



Q+A from “[Global South in the Imagining of Climate Futures](#)”

03/23/21

**Jesse:** Stanley, thank you for so many wonderful stories! What are your thoughts on your next book - what themes and movements are you looking to center?

**RESPONSE:** My next book will be a non-fiction book about the Sierra Nevada of California, combining geology, history, memoir and guidebook. This is new for me and exciting. After that I hope to write short novels.

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**Brian Ley:** Have you seen how Project Vesta [www.projectvesta.org](http://www.projectvesta.org) is looking to remove carbon with the oceans on the east coast. Using Alkalinity Enhancement with Olivine.

**RESPONSE:** I have not but checked it out and it looks good. All methods are worth trying, I feel.

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**Jeremy Baskin:** I'm a scholar of geoengineering and I imagine carbon removal technologies as the colonial option (because of land etc) and solar geoengineering as the imperial option (because it doesn't involve occupation of the South physically). Your thoughts on this way of framing?

**RESPONSE:** I am hoping that these impositions of one group over another are not the right frame for geo-engineering and would prefer changing the term itself to something like geo-finessing or geo-begging (for Gaia's help etc). Each action being considered should be judged on its own merits, both in terms of carbon drawdown and justice.

**RESPONSE (FEMI):** this all depends on where the carbon removal projects are sited and who controls them. Either of these technological options have spatial components and distributive components and either could function colonially.

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**Meghana Rao (she/her):** What climate solutions do you think are best at retuning power to the global south / people who have been most impacted by climate injustices?

**RESPONSE:** Regenerative agriculture, community-based agriculture, Kerala-style governance, Sikkim-style organic ag. Ending poverty and immiseration and also extreme wealth and hyperconsumption. Rapid build-out of clean energy infrastructure, funded by the North and built in the South. Ocean shallows repair and ag and aquaculture. And so on, lots would help. See Chapter 85 of my novel Ministry for the Future-- this is real list.

**RESPONSE (FEMI):** Mostly agree with Stan. I'd just add - the most direct things the North can do are to maximally constrain its own emissions (making more of the carbon budget available to the South); contribute to loss and damage financing for climate disasters, site carbon removal in its own borders. In response to calls for contribution to South-led adaptation or other projects, funding and other transfers should be unconditional.

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**Kathleen McAfee:** KSR: love the book, but there's a fatal flaw: you imagine that an army of certifiers can ensure that carbon removals are genuine, but all experience with 'nature-based' and industrial (DCC) offsetting have shown that incentives to find good news overwhelm any hope of accurate measurement. This matters because of the huge hype right now for 'net zero', letting corporations and governments off the hook.

**RESPONSE:** Yes this is a real problem. Friends of mine from economics and science studies have said to me, "every system of measurement is instantly gamified for advantage." I suppose this will be a battleground, but a good one to be fighting. Bond rating agencies show how fox-guarding-henhouse structures can go wrong. It will need a big corps of people doing it for the Earth and so will contribute to full employment..

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**Adam Orford** : for [Olufemi.Taiwo@georgetown.edu](mailto:Olufemi.Taiwo@georgetown.edu) - taking into account the historical processes you described, what responsibility (financial, technological, political) does the global north have for carbon removal over the next several decades, and how should that be done? e.g., tech development and r&d, tech sharing, policy support, legal implementation. how do you define or think about allocation of responsibility?

**RESPONSE (FEMI):** I think the North has responsibility for these at a scale at least commensurate with its proportion of cumulative emissions. Tech development and R&D should be public led, not private led - if there's any private involvement, it should be by legal compulsion and not by their fiat, and they should not be in charge of generating the proof that they have in fact done removals. Technology and patterns should be open sources and enforced juridically.

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**Anonymous:** How do you balance accountability for say, what oil majors and the banks that finance them have wrought on the world with the fact that these actors are in many ways best positioned to make the energy transition happen? This applies to DAC as well. Does a successfully climate transitioned world necessitate an entrenchment of existing powers given the importance of the next decade for action?

