



September 2014 | New Delhi, India

CEEW Issue Brief

Making the UN Secretary General's Climate Summit Count

An Opportunity for Credible Climate Leadership

Arunabha Ghosh

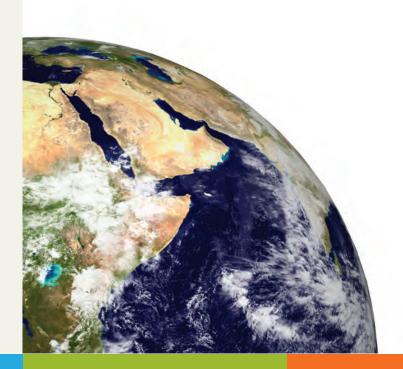


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Author Arunabha Ghosh

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An issue brief on 'Making the UN Secretary General's Climate Summit Count: An Opportunity for Credible Climate Leadership'.

The views expressed in this report are those of the authors and do not necessarily reflect the views and policies of the Council on Energy, Environment and Water.

The author thanks the Centre for International Governance Innovation for hosting a workshop on "Effective International Climate Agreements" in Zurich, 1-2 June 2014, when these ideas were presented in draft form. He thanks the participants for their comments and suggestions, particularly the co-chairs John Odell and David Runnalls.

The Council on Energy, Environment and Water (http://ceew.in/) is an independent, not-for-profit policy research institution, chaired by former Union Minister Suresh Prabhu. CEEW addresses pressing global challenges through an integrated and internationally focused approach. It does so through high quality research, partnerships with public and private institutions, and engagement with and outreach to the wider public. The International Centre for Climate Governance has ranked CEEW as India's top climate change think-tank two years in a row. In 2014, the Global Go To Think Tank Index ranked CEEW 1st in India in three categories.

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ABOUT CEEW

COUNCIL ON ENERGY, ENVIRONMENT AND WATER

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In less than four years of operations, CEEW has engaged in more than 60 research projects, published 35 peer-reviewed policy reports and papers, advised governments around the world over 80 times, engaged with industry to encourage investments in clean technologies and improve efficiency in resource use, promoted bilateral and multilateral initiatives between governments on 30 occasions, helped state governments with water and irrigation reforms, and organised more than 75 seminars and conferences.

Among its major completed projects, CEEW has: published the 584-page National Water Resources Framework Study for India's 12th Five Year Plan; written India's first report on global governance, submitted to the National Security Adviser; foreign policy implications for resource security; undertaken the first independent assessment of India's 22 gigawatt solar mission; analysed India's green industrial policy; written on the resource nexus and on strategic industries and technologies for India's National Security Advisory Board; facilitated the \$125 million India-U.S. Joint Clean Energy R&D Center; published a business case for phasing down HFCs in Indian industry; worked on geoengineering governance (with UK's Royal Society and the IPCC); published reports on decentralised energy in India; evaluated energy storage technologies; created the Maharashtra-Guangdong partnership on sustainability; published research on energy-trade-climate linkages for the Rio+20 Summit; produced comprehensive reports and briefed negotiators on climate finance; designed financial instruments for energy access for the World Bank; designed irrigation reform for Bihar; and a multi-stakeholder initiative to target challenges of urban water management.

CEEW's **current projects include**: developing the Clean Energy Access Network (CLEAN) of hundreds of decentralised clean energy firms (an idea endorsed by Prime Minister Singh and President Obama in September 2013); modelling India's long-term energy scenarios; modelling energy-water nexus; modelling renewable energy variability and grid integration;

supporting India's National Water Mission; analysing collective action for water security; business case for energy efficiency and emissions reductions in the cement industry.

CEEW's **work covers all levels of governance**: at the <u>national level</u>, resource efficiency and security, water resources, and renewable energy; at the <u>global/regional level</u>, sustainability finance, energy-trade-climate linkages, technology horizons, and bilateral collaborations, with Bhutan, China, Iceland, Israel, Pakistan, Singapore, and the US; and at the <u>state/local level</u>, CEEW develops integrated energy, environment and water plans, and facilitates industry action to reduce emissions or increase R&D investments in clean technologies.

