



Fig. 1: Hope, Tian Widjaya, web art, 2021 (Image courtesy of the author).

Copping Out of Climate Change

Richard T. Griffiths

The Glasgow climate change conference (COP26) solved nothing, leaving all the issues on the table for the next conference to resolve. To use the vernacular, it was a cop-out. The noun cop-out is defined by the Oxford Advanced American Dictionary as “a way of avoiding something that you should do, or an excuse for not doing it.” This article starts by examining the biodiversity challenges involved in the renewable energy alternatives needed if dependence on fossil fuels is to be addressed. It then explores the reasons why the Glasgow conference failed. It suggests that the size and diversity of the conference condemned it to failure from the start and that a smaller, more concentrated approach is both feasible and desirable. It ends by describing the word of the IAS “New Silk Roads” project in this field.

Dark portents

In August 2021, the UN’s International Panel of Scientists produced a 4000-page report confirming that human activity had already contributed to a 1.1°C warming of the planet beyond pre-industrial levels. Moreover, in all five of the scenarios it modelled, temperature increases by 2040 would exceed the 1.5°C target agreed to only five years earlier in Paris.¹ Of course, the effect of the report should have been to prompt countries to set themselves more ambitious targets, but as the pledges rolled in, the news was bleak. An examination of the plans of the 15 largest producers of fossil fuels showed that they were on line by 2030 to produce twice as much as would be consistent with 1.5°C.² The pledges from the consuming countries would propel the world towards a global temperature rise of between 2.2°C and 2.7°C by the end of the century,³ and that was assuming that countries were actually reporting correct data – which many clearly were not. The portents were clear for all to see. The previous seven years had been the hottest on record and weather events related to climate change produced both record rains and record droughts.

The false dawn of renewables

There was one bright light amongst all the doom and gloom. An Oxford University Report suggested that the costs of renewable energy were falling so fast that, even without changes in policy, a “green transition” was within reach. Indeed, the new technologies would soon be cheaper than fossil fuels, saving the world trillions of dollars.⁴ One problem, however, is that while renewables may have a beneficial impact on green-house gas (GHG) emissions, they often have a negative impact on biodiversity.⁵

Let us start with windfarms. The first issue is that their huge 35-metre blades form a mortal danger for any birds or bats that fly nearby. Of course, the solution is not to build them near nesting colonies, or along bird migration paths. A second issue is that wind farms take up a large amount of land (solar power is less demanding in this respect), and so they are often built in isolated locations away from concentrations of human population. The problem is that you need roads to carry the huge amounts of heavy materials. An 80-metre-tall wind mast comprises almost 1000 tons of concrete and steel, and the foundations needed to anchor it firmly in place require, on average, comprises another 1000 tons. So, you need well-made roads for the construction, as well as to maintain the site afterwards. These roads often pass through isolated locations, where they fragment habitats and heighten the risk of invasive species, mostly carried by ourselves.⁶ The problem with roads, as opposed to railways, is that people can stop anywhere along the route, inadvertently bringing invasive species with them.

Hydroelectricity is another renewable often touted as a game-changer. At present there are over one thousand dams under construction, mostly in Asia. The International Energy Agency (IEA) expects the supply of hydropower to grow by 50 percent by 2040. However, hydroelectricity has a huge biodiversity footprint. Most people are aware that river dams act as impassable barriers for migratory fish travelling upstream to their traditional spawning ground. Less appreciated is the fact that dams replace the rich biodiversity in the natural river flow with “ecologically dead” water – the water is pumped from dark, cold depths where little life exists, and then filtered before it is passed through the turbines. It is no surprise that the largest loss of fish-stocks is among fresh-water fish.

One issue faced by alternative power sources (as well as electric vehicles) is the need for batteries. These batteries need “rare metals” that are in limited supply on land. However, vents at the bottom of the ocean have been spewing out lumps of rare metals for centuries in the form of polymetallic nodules, which contain nickel, copper, cobalt, and manganese. The problem is that mining them will disturb a unique ecosystem. At huge ocean depths, as much as six kilometres below the surface, there is no light, the biometric pressure is extremely high, and there are huge variations in temperature. Yet, near vents in the earth’s crust, a rich habitat survives of which we know virtually nothing.

