Climate change: a relentless problem, fickle global politics, and Indonesia's role in forging the way forward

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Abstract

It is not the science or arithmetic that is a barrier to action on climate change; it is the politics. The main vehicle for that political agreement has been the United Nations. The UN meetings in December 2009 in Copenhagen were a great step forward, but did not "seal the deal" on a global agreement as hoped. A "United Nations-Plus" approach leading to a collection of sub-global agreements might be a prerequisite. Indonesia is a member of many of the relevant sub-global fora. It is also one country that is not only a major part of the problem but will also bear the brunt of the consequences. Its national interests are aligned with the planetary interest. Indonesia can therefore be a leader, a convenor, and a bridge. This article outlines five specific initiatives Indonesia could drive in 2010.

Climate change: the science and the arithmetic

Despite the recent furore in a controversy-hungry media about e-mail communications between some climate scientists and the veracity of some Intergovernmental Panel on Climate Change (IPCC) findings, the science of climate change is quite straightforward: human-induced climate change is caused by the build-up of greenhouse gases in the atmosphere. Greenhouse gases have only two other places to go: the oceans and the terrestrial system (including land and vegetation).

With our atmosphere overloaded, we have two complementary mitigation options: we can reduce ongoing emissions into our atmosphere (especially from burning fossil fuel and forests), and we can suck greenhouse gases from the atmosphere back into our terrestrial system and oceans.

For the terrestrial system, this means both maintaining the carbon stored in trees, vegetation and soils, and sequestering new carbon. Both require significant changes in the way we use land around the world. Land use (including forestry and agriculture) is currently the source of about one-third of all human-caused greenhouse gas emissions. In Indonesia, terrestrial carbon assumes massive importance. According to the Indonesian Government's National Council on Climate Change (DNPI), "emissions from peatland amount to roughly 45% of Indonesia's current greenhouse gas emissions, and forestry accounts for over 35%". It is these terrestrial emissions that catapult Indonesia into the top five emitting countries in the world.

Agricultural expansion for food, fuel, and fibre products is the leading cause of deforestation in developing countries. Although sufficient potential agricultural land might be technically available outside of forested land, it is often economically rational for agricultural producers to expand production into forests rather than investing in maintaining and increasing their productivity or rehabilitating abandoned lands. Expansion onto non-forested land can also lead to significant greenhouse gas emissions. And agricultural practices themselves are a source of emissions. Given the central importance of terrestrial carbon to the climate change solution, figuring out how to grow more food, fuel, and fibre on the same land with the same or fewer emissions is a fundamental task.

At its most basic, the arithmetic of climate change mitigation centres around three main questions. How much greenhouse gas can we emit each year and still avoid dangerous climate change (the annual global carbon budget)? Who gets to emit what portion of that annual global carbon budget? And who pays the financial and behavioural cost of changing from our current high-carbon global economy to the necessary low- or no-carbon economy?

The first question is relatively easy to answer. It is pure mathematics. No wriggling or clever rhetoric or complicated jargon or finger-pointing can change it. To avoid the worst impacts of climate change, the world needs to stabilise greenhouse gas concentrations in the atmosphere at between 300 and 450 parts per million (ppm) of carbon dioxide equivalents (CO_2e). Analysis in 2009 for Project Catalyst indicates that to stabilise at 450ppm humans can emit a maximum of 44 billion tonnes (gigatonnes or Gt) of CO_2e in 2020 and 35Gt in 2030, after peaking around the year 2015. To put this in context, "business as usual" emissions are predicted to be 70Gt in the year 2030. Many climate scientists now say that 300ppm is the safe level, allowing an even smaller annual global carbon budget. People often talk of reducing emissions by some percentage (25%, 40%, 90%) below the emissions in some base year (1990, 2000, 2005) by some target date (2020, 2050). However, in plain speaking, we need to essentially decarbonise the global economy. And we need to do it pretty quickly.

