

Climate through the lens of poverty, inequality, sustainability

November 17 2015, by Upmanu Lall



Flooding in Pakistan. “It is no secret that the poor in any country, and the poorer countries, are the most adversely affected by the present and future climate.”
Credit: Think Progress

There is no religion that does not teach its adherents the need to nurture the earth, or the need for the brotherhood, equality and humility of men. In every generation, in every land and in every clime is born a populist who embraces such goals to rise as a leader of the people. Yet, on the eve of Paris, we are visited by gunfire and death, symbolizing the distrust that is bred by inequity of opportunity. Religions uniformly preach peace, even as some adherents invoke martyrdom as a path to address injustices, perceived and real. Sadness embraces the families of those martyred as well as those whom they extinguished with little reason.

It is remarkable that we are in the 21st COP at Paris. In the furthest reaches of the world, there is now an awareness of our changing climate, of the human influence, and of the leaders who debate what needs to be done, year after year, decade after decade. The clock ticks, and in the absence of change in energy policies, the day comes ever closer. Inequities past and future color the debate, forestalling action. Technology has brought us low-cost global communication, and also enabled a [global economy](#). It has also brought us closer and further from each other. We now know more about other cultures. We also see the differences, and sharpen our sense of inequities. Perhaps, this, rather than a control of greenhouse gases, needs to be the primary conversation.

It is no secret that the poor in any country, and the poorer countries, are the most adversely affected by the present and future climate. Their ability to withstand floods or droughts, or climate induced disasters of any sort, is the most limited. Unable to buffer themselves from the vagaries of climate, they have lower economic and agricultural productivity, lower resilience to shocks, and are for all purposes trapped. They lack reliable sources of energy that could increase their productivity, and allow them a better access to the local or global economy. Solving this may provide them the income that eventually helps them better address shocks, climatic, political or economic. Of

course, such a pathway has to be harmonious with nature. These are the challenges we should be discussing and addressing as a common, global goal.

Most energy sources on the planet can be traced back to the sun. The winds blow in response to temperature differences created by imbalances in solar radiation. Hydropower relies on river flows that come from rain, which in turn is supplied by evaporation stimulated by the sun. Biofuels, coal, oil and gas result from biological activity on land and in the oceans that was once stimulated by the sun. We know how to harness all these sources to produce electricity and heat. The sun's rhythm governs our every day, waking, sleeping and working, as it does life across the planet. It would seem that finding a way to tap this energy in an environmentally benign way, and making it as available to the masses as cellular phones have become, would be the grandest economic opportunity of the 21st century.

Indeed, recent initiatives in China and elsewhere have dramatically reduced the initial investment required to tap solar and wind energy. This is exciting since these sources can be implemented and spread much as cell phones have—across the world, to areas poor and rich, on or off an existing grid. This is a grassroots business opportunity, that brings together large manufacturers, last mile implementers, supply chain intermediaries and maintenance specialists, and diverse users who are bound to translate the opportunity into diverse income streams through their ingenuity and local knowledge.

The COP discussions have revolved around targets for decarbonization to mitigate [climate change](#). I think this needs to be a discussion about how the development of a renewable energy platform can lead to sustainable and inclusive [economic growth](#) of all sectors of society in the world. Uplifting the poor, while a moral imperative, may not actually translate beyond political slogans. Perhaps, this is why the debates are

not framed in this light. The 20th century showed us that the rich get richer as the poor are uplifted. Let the 21st be about how to improve conditions for all living beings on the planet.

The second thread in the climate change discussions is that of climate change adaptation, recognizing that the political processes that lead to reductions in the emissions of greenhouse gases may not yield results in time. There are many dimensions to this discussion, ranging from questions as to investment in infrastructure to financial risk management to migration to food and water security. A tacit assumption in many such discussions is that societies are, by and large, adjusted to climate risk, and it is the change due to [human influence](#) on the earth's climate that we need to address.

This is a rather unfortunate posture that cripples real action, since future predictions of future climate with any specificity as to location or variable of concern are clouded by significant uncertainty not just in the models, but also in the assumptions that drive our models. Yet, floods and droughts ravage many places, with loss of life, disease, food insecurity, and property losses emerging as a surprise that we struggle to recover from, even from events that have been seen perhaps many times in the last century, but forgotten over the course of time. Again, if we are concerned about the well-being of people, we have a moral imperative to help increase resilience to climate shocks, whether or not we are concerned with climate change. The latter is an attendant factor that simply increases the urgency of the matter.

It is my view that mitigation of and adaptation to climate change should not be seen as two separate sides of a response to a threat. Rather, we need to approach both synergistically, under a paradigm that is primarily focused on economic growth and poverty alleviation, which in turn would reduce the risks of conflict and the threat to life on earth.

Every year, as climate induced disasters happen, in Brazil, in the United States, in Europe, in India, in Africa and in China, vivid images of tragedy pull at our heartstrings, and much is spent on international relief and recovery. Yet, many of the poorer places that are subject to these disasters have little to show a year later from the outpouring of support. A focus on economic growth stimulated by renewable energy, and accompanied by pre-emptive solutions to floods and droughts, through improvements in agriculture, in food preservation using [energy sources](#), in the diversion and control of floods, and in early warning and action systems, would be transformative.

With increased income comes the possibility to acquire a more egalitarian perspective, pay for education, to pay for infrastructure development, to pay for effective institutions and for risk mitigation. I look forward to a world where the enlightened few see it fitting to steer us in this direction, and look beyond the rhetoric of emissions, and inequity in past and future carbon emissions, with suspended disbelief as to the potential calamities that face us. Sustainable development as an objective encompasses the climate and energy challenge, and the natural responses to these challenges promise directions for bringing people and countries out of poverty.

In September, the governments of the world agreed to the sustainable development goals to be achieved by 2030, except Goal 13 (of 17), to deal with climate change. In December we can complete the agreement on that 13th goal. The 193 countries of the world must do nothing less.

Upmanu Lall also wrote for us back in 2009, before the Copenhagen summit. Here's an excerpt (for his full post, go [here](#)):

... In most places where we have multi-century historical records of rainfall or "proxy" natural records, such as tree rings, we see persistent shifts in rainfall patterns. Presumably due to natural causes, these often

go beyond ranges experienced in the 20th century, and have lasted years or decades. In the meantime human population has boomed. Many developing countries are particularly subject to such swings, and now with huge numbers of people and little infrastructure, they are particularly vulnerable. Developed countries also are now quite susceptible to systematic climate shifts, since much of their modern infrastructure, especially for water, was designed on the assumption that climate does not change with time. Today, in many places in North America, Australia and Europe, this infrastructure is at the limits of its performance, and their chance of failure is high if protracted droughts or extreme floods come along.

Given the prospects for human suffering and international conflict over water, Copenhagen offers an opportunity to focus the [climate change debate](#) in a new way, that has nothing to do with conjecture: we must increase the resilience of water resources to shifts that we already know are quite real.

While there is pessimism about the prospects of a binding agreement on future carbon emissions, there are things we can do now to address problems that are already with us—and will almost certainly accompany us down the road. It is imperative that the momentum and interest generated at Copenhagen be channeled toward them.

Provided by Earth Institute, Columbia University

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