ABOUT THE AUTHOR

Dr Arunabha Ghosh

ARUNABHA GHOSH is CEO of the Council on Energy, Environment and Water (CEEW), an independent, policy research institution in India. Arunabha conceptualised and has led CEEW (http://ceew.in), since its founding in August 2010, to the top-ranked climate think-tank in India for the last two years in a row. In January 2014 CEEW was ranked first in India across three categories in the Global Go To Think Tank Index. Arunabha has devoted his career to public policy. With experience in 35 countries and having previously worked at Princeton, Oxford, UNDP and WTO, he advises governments, industry and civil society around the world on: energy and resources security; renewable energy policy; water governance and institutions; climate governance (financing, technology, HFCs, geoengineering); energy-trade-climate linkages; and international regime design. In March 2013, the World Economic Forum selected him as a *Young Global Leader*. Arunabha's latest initiative is called the Clean Energy Access Network (CLEAN), a countrywide alliance of decentralised energy firms in India.

Dr Ghosh chairs the taskforce on economic relations for the India-US Strategic Dialogue; is member of Track II dialogues with the United States, Israel, Pakistan, Singapore and Bhutan. He formulated the Maharashtra-Guangdong Partnership on Sustainability. Dr Ghosh is associated with Oxford's Global Economic Governance Programme and its Smith School of Enterprise & the Environment. He was Global Leaders Fellow at Princeton's Woodrow Wilson School and at Oxford's Department of Politics and International Relations. He was Policy Specialist at the United Nations Development Programme (New York) and worked at the World Trade Organization (Geneva). He is on the Board of the International Centre for Trade & Sustainable Development.

His most recent publication is on the foreign policy imperatives for India's resource security. Others include: *Understanding Complexity, Anticipating Change* (India's first ever report on global governance, submitted to the National Security Adviser); *National Water Resources Framework Study* (for India's Planning Commission); *Strategic Industries and Emerging Technologies for a Future Ready India* (for the National Security Advisory Board); *India's Resource Nexus* (also for NSAB); *Governing Clean Energy Subsidies* (for Rio+20); *Laying the Foundation of a Bright Future* (on India's solar mission); *RE+: Renewables Beyond Electricity*; *Urban Water and Sanitation in India*; *Institutional Reforms for Improved Service Delivery in Bihar* (on irrigation reform); *Harnessing the Power Shift* (on climate finance); *International Cooperation and the Governance of Geoengineering* (for the IPCC); and three UNDP *Human Development Reports*. He has also led research on trade, intellectual property, financial crises, development assistance, indigenous people, extremism and conflict.

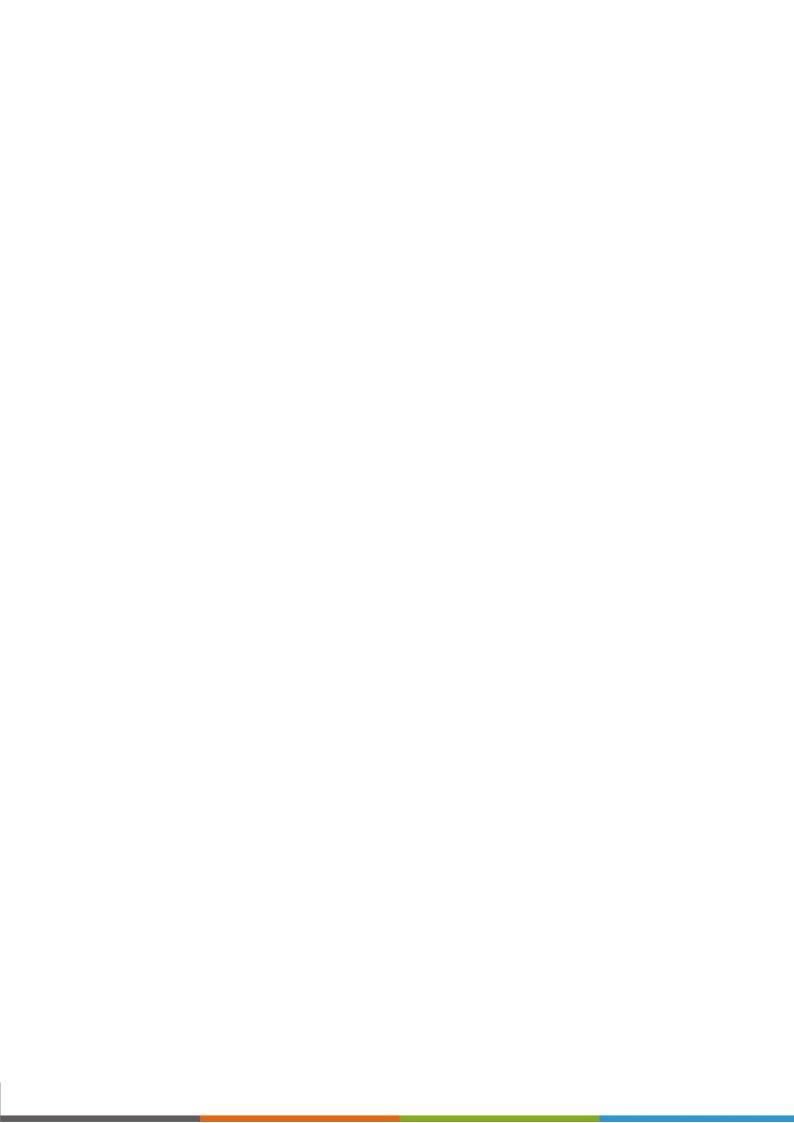
Dr Ghosh has presented to heads of state, India's Parliament, the European Parliament, Brazil's Senate, the Andhra Pradesh Legislative Assembly and other legislatures; trained ministers in Central Asia; and hosted a documentary on water set out of Africa, *Diary of Jay-Z: Water for Life*, honoured at the Webby Awards. His op-eds have appeared in the *Times of India, The Hindu, Business Standard, India Today, Indian Express, Financial Express, Mint, Seminar, and Tehelka*. He has delivered public lectures in several countries, and commented on All India Radio, ABC (Australia), BBC, NDTV (India) and Voice of America, among other broadcasters.