Fortunately, in September 2021, the International Union for Conservation of Nature (IUCN) voted in favour of a moratorium on deep-sea mining. However, the resolution is non-binding. Provisional deep-sea mining licences have already been granted, and work is well advanced in developing the machinery capable of collecting the nodules and conveying them to the surface. Once operational, all of this will create noise that will interfere with mammal communications and spread sediment over a range of several kilometers, burying the life underneath.⁷ It will be as though we had discovered life on another planet, with attributes of which we know absolutely nothing... and we kill it.

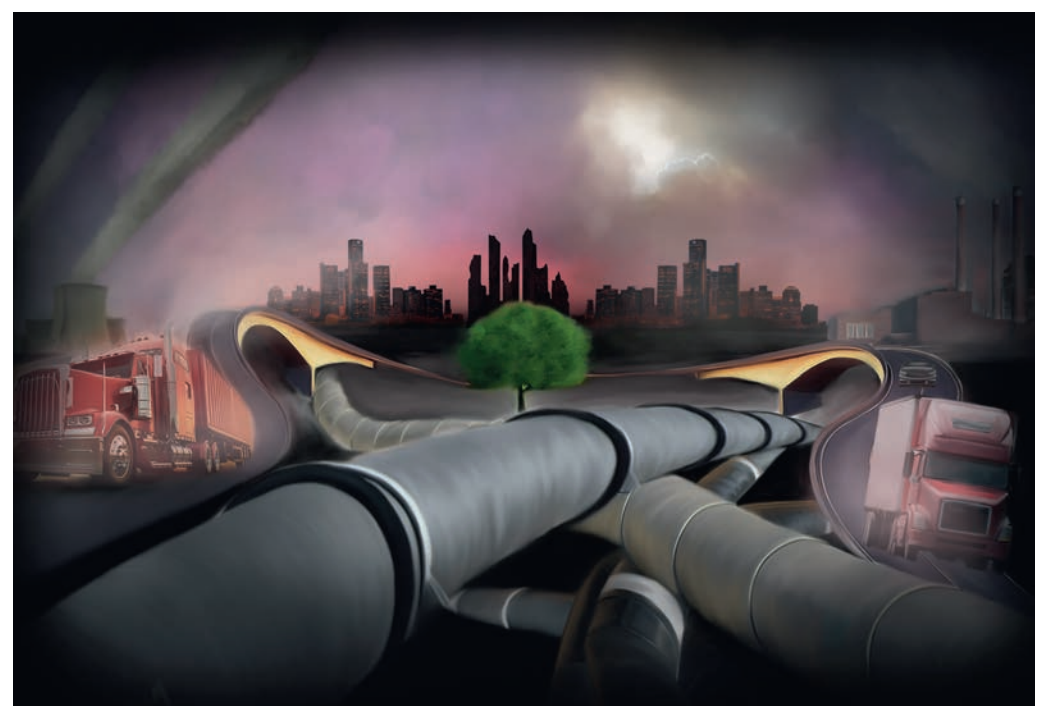


Fig. 2: Renewal, Raisal Shuvo, web art, 2021 (Image courtesy of the author).

The COP 26 blame game

The Glasgow conference spent little time on new, alternative energy sources. It had enough problems deciding anything on limiting traditional fossil fuels. At the end of the day, the conference managed to agree on the *Glasgow Climate Pact* with 97 paragraphs, enabling, again, the “COP process” to record yet another success. Never mind that almost all the paragraphs started with “invites” (7), “requests” (8), “notes” (9), and “urges” (14) – but never once with “decides.” Never mind that there were no obligations, no monitoring mechanisms, and no cash. Not to worry that the goal was receding faster than the measures taken to reach it. The process had produced more than there had been before. Mankind would have another chance, next year, at the balmy Egyptian sea-side resort of Sharm El-Sheikh.

It was all too predictable. For a start, for all of the optimistic bombast of the UK presidency, the country was not exactly a paragon of climate-change virtue. The UK’s own carbon-neutral plan was bereft of all costings.⁸ The UK also had 40 fossil-fuel projects in the pipeline awaiting approval, including the Cambo oil-fields off the coast of the Shetlands and a new coalmine in west Cumbria.⁹ Perhaps most damaging of all was that the UK government had produced only 80 percent of its expected contribution to the annual \$100 billion promised to developing countries for climate change adaptation and mitigation.¹⁰ Worse still, when it did announce its intention to comply, it was stated that the funds would come from the current aid budget,¹¹ which was not the ideal!

