this market rule should and will continue to apply, and in that case it was noted that this would lead to continued development in the Organization of the Petroleum Exporting Countries (OPEC) where costs are lowest. One participant suggested that OPEC be given an exclusive license to develop oil and gas in accordance with a pre-determined phase down schedule. Many argued that, in any event, development in high-cost areas (e.g., the artic and deep sea) was likely to slow down. A representative of an oil and gas major indicated that his company was already moving away from investment in some such areas.

  There was some concern that oil and gas development could cease in low-income countries with high cost reserves, affecting their ability to leverage their natural resources to achieve economic and social goals. It was also discussed that low income countries should work on improving their fundamentals to reduce the non-technical cost of their reserves and increase their chances of staying on the merit order curve. According to Professor Sachs, in order for the merit order basis development to be both economically rational and equitable, a global post-extraction redistribution system would have to be put in place and it should compensate less developed countries for not developing their fossil fuel reserves.

- ***Giving low-income countries preferential access to fossil fuels***: Some participants suggested that, given their historically small contribution to global greenhouse gas emissions and their relatively small proportion of fossil fuel reserves, low-income countries should be allowed to continue developing their fossil fuel resources to the extent necessary to achieve economic and social goals. They emphasized that such development would enable low-income countries to expand energy access and industrialize. Others countered that low-income countries should "leapfrog" fossil fuels and move directly to renewable energy sources. It was, however, recognized that there are numerous political, regulatory, and financial barriers to renewable energy development in low-income countries.

Opinions differed on the extent to which the phase out of fossil fuels will affect oil and gas companies. Representatives of several companies expressed optimism that they can and will play an important role in the low-carbon future. Most representatives agreed that the nature of that role will differ between companies. One participant suggested that some companies may continue producing oil and gas for the chemicals industry. Others discussed the possibility of oil and gas companies moving into the renewable energy sector. Some company representatives expressed support for such a move, explaining their interest in what they see as being the model of the future to expand energy access: distributed energy facilities such as renewable energy-based mini grids. Others mentioned that oil and gas companies are more suited for developing utility-scale gas energy projects to expand energy access.

There was broad agreement among CIIC participants that, to achieve climate change and sustainable development goals more broadly, countries must do more than simply decarbonize the electric grid. Many participants called for greater investment in energy efficiency, particularly in high-income countries, which use significantly more electricity than their low-income neighbors. Most felt that investments in climate-friendly technologies are needed across a range of sectors including transportation and agriculture. They

argued that technologies developed for these sectors could be transferred to low-income countries, allowing them to continue developing while also reducing their energy consumption.

There were also calls for the electrification of end-uses, particularly transportation, which currently relies primarily on fossil fuels. CIIC participants acknowledged that electrifying transportation will require countries to overcome a number of complex technical and regulatory barriers. Many emphasized the need for infrastructure upgrades, noting that use of electric vehicles will increase household electricity demand, necessitating changes in the local distribution grid. Others viewed electric vehicles as a form of distributed energy storage that can provide grid balancing services. For this to occur, however, the electric system will need to be digitized with the installation of smart meters that enable two-way communication between the meter and the central system.

Participants welcomed the progress that has already been made, for example, in developing renewable energy technologies. They acknowledged, however, that further research is needed in a number of areas including:

- carbon capture and sequestration, to establish once and for all whether this technology is economically viable. Only under this condition can fossil fuels continue to play a role in the future;
- energy storage, to enable cost-effective storage of renewably generated electricity;
- energy efficiency, to reduce energy consumption in agriculture and other sectors; and
- electric vehicles, to improve battery technologies and thereby increase vehicle range.

The Need for Land Use Transformation

Land use change, particularly the conversion of forest land to agricultural and other uses, is a major contributor to climate change. This fact, which Professor Sachs highlighted in his opening address, was reiterated on the second day of the CIIC, during a panel on “Land Use, Land Rights, and Investment in Natural Resources.” The panel discussed the impact of land use on climate change and development outcomes, and the related land rights implications. Much of the discussion focused on forests, which (as noted by participants) are currently the only proven means of carbon capture and sequestration. Participants emphasized that deforestation contributes to climate change by reducing carbon storage and increasing emissions. They also acknowledged the impact of deforestation on local communities, noting that it may lead to illegal evictions, deprivation of livelihoods, and other adverse effects. Participants agreed that protecting forest land will be vital to achieving climate change goals.

