

No Heroes, Only Villains ... and Too Many Victims

The global climate negotiations have been through a roller-coaster ride—with soaring hopes of a FAB deal, followed by a series of gut-wrenching jolts and setbacks which bring the journey to a screeching halt and very nearly throw the passengers off their seats. So severe is the damage caused to the prospect of a FAB deal by the Copenhagen and Cancun conferences that even Yvo de Boer, the former Executive Secretary of the UNFCCC, says the negotiations process is ‘not going anywhere’; it is ‘dead in the water’.¹ This is an eloquent comment on the legacy de Boer left to his successor Christiana Figueres when he quit the UNFCCC after the Copenhagen summit to join the consultancy and accounting firm KPMG.

The deep and devastating crisis in the climate negotiations coincides with the release of one dire scientific forecast after another about the near-certainty by the end of this century of global warming breaking through the 1.5° C ceiling (which many climatologists consider barely tolerable), and the 2° C limit (on which many governments base their climate action plans). Warming is very likely to reach the extremely high level of 3–4° C and even 5° C above preindustrial temperatures well before the end of this century. This will irreparably rupture the fine links and balances that hold the climate system together. The crossing of one or more ‘tipping points’ will lead to climate havoc and ecological destruction of demonic proportions all over the world.²

As we saw in Chapter 1, the chief culprit here is the ‘gigatonne gap’, which arises from the utter and complete failure of the world’s leading nations to reduce their greenhouse gas emissions to a point at which atmospheric GHG concentrations and global warming can be capped at a relatively safe level. The world’s march

towards climate disaster continues despite the Great Recession which began in 2008. Between 2005 and 2010, emissions from the world's energy sector alone rose by 10 per cent to 33 billion tonnes (gigatonnes) of CO₂ (excluding land use, land-use change and forestry-LULUCF).³

The Recession has led to a decrease in the emissions of the industrialised countries barring, most notably, the US. But in the developing South, it only led to slower emissions growth. In China and India, energy sector emissions of CO₂ grew by over 40 and 45 per cent respectively over five years.

The main reason for the rise in global emissions is a slow increase in energy efficiency and a slow trend of decarbonisation (reduction in CO₂ emissions per unit of energy use). This trend is not uniform across nations. For instance, CO₂ emissions per unit of energy use decreased impressively between 1990 and 2010 in the EU, and significantly in China. The US also moved some distance towards decarbonisation. But India, along with Canada, has proved a laggard since the mid-2000s.⁴

The main reason for the failure of the world's large and mid-sized economies to cut their emissions significantly lies in their addiction to high consumption of energy and resources (the North), or to high rates of GDP growth, which are creating a burgeoning consumerist elite (the emerging economies). Thus, most developed-country governments are loath to take measures that will even temporarily affect the standard of living to which the bulk of their population has got used—even if they involve minor inconvenience or discomfort. Similarly, governments in many big emerging economies are reluctant to risk jeopardising high GDP growth largely out of the fear that this might trigger elite discontent and make governance difficult.

Such fears are probably exaggerated. The kind of policies that are necessary to lower GHG emissions need not result in a fall in living standards or great hardship. For instance, energy efficiency improvement—for which there is tremendous scope—coupled with renewable energy promotion, can bring about large emissions reductions at a very modest cost without lowering living standards. The OECD countries considerably reduced the energy (especially petroleum) intensity of their GDP after the oil price crises of the 1970s.

Besides, the temporary impact of such policies would probably be far, far lower than the effect of the 'austerity' measures and brutal spending cuts being imposed on many EU countries in the wake of the Recession. The reluctance to take even the minimal 'no pain' or 'no regrets' steps towards emissions reductions is probably attributable to diffidence about charting out a new course. No less important is the fear that re-engineering the global economy to a low-carbon trajectory will mean redirecting the flow of billions of dollars.

Similarly, in the large emerging-economy countries, governments grossly underestimate the potential that exists to improve energy efficiency rapidly, and

tap new and fast-growing renewable energy technologies. They must also pause and ask if high GDP growth rates such as 7 and 10 per cent are desirable, leave alone sustainable, in the first place, and whether there are other, more efficient and climate-friendlier methods of reducing poverty and deprivation. Yet, many governments doggedly follow the beaten path even though it means more emissions and more trouble in the long run.

The Climate Action Tracker (CAT)⁵ shows that countries differ widely in their levels of ambition to reduce GHG emissions, and that these are not strongly correlated with levels of affluence or past record. At the top end of the ambition scale are the Maldives and Costa Rica which aim to become carbon-neutral respectively by 2020 and 2021. Bhutan is already carbon-neutral. Then come countries like Japan, Brazil, Norway, Papua New Guinea and South Korea, which are planning to reduce their emissions significantly. They are followed by developing countries such as Chile, India, Indonesia, Mexico and South Africa, which have pledged to reduce the growth of their emissions by the 2020s. In the CAT rating (varying from 'inadequate', 'medium' and 'sufficient' to 'role model'), these countries are ranked 'medium'.⁶

The EU is a case apart. Its unconditional commitment to 20 per cent GHG reduction by 2020 is rated 'inadequate' by CAT. However, if the EU adopts the higher, conditional target of 30 per cent, it would move into the 'medium' range and very close to 'sufficient'. 'China is rated "inadequate", because its target falls short of the ambition level expected from the implementation of its current national policies. Between the middle and the bottom of the scale is the US, whose target is "inadequate". At the very bottom of the scale are countries that have yet to propose substantial action beyond "business-as-usual". Among them are Russia and Moldova.'⁷

The level of ambition is of course only one criterion for rating countries. Emissions intensity of GDP, per capita emissions, and recent emissions increase rates are some other metrics which can be used. Not to be ignored is the cross-border transfer of GHG emissions that many Northern countries have recently brought about by phasing out the manufacturing of certain products at home while importing them from the South, in particular, China.

Yet, no matter which criteria they are ranked on, it is clear that the 10 or 20 major economies of the world do not earn high marks on climate responsibility. They are among its greatest historical polluters, or, as with the emerging economies, turning into its biggest future emitters. They are all devious and deceptive, or prone to denial, in various ways on climate matters: diverting attention from past emissions to current/future emissions (many Northern countries, especially the US); resorting to cheap shortcuts through offsets and carbon trading (many of the EU's older 15 members); demanding more climate space by hiding behind their poor

people (India, and to an extent, China); resisting significant emissions cuts while citing domestic political difficulties (the US); or citing dependence on fossil fuels for economic well-being (Saudi Arabia).⁸

Most major economies have failed to take the lead in climate matters, based on a principled and consistent approach. The only notable exceptions are, up to a point, the EU, the Nordic countries, and a few other individual states. The major economies have had to be pushed into owning up their obligation to combat climate change, and into matching the mitigation commitments of smaller, less affluent emitters.

The degree of responsibility and culpability varies from nation to nation. No state can match the US for its general culpability or the damage it has inflicted on the climate negotiations process by foisting its sectarian climate agendas on the world. This became starkly evident at Rio, where President George Bush Sr infamously declared that 'the American way of life is not up for negotiation'. In 1997, the US pushed other states (especially Japan) into signing the Kyoto Protocol and insisted, through an ultimatum carried by Vice-President Al Gore, no less, that the Protocol must use market-based devices for mitigation, i.e. carbon trading. But the US itself has not ratified the Protocol. It refused to undertake any mitigation commitment until 2009, when it offered to cut its emissions by a measly 3 to 4 per cent by 2020 (over 1990)—when a 40–45 per cent cut is needed.

Domestically too, the United States is probably the world's most conservative society in climate matters. A large number of American policy-makers, legislators, businessmen and shapers of public opinion believe that the international climate change discourse is intrinsically hostile to US interests; and accepting climate obligations will further weaken the US economy and blunt its competitive edge. Many really believe that climate change is a hoax, a conspiracy against the US and against Western civilisation. The tenor of recent Congressional debates on climate issues (themselves of abysmal quality) is marked by paranoia and hysterical exhortation to levy taxes and border imposts on imports from countries which do not have strong environmental regulation.

A number of factors explain this terrible US pathology—American exceptionalism, imperial arrogance, crude nationalism, the toxic power of the oil companies and other industries with a large carbon footprint, lavish suburban lifestyles, long-standing middle-class addiction to energy-intensive and high-emissions consumption, the general backwardness of US political culture, and lack of environmental and climate literacy.

Not to be underrated is the impact of the systematic disinformation campaign run by the powerful lobby of polluting industries and climate change deniers, which uses utterly unethical means such as 'astroturfing', and systematically distorts or concocts evidence.⁹ This pernicious phenomenon is not confined to the US. As shown by the hacking of the email accounts of University of East Anglia climate researchers, and

the lurid defamatory campaign in the UK against the Intergovernmental Panel on Climate Change (IPCC), it exists in western Europe too. But its greatest strength and impact is in the US.