On the ground, the UK president Alok Sharma did his best to maintain momentum with a string of announcements. It was not his fault that they became successively less impressive. He made a good start with an agreement by over 100 nations (responsible for 85% on the world’s forest) to halt deforestation by 2030.¹² It was not his fault that before the ink dried, Indonesia’s environment minister was clawing back on its commitment or that, a week later, a group of senators explained that Brazil’s commitment referred only to *illegal* deforestation. The ambition to sign a second 100-nation strong pledge, to cut methane emissions by 30 percent by 2030, was passed over by countries responsible for half of the global total.¹³ The third, a non-binding pledge to phase out coal-fired generators, attracted only 23 signatories and did not include the top six users jointly responsible for 80 percent of global coal power electricity generation.¹⁴ When at the last day, China and India changed a call to “phase out” unabated coal power to “phase down,”¹⁵ Sharma must have been pleased that the fortnight had come to an end.

The truth is that it was always going to be difficult to get over 200 nations and over 2000 NGOs, represented by 25,000 delegates, to agree anything. The interests were always too diverse: fossil fuel producers versus advocates of renewables, developing countries wanting more energy versus rich countries responsible for the GhG emissions crisis, poor countries disproportionately experiencing the impact of climate change versus rich countries disinclined to pay. Matters were not helped by long-simmering tensions between the USA and China, and between the EU and Russia. In addition, the USA had lost credibility as a reliable negotiating partner after the Trump administration’s unilateral withdrawal from the Paris Agreements. Confidence was not restored by President’s Biden’s announcement of the doubling of the USA contribution to the climate fund – it still left the country more than 60 percent adrift of its calculated contribution.

Time for a new approach

We cannot go on like this, COP 26, 27, 28... each step forward meaning two (if we are lucky) further removed from the goal. We do not have to keep enshrining a broken model. The COP “process” is not working. The plain fact is that we do not need everyone at the negotiating table to solve the problem. What we do need is a recognition in advance that the problem exists and a commitment to finding a solution. The idea would be to limit the initial representatives to those nations most responsible for global GhG emissions

and ready to acknowledge both the problem, that there is a limit which global warming should not exceed, and the solution, that this requires a reduction in GhG emissions within a specified time-frame. Leaders that refuse to do this should say so openly and publicly, and answer to whatever forces keep them in power. Removing them from the process stops them diluting/sabotaging any results. All the other parties should commit themselves to finding a solution. Failure should not be an option because such a negotiation is not a win/lose, zero sum negotiation, but an all win/all lose opportunity.

If we were to limit the negotiations to the largest GhG emitters, then China, the USA, and the European Union would already take us to over 50 percent. Adding five more (India, Russia, Japan, Iran, and South Korea) would raise the share in contribution to the problem/solution to just under 70 percent. A further three (Indonesia, Saudi Arabia, and Canada) would take the total to over 75 percent – in other words, ten countries plus the European Union.¹⁶ Not all of these would join, but some of their ranks could be filled by countries whose emissions fall under this cut-off point. The important thing is that they must be agreed on the object of the negotiations. Of these countries, China’s participation is a key to success. It is the largest emitter – albeit that part of this is the result of taking the GhG footprint for products consumed by other nations – but it is also the largest green energy builder. The USA’s presence would also be desirable, but its ability to deliver results depends on the tenuous voting balance of its Congress and the (very real) possibility that the next presidential election could lead to its withdrawal. The European Union is also unmissable because it has a track record of achievement and, like China, actually imposes a cost on carbon emissions. Admittedly, there are tensions among this group – arising from differences in systems of government, real and perceived security threats, and different exposures to the power of vested interests. These need to be set aside because of the overarching nature of the end goal. At this stage, other countries committed to the goals could also join (and compensate for those that refuse the initial invitation).

As we have already said, the negotiations should start by defining the ultimate global target and setting a deadline for achieving it. This is not difficult. It is a question of political will. The next step would be to identify the main polluting agents. After that, they should try to agree upon the easiest polluting agents to remove, and so on along a scale of difficulty. Once again, there is plenty of evidence available. At this stage, the negotiators should lock a timetable into place. Up to this point, the frame of the discussions should have remained global.