There was broad agreement among participants that incentives to protect land are undermined by market and governance failures. In terms of market failures, participants noted that there is typically no or little compensation for the services provided by land, such as carbon storage. Participants welcomed the adoption of payments for ecosystem services (PES) programs in some countries to address this issue, although cautioned that they have not always proved effective.

In this context, one participant discussed the example of Brazil, which has set a target of reducing its greenhouse gas emissions by thirty percent below 2005 levels by 2025. He noted that, to achieve this target, Brazil will need to restore twelve million hectares of ranch land and fifteen million hectares of pasture land to forest cover. To encourage land restoration, Brazil established a PES program, which compensates ranchers and farmers for removing land from production. The discussion concluded that PES programs have

been effective with small-scale farmers, as payments thereunder help to stabilize farm incomes, and have thus helped to change the behavior of these farmers. PES have not, however, been sufficient to encourage changes on the part of large-scale agribusinesses. One participant suggested that this is because the amount society is willing to pay to have land removed from production is less than the costs faced by agribusinesses.

Many participants expressed concern about the failure to address governance issues, particularly in low-income countries. They emphasized that individuals in low-income countries tend to be heavily dependent on land as a productive resource, but that such individuals often lack secure title to that land. One participant described this as a particular problem for women, who have fewer livelihood options than men and are therefore more dependent on land, but are frequently prevented from owning it. He argued that land tenure insecurity increases the potential for land use shifts to adversely affect women and discourages them from making investments in the land that would help to mitigate climate change.

Other participants discussed the issues facing indigenous and local communities, which hold or manage approximately one-quarter of the world's carbon found above ground in the tropics.[9] One participant noted that indigenous communities typically manage land under collective ownership models, which are often not recognized by domestic law, placing them at risk of exploitation by agribusinesses, mining firms, and other companies. The participant expressed concern that companies often fail to adequately consult with indigenous and local communities prior to undertaking projects on their land. She recalled overhearing executives from one company say that, instead of obtaining free, prior and informed consent (FPIC) from indigenous communities, as required under international law, they would make "fast payments in cash" to buy off community leaders.

Participants exchanged ideas about how to improve land governance systems. There was broad agreement on the need to strengthen land rights. Several participants pointed to studies showing that, where communities and individuals have strong land rights, they are more likely to protect their land, including by investing in climate change mitigation and adaptation. Other participants noted that strong land rights have also been associated with improved development outcomes (e.g., in terms of health and education). Many argued that to maximize these benefits, individuals and communities must not only have their rights recognized, but must also be able to exercise those rights. There were calls for improvements in consultation processes, to ensure landholders and local communities have a say in the use of their land, and for the establishment of benefit-sharing schemes, so that such communities receive a portion of the value generated through use.

Several participants argued that the private sector can and should take steps that promote greater protection of land rights and more sustainable land use practices. Supporting stronger land rights protections, these participants argued, would benefit companies making land-based investments, including by reducing the potential for conflicts with local communities and thereby lowering material risks and costs. Participants also noted that some companies have developed novel procurement arrangements, wherein supply chain decisions are not based solely on cost, but also on sustainability or other factors. Participants emphasized that individuals around the world can, through their consumption and other decisions, encourage such action by companies.

There was some discussion of the role of governments and the private sector in encouraging more efficient land use. Participants agreed that

[9] See e.g., Katie Reytar and Peter Veit, "Indigenous Peoples and Local Communities Are the World's Secret Weapon in Curbing Climate Change" World Resources Institute Blog (November 10, 2016). <https://www.wri.org/blog/2016/11/indigenous-peoples-and-local-communities-are-worlds-secret-weapon-curbing-climate>.

efficiency gains will be needed in the agricultural sector if increasing demand for food and other products is to be met without contributing to deforestation. Some participants called on governments to establish training programs for agricultural producers, while others suggested a role for multi-national food companies. One participant discussed the coffee sector as an example, arguing that coffee companies should work with growers to improve cultivation practices. He noted that while demand for coffee is expected to double by 2050, the amount of land suitable for growing it may decline due to climate change. As a result, growers will need to become more efficient and, in the future, may have to develop new plant cultivars. This is likely to be difficult for many growers, who may lack the necessary financial resources, as growing incomes average just $1,000 per year. Some companies, however, have shown a willingness to assist growers to develop and implement new production techniques.