There is a huge gulf between what the US climate scientific community thinks and the lay public's opinion of climate change. In April 2010, a study published in the *Proceedings of the National Academy of Sciences of the USA* showed that 97–98 per cent of working climate scientists accept the evidence for human-induced climate change as convincing.¹⁰ In contrast to this stands the commonly held view that there may be no climate crisis. According to a survey carried in the World Bank's 2010 *World Development Report*, 17 per cent of US citizens think that the current scientific view is to be sceptical about climate change. And 43 per cent believe that scientists are 'evenly divided' on its existence.¹¹

The media and the government have done very little to counter this shocking ignorance and prejudice. Frustration at the callous indifference of American society and influential political opinion to the climate crisis has driven one of the US's (and the world's) finest climate scientists, James Hansen, to launch a civil disobedience movement in Washington.¹² Hansen, who has been the director of NASA's Goddard Institute of Space Studies, first alerted the US Congress to the dangers of climate change in 1988. Instead of educating the public on climate issues, the US government has used uninformed political sentiment as an excuse to play a negative role in the UNFCCC negotiations.

The US stands apart in this regard from the rest of the powerful and emerging nations. But together, these nations do not constitute a virtuous group either. There are few heroes and plenty of villains amongst them. Prominent among the culprits are North America, the former colonial powers and other European countries, the former settler colonies, and Japan. Along with the former Soviet bloc countries, they constitute the developed-country Annex 1 states under the Climate Convention. Within Annex 1, there is a more affluent sub-set, Annex 2, which excludes the former Soviet bloc's Economies in Transition.

The Annex 1 (and especially Annex 2) countries are reluctant to acknowledge and bear their share of the burden of fighting climate change. So are the oil-rich OPEC states, which have the world's largest per capita pollution footprint. OPEC vehemently opposes the idea of a non-fossil fuel future and plays a negative role in climate matters. Not to be excluded from the culprits' list are China and India, themselves part of the BASIC group, whose GHG emissions are rising far more rapidly than the global average.

Even more numerous than all these actors are the victims—poor people, primarily in the South, but also in the North. They have contributed very little to climate change but stand to suffer the most from its effects. This speaks to a rich-poor divide in addition to a North-South one. The victims are only partially and unsatisfactorily

represented in the Group of 77 bloc of developing countries. Some countries of the South have formed separate groupings or blocs to voice their concerns—the Least Developed Countries (LDCs), Small Island Developing States (SIDS), and the Alliance of Small Island States (AOSIS).

But given the nature of the United Nations process, only states can be represented in it, not classes or social groups. Some NGOs, typically dominated by Northern-country representatives, speak purportedly on behalf of the poor of the South, and occasionally facilitate their presence on the sidelines of the climate negotiations.

There is no ambiguity whatever about the urgent climate-related tasks which confront humanity. If the world is to limit global warming to 2° C by the end of the century and follow the 450 ppm pathway for capping atmospheric CO₂ concentrations, it should ensure that global GHG emissions peak by 2013 or so and decline thereafter.¹³

This assumes a global cumulative emissions budget of 1,000 Gt (gigatonnes, or billions of tonnes) for the first half of the twenty-first century. By 2020, global emissions must start falling steadily by about 6 per cent a year. Emissions in 2020 would be about 10 per cent below their 1990 levels and by 2050 a much higher 85 per cent below the 1990 baseline. The 450 ppm pathway, it bears recalling, still carries a 25 per cent chance of the 2° C ceiling being breached, besides the likelihood of a series of destabilising climate events.¹⁴

A 350 ppm pathway, now favoured by a growing number of climatologists and governments, is safer. But it implies a more stringent CO₂ budget (cumulative emissions of 750 Gt for 2000–2050). This means that global emissions must peak in 2011–12 or so and start decreasing immediately and rapidly after that, reaching their maximum rate of decline of about 10 per cent a year by 2016. This is a tall order. On the 350 ppm pathway, global emissions would fall by 40 per cent below their 1990 levels by 2020, and 100 per cent below them by 2050.¹⁵

However, the mitigation pledges of the world's nations do not remotely measure up to this. After the June 2011 Bonn intersessional talks, their sum-total stands way below what is consistent with even the 450 ppm-2° C pathway.¹⁶

An odious feature of the emissions reduction pledges made is the gross disproportion between rich and poor countries. The Annex 1 countries' pledges range from almost nothing to a collective maximum of 3.8 Gt by 2020, depending on the level of ambition expressed, the conditions it is hedged in with (e.g. there must be a legally binding global deal which includes China and India), and the leniency or strictness with which accounting rules are applied. By contrast, according to the estimate of the UN Environment Programme (UNEP), the developing countries' pledges for 2020 range from roughly 3.6 Gt to 5.2 Gt. At the higher end, the developing countries collectively pledge 37 per cent *deeper* emissions cuts than the developed countries.¹⁷ This is horribly iniquitous.

The Stockholm Environment Institute (SEI) has done a meta-analysis of the post-Cancun pledges based on four different estimates—made by UNEP, CAT, McKinsey (Climate Desk v2.1), and an independent researcher (Frank Jotzo). It finds that developing countries have made much higher pledges (37 per cent to 220 per cent higher) than the rich countries.¹⁸ Lest it be thought that the South's top polluters have been let off the hook, China, India, Brazil, South Africa, Indonesia, Mexico and South Korea have made far higher pledges than the top six polluters of the North, including the US, the EU, Japan, Russia, Canada and Australia. The differences, depending on ambition levels, conditions, and leniency of accounting, range from about 40 per cent to 300-per cent plus.

For example, in UNEP's 'low-pledges-strict-rules' scenario, the top seven Southern countries' emissions reduction offer is 3,623 Mt (million tonnes) of CO₂-equivalent,

TABLE 7.1: COMPARISON OF NATIONAL MITIGATION PLEDGES—1

	MtCO ₂ e in 2020	
	low pledges strict rules	high pledges strict rules
United States	1905	0
Eu-27	972	1529
Japan	507	0
Russia	1156	0
Canada	230	0
Australia	185	280
Annex 1	1157	3773
China	1010	1730
India	523	523
Indonesia	733	1156
Brazil	974	1051
Mexico	51	265
South Korea	244	244
South Africa	88	238
Non-Annex I	3623	5207

Quantities in millions tonnes of CO₂ equivalent

Source: Sivan Kartha and Peter Erickson, 2011, Comparison of Annex 1 and non-Annex 1 pledges under the Cancun Agreements, Stockholm: Stockholm Environment Institute, 11 June, p. 15. Based on UN Environment Programme, 2010, *The Emissions Gap Report*, UNEP, November.²⁰

more than three times higher than the top six Northern countries' pledge of 1,157 Mt. Even in the 'high-pledges-strict-rules' case, the South's top seven score 38 per cent higher than the North's top six. (The other three estimates are consistent with this.) In some scenarios, China's pledges alone exceed those of the US and the EU put together. In four scenarios, China's pledges exceed those of all the top Annex 1 countries combined.¹⁹

TABLE 7.2: COMPARISON OF NATIONAL MITIGATION PLEDGES—2

	MtCO ₂ in 2020	
	low targets	high targets
United States	1289	1289
Europe	973	1535
Japan	379	379
Canada	297	297
Australia	28	138
New Zealand	19	28
Russia	0	0
Other Eastern Europe	7	7
Annex 1	2991	3673
China	1392	2500
India	0	149
Brazil	975	1052
Mexico	183	183
South Africa	158	158
Indonesia	653	1029
South Korea	162	162
All other Developing Countries	99	99
Non-Annex	3622	5332

Quantities in millions tonnes of CO₂ equivalent

Source: Sivan Kartha and Peter Erickson, 2011, Comparison of Annex 1 and non-Annex 1 pledges under the Cancun Agreements,' in Stockholm: Stockholm Environment Institute, 11 June, p. 16. Based on estimates by McKinsey and others.²¹

TABLE 7.3: COMPARISON OF NATIONAL MITIGATION PLEDGES—3

	MtCO ₂ e in 2020			
	low pledges low growth	high pledges low growth	low pledges high growth	high pledges high growth
United States	800	800	3100	3100
EU-27	250	750	1800	2340
Japan	300	300	700	700
Russia	0	0	175	450
Canada	200	200	500	500
Australia	55	145	249	351
Annex 1	1605	2195	6524	7441
China	2720	3840	6364	7636
India	0	0	0	250
Indonesia	500	500	700	700
Brazil	960	1040	1248	1352
Mexico	200	200	300	300
South Korea	100	100	300	300
South Africa	100	100	200	200
Non-Annex 1	4580	5780	9112	10738

Quantities in millions tonnes of CO₂ equivalent

Source: Sivan Kartha and Peter Erickson, 2011, Comparison of Annex 1 and non-Annexe 1 pledges under the Cancun Agreements, Stockholm: Stockholm Environment Institute, 11 June, p. 17. Based on estimates by Jotzo.²²

This completely inverts the principle of assigning responsibility for combating climate change according to the differential contributions of rich and poor countries to its causation. The inversion, with its huge implications, was brought about through two processes—the creation of a new negotiating track in the UNFCCC talks in 2007, called Long-Term Cooperative Action (LCA), and the application of enormous diplomatic and political pressure by the Northern powers on Southern governments. The LCA diluted the critical North-South distinction established earlier and brought the Southern countries into negotiations in the Working Group on LCA (one of the two main Working Groups in the UNFCCC process) on their mitigation plans.