The next stage of negotiations involves assessing the geographical spread of the change required on a national basis. The negotiating parties could then start tweaking the timetable, building in formulae for compensation, and constructing funds for poorer countries. Parallel to this, the experts should identify technological solutions and divide them into short-term and long(er)-term, according to their probability for success. Negotiators should then build a research and development fund, distribute the financing, and establish rules, whereby a distinction is made between universal and optional projects, and there are guarantees that the contributors to the fund would receive a proportionate amount in its expenditures. By now, nations responsible for a significant proportion of GhG emissions will have agreed upon a plan for their elimination. The next step is to invite smaller countries, applying the formulae agreed by the majority and dispensing any extra assistance that might be required. The main objective, when this stage has been reached, is to start. It is better to begin with an imperfect plan that works than with a perfect plan that doesn’t. Moreover, actually working together helps build familiarity and trust that may spill over into other areas.

It is possible that such an approach might not work, but the prospects are better than limping along with the COP process. There are also historical precedents for this approach. The most obvious was the creation of the European Coal and Steel Community,



Fig. 3: The Last Judgement, Valentin, inspired by Aert Pietersz 'The Last Judgement' (1611), web art, 2021 (Image courtesy of the author).

In 1950, a German delegation sat at a negotiating table with five countries that it had occupied militarily only five years previously, at the cost of hundreds of thousand lives and much economic damage. The negotiations took place with one prior condition: that the countries pool their responsibility for making the outcome work. The largest economy in Europe (the UK) refused, and the negotiations continued without it. One year later, the new community was created, the forerunner of the European Union. There are other examples from this early post-war period. The Organisation for European Economic Cooperation – forerunner of the Organisation for Economic Co-operation and Development (OECD) – staggered through the 1950s with constantly ratcheted targets until it eliminated all quantitative restrictions on intra-European trade and payments. The European Organization for Nuclear Research (CERN) pioneered shared use of its facilities and return flows of revenues, which was also applied to European space research.

Climate change and the New Silk Roads Project

The New Silk Roads project was started in the wake of China’s Belt and Road Initiative (BRI), but the use of the plural in the title is intended to convey an interest in infrastructure, communication, and connectivity from whatever source. Having worked to describe the contours of the overland and maritime Eurasian networks, it subsequently moved into looking at environmental impacts. Perhaps a personal word of explanation is in its place. Towards the end of 2019, I had been invited to a ‘horizon scan’ meeting on BRI. I expected the meeting to be all about the nuts and bolts of China’s infrastructure investments, but, instead, half the participants were ecologists and environmentalists. I sat in stunned silence as I heard how my beloved infrastructure was fragmenting unique eco-systems, how my renewable energy sources were endangering migrating birds and fresh-water fish, and how we were probably wiping out life that had not yet even been identified. So it was that I became one of the authors of the “Horizon Scan” of BRI,¹⁷ and how I initiated a collaborative project on the ecological impacts of infrastructure, which has resulted in the publication of a book on the subject.¹⁸ I then attracted Dr. Elanor F. Tracy to become an IIAS Fellow, to work on “shadow ecology” along the corridors of the new Silk Road – a process whereby national green transitions ride on the back of environmental degradation abroad. At the same time the project started collaborating with the research team led by Dr. Jojo T. Nem Singh (International Institute for Social Studies, The Hague), which is researching the implications of the exploitation of rare metals in the development of green technologies.

In the build-up to the biodiversity and climate changes conferences, held this autumn in Kunming and Glasgow, respectively, the project launched a new website: resources4climatechange.com. Its “Milestones” page provides direct links to the originals

of authoritative reports contributing to the conferences (and beyond) – over eighty this year alone, including all those cited in this article. It also has fifteen eLibraries devoted to different issues, including some of those dealt with in this article: biodiversity loss, dams and hydroelectric power, deep-sea ecology, emissions trading, methane. It also has three regional libraries, devoted to the destruction of the Amazon, the degradation of the Mekong, and the melting of the Arctic. It also has eLibraries devoted to climate change denial, on the one hand, and to youth activism, on the other. These give access to over 1000 free online scientific articles and reports, as well as to short explanatory videos. Finally, the website has its own art gallery featuring creative works, including those featured on these pages, focussing on different aspects of the Earth’s environmental challenges.

It is the hope to expand our work on environmental issues and we welcome any initiatives for innovative, collaborative work in that direction.

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Notes

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