**RESPONSE:** I would say, nationalize them. 75-80 of fossil fuel on Earth is already nationalized, and the other private owners usually lease land and thus fossil fuels from nation-states. So that part's done and the international agreements would act on that part. Then nationalizing finance--since it's back by the state already, why not admit it and take away the rentier in the middle? Banks too need to be requisitioned for this big lift.

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**Anonymous:** Do you think the eye-watering fiscal numbers associated with covid make the numbers needed to tackle climate change less scary or more?

**RESPONSE:** I think more. Covid is a virus and the vaccine was worked up in weeks, took months to approve. Fiscal hit was huge, admittedly. Climate change much worse. The re-insurance companies are freaking out at the numbers involved. The damage can't be paid for so it can't be insured. Money itself could crash along with the biosphere, as makes sense. So I am hoping this will drive civilization to big actions.

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**Ina Moller:** What are your perspectives on the many long term net-zero targets by actors around the world, many of which (explicitly or implicitly) rely on large amounts of carbon removal? And most of which have no concrete plans on where or how this carbon removal will take place?

**RESPONSE:** Calculations have been made showing how much more we are likely to burn and where we need to end up, and they don't match, thus the inclusion of "carbon removal" as a kind of vaporware solution that we will have to make real. The pressure of necessity might cause rapid progress here.

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**Elise Birkett (she/her):** How can non-monetary means being incorporated into the north meeting that "differentiated responsibility" and giving what is owed?

**RESPONSE:** Good question, because feeling responsibility for the crimes of generations long past is hard. I resist that myself. So that's not the way. Maybe some kind of one planet ethos, we're all in this together, and as a practical project the North can do more now, and since it too will go down if the world goes down, it makes sense to pitch in to help. This is sounding like a kind of "enlightened self-interest" argument, which I think is often the most effective. You see that your own interests are tied up with everyone else's.

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**Liam St.Louis:** For CDR specifically, there's both the cost of CDR, which many people agree should fall on rich historical emitters, but also the opportunity of the jobs and industries that grow around it. Is it problematic for rich countries to benefit from their own clean-up operation?

**RESPONSE:** Yes, although the precariat are everywhere. Only the rich are really rich in the rich countries. So job programs everywhere help. But sharply progressive taxation and massive reparations/aid/equity shifting from North to South-- clean energy needs to be built everywhere, so the jobs should be spread out.

**RESPONSE (FEMI):** Only if the benefits are hoarded - as Stan said, the jobs should be spread out, partially so that the knowledge and other benefits also are. That includes at the research, design, and engineering levels (not just construction and maintenance).

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**Alexandra Mallett:** Maybe you disagree, but having worked on climate issues for a long time (e.g. I used to work as a climate negotiator for the Canadian government in the early 2000s), where I've seen more progress is in activities on the ground. For instance, in Canada a number of Indigenous communities in the Arctic / North are interested in reducing their dependence on diesel for various reasons including climate change and improving local air / environmental quality. But what is often most important for them is that they see renewable energy options which can be more modular / scalable as a way in which to advance decolonialism - such as through active ownership and / or management. Have you seen some other examples like this?

**RESPONSE:** Yes, I think this is happening. In my novel I focused on the Paris Agreement apparatus as a way to talk about the necessity of a global effort, but this is only part of it. Chapter 85 is simply a list of community organizations working for climate justice and biosphere restoration. It takes about 15 minutes to read aloud and all the organizations are real, and they represent a small percentage of what's out there. So, yes-- "bottom up" is crucial, and I've been interested in "side-to-side" as an additive to top-down, bottom-up thinking-- cities and regions are cooperating in great ways too.

**Response (FEMI):** I think this is important, and modularity / scalability + ownership is a very helpful way to think about the politics of whether climate options advance or prevent colonialism.

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**Sam Beckbessinger:** We already have a lot of the technology we need to reduce our emissions, but not the political will to implement them. What are the big changes we need to make the global political system fairer? Does the UN need more power? What are the specific reforms to the global political systems we need to make them more able to respond to the global climate emergency?