In the negotiations, in bilateral exchanges, and in informal meetings, the Southern countries were nudged, cajoled, bribed, goaded or taunted and bullied into making voluntary commitments to cut their sector-wise emissions or reduce the emissions intensity of their production. These actions, called National Appropriate Mitigation

Actions (NAMAs), would be eligible for financial support by the North on the condition that they are measured, reported and verified (MRV). The South first insisted that only those NAMAs which apply for financial support should be subjected to scrutiny, analysis or verification. Unsupported actions should be free of scrutiny. But under the insistence of the US and some other Annex 1 countries, this condition was whittled down.

WikiLeaks disclosures, released in December 2010 while the Cancun conference was in progress, showed that the US used 'strong-arm' tactics and bribery right from 2009 to win a series of concessions, especially from vulnerable Southern countries, such as AOSIS and the LDCs. The US sought damaging intelligence on Southern diplomats so as to discredit or blackmail them. Some cables from the US Embassy in Brussels described meetings between US Deputy National Security Adviser for International Economic Affairs Michael Froman and top EU officials as they plotted to influence Southern governments and cynically exploited the financial needs of the AOSIS countries in particular.²³

The US and EU pressure produced dramatic results in late 2009. The developing countries caved in and accepted in principle that they would submit their voluntary unsupported mitigation actions to 'international consultations and analysis' under the Copenhagen Accord. At Cancun, the plural form of consultations was dropped and 'international consultation and analysis' was further elaborated. This was touted by the US as one of the 'main achievements' of the Cancun conference. ICA may not be as strict as MRV, but it nonetheless allows Northern governments to scrutinise and comment upon Southern governments' mitigation actions even when they are not financially supporting these. This increases North-South climate inequity. It has emboldened some Annex 1 countries to adopt more aggressive postures.

Even more deplorable are the 'loopholes' the developed countries have inserted into their emissions calculations, including BAU scenarios, LULUCF figures, and various emissions allowances. The 'loopholes' consist of dubious accounting rules including double counting, arbitrary inclusion or exclusion of sources such as aviation and marine fuels, other technical sleights of hand, and carrying over of 'surplus' Assigned Amount Units (AAUs), including emissions allowances and carbon credits, from the first Kyoto Protocol period to the next.

Together, estimates a Stockholm Environment Institute analysis²⁴, the 'loopholes' add up to about 4 Gt of CO₂ for 2020.²⁵ This exceeds the high end of the Annex 1 emissions reduction pledges, 3.8 Gt. This means that the countries primarily responsible for climate change can shirk their mitigation responsibility altogether and claim to have complied with their targets without actually reducing emissions! This is a pernicious form of cheating. Some Northern countries have stooped to artificially generating AAUs by making pledges 'that are higher than their expected

BAU emissions'. This has been estimated as possibly another 1 Gt CO₂-eq loophole in 2020.²⁶

Of the 4 Gt margin created by the 'loopholes', the greatest contribution (about 60 per cent) would come from 'surplus' AAUs carried over from the first 'commitment period' (CP) of the Kyoto Protocol,²⁷ comprising unused emissions allowances generously granted to Northern corporations and governments, including 'hot air' permits for the Economies in Transition, some of which shrank after the Soviet collapse.

The current negotiating text of the Kyoto Protocol includes options that would permit countries to use allowances originally meant for the first 'commitment period' ending 2012 beyond that date. If they are used and traded after 2012, these 'surplus' allowances would give the developed countries as a whole so much room to emit GHGs that they would not need to make additional emissions cuts over and above the current levels at least until 2020.²⁸ Effectively, these ... allowances would allow equalising emissions to business-as-usual levels, thus *adding* about 3 to 9 percent to the emission limit relative to 1990, or about 0.6 to 1.6 billion tonnes of ... CO₂-equivalent.²⁹

This is not all. Great uncertainty surrounds the emissions reduction targets announced by some major Northern states. For instance, the US has pledged to reduce its emissions in 2020 by 17 per cent below 2005—which works out to a paltry 3–4 per cent reduction on the standard 1990 baseline. But so large are the inconsistencies in the US data on LULUCF reported in 2009 and 2010 that depending on which estimate is used, US industrial emissions could legitimately rise by 3 per cent above their 1990 level under the announced target. The US also threatened to prune the reduction target further by saying that 'LULUCF adjustments may be made for natural disturbances and other factors', but the details were left unclear.³⁰

Even greater uncertainty arises from US domestic politics. It is not clear—indeed, it is unlikely—that President Obama can push even this measly mitigation plan through Congress. Similarly, Russia remains unclear about its baseline emissions, forestry credits and unused 'hot air' allowances from the first Kyoto Protocol period, which could add up to many gigatonnes. Many other Annex 1 countries have done their best to wriggle out of and dilute their mitigation pledges and deny their true climate-related responsibility. The US accepts that it has been a major contributor to climate change, but denies that it owes compensation or reparation to the victims of climate change.

Yet, it is imperative to hold the rich countries' feet to the fire on the issue of responsibility—for yet another reason. Recent analysis confirms and quantifies what has long been known, namely, the Northern countries have not really decoupled their

consumption from GHG emissions, but transferred many of their emissions over two decades to the South, which now produces some of the emissions-intensive goods which they import. Today, emissions embodied in imports account for a significant proportion of the emissions 'consumed' in the North. 'The United States, Europe, the rest of Annex 1, and Annex 1 as a whole, have all seen increases in their net imports of embodied carbon from developing countries, and these increases exceed their Kyoto targets.'³¹

'Under a "consumption-based" accounting of emissions, the developed countries are responsible for about 60 percent of global emissions.'³² Owing both to this, and their historical contribution to global emissions (75 per cent), the developed countries must make a much greater effort to fight climate change than the developing countries. They are enjoined to do so by Article 3 of the UNFCCC, which says: 'The Parties should protect the climate ... on the basis of equity and in accordance with their common but differentiated responsibilities [CBDR] and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof.'

It might be argued that Annex 1 countries are being judged here unfairly or more strictly than developing countries. Even though the latter have made higher emissions reduction pledges, these are partially conditional upon financial support from the rich countries, which therefore must be given part of the credit for such mitigation. Besides, developing countries must logically make a larger effort because their emissions now exceed those of the Annex 1 countries and account for about 55 per cent of the globe's emissions total.

Box 7.1: HOT AIR: CARBON CAPTURE AND STORAGE

Carbon Capture and Storage (CCS) is a technology based on collecting carbon dioxide at its source—typically, power plants that burn coal—compressing it, carrying it away to storages which are underground or underneath the sea-bed, and keeping it there for prolonged periods. Storing carbon away from the atmosphere is meant to prevent further global warming. But none of the methods used in the four parts of the CCS process—capture, compression, transportation and storage—has proved cost-effective, safe, or viable under actually existing conditions.

The influential Stern Review considers CCS as 'essential'. But many environmentalists say it is 'the ultimate capitalist dream'. If it works, CCS will permit the limitless burning of fossil fuels without the risk of aggravating climate change. The world need not change its unviable patterns of consumption and can carry on with its existing high-emissions trajectory.

CCS is still at an early experimental stage. CO₂ capture (without storage) has so far been used on a limited scale mainly by oil and gas companies for secondary recovery of hydrocarbons from depleted wells through water or gas injection. The

This argument is specious. We have just seen that even the low pledges of the developing countries are equal to or higher than Annex 1's high pledges and are not primarily dependent on external financial support. If emissions transfers are taken into account, the developed countries are still responsible for three-fifths of global emissions.

More important, basic considerations of equity demand that the developed countries acknowledge their greater responsibility by undertaking deep emissions cuts *before* the rest of the world. Further, these cuts must be greater than the developing countries' reductions in the early phase. After all, it is the developed countries that put the world on the dangerous road to irreversible climate change through over-consumption of fossil fuels.

Yet, some of the richest Annex 1 countries are loath to make a half-way serious effort to get rid of their fossil-fuel addiction. The US and Canada have not drawn up mitigation plans which even remotely reflect their climate responsibility. Canada is set to exceed its Kyoto Protocol target by 30 per cent. And the US's record on climate issues is singularly appalling.

The former Soviet bloc countries negotiated their Kyoto Protocol targets such that they would be higher than their projected emissions; they would need to make no mitigation efforts to show compliance with the Protocol. The collapse of the USSR caused an economic breakdown and severe contraction in some of these countries in the early 1990s. They cynically used that moment to drive an unfair mitigation bargain, aided by an indulgent West gloating over the demise of socialism.

earliest technically feasible CCS project on a utility scale may not be possible until 2030. The UN Development Programme says: 'CCS will arrive on the battlefield far too late to help the world avoid dangerous climate change.'¹ Although some governments continue to root for CCS regardless of its problems, many flagship CCS projects such as the \$1.5 billion FutureGen plant and American Electric Power's Mountaineer power plant in West Virginia in the US have been abandoned.

For CCS to be minimally acceptable, the sequestered CO₂ must assuredly stay underground or under sea without leaking for centuries. But the longest experience so far is limited to 15 years. This is a CCS project run by Norwegian company Statoil Hydro at Sleipner, off the coast of Norway.