The second question – who gets to emit how much – is a mix of what is fair and what is feasible. The fairness question is tricky and the real subject of the United Nations and bilateral climate change negotiations. It can be solved only by negotiation amongst countries. The feasibility question is about what we can do in different countries in different sectors (industry, land use, and behaviour) in what time frame. It can be influenced by policy but is determined more by technology and implementation constraints, and will change over time.

The third question – who bears the costs – is fairly obvious too. The developed world needs to pay because it is historically responsible for most of the greenhouse gases currently in the atmosphere; because this industrialisation has provided the developed world with the very financial and technical resources to address global problems; and because it cannot reduce its own emissions rapidly enough to stay within its fair share of the carbon budget, at least in the short to medium term. But emerging economic powers should start to pay their part too.

It is not the science or arithmetic that is a barrier to action; it is the politics.

Climate change: the politics

Climate change is likely to be the defining issue of the 21st century. It would be easier if climate change were solely an environmental issue; if it didn't impact on all facets of life in all countries across the globe. It would be simpler if avoiding dangerous climate change were an optional activity; if our emissions trajectory were not so steep that we face having to implement not just one but all available means of mitigation. It would be less intimidating if it only required the planting of a few extra trees or the use of some additional solar panels instead of the need, collectively and individually, to make significant changes to our local, national, and global economic activity, including the way we manage land.

It would be, but it isn't. It challenges the very structure of our international economy; challenges democracy for the principle of the individual vote has always elevated individual self-interest over the collective good; and challenges the ethics of a global society, for the actions of one state now affect the entire world, the actions of one generation, the next.

Telling the story of climate change in order to promote its solutions is increasingly difficult, with news media and audiences both increasingly uninterested in substantive information and politics and public opinion following capricious trends. These challenges are real and here to stay no matter how tired we are, or unfashionable the story of climate change becomes. It is an unrelenting problem.

Our collective solutions to climate change need to be as all-encompassing and persistent as the problem itself. We have to cut through a lot of noise, in order to work together to avoid dangerous climate change.

So far, the main vehicle for that collective action has been the United Nations Framework Convention on Climate Change (UNFCCC). It was adopted in 1992 at the "Rio Earth Summit" and entered into force in 1994. Parties meet each year to discuss progress and negotiate new commitments. In 1997, countries agreed to the Kyoto Protocol, which set out countries' substantive commitments. In 2007, parties laid out the Bali Roadmap as a plan to replace or enhance the Kyoto Protocol and bring in countries that had hitherto stayed away from international commitments on climate change, notably the USA and China. This was to be achieved by the UNFCCC meetings in Copenhagen at the end of 2009.

As the past decades have shown, agreeing the solution to climate change at a political-diplomatic level is devilishly complex. Four factors are of particular influence.

The Cost-Benefit Disconnect: Greenhouse gases are emitted in a country based on the economic and political choices of that country. It would be easier if the impacts of climate change in a country were directly proportionate to the country's emissions. But they are not. Climate change affects countries based on their particular circumstances, mostly beyond their control. There is no clear incentive to act out of immediate self-interest. We saw this in Copenhagen. Just because it was a global conference did not mean that nations left their domestic agendas at the door. Indeed, they are incapable of doing so. It is why so many Heads of State used the podium in Copenhagen not to engage in a dialogue with fellow leaders, but to posture and perform for their audiences at home. To wait for the nations of the world to act in any more altruistic way is to wait a long time.

The Jamboree Factor: Everyone feels the effects of climate change, but a relatively small number of countries causes the bulk of the problem. Everyone understandably wants to be involved in what the solution looks like. But finding agreement between almost 200 parties with diverse and competing national interests and priorities is not easy, especially when agreement is based on consensus allowing just one country to stymie progress. Agreement amongst the major emitters might be more straightforward, but there will be suspicions that such an agreement sidelines the justified interests of other countries.