The Private Sector's Role in Financing Energy and Land Use Transformation

The role of private actors in supporting energy system and land use transformations was a key focus of discussions at the CIIC. During a panel on "The Role of Private Sector Finance," CIIC participants noted that achieving the necessary transformations will require trillions of dollars-worth of investment, much of which will have to come from the private sector. Participants agreed that there is a need for significant additional private sector investment at an accelerated pace. A number of participants suggested that such investment may come from fossil fuel companies. One oil and gas company representative pointed out that the renewable energy sector has, in the past, been characterized by small entrants and that many of those entrants have subsequently gone out of business. He therefore indicated that oil and gas companies with their strong balance sheets and experience with boom and bust cycles have an advantage. Furthermore, the oil and gas sector has extensive engineering expertise and experience in developing large-scale projects in challenging political and environmental contexts.

Some participants expressed concern that oil and gas companies' efforts to diversify and invest in renewable energy technologies may be opposed by shareholders. It was noted that the CEO of NRG Energy was replaced last year after attempting to move his company into the renewable energy sector. One representative of an oil and gas major noted that some shareholders view renewable energy investments as high risk and believe fossil fuel companies should remain focused on their core business. He noted, however, that companies are beginning to recognize that their core business may not remain profitable in the future as climate change leads to the stranding of assets. In his words, "it is beginning to be widely recognized in the industry that the world of peak oil is over," leading to a concern that prices and profits will decline in coming years. There was broad agreement among participants that investors are beginning to recognize that oil and gas development is unlikely to remain profitable in the long term.

Several participants noted the success of shareholder activism in raising awareness of the risks climate change poses to oil and gas companies. They noted that shareholder resolutions have been used to force companies to report on climate change risks. Many U.S. companies initially sought to avoid such reporting, including by arguing that climate change does not pose a risk to their business, as the government is unlikely to adopt regulations to address it. Over time, however, company attitudes have begun to change. A number of companies have recently undertaken risk analyses and released risk management strategies.

Some participants argued that, in addition to raising awareness of climate change risks, shareholder activism has also resulted in companies taking mitigation action. They pointed to the adoption of shareholder resolutions forcing companies to

reduce their greenhouse gas emissions and/or switch to clean energy. They acknowledged, however, that the success of such resolutions varies by company. For example, consumer goods companies have generally been more willing to act than fossil fuel developers, at least in the U.S. Participants discussed other ways in which shareholders can encourage climate-friendly behavior by companies. Some noted that shareholders have recently sought for oil and gas companies to include board members with knowledge about climate change. Shareholders can also vote down board members opposed to climate action and/or nominate new members who they believe will put pressure on the chief executive and/or others to act.

Where these and/or other efforts prove unsuccessful, investors may elect to divest their holdings in the company. One representative of an institutional investor reported that, after failed attempts to engage the board of oil and gas majors on climate change, his institution has elected to divest from all fossil fuel companies. He noted that many other institutions, including universities, pension funds, and philanthropic funds, are also divesting their fossil fuel holdings. As of November 2016, institutions representing $5 trillion in assets had pledged to divest their holdings, up from $50 billion in 2014.

It was noted that divestment strategies are unlikely to change company behavior in the short-term. Many participants argued that the primary goal of divestment is signaling to companies and other investors the importance of the issue. Some participants argued that, over time, as more investors join the movement, companies may be forced to act. This is particularly likely if investors engage in selective divestiture strategies, which reward progressive companies within a sector and punish 'laggards' (i.e., by divesting from them). It was noted though that while sector specific investment tools such as Fossil Free Funds and Deforestation Free Funds are increasingly available for concerned investors, various online tools and indices that try to distinguish between the 'leader' and 'laggard' companies within a sector suffer from severe limitations. Investors must, therefore, exercise care when using such tools and should investigate how they were developed prior to use.

The other side of the coin from divesting from companies/sectors that are particularly climate unfriendly is using the freed up funds for 'green investments.' The institutional investor representative of the fund that has chosen to divest from fossil fuels highlighted that this twin strategy is being followed by his organization and it has not come at a cost of lower returns.