CCS carries high risks, in particular of the captured CO₂ escaping. Even a small leakage rate of 1 per cent a year means that 63 per cent of the CO₂ stored will escape within 100 years, wiping out the imagined benefits. CO₂ dissolves in water to form an acid which can react with minerals and form carbonates. Theoretically, this renders the carbon inert and stable. But the CO₂ can also leach through its lock and escape. Carbon dioxide is heavier than air, and can easily collect over lowlands.

The rich countries have generally chosen soft, cheap and short-term options in climate-related matters. Rather than sincerely reduce emissions by decisively moving away from fossil fuels, they have invested their energies in developing market-based means like the Clean Development Mechanism (CDM) and European Union Emissions Trading Scheme (EUETS) which are designed to transfer mitigation responsibilities by monetising them and enabling one country to pay for mitigation in another country. 'Similarly, much of the attention in the current round of negotiations is devoted to designing and operationalising the Green Climate Fund, also to enable one country to pay for mitigation (and adaptation) in another country.'³³

Such transfer of responsibility through monetary transactions detracts from the urgent imperative of effecting a transition to a new low-carbon paradigm of production and consumption, which is equitable and involves major societal transformations. It reduces the agenda of combating climate change to carbon trading and financial flows. Market instruments and financialisation of carbon also help the North's mitigation-averse hegemonic powers to divide the developing countries and, more generally, countries that support a fair, ambitious and (legally) binding FAB deal. They can thus prevent the emergence of a progressive North-South bloc, and 'buy up' and neutralise the opposition by offering it monetary rewards and short-term gains. WikiLeaks exposes show how the US and the EU imposed the Copenhagen Accord upon scores of poor countries by making adherence to it a condition for financial assistance.³⁴

UNEVALUATED RISKS

It is not yet possible to estimate the exact risks from CO₂ leaks from CCS projects. But a natural example warrants grave concern. A volcanic eruption occurred in 1986 in Lake Nyos, Cameroon, during which large quantities of CO₂ accumulated at the bottom of the lake were suddenly released, killing 1,700 people and thousands of cattle.

It is not clear that CCS, even if proved reasonably safe and commercially viable, can make a major difference to climate change. It will do nothing to alleviate the damage caused by the CO₂ already pumped into the atmosphere for the past two centuries and the emissions that are in the pipeline. A large fraction of this will stay in the atmosphere for thousands of years. To capture and store the emissions that will be generated by 2050, estimates the International Energy Agency (IEA), 6,000 projects will be needed, each annually injecting a million tonnes of CO₂ into the ground. This is a staggering number. Currently, there are only three storage projects in the world. To be viable, storage sites must be located close to power plants: transportation beyond 100 km is prohibitively expensive.²

Even assuming that CCS reaches commercial viability soon—which seems extremely unlikely—studies suggest that only 20–40 per cent of carbon dioxide

However, it is not the Annex 1 countries alone which are reprehensible. The larger, more powerful, fast-growing countries of the Global South too have much to answer for, besides a spiralling rise in emissions, and a general reluctance to move away from a GDP-obsessed growth trajectory which confuses growth with development and raises inequalities to staggering levels while ignoring the basic needs of their large underprivileged populations. These governments swear allegiance to the G-77 developing-country bloc and emphasise South-South solidarity. But they pursue Great Power ambitions through emission-intensive growth. Some of them are only too willing to sacrifice principle for short-term gain.

The BASIC grouping comprising Brazil, South Africa, India and China, set up in October 2009, is the most organised and powerful expression of the big emerging-economy category. China took the initiative in establishing BASIC because it feared that it would be isolated at Copenhagen on the question of CBDR just when it had overtaken the US as the world's top emitter. For some years before BASIC was formed, India, Brazil and South Africa had coordinated their climate stances through the IBSA forum, without formally involving China. BASIC's positions are still evolving, as we see below. But it remains a very important group or bloc.

BASIC's formation gave its four members a high profile as key states in climate-related politics. What bound them together was their anxiety to resist growing pressure from several Northern countries, especially the US and leading EU states, to dilute the CBDR principle and to accept climate-related obligations. All four states claim to be developing countries. None of them would willingly accept quantitative

would be technically suitable for capture by 2050. CCS technology may not be able to capture up to 70 per cent of electricity generation emissions by mid-century.

The energy needed for the capture, compression and transport of the carbon dioxide is at least a quarter of a power station's output. So CCS plants will need to be at least a third bigger than normal ones to generate the same net amount of power, and will use at least one-third more fuel. There is also the extra expense of building the capture plant and the injection pipelines. According to the US Department of Energy, installing carbon capture systems will almost double plant costs. This will lead to electricity price hikes of anywhere between 21 and 91 per cent.³

CCS-fitted power stations will need 90 per cent more freshwater, further aggravating water shortages. If CCS is adopted on the scale needed to mitigate climate change effects, the efficiency gains of the last 50 years will be cancelled, and the resources consumed will increase by a third.

Another problem is the purity of the captured CO₂, which usually contains various by-products of combustion of fossil fuels such as nitrogen oxides (NOx) and sulphur dioxide (SO₂) as well as trace heavy metals including lead, mercury and cadmium. Scrubbing these impurities out could be very expensive. Injecting them

emission caps in the near future—even if averting these means working for a weak and ineffectual climate deal. In this, strangely, the four found an ally in the US, which too does not want legally binding emissions obligations. The common interest suddenly became evident at the Copenhagen conference in 2009.

On the last day of the conference, US President Barack Obama famously walked into a small informal meeting where the BASIC countries' top leaders were present. And the five states—representing some of the world's biggest historical, current and future emitters—together hammered out the so-called Copenhagen Accord, soon signed by only 20-odd governments, of the 193 present. The Accord, discussed below, mentions no quantitative targets, either globally or for individual states. Reportedly, some numbers were proposed by Obama, but these were vetoed by President Hu Jintao who did not want any formulation with implications for the year by which global emissions should peak, or the extent to which they should be reduced by specific years.³⁵

By co-sponsoring the Copenhagen Accord, the BASIC countries set their face against their own stated position as part of the G-77 bloc, which had demanded an equitable top-down agreement which imposes differential obligations upon different countries, including deep emissions cuts on the Annex 1 countries 'in line with what the science requires'. G-77 demanded that these countries 'stand firmly in the [Kyoto Protocol] and ... engage seriously in negotiations for a second commitment period' for it. G-77 warned that it would 'consider the Copenhagen CoP meeting to be a disastrous failure' if there is no agreement on this. BASIC broke ranks with

along with the CO₂, could seriously contaminate groundwater, with an increased possibility of leaks because of the high chemical reactivity of SO₂. This will pose major problems for environmental regulatory authorities.

Burning coal emits twice as much CO₂ as burning natural gas. But it is also a very cheap way to produce power. At least half the electricity generated in the US, Australia, China, Germany and India—and therefore very many jobs—comes from coal. To many politicians and industry leaders, burning dirty coal appears preferable to job cuts. But this is a myopic calculation.

Several attempts have been made in the UNFCCC talks by the EU, Australia, Japan and Saudi Arabia to have CCS included as a technology qualifying for carbon credits under the CDM. Many developing countries led by Brazil and Venezuela have opposed such inclusion. India is normally strongly supportive of technology-centred solutions. But it is at best lukewarm towards CCS because many of its coal-fired power stations are in seismically active zones and therefore not amenable to CCS, which assumes long-term geological stability.

G-77, indeed splintered the group, although it hypocritically continues to pay lip service to South-South solidarity.

After Copenhagen, BASIC's environment ministers have been meeting every quarter to share information and exchange views. But because BASIC is keen not to be seen as having broken ranks with G-77, it invites to its meetings 'the Chair of G-77, a representative from AOSIS, and also one from LDCs/Africa. The joint statements issued by BASIC environment ministers at the end of each quarterly meeting signal some common points of relevance for immediate negotiations and thus provide input/orientation to discussions within G-77 as well as to developing-country negotiating partners.³⁶ A BASIC Experts Forum (BEF) was recently set up to provide analytical support to the bloc's meetings upon ministerial request. BEF has been meeting in parallel with the group's ministers and it is currently working on equity and 'climate space' issues which have implications for emissions-peaking dates and burden-sharing in mitigation.

BASIC is only one among the different alliances, blocs and groups active in the UNFCCC, formed on the basis of shared interests, identity or geographical location. These include the developed-country group of 42 parties listed under the Climate Convention as Annex 1—easily the most powerful grouping—, G-77, AOSIS, LDCs, and the SIDS—the poor and more vulnerable island nations.

In addition, there are geographically-based groups like the EU, which has expanded from 15 members to 27 (28, if Croatia is included), the Africa Group comprising 53 states, the Bolivarian Alliance for the Peoples of Our America (ALBA), the

FADING PROMISE DESPITE SUBSIDIES

CCS's appeal is fading even within the scientific community. Of 1,000 climate change scientists, analysts and activists recently surveyed, only about a third felt that retrofitting CCS would help produce low-carbon energy and cut emissions over 25 years in an environmentally acceptable way.