The Prisoners Dilemma: Few countries want to act unilaterally because they fear or know that they will be at a relative disadvantage in the medium term unless their economic competitors take commensurate action. And they can make the uncourageous argument that unless everyone acts, the problem will not be solved, so why bother. Again, it might be easier as a first step to reach collective agreement amongst the major emitters than amongst all 200 parties. And that might be enough to enable rapid progress towards a global deal.

The Governance Disconnect: Climate change is a global problem with local impacts caused by local actions. The solution requires global commitment and coordination, coupled with a suite of local action. But power resides at the national level. It is nations that agree international treaties, and coordinate local actions. We do not have effective mechanisms to bring local actors together to make the required decisions. National governments must act as intermediaries, and national governments are perhaps more easily swayed than local actors by powerful vested interests that have more to do with the problem than the solution. Local and municipal governments are closer to their constituents and perhaps therefore more responsive. As a response to this problem, cities around the world have been joining forces under the "C40 Cities Climate Leadership Group" initiative, which includes Jakarta, and sub-national initiatives such as the memorandum of understanding on forest emissions and sequestration between governors from states and provinces in the USA, Brazil, and Indonesia. Perhaps this is also why Indonesia's President Susilo Bambang Yudhoyono was accompanied in Copenhagen by provincial governors.

So, while a collection of sub-global agreements might be a step forward through the Jamboree Factor and the Prisoners Dilemma, a collection of coordinated action by sub-national actors can help with the Governance Disconnect.

But, as it stands, our business as usual emissions pathway takes us to a staggering atmospheric CO_2e concentration of 950ppm by the end of the century. But we need to be somewhere below 450ppm, and probably as low as 300ppm.

How will we bridge that gap? Is the United Nations process enough, or do we need other supporting approaches? Before exploring that question, let us consider how far we got in Copenhagen.

Copenhagen and its consequences

The two years between the UNFCCC meetings in Bali (2007) and Copenhagen (2009) have left negotiators exhausted. The probability of success was never certain because political mandate and will waxes and wanes. However, many hoped that the window of opportunity that Copenhagen represented, when both political and public interest coincided, would translate into binding action. In Copenhagen the world was going to "seal the deal" to solve climate change. Copenhagen became both a catch cry and an end date. December 2009 has come and gone, and the resulting "Copenhagen Accord", which arose despite acrimonious negotiations, has been met with a mixture of confusion, disappointment, derision, and fatigue.

Ostensibly, a few thousand bureaucrats from around 200 countries took part in the Copenhagen negotiation while 43,000 representatives from media outlets, social and environmental NGOs, and the corporate sector tried to influence the outcome of the negotiation. In reality, five leaders from five countries agreed a deal in the final hours that suited their own national interests. That might not have put us on a direct path to avoid dangerous climate change, and it might not satisfy desires for a global deal, but it is not surprising. And despite all the media cries that Copenhagen represents a failure, it remains nonetheless a step forward.

By early February 2010, many countries had made non-binding pledges under the Copenhagen Accord. Much will depend on the detail of any follow-on negotiations and operative mechanisms. And, as always, everything depends on whether commitments are followed by real action. But broadly speaking there are five positive outcomes from Copenhagen.

First, the world accepted that the developed / developing country dichotomy is too crude to be helpful in the context of climate change. Two new classes of countries were not just heard and talked about but also recognised: those countries that will be major emitters of greenhouse gases in the future even if their past emissions have been low compared with the traditionally-defined developed world; and those countries most vulnerable to the impacts of climate change. This is an essential step because it breaks the handicapping nexus between the moral argument (those who caused the problem should fix it, and those who will be most affected should be compensated) and the practical argument (those who can fix it have to fix it). Instead, it creates a new prism through which to understand the solution to climate change, one that discerns between significant current and future emitters on the one hand and those vulnerable to the consequences of these emissions on the other.