Arunabha has been consulted by the Asian Development Bank, DFID (UK), IDRC (Canada), International Energy Agency, International Finance Corporation, IPCC, Commonwealth Secretariat (London), Oxfam International, Transparency International, UK Ministry of Justice, USAID, and the World Bank. He co-chaired the international governance working group for the UK Royal Society's Solar Radiation Management Governance Initiative. He has been an Editor of the *Journal of Human Development and Capabilities*. In 2011, the Asia Society named him an *Asia 21 Young Leader*. He is also a fellow of the *Aspen Global Leadership Initiative*.

Arunabha holds a doctorate and M.Phil. in international relations from Oxford (Clarendon Scholar and Marvin Bower Scholar); an M.A. (First Class) in Philosophy, Politics and Economics (Balliol College, Oxford; Radhakrishnan Scholar); and topped Economics from St. Stephen's College, Delhi University.

KEY MESSAGES

- The UNSG's climate summit must have three objectives to succeed: giving heads of government a platform to lead on different themes; allowing for multiple small group deals and issue linkage; and managed well with the process being perceived as inclusive and legitimate.
- An effective climate agreement would offer opportunities to leverage three growing demands: (i) from the poor for access to basic services (and their willingness to pay); (ii) from the middle class for better quality of life and thereby efficiency in resource use (energy and water availability, air and water pollution, health impacts, food price inflation); and (iii) from the upper income strata (in developed and developing countries) for better returns on investments in technologies and new business opportunities. The latter could be termed as "inflection capital" or investments, which although highly risky, could if successful alter the energy and economic structures of societies.
- Structured around access, efficiency, and inflection capital, the UNSG's summit would
 provide a platform for heads of state to demonstrate their willingness to act on issues on
 which they and their countries could deliver. In addition, heads of state could convene or
 participate in one or more small-N meetings to bring along other like-minded leaders. The
 process would not be exclusionary, but with an open membership approach to ensure
 legitimacy.
- Examples could include but not be limited to: China and India on renewable energy manufacturing and deployment; India, Kenya, Thailand and others on decentralised clean energy services; United States and Japan on energy efficiency; France, Netherlands and other EU countries on adaptation to water stress and water use efficiency; United States on energy storage; Germany on integration of renewables in the grid; China, Europe, India, Japan and the United States on alternatives to HFCs; Mexico and the Philippines on agricultural R&D for drought-resistant seeds; Brazil and Indonesia on new technologies to monitor rainforests; etc.
- This approach would have three merits: First, it sets out a roadmap for action at scale (across countries) rather than merely reporting and monitoring country-specific policies and registry of limited actions; secondly, it prioritises action now on several fronts, thereby building the trust necessary for an eventual multilateral climate agreement; thirdly, it overcomes the concerns about voice of small countries; small-N groups under the proposed arrangement would not be exclusive clubs but have open membership to evolve into large-N models.