Proponents of CCS do not quite seem to believe in it either. They want governments to pay most of the cost and take almost all the risk. CCS currently poses unacceptable liabilities—human health effects, greenhouse emissions resulting from leakage and damage to ecosystems, and pollution of groundwater and drinking water. Potential investors are reluctant to accept liability beyond 10 years.

An excellent example is FutureGen, once the US government's flagship CCS project. This was launched as a public-private partnership between the government and industry giants including Rio Tinto and American Electric Power Service Corp. Scheduled to be commissioned for 2012, it was promised about \$1.5 billion of public money, protected against all forms of legal and financial liability, and insured for it too. When its projected cost rose to \$1.8 billion, FutureGen was scrapped.

League of Arab States (22 members and four observers), and the Central American Integration System (SICA) with eight members. There are also special-interest groups like the Organisation of Petroleum Exporting Countries (OPEC).

The developed countries have also seen the emergence of new internal blocs and a change in the composition of old groupings. A powerful political alliance is the Umbrella Group, a loose coalition mostly of non-EU developed countries, chaired by Australia, with some Central Asian republics thrown in. The Group has no formal membership list and its strength varies from nine to 14, with some regular participation by Australia, Canada, Iceland, Japan, Kazakhstan, New Zealand, Norway, the Russian Federation, Ukraine and the US.

The group's origins go back to JUSCANNZ (Japan, the US, Switzerland, Canada, Australia, Norway and New Zealand), which was active during the Kyoto Protocol negotiations. What unites this group is its demand for the acceptance of increased climate-related obligations by major developing-country emitters, especially China and India, and for revisiting the application of CBDR in the light of their growing economic and political status.

The Umbrella Group has members who refused to ratify the Kyoto Protocol—the US, and Australia (which ratified recently, after a change of government)—or are likely to exceed their Kyoto emissions targets greatly (Canada). Some group members would like 'surplus' emissions allowances and carbon credits to be banked. The most extreme position in the group is that of the US, which demands legal parity

The cost per tonne of emissions averted through CCS is high. The IPCC estimated a range of \$14–91 per tonne of emissions avoided through CCS. The IEA has suggested \$40–90. And consulting firm McKinsey's estimates are \$75–115.⁴ This is way above the current price of carbon in the EU, about \$15 a tonne.

No company board is likely to invest \$1.5–1.8 billion in an uncertain business proposition unless it is given generous subsidies. Even with subsidies, CCS may be unviable. Statoil Hydro says that even with Norway's carbon tax (over \$60 a tonne), CCS does not make financial sense. Hydrogen Energy International, a Rio Tinto-BP joint venture, says that its proposed CCS plant in California will need extra subsidies, besides an assured high carbon price and revenues projected from enhanced oil recovery. In the UK, a proposed new coal-fired power plant at Kingsnorth, Kent, is supposedly 'capture-ready'—CCS-compatible—though no one knows if the technology will ever be available. That means Kingsnorth, if ever built, will emit around 8 million tonnes of carbon dioxide annually, possibly for its entire lifetime.

Vattenfall, a Swedish utilities company, opened the first CCS power plant at Schwarze Pumpe in Germany in 2008. But it is a tiny 30 MW demonstration project, less than 5 per cent of the size of most modern coal-fired plants.

between the North and the South both in the form of climate commitments and in MRV standards.

Members of the Umbrella Group have bagged the most number of 'Fossil of the Day' awards from NGOs for taking climate-unfriendly positions. Before the Cancun summit, most Umbrella Group members 'called publicly for a single legally binding treaty framework that would bring the US back in and at the same time establish mitigation commitments for China/India'.³⁷ But since then, it has become clear that the US is unlikely to make major international climate commitments any time soon. So the Group's emphasis has shifted to 'securing a series of CoP decisions that would lead to a weaker institutional framework'.³⁸

Three Umbrella Group members (Russia, Japan and Canada) strongly oppose a second commitment period (CP) for the Kyoto Protocol, whose first CP ends in 2012. According to one informed assessment, Australia and New Zealand are likely to follow the three.³⁹ (According to other assessments, they are fence-sitters and can be persuaded to support a second CP.⁴⁰) The US is of course quietly working to kill the Kyoto Protocol.

Because of its high political weight and conservative positions, the Umbrella Group is the strongest candidate amongst all the alliances as a blocker of progress at Durban and beyond. If other members of the group adopt anti-Kyoto Protocol positions as hard as those of Japan, Canada and Russia, they could become the likeliest wreckers of a climate deal.

Over the past five years, dozens of CCS projects were scrapped in different countries. CCS costs are expected to fall, but not nearly enough. The consultancy firm McKinsey expects that CCS plants will operate as smoothly as normal thermal stations, although their machinery is far more complicated, and that their costs will fall 12 per cent every time the capacity doubles.⁵ Such high cost reduction rates were achieved in the case of wind power, but it is not clear if that example can be replicated in CCS. Most technologies on which CCS will be based, which are in current use in oil/gas recovery enhancement processes, do not seem amenable to such high cost reduction.

ENDNOTES

- 1 United Nations Development Programme, 2007, 'Avoiding Dangerous Climate Change: Strategies for Mitigation', in *Human Development Report 2007/2008*, New York: UNDP.
- 2 Greenpeace International, 2008, *False Hope: Why Carbon Capture and Storage Won't Save the Climate*, Amsterdam: GreenPeace International.
- 3 Ibid.
- 4 *The Economist*, 5 March, 2009.
- 5 <http://assets.wwf.ch/downloads/mckinsey2008.pdf>.

So long as the Kyoto Protocol—with all its flaws⁴¹—is on the negotiating table, there is some hope of averting a regression from a top-down science-driven climate deal which imposes binding emissions cuts on different countries, to a ‘pledge and review’ agreement with meagre targets, which will lock the world into 3° C-plus warming. Key members of the Umbrella Group, preoccupied with extremely narrow short-term considerations, seem unconcerned about this likelihood—so long as they do not have to accept serious obligations.

A strident frontal attack on Kyoto could lead to an implosion at the climate talks. One can only hope that Japan (which has a more respectable climate record than many other developed countries), Canada and Russia do not press the anti-Kyoto agenda to the breaking point and that Australia and New Zealand do not join the anti-Kyoto forces.

The EU, as the biggest developed-country bloc which accepts CBDR and supports Kyoto, should do its best to dissuade members of the Umbrella Group from killing the Protocol. The EU certainly has the political clout to influence them without threatening the overall stability and unity of the Annex 1 group. But the present Union, with its 27 members, is not the same entity as the ‘original’, far more cohesive, western Europe-based Union, with 15 members, which saw itself as a climate protection champion. The EU-15 offered to host the first Conference of the Parties in 1995 as well as the UNFCCC Secretariat. It embraced the climate change remediation agenda early on and helped to secure the Kyoto Protocol and then bring it into legal effect. This was seen as evidence of ‘global leadership’.

The EU-15 formed various ‘green group’ alliances with developing countries ‘that were central to progressive developments at CoP-1 through to CoP-7 in Marrakech, and still in evidence in Bali at CoP-13’.⁴² As analyst Farhana Yamin puts it, these alliances ‘were, in hindsight, the high mark of EU ambitions to be seen as a global player distinctive from the USA. The appetite for continued global leadership by the EU, in the absence of comparable efforts by the USA, is not spread evenly across the EU-28 and many smaller and newer entrants need to be convinced that continued leadership will be worth it, diplomatically and economically. It is also much more difficult to coordinate climate policy, and ratification procedures, among 28 countries than between 15, rendering decision-making and changes in tactics/strategy that much more difficult still’.⁴³

Coordination apart, many of the EU’s new entrants are from central and eastern Europe. Their energy economies are highly dependent on fossil fuels. Otherwise too, they have a poor environmental record. Countries like Poland are singularly apathetic, if not hostile, to progressive climate agendas and to the perspective of rapid emissions reduction.

Poland will hold the presidency of the EU for the second half of 2011 when the Durban summit takes place. Another strident opponent of strong mitigation

obligations for the Annex 1 countries is Italy under the hard-Right Prime Minister Silvio Berlusconi. Italy, in turn, gets support from conservative central and eastern European states. In general, the internal balance within the EU has shifted after its recent expansion to a less progressive and proactive position on climate issues.

Who holds the EU's rotating six-monthly presidency seems to matter a lot, because the president can put spin, expedient interpretations and nuances on the Union's agreed common positions. Writes Hans J. H. Verolme of the Climate Advisers Network, based in Europe: 'While in Cancun under the Belgian Presidency the EU took a balanced approach, ... right now [under Hungary] it again emphasises that it prefers a single agreement', referring to a unified (as opposed to differentiated) list of obligations for Annex 1 and non-Annex 1 countries. Verolme also argues that the Umbrella Group has succeeded in creating a scare that there may be no second commitment period to the Kyoto Protocol. 'But the Umbrella Group has been aided and abetted by Europe.'⁴⁴

Politically, today's EU could not have been more different from the EU-15. As Yamin puts it, the EU 'historically played a leadership role in climate negotiations domestically and internationally on a number of issues. It has championed science-based targets and was one of the first blocs to put forward the need for a global goal (2° C). During [the] Kyoto negotiations, the EU was a strong advocate of domestic policies and measures and insisted on limiting use of offsets. Many of its positions on environmental safeguards draw strong support from developing countries such as AOSIS who wanted to limit the use of surplus AAUs and to avoid cheap, difficult-to-measure offsets from deforestation undercutting the rationale for domestic action.... In the context of current negotiations, the EU is still the only major group of developed countries that is willing to consider signing up to Kyoto-CP-2 [second commitment period].'⁴⁵

What role the EU plays in the near future is an open question. Many top EU leaders are no longer nearly as engaged with climate matters as they were before Copenhagen. Their attention has been claimed by other issues, especially the economic slowdown, sovereign debt crises, political unrest in several EU countries, and responses to the 'Arab Spring' and the Afghanistan situation. For a positive outcome, the climate negotiations will need a proactive and ambitious EU leadership.