Second, China and the United States agreed to do *something* on climate change, breaking the infuriating but understandable "I won't act until you act" standoff. This could be the start of a virtuous domino effect where the broken stand-off eases the passage of US domestic climate change legislation, which allows the US to make a legally binding international commitment to reduce greenhouse gas emissions, prompting more ambitious commitments from other developed countries, and in turn fostering a greater willingness from the emerging major emitters to take positive action. Countries who signed the Copenhagen Accord encompass 80-90% of global emissions.

Third, countries committed in Copenhagen to providing serious money for adaptation, especially for the most vulnerable countries, and for mitigation. Of course, success will depend on whether the money is actually delivered and effectively used.

Fourth, the Copenhagen Accord and surrounding negotiations included terrestrial carbon in developing countries, under a broadly defined mechanism referred to as "REDD-plus" (Reducing Emissions from Deforestation and Forest Degradation plus other activities) and other actions on agriculture.

Finally, progress was made between experts from countries and civil society on complex and difficult technical issues, and ongoing processes were strengthened or set in place to continue this fundamental work. Without the technical underpinning, a political accord cannot be implemented at the required scale.

"United Nations-Plus"?

Copenhagen should be seen as a great step forward, but the world's nations did not "seal the deal". The Cost-Benefit Disconnect, the Jamboree Factor, the Prisoners Dilemma, and the Governance Disconnect came away battered and bruised, but by no means defeated.

An effective world government could help. It could cut through the difficulties and impose a solution in the planetary interest rather than getting bogged down in competing national interests. But – as much as some would like one – there is no world government, and no great prospect of one in the next half century. The United Nations is the closest we have.

However, there is a growing sense – heightened by the experience of Copenhagen – that the United Nations process has failed and new processes are needed, whether in substitution or in parallel. The failure was not in the concept but in the delivery. The failure was in expecting consensus alone to deliver a global deal. In fact, given the fickle nature of politics and the undeniable logic of national interest, the Copenhagen Accord can be viewed as a milestone, though it was not the complete solution. It sits alongside the progress made in the form of "draft decisions" of the UNFCCC's advanced working groups, which consolidate extensive discussions on technical and policy components of climate change mitigation and adaption.

Meanwhile, sub-global fora, such as the G20, the Major Economies Forum, ASEAN plus 3, APEC, OPEC, the Forest 11, OECD, and the BASIC Group countries (Brazil, South Africa, India, and China), provide a promising venue for pursuing diplomatic agreement where else there might be none. Faced with indecision and gridlock in global negotiations, bilateral and multilateral initiatives must proceed, as some already are. Indeed, a suite of unilateral, bilateral, and multilateral commitments and agreements on climate change is emerging outside the United Nations process. If agreement is not yet possible at a global level, the need for strong and effective international coordination becomes even more important, especially to progress technical issues and to enable comparison of outcomes.

The distinction between diplomatic and technical is important. The UNFCCC is a forum for both, and although diplomatic agreement might be hamstrung when so many competing interests come together, progress can and should still be made at the technical level. This does not need to jeopardise national interest. Rather it is the factual underpinning for a successful diplomatic agreement.

Why Indonesia matters

Climate change is a major problem for the planet and for Indonesia. Indonesia is a large and growing economy. It is one of the top five emitters of greenhouse gases. We cannot expect to avoid dangerous climate change unless Indonesia makes a significant contribution to mitigation by cutting greenhouse gas emissions from the land use and industrial sectors, and by increasing greenhouse gas sequestration in its terrestrial system.

But Indonesia matters not just because of inescapable arithmetic. The climate change problem will be solved only when diplomatic agreement and technical capability fuse. Indonesia can continue to foster progress at both the diplomatic and technical levels.

Indonesia is ideally placed to be a world leader at the technical level of how to effectively unlock the potential of terrestrial carbon, contributing to Indonesia's own climate change and wider development goals. It will also make progress easier in other important forest countries.