1. CHALLENGED REGIMES

The international governance of climate change is being altered by new pressures and institutions. For better or for worse, the climate regime is being challenged in five ways. First, there is little consensus on how to manage the balance between bottom up and top down approaches: whether we should aim for a new climate protocol, a new legal instrument or an 'agreed outcome with legal force'. Secondly, there remain fundamental disagreements over regime design, not simply the question of how much flexibility to accord to countries but persisting questions about lack of enforcement mechanisms, weak review of actions, and contestation over the Annex I/Non-Annex I distinction. Thirdly, the regime complex of climate negotiations has become more obvious, with debates about the decision-making at the G-20, the role of the Montreal Protocol (for HFCs, for instance), the Green Climate Fund's relationship with dozens of other climate-related funds, trade disputes at the WTO over promotion of clean energy, and so forth. Fourthly, there is growing reliance on informal networks to break logiams in multilateral negotiations and develop consensus on policy issues, with concerns about their exclusivity. Fifthly, many other issues remain semigoverned (the climate implications of continued fossil fuel exploration and production in the Arctic) or ungoverned (growing research and interest in climate geoengineering).

In the run up to COP-21 in Paris, the UN Secretary General's Climate Summit is an important milestone. At COP-15 in Copenhagen heads of government ended up having to negotiate a decision at the last minute. With the complexity in climate negotiations having increased since then, there is little reason to believe that this time negotiators will be ready with a near-final agreement to be decided in December 2015. So leaders would have to take charge again, except that in this case they would need to step in sooner. In September 2014 heads of government could set the stage for the negotiations over the following year. For the UNSG's summit to count, it must offer an opportunity for multi-pronged climate leadership. This would mean that leaders attending the summit speak less as negotiators and more as statesmen, outlining the key areas in which they would like to promote action, as a means to demonstrate their commitment, build trust by drawing in other partners, and create conditions for an effective climate agreement.

2. WHAT KINDS OF NEGOTIATIONS WILL NOT SUCCEED?

Leaders must recognise that an international climate agreement will not be possible if negotiations continue on business-as-usual terms. Empty promises will not work. The UNFCCC architecture is grounded in certain assumptions about what the Convention can deliver (technology leapfrogging, innovative finance, emission cuts in return for cash, adequate response driven by growing body of information about climate change), which have led to a huge rise in expectations. In reality, nothing serious has been on offer to developing countries. In finance, despite new funds, no substantial monies have come forth. In technology and trade, there remain several barriers to transfer of technology combined with the rising threat of trade disputes, if countries seek to promote clean energy at home. Information about rising temperatures or warming oceans (via a series of IPCC reports) has not automatically resulted in proportional response.

In addition to empty promises, climate negotiations have been beset with the "large-N" problem. It is true that negotiations involving more than 190 countries, each with a veto, have not succeeded. But it would be wrong to draw the conclusion from this that large groups cannot arrive at an agreement, even when consensus-based decisions are the norm. There are numerous examples of multilateral agreements having been concluded. We have to recognise that the climate problem is not merely a grave environmental one, it is a problem borne out of injustice. The denial of equitable access to sustainable development, while continuing to shrink the remaining global atmospheric space, is at the core of this injustice – and opposition by one or more countries on these grounds cannot be simply dismissed as marginal, irrelevant or obstructionist.

Equally, there is disproportionate hope placed in "small-N" negotiations, from expectations of a deal between China and the US, between the BASIC group and the US, or at the G-20. But this hope, too, is misplaced. It assumes that other countries have nothing to gain (or lose) and will be quiet spectators while a deal is made by and for a few. Secondly, it mistakenly wishes away the fact that large developing country emitters also have poor citizens for whom basic energy access is still a priority. These emerging economies, if not emerging powers, cannot ignore this vast constituency simply because they have a seat at the top table. Most importantly, the climate problem is due to the historic emissions of developed countries and will be exacerbated by the projected emissions of large developing countries. If these countries cannot arrive at a deal within the UNFCCC, why should we expect them to solve the problem among themselves?