There is yet another group in the UNFCCC 'which does not fit neatly into the Annex 1 category, but whose members also are not developing countries'. This is the Environmental Integrity Group, comprising Mexico, South Korea and Switzerland, and now Monaco and Liechtenstein. 'The Group is generally like-minded and makes common plenary statements, but it does not generally submit position papers. It sees itself as an active bridge builder and moderator. If CoP-18 [the climate conference after Durban] is hosted [by] South Korea, it will mean that two out of three presidencies will be from among its members.'⁴⁶

Two other 'mixed' groups have recently emerged in the UNFCCC arena, a majority of whose members are from the developing world: namely, partnerships centred on REDD+, and the Cartagena Dialogue for Progressive Action. One expression of the REDD+ initiative is the Coalition for Rainforest Nations, set up by Papua New Guinea, whose objective is to reconcile forest stewardship with economic development. The coalition's participants include some well-forested countries like Indonesia, the Democratic Republic of Congo, Malaysia, etc., but not Brazil.

The Cartagena Dialogue (CD), so named because it held its first meeting in Cartagena (Colombia) in March 2010, sees itself as 'an informal space open to countries working towards an ambitious, comprehensive and legally-binding regime in the UNFCCC, and committed domestically to becoming or remaining low-carbon economies. These countries are willing to work positively and proactively together, within and across regional groupings and traditional negotiating blocs in the UNFCCC. The aim of the Dialogue is to discuss openly and constructively the rationale behind each other's positions, exploring areas of convergence and potential areas of joint action.'⁴⁷

The CD is unique in that it includes both Annex 1 and non-Annex 1 parties. CD emerged as a counter to the ALBA group created by socialist and social-democratic governments to promote Latin American economic integration based on social welfare, bartering and mutual economic aid, as distinct from free trade. The CD's political orientation and its climate-related positions are not public. The media is excluded from its meetings.

From what one can make out from blogs by various participants, CD now comprises around 30 countries from all continents. Its major concerns centre on forestry, MRV of mitigation, and actions by non-Annex 1 countries. Most CD members profess to defend the core institutional machinery of the UNFCCC, the Kyoto Protocol and climate multilateralism. They strongly favour a legally binding regime.

Yet, inclusion among the Dialogue's participants of Australia, France, Spain, the UK and the United Arab Emirates (UAE) raises questions about how independent the grouping will be of Annex 1 influences and pressure for market-oriented solutions.⁴⁸ Some of these countries have had climate policies and positions that are conservative in relation to the more progressive Northern states (e.g. Germany or the Nordic countries).

CD played a major role in building a consensus at Cancun and regards its outcome a big success. As a participant in CD meetings puts it: '[M]uch credit [for Cancun's success] was due to the way in which CD meetings had built up trust.... He also identifies 'legal form' as the critical issue before the UNFCCC—'how we move together to get a legally-binding outcome which both preserves the gains of

the Kyoto Protocol whilst also bringing the large emerging emitters in the developing world into the overall framework.... Ultimately the central challenge ... is how to break down the so-called "Berlin Wall" which divided the world into mutually-antagonistic rich and poor blocs way back in 1992....⁴⁹ Given the different pulls and pressures within it, it is unclear whether the CD can help catalyse a forward-looking climate deal.

The work programme before UNFCCC negotiators is wide-ranging and will run beyond the Durban conference. It comprises three sets of issues, not in that order of importance: *ambition* to reduce emissions, including setting peaking years and global and individual-country decadal targets for 2020, 2030 and 2050; *legal form*, or what kind of obligations are necessary, including, above all, the future of the Kyoto Protocol; and, finally, the discrete foundational *building blocks* of the climate architecture, including adaptation, climate finance, forest protection, technology transfer, and MRV modalities. Some of these issues are complex and technical, but can be successfully solved if key nations summon up the political will.⁵⁰

At the moment, the issue of legal form seems to have displaced even the ambition question, further eclipsing other matters such as the drafting of a comprehensive adaptation programme; financial support for the Southern countries' efforts; MRV; and technology transfer for low-carbon development. This has led some to argue that form is trumping substance.

That is not correct. The real contestation in the climate arena is between two mutually incompatible approaches. The first is a top-down multilateral and equitable approach, which sets global warming limits and emissions targets based on what science regards as necessary to prevent a climate catastrophe, and imposes differential obligations on different countries according to their respective responsibility. The second is a bottom-up approach in which the notion of responsibility and its differentiation is absent, and under which governments set whatever targets seem expedient, which bear no relationship to the maximum level of warming which Planet Earth can tolerate.

Only a top-down approach, which translates the urgency of climate action into specific quantitative goals, can meet the imperative of fighting climate change through collective action. There is no way that an approach based on voluntary pledges can deliver the decisive break from BAU that the world needs.

Under bottom-up, many governments will not set the ambitious goals that are required. There will be no system of assessing the adequacy of individual-country targets or of the aggregate mitigation effort. That approach cannot generate the confidence and assurance that comes from a broad-based agreement based on solid scientific evidence and agreed principles such as CBDR. The 'review' part of the bottom-up 'pledge and review' approach, however strong, cannot make up for the weakness or paltriness of what is pledged in the first place.

That said, the importance of ambition in setting targets must not be minimised. Negotiating legal form in a vacuum, without a strong link to ambition, is not very good politics. The gigatonne gap must be closed through a comprehensive agreement on bold, radical and far-reaching emissions reduction targets for 2020, 2030 and 2050. Related to this are agreements on peaking emissions on specific dates for different country-groups. Further 'clarifications' on the already made pledges must considerably raise the level of ambition and push actors towards the upper end of the pledged range, while eliminating loopholes.

Detailed negotiations are also necessary to deal with recently raised issues like REDD, and the MRV/ICA framework, and make the Green Climate Fund and technology transfer operational. The developing countries see the Green Climate Fund as a cherished victory. Talks on its management, control and operation must quickly pick up momentum and yield results. The developed countries would be unforgivably myopic if they fail to make early and substantial financial commitments (especially to Fast-Start Finance), and if they negotiate primarily with a view to controlling the Fund, either directly or through the World Bank. These 'building block' elements are important for maintaining trust and retaining the ability to finesse differences and execute reasonable agreements.

All these issues have been negotiated recently within a context or framework which bears a specific impress—the largely toxic legacy of Copenhagen and Cancun. The central task before climate negotiators is how to make a clean, radical break with that legacy, in particular the attempt to bring about only token emissions reductions (when deep and early cuts are needed) through 'pledge and review' and to legitimise the reductions and inscribe them into the Climate Convention. To understand why this is a priority, we need some clarity about the kind of failures the Copenhagen and Cancun conferences were, and how the approaches underlying their outcomes can never deliver even the basic elements or ingredients of a FAB deal.

The Copenhagen Accord was an unmitigated disaster. It inverted the UNFCCC's top-down science-driven unanimity-based approach and created a free-for-all in which each nation could choose an expedient, low-ambition target. The Accord contained no short- or medium-term goals or benchmarks, no quantitative emissions reduction targets, no obligations for individual Northern countries, not even a real commitment—as distinct from a vague promise—to limit global warming in this century to 2° Celsius, not to speak of the 1.5° C limit demanded by more than 100 developing countries. It was silent on the year by which global emissions must peak. And it only made a token reference to the principle of North-South differentiation of responsibility.

So laughably low were the emissions reduction pledges made under the Accord that they would virtually guarantee 4° C-plus global warming and imperil the survival

of billions. The Accord solved many of the US's problems—and some of the BASIC countries', which did not want binding obligations—but made the world's problems worse. With the Accord, the US, long the climate pariah of the world, suddenly became the main driver of the UNFCCC process, with BASIC in tow.

The Accord negated much of the progress made since the Bali Action Plan of 2007. It made a mockery of multilateralism, vital for strong collective action. And it trampled upon the concerns of the most vulnerable of peoples and countries such as the small island states, which need emergency action to protect them from submergence and extinction. Missing from the Accord were references to continuing with the Kyoto Protocol, to financial governance structures, or to green technology development. By contrast, market-based mechanisms like REDD+ found a prominent place.