Indonesia has already made enormous efforts at the implementation level. It has focussed on the detailed technical and policy issues of long-term implementation of domestic action on climate change, especially on land use. It will be at this level that any international agreement becomes real. In partnership with other countries and NGOs, Indonesia is harnessing and enhancing its strong scientific capacity to build systems to collect and analyse satellite and ground data, and undertaking large-scale demonstration activities. It is working with Australia to develop a national Forest Resource Information System and National Carbon Accounting System.

At a diplomatic level, Indonesia matters because it is one of a relatively small number of large leading nations finding its place in a more nuanced world than was allowed by the old developing and developed country dichotomy. In this new world, there are countries that have and will be part of the problem, countries most vulnerable to the impacts of climate change, and everyone else, none of whom is immune from the impacts.

Indonesia is also a member of many of the sub-global fora of relevance to climate change including the G20, the Major Economies Forum, ASEAN plus 3, APEC, OPEC, and the Forest 11. It is one country that is not only a major part of the problem but will also bear the brunt of the consequences. Its national interests are aligned with the planetary interest.

Indonesia can be a leader, a convenor, and a bridge.

Indonesia was the first OPEC country to begin the Kyoto ratification process. It was the first country to establish regulations on how REDD-plus would be implemented within its borders, including how revenue from REDD-plus projects would be shared.

In 2007 in Bali, Indonesia convened the first Finance Ministers' meeting on climate change. In 2008, it established the National Council on Climate Change to coordinate climate change policy, negotiations, and implementation across all levels and portfolios of government in Indonesia's decentralised system. In 2009, President Susilo Bambang Yudhoyono announced to the world Indonesia's commitment to change the status of its forest sector from a net greenhouse gas emitter to a net sink by 2030.

In a year in which the majority of the west haggled over small percentage cuts and altered their base years in the manner that an accountant might cook his books for the tax man, this was an extraordinary announcement by the leader of a sprawling and densely populated country. When one compares this grand visionary commitment, by a country of 200 million people entering the new millennium in a newly invigorated democracy, to the promises of lowly populated countries such as Australia (21 million) and Canada (33 million) it is no wonder that the developing world remains sceptical of the West's commitment to action.

Resuscitating the Bali Roadmap: an action plan for Indonesia

Indonesia has a critical role to play to keep the spirit of the Bali Roadmap alive and put the planet on a path to avoid dangerous climate change. Indonesia was rightly proud to host the 2007 UNFCCC meeting and shepherd through the Bali Roadmap. That national pride is now at stake: just as the success or failure of the Kyoto protocol reflects on Japan, and the outcome at Copenhagen reflects on Denmark, progress along the Bali Roadmap is intrinsically tied with views of Indonesia as a whole. Japan, Denmark, and Indonesia each invested enormous political and diplomatic capital in these three pivotal UNFCCC meetings, capital that will be repaid only through success.

A successful strategy for Indonesia would include three elements. The first is to work domestically and with partners on technical aspects of the climate change solution. Considering Indonesia's particular circumstances, where around 80% of emissions come from the use of forests and peat lands, this work should focus on terrestrial carbon. The second is to push for a coordinated and standardised approach to technical issues through fora like the UNFCCC's Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Intergovernmental Panel on Climate Change (IPCC). The third is to drive for diplomatic agreement on the components of the overall solution to climate change. This can usefully take place in sub-global fora like the G20, the Major Economies Forum, ASEAN plus 3, APEC, OPEC, the Forest 11, OECD, and the BASIC Group countries with a view to reaching global agreement in the future, perhaps as early as the UNFCCC meeting in Cancun, Mexico at the end of 2010.