Further, (artificial) coalitions of the willing will not work either. In recent years, emphasis has been laid by developed countries on corralling small countries together to apply pressure on other large developing countries (for example, the Climate and Clean Air Coalition

focused on short-lived climate pollutants). However, without China or India, there is little expected impact of the CCAC except to harden positions within the formal UNFCCC negotiations.

Finally, for twenty-plus years, climate negotiations have been a "war of values": equitable access to carbon space, intergenerational equity, common but differentiated responsibilities, uncompromising "way of life", compensation, loss and damage and the polluter pays principle, etc. But their interpretations have been different and the analytics to determine the costs and benefits have been affected by such differing interpretations. Therefore, little common ground has been found to convert the values into enforceable commitments.

3. ALTERNATIVE DRIVERS: WHAT IS COMMON?

The climate is already changing. Despite their stated negotiating positions, major economies are recognising this reality. They are responding with domestic policies, whether for a cleaner energy mix, more efficient appliances, homes and cities, investments in public transport or electric vehicles, adapting to expected shifts in water availability or the need for different agricultural practices, targeting short-lived climate pollutants, and so forth.

The extent of the response is certainly not yet adequate to meet the climate challenge. But it is important to draw on the common drivers, which could be the basis for cooperation between countries. An effective climate agreement would offer opportunities to leverage three growing demands: (i) from the poor for access to basic services (and their willingness to pay); (ii) from the middle class for better quality of life and thereby efficiency in resource use (adequate energy and water availability, air and water pollution, health impacts, food price inflation); and (iii) from the upper income strata (in developed and developing countries) for better returns on investments in technologies and new business opportunities. The latter could be termed as "inflection capital" or investments, which although highly risky, could if successful alter the energy and economic structures of societies.

These drivers can be found in all countries, of course in varying degrees. But it is this commonality of interests, which could enable cross-country cooperation. Energy poverty, while fundamentally a challenge for poor countries, is not unheard of in rich countries. Therefore, solutions for access to basic energy services would resonate in many communities. Similarly, while quality of life issues (such as air and water pollution) have a longer history in developed countries, many developing countries are encountering similar demands from their citizens, or have already demonstrated resolve through investments in public transport and cleaner fuels, or pricing water and energy appropriately. And the ability of technology and business innovation to shape entirely new opportunities might be the driver of productivity growth in rich countries but developing countries have also greatly benefited in the past. The roles of vaccines in public health, high yielding seeds in agriculture, or mobile telephony in communication technologies are well known. But each required private and public investment in risky ventures without certainty about which approaches would succeed and how. In a similar vein, investments in game changing energy and environmental technologies, i.e. inflection capital, as a response to climate change guarantees high risk but also offers potentially high private and social returns.

So who could take the lead and in which area? The ideas outlined below are illustrative but they give an indication of how both developed and developing countries could portray themselves as leaders in particular areas.

Access to basic energy services

- Renewable energy (particularly wind and solar) is rapidly approaching grid parity in terms of costs. Although there are several factors involved, the precipitate decline in the prices of solar cells and modules is one important reason. China has established itself as the world leader in solar manufacturing capacity, in part thanks to significant government support to domestic firms. India is potentially one of the world's largest solar markets. Notwithstanding trade disputes in this area, China and India are well placed to position together as crucial nodes in an otherwise global supply chain of renewable energy products and services. This would not be a mercantilist strategy of grabbing market share by undercutting rivals but using positions of strength to bring together several other countries to promote R&D, manufacturing capacity, and financial models.
- Decentralised clean energy: in India alone there are more than 250 companies delivering off-grid energy services. The decentralised energy sector offers a range of business models, across technologies and scales of operation, through leasing, sales of home systems, community-based products, and mini grids with productive anchor base loads. Moreover, energy access in rural areas offers opportunities beyond the minimum requirements for electricity and heat. It creates the foundation for livelihoods, investments in more value added activities, and social benefits (access to education, improved health outcomes). Innovations in dozens of business models to deliver energy access in India could be applicable in Sub-Saharan Africa, Southeast Asia, parts of South America and even western China. If large numbers of small projects could be aggregated (within or across countries) financiers could be attracted to investable portfolios with lower transaction costs.