Simply put, the Copenhagen Accord was an ill-conceived, collusive deal between a handful of countries which undermined the agenda of ambitious climate actions, including deep economy-wide emissions cuts by the North, transfer of substantial funds to the South, and strong action by the big fast-growing Southern countries to limit their emissions below BAU scenarios.⁵¹

Even in the best-case scenario, the pledges made under the Copenhagen Accord will lead to a 16 per cent decrease in the developed countries' emissions—based on the higher end of their pledges and without the use of 'loopholes', discussed above. This compares poorly with the 40–45 per cent cuts necessary. In the worst case, under which developed countries implement the low end of the pledges, and also use loopholes, emissions would actually *increase* by 6 per cent by 2020.⁵²

Even on finance, the Copenhagen Accord was miserly. In place of the minimum \$200 billion needed annually to finance Southern mitigation, adaptation and low-carbon development (some estimates put this at \$500–600 billion), the North promised just \$30 billion in Fast-Start Finance over three years, to be raised eventually to \$100 billion. A good chunk of this is not 'new and additional'. At any rate, less than half of the pledged amount has materialised.

The Copenhagen Accord was roundly condemned in much of the world. CoP-15 refused to adopt or endorse it and give it the legal status of a UN agreement. It only 'took note' of it. Some of the key countries which signed it (including China and India) did not even mention it in their early official communication to the UNFCCC in 2010. Copenhagen set a terrible precedent and exposed the failure of key states to put short-termist, narrow self-interest-driven calculations aside to defend a global public good in the larger interest of the world. Worse, Copenhagen dissipated the political momentum, backed by strong public awareness, in favour of urgent action to protect the climate.

In contrast to Copenhagen, the Cancun Agreements (CA) were seen by some analysts and even activists as a 'lifeline outcome', 'a balanced package', a worthy

deal, and a diplomatic triumph, which breathed 'new life' into the negotiations process.⁵³ At the very least, it was claimed, Cancun 'salvaged' multilateralism⁵⁴ and created an interim framework within which a true FAB deal can be built; in this regard, Cancun was far superior to Copenhagen.

True, Cancun rebuilt a certain level of trust because every group of countries 'got something' from it. The vulnerable and very vocal AOSIS secured an adaptation plan and got promises of funding. Many other Southern countries were pleased at the establishment of a Green Climate Fund. The South's 'emerging powers' were relieved that they only had to accept weak climate-related obligations, and can thus continue along their high-GDP and -emissions growth path. Most important, the big Northern countries were happy because the CA make light of their duty to combat climate change in proportions commensurate with their responsibility.⁵⁵

However, it would be wrong to underrate the high cost of the many opportunities lost at Cancun—which will result, most importantly, in the accumulation of yet more GHGs in the atmosphere and a widening of the gigatonne gap, with a dangerous slide in ambition. More substantively, CA supporters fail to see or deny the close connections between Copenhagen and Cancun. Scientific analysis, considered above, shows that the pledges made at Cancun are totally insufficient to meet the immediate imperative of beginning the climate stabilisation process.

Like Copenhagen, Cancun failed to negotiate a second commitment period for the Kyoto Protocol with binding emissions cuts beyond 2012. Instead, it recognised the utterly inadequate, voluntary and arbitrary emissions reduction pledges made by the developed countries under the Copenhagen Accord, and sanctified the idea of such pledges replacing binding targets.

At the same time, Cancun imposed more constraints or disciplines upon the South, including more frequent reporting of its climate actions, and their scrutiny through MRV and 'international consultation and analysis'. On a positive note, the Cancun Agreements acknowledged the need to raise ambition and mitigation targets. But on balance, Cancun was a major setback to the causes of equity and climate protection.

At Cancun, the US adopted a hardline stand by making progress on finance, adaptation and technology conditional upon corresponding commitments on mitigation. This meant that all countries, including developing ones, would inscribe their voluntary pledges in a table created by the Copenhagen Accord. These would then be recognised by the UNFCCC and anchored in the Convention. This is liable to destroy the world's sole legally binding climate agreement, and lock the climate into a 3–4° C-plus warming trajectory. It will also impede a future return to an effective, equitable science-based top-down agreement.

Cancun established an Adaptation Framework, but this will remain an empty shell unless funds are made available for undertaking vulnerability assessments,

strengthening institutional capacities, enhancing climate change-related risk-reduction strategies, strengthening education and public awareness, and improving climate-related research, analysis and modelling. The North did not fully accept its adaptation-related obligations at Cancun. The Agreements' text only 'requests developed country parties' to finance adaptation in the South.

The Green Climate Fund was seen as Cancun's biggest achievement. But even this involved compromises. How much money the Fund will have is not clear. It will work under the guidance of the CoP, not directly under the UNFCCC's authority. In place of majority Southern representation, its board has an equal number of representatives from North and South. The World Bank will be the Fund's trustee for three years. Cancun set up a technology mechanism, but was silent on the thorny issue of intellectual property rights.

Cancun manifestly failed to deliver the minimum agreement necessary to begin climate stabilisation by 2020. After Cancun, the emissions gap stands at 10–14 Gt.⁵⁶ It takes quite a leap of the imagination to see Cancun as a big achievement.

A major argument advanced for treating the lowest common denominator-type deal at Cancun as a worthy compromise was the need to get the US, the world's largest economy and its biggest emitter, on board. There lies the rub. To satisfy the US, the world has systematically eroded the internationally legally-binding nature of UNFCCC commitments and deviated dangerously from both multilateralist principles and climate effectiveness. But the US is not prepared to sign even an anaemic version of a barely passable climate deal. Nor has Cancun brought the US any closer to climate multilateralism. Within weeks of the summit, the US was back at its old game, attacking the very idea of a multilateral agreement and binding emissions cuts as 'unrealistic'.⁵⁷

The failures at Copenhagen and Cancun will accelerate climate change processes, raising sea levels, changing rainfall patterns, causing more floods, cyclones and droughts, lowering crop yields, spreading disease, and turning millions of people into climate refugees. The bulk of these victims are poor and underprivileged people who have contributed little or nothing to climate change.

It will not be easy to put the climate talks back on track for a FAB deal. The Annex 1 countries, the EU, the Umbrella Group, G-77, BASIC, the CD countries, are all set to play major roles in the climate change theatre, along with smaller groupings like AOSIS, LDCs, SIDS and the Africa Group. How they set their agendas and identify their bottom lines, where they pitch their demands, with whom they tactically ally, and how resilient their negotiating stances are, will shape the outcome of the coming negotiations—within today's overall global context.

Is it realistic to think of a two-stage process—first rescue and protect the integrity

of the negotiations, and then aim for something higher? This is discussed in the last Chapter.

ENDNOTES

- 1 Alister Doyle, 'Hopes Fading for Climate Agreement', Reuters, 20 June, 2011.
- 2 For more on tipping points and tipping elements, see T. Lenton, et al., 2008, 'Tipping Elements in the Earth's Climate System', *Proceedings of the National Academy of Sciences (PNAS)*, 105(6), 12 February.
- 3 Climate Action Tracker, 2011, 'Emissions and CO₂ Concentrations at Record Highs: Developed Countries Ambition Stalled While Developing Countries Gearing Up to Act', *Bonn Update*, 16 June, http://www.climateactiontracker.org/CAT_update_Bonn_2011-06-16.pdf, accessed on 3 July, 2011. CAT is an indicator developed by Europe-based researchers to evaluate the impact of climate actions by different countries.
- 4 Ibid.
- 5 www.climateactiontracker.org. See in particular sections on 'Background on the Climate Action Tracker' and 'Methodology'.
- 6 CAT Briefing Paper, 6 April, 2011, http://www.climateactiontracker.org/briefing_paper_bangkok_2011.pdf, accessed on 3 July, 2011.
- 7 Ibid.
- 8 Some Annex 1 countries demand that they be allowed to carry over 'surplus' emissions allowances, carbon credits and land-use credits from the 'first commitment period' of the Kyoto Protocol ending in 2012 to the 'second commitment period'. This is a controversial proposal. The EU opposes it.
- 9 The term 'climate change sceptics' is often used to describe the deniers. This is misleading. Most such deniers are not sceptics by philosophical conviction or in the critical realist tradition of science. They typically have no respect for critical realism and lack discriminating judgement on the quality of scientific evidence. Most are driven by rank prejudice.
- 10 William R. L. Anderegg, et al., 'Expert Credibility in Climate Change', <http://www.pnas.org/content/early/2010/06/04/1003187107.full.pdf+html>, accessed on 3 February, 2011.
- 11 <http://siteresources.worldbank.org/INTWDR2010/Resources/Background-report.pdf>, p. 7, accessed on 7 April, 2011.
- 12 Michael Brooks, 2011, 'Scientists Finally Get Angry about Indifference to Climate Change', *The Guardian*, 5 July.
- 13 Tom Athanasiou, et al., 2009, 'Principle-based, comparable, Annex 1 targets', EcoEquity/Stockholm Environment Institute, 4 December, <http://gdrights.org/wp-content/uploads/2009/12/Principle-based-A1-targets-draft2-3.pdf>, accessed on 6 June, 2010.
- 14 Ibid.
- 15 Ibid.
- 16 UNEP, 2010, *The Emissions Gap Report*, Nairobi: UNEP, November 2010 http://www.unep.org/publications/ebooks/emissionsgapreport/pdfs/GAP_REPORT_SUNDAY_SINGLES_LOWRES.pdf. Also http://www.climateactiontracker.org/CAT_Overview_FullENG_20101009.pdf, accessed on 23 March, 2011.
- 17 Ibid.
- 18 Sivan Kartha and Peter Erickson, 2011, 'Comparison of Annex 1 and non-Annex 1 Pledges under the Cancun Agreements', Stockholm: Stockholm Environment Institute, 11 June, <http://sei-international.org/mediamanager/documents/Publications/Climate/sei-comparison-of-pledges-jun2011.pdf>, accessed on 12 August, 2011.