Most participants agreed that state-sponsored institutions can play an important role in helping to fund green investments and may, for example, draw private-sector capital into renewable energy markets. Participants recognized that many banks and other large investors are interested in funding renewable energy projects. Before those investors will act, however, they typically require evidence of the project's financial viability and often request proof of precedent transactions. Demonstrating experience in new and rapidly changing sectors may be difficult, creating a role for state-sponsored institutions, which can step in to fund small-scale projects that deliver proof of concept, thereby providing a bridge to more institutionalized financing options. Participants discussed the work of the New York Green Bank, which provides financing for renewable energy projects, often in association with private-sector investors.

Several participants noted the recent growth in the green bond market and argued that the market has been highly successful in mobilizing finance for renewable energy and other 'green' projects. As one participant observed, without the green bond market, financing for large-scale renewable energy projects would be limited to a small number of investors (i.e., 20 to 30 banks and insurance companies). According to the participant, green bonds "allow a much broader set of investors" to participate in the market, increasing the financing options available to project developers. He and others welcomed recent innovations in the green

bond market, including the new World Bank forest bond program, which offers investors in the bond the opportunity to secure carbon credits.

Ensuring Global Governance Frameworks Support Transformation

The CIIC's final panel, titled "Global Governance: Transforming Consensus into Concerted Global Action," considered the role that international legal frameworks can and should play in shaping all-level action on climate change and sustainable development. Participants agreed that achieving climate change and development goals will require concerted action by both public and private actors. This action will, however, only be taken if legal frameworks send and promote the right signals and safeguard the ability of government actors to adopt and implement climate change-oriented policies. Whether international trade and investment treaties satisfy those criteria was hotly debated. The debate focused primarily on international economic agreements, including the World Trade Organization (WTO) agreements, and international investment agreements (IIAs), with particular focus on the 12-country Trans-Pacific Partnership (TPP).

CIIC participants generally agreed that international trade and investment can play an important role in promoting growth in low-income countries. Some participants also noted that trade and investment may have climate benefits, with one suggesting that liberalizing trade in environmental goods and services could encourage the development of technologies needed to mitigate climate change, and facilitate their transfer between countries. That participant cautioned, however, that trade and investment treaties not be asked to do too much outside their main purpose and scope of setting rules regarding international economic activity. Others underscored the need to, at a minimum, ensure those treaties do not impede action on climate change.

On that point, participants considered the potential for existing trade and investment treaties to prevent or hinder climate action. With respect to the WTO, some participants noted that the agreements leave member states free to decide on their own policies, including with respect to climate change, and require only that those policies be applied on a non-discriminatory basis. Others expressed concern that the way in which those agreements have been interpreted by the WTO's dispute settlement panels may have limited the scope of government action.

Some participants noted that the subsidy restrictions in the WTO agreements may prevent government support of clean energy and other climate-friendly investments. Other participants expressed concern that, under the current WTO system, governments might be unable to distinguish between climate-friendly and unfriendly products when setting tariffs. However, at least one participant was of the view that, in countries with a domestic carbon price, governments could impose a border tax adjustment on goods imported from and/or exported to other countries without an equivalent price on carbon.

Many participants expressed concern that IIAs, including free trade agreements with investment chapters, may hinder policy changes aimed at mitigating or adapting to climate change, and therefore may ultimately interfere with the achievement of climate goals. Participants expressed particular concern regarding the TPP, which the U.S. signed with Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam in February 2016. For example, one participant warned that the TPP may lead to increased trade in palm oil and other environmentally harmful products because of reduced tariff rates that do not correspond to policies that may limit such trade. She also expressed concern about the potential for increased production of and trade in natural gas. Generally, before natural gas can be exported from the U.S., the Department of Energy must conduct a public interest review. Such review is not, however, required where natural gas is to be exported to a country with which the U.S. has a free trade agreement that includes "national treatment for trade in gas." The TPP is such an agreement and

would, therefore, result in the automatic approval of exports to signatory countries. By making it easier to export natural gas, the TPP could lead to an increase in domestic production, with expanded use of hydraulic fracturing, which can contribute to greenhouse gas emissions.