Efficiency of resource use for quality of life

- Industrial energy efficiency can be pursued where the business case for positive returns on investment is established. The United States has saved more energy via efficiency measures since the early 1970s than the addition energy delivered from supply-side sources. Japan, more recently, demonstrated how energy efficiency can be quickly given national priority in response to the energy crunch following the Fukushima disaster.
- Water use efficiency, as an adaptation strategy, is embedded in a broader case for higher rural incomes and food security for small and marginal farmers. With water in the frontline of climate-related stresses, higher efficiency particularly in the agriculture sector, could again offer opportunities for collaboration between South Asian countries. In addition trade in technologies and sharing of water management practices would bring

in western European countries (such as France and Netherlands) along with Sub-Saharan African nations, since many of the basins in the latter remain under-exploited.

- Fuel and water security concerns for thermal power plants are also resulting in the push for higher efficiency for the purposes of de-risking investments. R&D collaborations might be engendered between countries in the Middle East, North Africa, regions of western India and northern China to focus on this dimension.
- Higher air and water quality standards are being demanded by user groups across the world. The impact on human health and productivity is being catalogued at a country level and at the community level. Global initiatives around sustainable cities offer the chance for provincial or city-level governments to collaborate on air and water pollution, with the attendant co-benefits for the climate.

"Inflection capital" for high private and social returns

- Energy storage R&D is making important breakthroughs and will be critical for integrating renewables into the energy mix and ensuring grid stability. The United States has some of the most innovative firms and research laboratories in this area and could be one of the drivers of global collaboration in energy storage. Germany could take the lead on the integration of renewable energy into the grid, given the vast capacity addition in that country and the large share of electricity being drawn from renewable sources.
- Short-lived climate pollutants are attracting attention on the sidelines of climate negotiations. In fact, more action is visible within countries, as the need to respond to changing market conditions, standards and energy efficiency directives are making firms in China, Europe, India, Japan and the United States develop alternative refrigerants to HFCs. With significant climate co-benefits, cross-border technological collaboration on HFC alternatives could be another area for any of these countries to lead.
- Agricultural R&D for drought-resistant seeds is underway in pockets but could be the basis for a second green revolution globally. As in the case of the first green revolution, international collaborative research could be driven by, say, Mexico, the Philippines, India and other tropical countries.
- The market for electric and hybrid vehicles is growing. China has more than 100 million electric cycles. The United States is a hub for research in and commercialisation of EVs. And some European countries are well ahead of the curve for designing the charging infrastructure for EVs.

Brazil, Indonesia and the Democratic Republic of Congo are the prime candidates for leadership in the protection of tropical rainforests. In particular, Brazil, with its advanced satellite technology to monitor illegal logging, is well placed to support other countries with similar challenges. Indonesia has also teamed up with leading environmental organisations and technology firms to monitor illegal clearing of protected forests.

These examples do not suggest that the particular challenges they target have been overcome or that the countries best placed to tackle them have no lessons to learn from other countries. For instance, fossil fuel subsidy reform is being considered in several countries (in part driven by discussions at the G-20). Political leaders interested in levelling the playing field for renewable energy sources and reducing the fiscal burden of inefficient subsidies will need to rely on each other's experiences. The ideas above, instead, outline the possibilities for leadership and cooperation.

4. AN ALTERNATIVE PROCESS: WHO WOULD BE INVOLVED?

Once we have identified areas in which countries have a proven track record, how could the Secretary General's summit be structured? The UN Secretary General's climate summit must have three objectives to succeed: it should give heads of government a platform to lead on different themes; it should allow for multiple small group deals and issue linkage; it should be managed well with the process being perceived as inclusive and legitimate.

Process matters in international negotiations. Countries need to believe that they have a meaningful role and are not being asked to merely rubber stamp a deal struck elsewhere. The praise offered to Mexico's handling of the Cancún COP in 2010 stood in stark contrast to how Denmark was pilloried for COP-15. One could argue that Copenhagen was a bigger disappointment because it was ambitious in its approach whereas Cancún maintained a low bar for success. Even so, COP-16 was perceived to be more inclusive, better managed and the host country was seen to be a good faith arbiter.

Equally, for an issue as complex as climate change, it is not surprising that negotiations are lengthy – and that serious attempts are needed to link issues (energy security, emissions cuts, air quality, technology, finance, adaptation, water and agriculture, commercial opportunities, trade disputes, etc.). Such efforts would continually evolve within and beyond the climate regime, when past attempts fail to deliver and new ones are tested. For issues to be linked, negotiators and their principals need to learn about their counterparts' interests. Small-N negotiations could offer the forum for such deliberation but they need to be open-ended and inclusive enough so that opportunities for linkage with other countries are not missed.