- 19 Ibid.
- 20 For a detailed explanation of the levels of pledges and strictness/laxity of accounting rules, see Kartha and Erickson, 'Comparison of Annex 1 and non-Annex 1 Pledges under the Cancun Agreements'.
- 21 For full sources and detailed explanation, see Kartha and Erickson.
- 22 Ibid.
- 23 *The Guardian*, London, 3 December, 2010; *The Hindu*, New Delhi, 6 December, 2010; *Mail Today*, New Delhi, 8 December, 2010, among other sources. The cables showed that the US bribed and bullied AOSIS, the LDCs and many other countries into supporting the Copenhagen Accord against their better judgement. US deputy climate change envoy Jonathan Pershing and EU climate action commissioner Connie Hedegaard conspired to target vulnerable states and identified AOSIS as 'our best allies given their need for financing'. Eventually, some 140-odd countries signed the Copenhagen Accord.

Other cables reveal the deep differences between the developed and developing countries. Michael Froman told his European colleagues that the Western countries 'needed to work much more closely' together to counter the increasing influence of India and China and 'avoid future train wrecks on climate, Doha [trade talks] or financial regulatory reform'. A cable from the US Embassy in Brussels in February 2010 said EU officials welcomed Froman's call to 'push back against coordinated opposition of BASIC countries.... It is remarkable how closely coordinated the BASIC group of countries have become in international fora, taking turns to impede US/EU initiatives and playing the US and EU off against each other', the cable quoted Froman as saying in talks with EU officials. 'The US and EU need to learn from this coordination ... to better handle third-country obstructionism and avoid future train wrecks....'

Bolivia, which figures prominently in the leaked cables, reacted angrily to the WikiLeaks disclosures during the Cancun climate conference. Bolivia's UN ambassador Pablo Solon said: 'I hope that we are not going to have to wait one year until we know really what happened here in Cancun, because what happened in Copenhagen is also happening here in Cancun ... there is a lot of pressure put into countries in order to force them to accept, I would say, a new version of the Copenhagen Accord.' Cited in *Mail Today*, New Delhi, 8 December, 2010.

- 24 Sivan Kartha, 2011, 'Annex 1 Pledges, Accounting "Loopholes", and Implications for the Global 2° C Pathway', Stockholm Environment Institute, 16 June, 2011. http://climate-justice.info/wp-content/uploads/2011/07/SEI-Policy-Brief_v02sk.pdf, accessed on 5 July, 2011.
- 25 Ibid.
- 26 Ibid.
- 27 Ibid.
- 28 For the addition to the permissible emissions to occur, the 'surplus' allowances must be bought and used. Australia, Japan and New Zealand could be the potential buyers. During the current Kyoto Protocol period, Japan, Switzerland and Germany as well as others have been active buyers of surplus AAUs. For the future it is not clear which countries would buy surplus AAUs. The EU announced at Bangkok in April 2011 that it would not recognise surplus AAUs from the Kyoto Protocol's first commitment period. 'Emissions and CO₂ concentrations at record highs: developed countries ambition stalled while developing countries gearing up to act', Climate Action Tracker Update, 16 June 2011, p. 4.
- 29 Ibid.
- 30 http://www.climateactiontracker.org/briefing_paper_bangkok_2011.pdf, accessed on 3 July, 2011.
- 31 Kartha and Erickson, 'Comparison of Annex 1 and Non-Annex 1 Pledges under the Cancun Agreements' (emphasis added).
- 32 Ibid.
- 33 Ibid.

- 34 See Endnote 23 above.
- 35 Mark Lynas, 2009, 'How Do I Know China Wrecked the Climate Talks? I Was in the Room', *The Guardian*, 22 December, <http://www.guardian.co.uk/environment/2009/dec/22/copenhagen-climate-change-mark-lynas>, accessed on 4 May, 2011.
- 36 Farhana Yamin, 2011, 'Pathways and Partnerships for Progress for Durban and Beyond', Discussion paper prepared and presented at a Heinrich Böll Foundation Conference at Bonn, June.
- 37 Ibid.
- 38 Ibid.
- 39 Ibid.
- 40 E3G (Third Generation Environmentalism Ltd), 2011, *E3G Global Deal Scenarios: Outlook for Durban*, Paper prepared for WWF, London, May.
- 41 These are discussed in Chapter 1.
- 42 Yamin, 'Pathways and Partnerships'.
- 43 Ibid. This assumes that Croatia has already formally become a member of the Union. It is in the process of doing so.
- 44 Verolme, *Durban: A Signpost for a Safe Climate Future*.
- 45 Recalling the EU's record, Yamin says: 'It is one of the largest providers of climate finance and fast-start finance since Copenhagen. Finally, unlike JUSSCANNZ (now Umbrella Group) the EU has not historically asked for legal parity of mitigation commitments but has been more respectful of issues relating to the "firewall". This was one of the key reasons why developing countries formed an alliance with the EU at CoP-1 which led to agreement of the Berlin Mandate that specified no new commitments would be negotiated for developing countries as part of the Kyoto Protocol process—an understanding that stayed in place until the adoption of the Marrakech Accords and the entry into force of Kyoto in 2005'. 'Pathways and Partnerships'.
- 46 Yamin, 'Pathways and Partnerships'.
- 47 Mark Lynas, 2011, 'Thirty "Cartagena Dialogue" Countries Work to Bridge Kyoto Gap', 10 March, <http://www.marklynas.org/2011/03/thirty-cartagena-dialogue-countries-work-to-bridge-kyoto-gap/>, accessed on 4 May, 2011.
- 48 As a participant notes in a blog, 'the Group will continue to discuss ways to deepen and enhance access to carbon markets for all nations, leverage the finance commitments from Copenhagen, and tackle MRV structuring....' The blogger also quotes 'a representative from an industrialised nation' as saying 'Don't push us [to be even more ambitious] or you are not going to like it.' The blogger adds: 'While the words may seem a little jarring, that was not the intent. The purpose was to make clear that negotiators ... can only do so much as they are at the mercy of the political winds of the countries they represent and might suffer backlash from voters.' Kartikeya Singh, 'Cartagena Dialogue Provides a Breath of Fresh Air', 25 July 2010, <http://itsgettinghotinhere.org/2010/07/25/cartagena-dialogue-provides-a-breath-of-fresh-air/>, accessed on 4 May, 2011.
- 49 <http://www.marklynas.org/2011/03/thirty-cartagena-dialogue-countries-work-to-bridge-kyoto-gap/>, accessed on 4 May, 2011.
- 50 Several NGO perspectives exist on how agreements can be reached on these foundational 'building block' issues, as well as on ambition and legal form. See, for example, *Bonn Brief*, produced by Action Aid, Friends of the Earth International, Africa Trade Network, and What Next? Forum (whatnext.org). Climate Action Network-International has just produced its *Durban Expectations*, June 2011, which makes a number of proposals.
- 51 I have discussed this at length in numerous articles to be found at www.prafulbidwai.org and at www.tni.org. Some of them are: 'The Great Betrayal at Copenhagen', 28 December, 2010; 'Breaking the Global Climate Impasse', 9 November, 2010; 'To Copenhagen with Confusion',

14 December, 2010.

UNEP, *The Emissions Gap Report*.

⁵² E3G Global Deal Scenarios: *Outlook for Durban*. Many NGOs too welcomed the Cancun Agreements. For example, CAN said, 'Cancun was a modest success as it buried the ghost of the failure of Copenhagen.' The vast majority of governments applauded the outcome. Bolivia stood out as an exception.

⁵⁴ T. Jayaraman, 'Taking Stock of Cancun', *The Hindu*, 13 December, 2010.

⁵⁵ For a critique of the Cancun Agreements, see my 'Letdown at Cancun', *Frontline*, 14 January, 2011; 'How Not to Fight Climate Change: A Bad Deal at Cancun', 20 December, 2010, and 'Cancun is a Letdown', *The Bengal Post*, 15 December, 2010. Also, Martin Khor, 'Strange Outcome of Cancun Climate Conference', Third World Network, 14 December, 2010; and 'The Global Climate Regime on the Brink', Third World Network, 14 December, 2010; and ActionAid, *Outcomes of the Cancun Climate Conference: An ActionAid Analysis*, January 2011.

⁵⁶ See Endnote 16 above.

⁵⁷ Todd Stern, quoted in Jim Efstatihou Jr, 'US Cites Flaws in UN's Climate Talks, Says Treaty Effort "Unworkable"', *Bloomberg*, 7 April, 2011.