In addition to Indonesia's existing work on climate change, I propose specifically that Indonesia seizes and energetically drives five initiatives spanning those elements to address the problems identified in this article:

- "Whole of Government Plus": Climate change touches on every aspect of society. Whether we ignore the problem or we fix it, fundamental shifts in society are in store. The problem is too all-encompassing to be solved by any one department within a ministry or any one ministry within a government, or by any one level of government, or by a government alone. All relevant ministries, all levels of government, all sectors of the economy, and a broad range of civil society must be engaged in the discussion. Indonesia should strengthen its drive towards this "Whole of Government Plus" approach, to make effective progress at home and become a model for countries around the globe.

- South-South Cooperation: For some time, Indonesia and many other forest countries have been actively developing and implementing their strategies and demonstration activities for REDD-plus. It has a role to play in engaging with other forest countries and providing direction, leadership and expertise. This is not about one-off workshops, but about a sustained engagement between countries working as equals to share lessons and work through problems together.

- Regional Center for Excellence on Climate Change: Forward-looking institutions are needed at all levels to move from the current committed but ad hoc and fragmented reaction to climate change and REDD-plus to a coordinated and sustained response. Indonesia would be an ideal place to establish a center for excellence on climate change focusing on terrestrial carbon. Bogor is the home of the Center for International Forest Research (CIFOR) and Jakarta hosts the ASEAN Secretariat. The Center would serve as a regional hub for learning, knowledge, and providing outsourced capacity to those countries that requested it. This knowledge as well as past experience will have important lessons for the design and implementation of the Copenhagen Green Climate Fund, announced as part of the Copenhagen Accord, as well as the more detailed rule-setting undertaken through the technical and coordination components of the UNFCCC and IPCC. This would include a sustained and well-funded research program to fill remaining gaps in our understanding.

- Public-Private Forest Carbon Funding Initiative: At present, much of the action on REDD-plus does not extend beyond the forestry sector, while the science tell us action is required on all terrestrial carbon. Where action is happening on the ground, it is largely supported either by public money or by philanthropic funding. Despite numerous announcements and extensive efforts to become involved, the private sector has not yet been widely engaged. Indonesia could address this by calling for a cross-sectoral public-private partnership. It could, for example, convene a partnership between the palm oil industry (a major source of land use change in Indonesia), major multi-national emitters that face regulation in other markets, the national government and a provincial government. Such a Public-Private Forest Carbon Funding Initiative could jointly develop projects that not only deliver greenhouse gas mitigation but also lead the way in a shift from philanthropically funded demonstration projects to large scale privately funded projects that are commercially viable across the terrestrial carbon spectrum.

- G20-F11 Ministerial Summit on Implementing Terrestrial Carbon Mitigation at Scale – "Bandung II": In April 1955, 55 years ago, the ground-breaking Asian-African "Bandung Conference" ushered in a new era of partnership between developing countries. Given this history, and that of Indonesia's leadership of the Forest 11 and membership in the G20 and the Major Economies Forum, Indonesia has the mandate to call for and host a G20-Forest 11 Ministerial Summit on Implementing Terrestrial Carbon Mitigation at Scale. Such a summit could deliver agreement on inter-governmental approaches and action at the required scale. It would serve to elevate the delivery considerations of terrestrial carbon (including REDD-plus) to the level of finance ministers, heads of government, and overall national planning. Following the skeleton agreement at Copenhagen, and drawing on the initiatives outlined above, key countries could use the Summit as an opportunity to work through the detailed rules of a long-term incentive system and the necessary emergency and capacity-building support, both financial and technical. This event would mark the ushering in of another new era – of concerted action on climate change and partnership among all countries.

It is not the science or arithmetic that is a barrier to action on climate change; it is the politics. And Indonesia can take a leading role in changing the politics.

This article draws in part on Terrestrial Carbon Group publications and on articles that have appeared in the Jakarta Post (all available at www.terrestrialcarbon.org). The writer is Convenor and Chair of the international Terrestrial Carbon Group, and Senior Policy Fellow at the H. John Heinz III Center for Science, Economics and the Environment. He can be reached at ralph.ashton@terrestrialcarbon.org