The Secretary General's climate summit can serve both purposes. If managed well, it would gain process legitimacy. And by facilitating multiple leader-level small-N issue linkage opportunities, it might even win legitimacy in outcomes or at least set the countries on a path towards agreement in 2015. In any negotiation, assuming it is sincere, any country would be conservative about issues it feels unlikely to be able to deliver. The alternative approach, especially with the possibility of issue linkage and open membership, would emphasise issues about which countries would feel confident to take a lead.

Therefore, rather than expect statesmen to negotiate last minute deals at climate negotiations, the UNSG's summit would provide a platform for heads of state to demonstrate their willingness to act on issues on which they and their countries could deliver. Examples could include: India "exporting" business models on decentralised energy; Brazil offering to share its satellite technology for monitoring forests; the United States bringing to bear its vast experience in commercialising R&D, including risk mitigation and risk insurance; and China opening its market for clean technology deployment at home and establishing manufacturing supply chains abroad.

Moreover, a UN summit could serve as the forum to forge cross-country collaborations and find opportunities for issue linkage. Heads of government could convene or participate in one or more small-N meetings to bring along other like-minded leaders. The process would not be exclusionary, but with an open membership approach to ensure legitimacy. Even countries with limited financial resources could demonstrate leadership, say in conserving forests and, thereby, serve as more than mute spectators of climate negotiations. No country would be excluded and each leader making a proposal could take the responsibility of collaborating with two or more countries.

5. AN ALTERNATIVE OUTCOME: IS LEADERSHIP ENOUGH?

Discussions structured around access, efficiency, and inflection capital suggest a different way to aim for small-N deals. While maintaining the integrity of the UNFCCC, this approach allows for various grouping for the purposes of climate-related action, so long as the groups are not exclusive or exclusionary. Moreover, we know that mitigation, adaptation, technology and finance are often overlapping and contingent on one another. Therefore, proposals on "access" related initiatives would consider impacts on emissions, energy access, adaptability to water stress, various technology options, and sui generis financial models. Initiatives on "efficiency" and "inflection capital" could also be structured and evaluated similarly in terms of their mitigation potential, adaptation response, and financial and technological innovations.

If the Secretary General's climate summit has to count, it must create space for practical and credible climate leadership by heads of state across the world. But would this kind of flexible and dynamic leadership be enough? Would this add up to the effort needed to keep carbon emissions restricted to the trillionth tonne or atmospheric concentration of CO2 to 450 ppm? Perhaps unlikely, just as other options being considered are also unlikely to deliver the ideal outcome. But this arrangement, with a focus on access, efficiency and inflection capital, has three main benefits over the others:

- First, it sets out a roadmap for action at scale (across countries) rather than merely reporting and monitoring country-specific policies and registry of limited actions.
- Secondly, it prioritises action now on several fronts, thereby building the trust necessary for an eventual multilateral climate agreement.
- Thirdly, it overcomes the concerns about voice of small countries in the governance of the climate regime. Under the proposed arrangement small-N groups would not be exclusive clubs. They would be effective coalitions of parties driven by mutual interests in providing access, increasing efficiency, and seeking high returns from investments of inflection capital. And with open membership, they could evolve into large-N models, the size of which would vary on an issue-by-issue basis.

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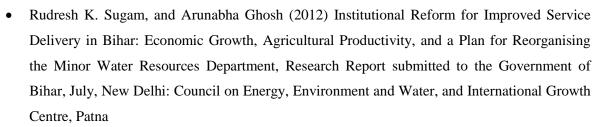
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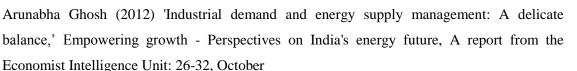


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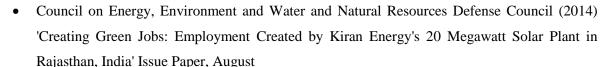
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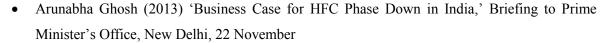


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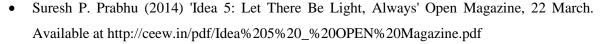


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