The same participant also expressed concern regarding the TPP's investor-state dispute settlement (ISDS) provisions, which allow foreign investors to challenge new laws and regulations that reduce the actual or potential value of their investment. The threat of such challenge may, according to the participant, discourage governments from adopting new policies needed to combat climate change. It was noted that investors have used ISDS provisions in other international agreements to challenge new environmental regulations, administrative decisions, and enforcement and other government actions (or inactions) that impact investors. Participants emphasized that, if an ISDS challenge is successful, the government may be required to pay significant compensation to the investor. By contrast, there is no penalty for governments failing to meet their climate change commitments under the Paris Agreement. This discrepancy in penalties creates a perverse incentive for governments to meet their investment obligations over their climate change commitments.

Several participants noted that the outcome of ISDS cases is heavily influenced by the identities of the decision-makers. Under most IIAs, ISDS cases are heard by arbitral tribunals, the members of which are selected by the disputing parties. These tribunals play an important role in shaping the meaning given to treaties and, consequently, their impact on climate change and other policies. Many participants expressed concern regarding the perceived and actual biases of tribunal members, which were suggested to undermine the legitimacy of ISDS and the outcomes produced by this form of dispute settlement. One participant suggested that a better approach may be to refer disputes to an expert arbitrator who is not appointed by the disputing parties. He noted that, while criticism of ISDS has increased significantly in recent years, ISDS provisions continue to be included in recently negotiated IIAs.

At least one participant was of the view that the TPP's ISDS provisions do not limit governments' authority to adopt regulations addressing climate change and other environmental issues. Several also emphasized that the TPP may have environmental benefits, noting that the agreement includes an environment chapter covering a wide range of issues, including wildlife trafficking, over-fishing, and illegal logging. Others, however, countered that the TPP does not do enough in these areas, by, for example, reducing a tariff on a product while simultaneously, in a separate chapter, attempting to regulate illegal production but failing to establish adequate, industry-recognized, enforcement provisions. These participants noted that similar provisions in other international agreements are rarely enforced and highlighted the internal inconsistency of the TPP in this regard. There was a heated exchange regarding the omission of climate change from the environment chapter, with some arguing that this is a fatal flaw in the TPP, while others viewed it as a political necessity to secure ratification of the TPP in the U.S.

Participants exchanged ideas about how to ensure future international trade and investment treaties do not impede action on climate change. Some suggested that countries should undertake an impact assessment that considers any new treaty's climate change implications. It was suggested that such assessments may help to address the lack of policy coherence that results from a disconnect between the roles and responsibilities of government officials with respect to climate policy, on the one hand, and trade and investment strategies, on the other. It was noted that, while some countries already perform such assessments, they often suffer from deficiencies. Participants pointed out, for example, that assessments conducted in the U.S. and Canada often fail to consider the climate change impacts of a treaty both in partner countries and globally. Participants

were not aware of any accepted methodology for conducting climate change impact assessments to identify (and mitigate) ways in which these agreements could exacerbate climate change challenges and risks. Concerns were also expressed about inadequate opportunities for public input during negotiations of trade and investment agreements. One participant identified the lack of public participation specifically and the methodology for conducting impact assessments generally as a particular problem in the U.S., noting that review of the TPP was conducted several years before a draft text was published.

Even assuming these issues could be addressed, however, some participants remained opposed to the use of impact assessments. One participant argued that impact assessments may prevent the adoption of treaties, leading to a decline in international trade and investment, with serious long-term consequences for the achievement of development goals. Other participants responded that conducting impact assessments would merely ensure trade and investment are consistent with environmental goals. There was broad agreement among all participants that trade and investment can produce significant development benefits. Many emphasized, however, that those benefits should not come at the cost of environmental protection.

Conference Follow Up

The discussions at the Conference underscored the need for further research and dialogue on the linkages between climate change and sustainable development, and the implications for investment in natural resources. The Conference Organizers continue to research the linkages and to explore the policy implications. In February 2017, the United Nations Sustainable Development Solutions Network re-launched the Thematic Network on Good Governance of Extractive and Land Resources, which provides a platform for continued discussion and collaboration on these issues. Interested parties may contact the Network's Manager, Lauren Barredo (lauren.barredo@unsdsn.org).