Updates:

1. We are moving away from a project that includes creating our own index for conflict - instead we are considering a new 3-part process, as detailed below.
2. Part 1: Using indicators that align with the Pardee-RAND FEW insecurity index, under what conditions does this indicator suggest higher risks of conflict spatially and temporally?
    a. Plan is to vary SSPs, RCPs, and carbon tax plans (LUC vs UCT)
        i. Cat: ran 5 scenarios, spent a long time with rgcam and gcamextractor -> figured these out so should be good to explore a few more GCAM runs…
        ii. Can we generally do this and then do a specific case? Iraq -> use ongoing water-conflict pathways
3. Part 2: Disaster generation
    a. We write some code that generates disasters within GCAM
        i. Random?
        ii. Chosen?
        iii. What kinds of disasters?
4. Part 3: Given all of these interactions, how can GCAM best be use (or not) to guide policies in the context of conflict prevention and response?
    a. Literature review on how GCAM has been used in this context
        i. Ymbar: from what I've seen so far, policies are often mentioned when thinking about climate mitigation and adaptation but not necessarily conflict prevention and response
    b. Literature review on how GCAM has been used for climate mitigation (identify a scale)

Shafiq Comments:

- What's the scale for global conflict?
    - Specifically looking at Ukraine
- We should have a level of baseline
- At what scale has it been used to inform policy?
    - Jon: It's been used in climate negotiation
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Jon Comments:

- If we can't capture something as big as world war II, how useful can it be for smaller conflicts?
    - Systematic analysis of conflict to identify sensitivities
        - E.G. India, Pakistan, Taiwan, and sanctions in China

Meetings 2/21:

- Criticism: part 2 is not going to work well - why do it at all?
- Different kind of conflict?
    - How much could we shake GCAM up? One data point…..

        - What quantitative things can we draw from a single event
- Is Ukraine a specific region in GCAM?
    - Incorporated into Europe Eastern maybe
- Could you simulate WW2 - some kind of catastrophe generator?
    - David was interested
    - Questions of representation?
        - How would you affect war? How would you affect population?
- Previously established catastrophe or an imaginary one?
    - Leaning towards imaginary
        - Tsunami, famine, plague
    - Pandemic?
    - Questions of bilateral trade
    - GCAM won't necessarily resolve with extreme shock -> only sometimes resolves
    - Gets to questions about what are the limitations?
        - How bad of a disaster has to happen before GCAM fails?
- What are we going to do with outputs?
    - Same statements of limitations of these models for policy makers
- What is GCAM useful for?
    - Conflict
    - War-gaming catastrophes
    - How does how we are using GCAM vary from how others use GCAM?
    - What have people used it for in the past?
    - What alternative methods that can be used?
    - Implications for the 'right use'?
    - How robust is planning based on equilibrium models?
- Equilibrium models may not be robust to crises
- Three parts
    - GCAM suggests where and when we could see things shaken up
    - GCAM isn't robust to being shaken up
- What do we bring to Jon?
    - Meeting Friday morning?
    - Can we re-pitch idea two?
        - How big of a disaster has to occur to matter? Is there a threshold for catastrophe?
            - Simulate impact of increasingly bad catastrophes by manipulating impacts?
                - Across severity, regions of catastrophe, etc
        - Match catastrophe definition to inputs
            - Will it resolve?
        - Or….take a movie disaster…….?
        - What has to happen to have a meaningful impact?
    - Does he care if they are super aligned or not?

Incorporating ‘catastrophic’ climate change into policy analysis
https://www.tandfonline.com/doi/full/10.1080/14693062.2014.864947

Meeting with Jon 2/23/24

- Pitch project 2
- Jon says pivot, not restart
    - 1st project consistent
    - 3rd project makes sense
        - What venue? Important policy indications
            - Exclusion of wellbeing from these models
- Project 2:
    - Programming/data analysis interest
        - What’s possible from a programmatic standpoint?
        - Full catastrophe also may not work
    - Some ‘catastrophic disaster’ lever for regions to affect
    - Not sure this is actually about disaster recovery…..
    - More positive feedback from Jon on this one
    - Coincidence of massive inequality would be bad - in the vein of
    - Having mechanisms to increase global equity/build resilience are good
    - What does it look like and what can we even try?
- Other suggestions
    - Experiment with inputs - knock out certain regions
    - Like changing input parameters in a region- eastern europe
- Thresholds for registering disasters.
    - Cost of tech
    - Some other levers
    - GDP/pop impacts might be the easiest
- Internal civil conflict is bad for economic measures in general -> isaac to help think through what some of these things can be
    - Capital stock -> aligns with power plants perhaps
    - Things to use but not buy -> notions of this existing
- Promising direction too
- Validating GCAM
    - Why is this model used for climate policy if we can’t validate it? Cannot be validated overall - just components
        - No one knows how to validate
        - Validation may not be possible
- Interest in our discussions around educational purposes as well
    - What is trivial for us doesn’t mean trivial for the public
    - Educational tool to simulate disaster movie
        - Bring in others to the conversation
        - Can we capture some of 2012/other movies, etc
    - Jon’s comments:

        - Simple IAMs exist illustratively - DICE from Nordhaus
            - Designed as an educational tool
        - Tool to help students explore the consequences of mitigation
        - Tools exist along disaster route
    - Big disaster movie idea pitched
        - Simulation - super illustrative
        - Jon comments
            - Does have to be a big disaster
            - We are going to make ourselves extinct lol
            - Maybe not massive tsunami, but maybe nuclear bomb, wwiii, etc
            - Example Conflict- oil production from Middle East severely reduced/ oil or any commodity
            - Could scale workforce productivity -> migration is a big question
- Realism isn't a problem for educational purposes
- Lot of good ideas
    - Book ends and middle all are on the right track
    - All things can be modeled for stylization