**RESPONSE:** Good question. I doubt the UN can get more powerful, it is a WWII artifact with too much power given to the big winners of that war. There's no good answer here! All the biggest emitters have to agree to act, all the small countries have to band together and lead from below, in terms of emissions. The Paris Agreement is maybe more egalitarian than its parent body the UN.

**RESPONSE (FEMI):** I think the keys here likely come from outside the formal system - the balance of power at national and subnational levels is likely decisive here, and it skews heavily towards moneyed interests and away from activists, workers' organizations, and so on. If these groups can constrain their national and subnational governments, I bet the international stage starts looking a lot less dysfunctional.

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**Anonymous Attendee:** Isn't the UN the logical place for overseeing transnational research in SRM and CDR? Or would that be problematic for the South?

**RESPONSE:** UN helps run the IPCC and the Paris Agreement, so I think what governance we have is already there. Research can happen anywhere, although maybe you are bringing up the problem of global reach of even some experiments. Good point. UN might be the place to discuss that too. What else do we have?

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**Duncan McLaren:** Given the idea of 'worlds of possibility' in which carbo removal or geoengineering technology does not serve capitalism, is there any way to configure or mobilise those technologies in ways that help us break the hold of capitalism; or do we need to break capitalism before we can configure those technologies to the ends of justice?

**RESPONSE:** I think the best way to try to proceed would be to break capitalism in the same effort that we make to do carbon removal. I think this might work because carbon removal is not profitable and will never be the highest rate of return on investment. It's like sewage plants or something-- a necessary public good. But then, since it's so expensive, governments have to agree to seize capital and do it as a necessary thing for survival. Having seized capital from private interests (the rich) why ever give it back? And thus a kind of public utility/ social ownership of finance and the means of production could de-capitate capitalism. Worth a try.

**RESPONSE(FEMI):** I think so, jumping off the point Stan makes at the end there - the key would be the distributions of decision-making power that go along with the new technologies. The likeliest course as things stand is to continue to give private companies and autocracies unchallenged authority about how and when these technologies are deployed and implemented - these command structures are part and parcel of capitalism and the more we challenge them the more we challenge capitalism.

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**Gary Hughes:** Neo colonialism is embedded in much climate policy, for instance carbon markets are clearly another wave of transnational corporate economic hegemony, but this time disguised as 'climate action.' The same can be said regarding 'carbon dioxide removal'. For instance, both promote a narrative that advances erroneous assumptions about the benefits of monoculture plantations (Green Climate Fund invests in destructive plantations). How can land defenders have confidence that 'carbon dioxide removal' narratives are not just appropriating the language of climate justice to justify more industrial sacrifice zones and business as usual that continue to destroy nature and communities? What happens now that 'carbon dioxide removal' is being used as a bludgeon by state and corporate forces against indigenous and local communities who are clear in imagining that "another world is possible"?

**RESPONSE:** One project at a time. All these issues need to be kept part of the discussion as to what to do. Carbon markets are usually shell games as you point out. A really steeply progressive carbon tax, with proceeds returned to poorest citizens in feebate style, would be one way to go at this. These various carbon-reduction projects are necessary but need to be instituted as anti-capitalist projects, not business-as-usual mitigations. The fight here is across a broad front but what I'd say is that if carbon reduction is necessary to avoid a biosphere crash and mass human suffering, then we have to do it, and fight to change capitalism to something more just at the same time. We can't decline to de-carbonize just because capital will try to seize it. Capitalism tries to seize everything. So the two need to be de-stranded and made coherent parts of the whole project.

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**Sam Beckbessinger:** What are some ways that activists in the Global South could force the Global North to take faster action in reducing emissions?

**RESPONSE:** Sabotage of fossil projects? Occupations? General strikes? Election of governments that actually stick to the program and don't get bought off by vested interests? I add the question marks here because I don't know what will work. So far, banding together under the Paris Agreement would be one thing to do, for sure.

**RESPONSE (FEMI):** I am not sure that they can. This is our job.

Someone in the q and a expressed skepticism about the Paris Agreement, but to that I want always to say, what's better? How are we going to coordinate a global effort? We have to use already-existing tools, at least at first. Paris Agreement is weak and doesn't ask enough yet-- commitments are only half as much as they need to be. But dismissing it now would be a mistake, unless you have something better to offer.

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**Anonymous Attendee:** [Olufemi.Taiwo@georgetown.edu](mailto:Olufemi.Taiwo@georgetown.edu) Dr. Taiwo's article about not setting up climate change as an issue of national security is that it will lead to an antagonistic relationship - but do you think that this could be a wedge or a foot in the door to get a nation state to take steps to address a global crises? And then maybe the openness to taking these steps for selfish purposes could be co-opted to and evolve to be actions taken for the benefit of the entire planet? And what is needed to reach the tipping point of acting from selfishness to acting for others?

**RESPONSE (FEMI):** I don't see why not! I'm much more optimistic about organizing action than I am about organizing people's motivations - I don't see any campaign I think is likely to prevent selfish people from being selfish, or tribalistic people from being tribal. I think there are ways to align incentives creatively, ways to challenge culture, and - if we're lucky - ways to do both. I think that looks like mass movement politics, but it also looks like careful policy design.

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**Saqib Huq | ICCCAD:** Is there not a risk that exploring Geo-engineering projects would allow nations to have less ambition for adaptation/Loss & Damage to climate impacts, or even abandon mitigation projects?

**RESPONSE:** This is called the Moral Hazard argument and it is a real problem but growing weaker as we get into a more and more dangerous situation. No one is arguing we can keep burning fossil carbon into the atmosphere and get away with it by these other means. It's an all-hands-on-deck moment, and will be for a long while.

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**Alan Robock:** Aren't woman's rights and justice actually mitigation techniques and not geoengineering? Indeed they are important, but geoengineering is a set of proposed schemes directly to control climate.



**RESPONSE:** People are proposing to “bend the curve” of the human reproduction rate to 1.5 children per woman by 2030. This would have biospheric effects. I’m not sure the mitigation/adaptation/geo-engineering language is adequate to the situation.

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**Anonymous Attendee:** Your discussion about the broader understanding of “geoengineering” is fascinating and stimulating. Do you think there is a danger in considering justice objectives, such as women’s rights, as methods combating climate change? In other words, while both climate change and women’s rights are certainly priorities (and obviously overlap), do we risk losing the moral ground advocating for justice by arguing it is a technique for existential climate survival - rather than arguing for women’s rights for its own sake?

**RESPONSE:** Yes. It’s best to insist that these are moral priorities beyond any utilitarian considerations. I feel strange bringing them into discussions like this, but I do it partly to destabilize the concepts involved, and partly to introduce the idea of paired goods. There could be arguments made that moral judgments are practical and vice versa. Still I think this distinction is important.

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**Maria Ivanova:** What are the key lessons from the pandemic that governments and international institutions should heed and implement? What have we learned that various governance levels can do differently?

**RESPONSE:** Listen to the scientists and follow their suggestions! Facilitate their work and promote belief in the scientific method and mutual aid.

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**Adam Orford:** for both: Rahman et al. argued in Nature (<https://www.nature.com/articles/d41586-018-03917-8>) that developing nations should take the lead in discussions and, ultimately, decision making around geoengineering. Do you agree?

**RESPONSE:** Yes I think that would make sense, that the nations most endangered by climate change (heat waves and sea level rise) plus also the potential bad effects of geo-engineering (messing up the monsoon rains), should have the leading voices in what to do if we get into really bad emergencies.

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**Karina Garbesi:** Can you both talk more about the potential use of carbon coins for mitigation?

**RESPONSE:** The idea would be that anyone (person, city, nation-state, company) sequestering or drawing down carbon would get paid for it (this would require measurement, yes) and thus people would get paid for doing good climate work. The coin would be tradeable on currency markets but the production of the coin itself would be indexed to carbon sequestration, so the hope would be to create a solid “carbon standard” that would stabilize money itself, in good ways. Central banks, all the big ones, would have to band together to back this, because if one nation did it alone there might be problems with currency speculations. Details for this would need to be worked out by the central banks and the economists, and it would need to be teamed up with a progressive carbon tax too, after which it works ever better (in the modeling). It's the carrot to the stick of taxes. It's a new idea but it's being taken up and discussed by the same people who would have to legislate and enact it, so maybe it will happen.

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**Anonymous Attendee:** I \*can't\* envision world governance of SRM research as \*not\* being technocratic and “elitist” Can you?

**RESPONSE:** No, but let's say scientists would be the technocrats, and then diplomats negotiating for the governments they represent would be the elites involved. What one has to hope is that pressure for action comes from the general population, to do things to protect the biosphere, and then also these plans would need to be supplemented by all the local and regional actions one could imagine, hopefully paid for, although volunteering is great too.

But to stick to solar radiance management, I actually think there's not much to research. The volcanic eruptions provide the plan, and replacing Sulphur dioxide with limestone dust would reduce the bad effects of a volcanic eruption while leaving the deflection of some sunlight there to help.

Painting all the roofs of all the cities white would deflect sunlight. Bubbling the waves of ships at sea would deflect sunlight. So, “solar radiance management” is a very general term...

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**Isabella Corpora:** Hi! Can Stan elaborate on the plateau that he mentioned regarding women's rights and society?

**RESPONSE:** The better women are doing the more the population replacement rate drops. This is shown in demography of various countries policies and results. So, now there are predictions we'll reach steady state in human population, entirely by improvements in women's education, status, legal rights, economic standing, etc., by the year 2060. If we did that by 2030, there would be several hundred million fewer humans to accommodate in mid-century, and women's lives would be better too. So people are talking about this as a goal, "bending the curve".

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**Ina Moller:** Isn't there a stark difference between a global intervention that is done by one actor (i.e. solar geoengineering) versus a global intervention that everyone participates in? Wouldn't that have very different effects in terms of attribution of 'fault' e.g. if something with the weather goes wrong, whoever is changing the climate will be blamed?

**RESPONSE:** Yes, for sure. The dust-in-atmosphere plan is said to be cheap (a few billion at most) although it often seems to me it might take more planes and people than are easily buy-able. But in money terms, cheap enough for one person. And easy for any country with a decent-sized air force. But then the burden would be on them as to bad side-effects, if there were any. The dust falls in about 5 years, so it isn't a sure thing there would be bad side-effects-- no Snow-piercer futures possible from a Pinatubo-sized intervention. But the monsoon might be affected, so if that happened it would be bad. On the other hand, rising heat is melting glaciers that a billion or two people depend on, so it's a balancing act...

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**Anonymous Attendee:** Do you believe that some of the opposition to solar geoengineering, and carbon dioxide removal, is driven by a fear that the motivating power that climate change provides for systemic change will be weakened?

**RESPONSE:** Yes, this is the Moral Hazard argument again, and a real thing, but weakening as the scale of the emergency and our slow response so far gets more notice. We may become desperate, in other words. The scientists studying now will always say We have to decarbonize no matter what. But in emergency of mass heat death and mass

extinctions, we may also want to break glass on emergency methods, as the lesser of two evils.

Oil companies may talk well of carbon drawdown because it would give them something to do if their product is forced by society to “keep it in the ground.” But here, this would be a good thing. We all used oil to generate electricity and get around in cars etc. Now, if that industry gets re-configured into putting carbon back into the ground, then to me, it's a case of whatever. At least they have the capacity and tech to do it!

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**Alírio Karina (they/them):** How do participatory models help manage the neocolonial problem at the heart of climate troubles? What I mean here is that the distance between people living relatively untroubled lives and causing troubles to the others who are experiencing them elsewhere is a political problem too--how do we respond to that?

**RESPONSE:** That's a hard one, what about a stiff progressive carbon tax (paying the “social cost of carbon”) with the fees paid shifted to the people affected the most by bad impacts? I know this is a little utopian, but if brokered by the Paris Agreement it might actually be something that worked. Also, carbon quantitative easing-- the creation of new money from scratch can be done best by developed nations with trusted currency. Best of all, the US dollar. New US dollars created and given immediately to most-impacted peoples?

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**Anonymous Attendee:** What is your opinion about the role of China in the future? In the novel, India and other parts of the world seem to experience more democratic and distributed governance but China seems to play a powerful role while maintaining the one party dictatorship. It felt very realistic but is this ok?

**RESPONSE:** Hard to say about this. China is big, important, has its own system and culture, needs to be part of the world community and the climate solution. Has trashed its own country in classic quick-fix socialist style, people first, get out of poverty, the environment be damned. This will come back to bite them. They are in a very tricky balancing act. The current leadership's distrust of the people will rebound on them. I think it's a case of the people will trust the Party if the Party trusts the people. But this is the guess of an outsider. From the outside, I think we should pressure them to respect all their citizens-- that will work best if we do the same here....

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**Joshua McBee:** For [Olufemi.Taiwo@georgetown.edu](mailto:Olufemi.Taiwo@georgetown.edu): under the sortition scenario you mentioned, who picks the experts whose views inform legislators' decisions? It seems like there's a real risk that whoever does that will have the real power to shape what happens. Is there a way to preempt the possibility that the expert-selectors would work self-interestedly to shape legislators' opinions?

**RESPONSE (FEMI):** I don't think this situation is entirely preventable. That said, I think even a situation where we shift where elite capture sits in the system from decisionmakers themselves to the decisionmakers' advisors is a marked improvement relative to the status quo. But there's still stuff to do: expert testimony could itself be solicited by a lottery process, academic norms could adjust to require experts to give voice to minority opinions in the field (even where they personally disagree).

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**Karina Garbesi:** But mustn't a distinction be made between win-win ecological sequestration and those typical geoengineering approaches which SHOULD be reserved as measures of last resort because of both their risks and because of legitimate mistrust in them because of the history of industry and government lies.

**RESPONSE:** Yes, this is a good distinction to make and hold to. First do all the things that are clear win-wins without downsides. Save the spectacular interventions for emergencies and hope never to have to use them. This probably should be emphasized more, yes.

**RESPONSE(FEMI):** Agreed with Stan, this is a very helpful distinction.

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**Anonymous Attendee:** Interesting reply. Thanks! What bothers me with is in terms of justice.. what happens in Hong Kong and Uighur and Tibet at the moment. and the warnings of people in HK saying that "this time it's us, next will be you" whatever that means

**RESPONSE:** I am hoping that Hong Kong will hold as an island of human rights and rule of law, and I'm wondering if the entire Cantonese-speaking zone (125 million people) in the south of China will serve as a kind of HK-support group in mainland China, because

Beijing has been bad about supporting Cantonese-speaking citizens lately. But again, justice in China, without rule of law, with Party not trusting the people-- it's not looking good right now.

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**Alex Watson:** Thanks for the interesting chat. I work in today's carbon market (a.k.a. offsetting). Yes, as it is at the moment, it is wholly inadequate for tackling the climate crisis, because it relies on big profit-driven polluting companies to voluntarily act. But it's a \$1bn/year industry and companies aren't paying for nothing! So it has established many of assessment systems and accounting protocols needed for the "getting the certification teams for the sequestration up and running" you talk about in your (inspiring) book Stan. Femi, I look forward to reading the Atlantic article Kate mentioned. I'm happy to explain more about carbon offsetting industry [awatson@naturalcapitalpartners.com](mailto:awatson@naturalcapitalpartners.com)

**RESPONSE:** Thanks for this Alex, it's good to have pilot projects and real-world effects for the good even if there are associated problems. Just because people always try to game a system, doesn't mean the system is bad inherently. People try to game taxes (big time) and yet taxes are still a good idea. What starts voluntarily might become a norm, and even a law, and companies doing things voluntarily are trying to protect themselves down the line so this indicates a shifting structure of feeling-- this is important. Keep up the good work!

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Thanks for listening and reading, in this time of Zoom fatigue this says a lot for people's curiosity and interest in these matters. Thanks also to Kate and Wil and all the organizers, and I'm looking forward to following Femi's work and learning more-- Stan

Also thanks everyone for listening, and apologies that I didn't get to all of the questions! Thanks of course to the organizers as well. - Femi