# Robustness and legitimacy: Outlook

27 May 2020 Seth Monteith



# AMPLIFYING CLIMATE PHILANTHROPY

Global Intelligence Global Collaborations Global Grantmaking



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Global Intelligence

Climate

Philanthropy

Results

Global Collaborations Global Grantmakin



#### How do we use Integrated Assessment Models?

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### Education

### **Discourse tools**

#### Insights, targets and benchmarks

#### Global Change Assessment Model (GCAM) Pacific Northwest National Laboratory



#### Land Use

GCAM includes 283 land regions with 18 types of agro-ecological zone. The land resource mapping units are defined in terms of climate, landform, and soil to allow for modeling of land use and land use change activity and emissions.

#### Energy

GCAM covers 32 energy and economic regions, including all of the major economies in which we work. Energy sectors have technology-rich representations with myriad mitigation options.

#### Water

New to GCAM is a global hydrological model with 235 water basins. This model includes a technologically detailed representation of water demand sectors, and withdrawal and consumption.

#### Climate

Covering 16 greenhouse gases and short-lived forcers, GCAM is a representative concentration pathway (RCP)-class model. It can be used to simulate scenarios, policies, and emissions targets..



#### Insights, targets and benchmarks



## Funding



#### Abatement



Illustrative

#### Funding considerations are varied



Strong, long-term relationship with funding organization



Strength or lack of capacity within the network of grantees



Windows of opportunity for policy action



Co-benefits for secondary goals & missions



Well positioned champions



Financial or operational barriers

# And holding up a mirror can be difficult for any group...



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## ...but looking at funding/tons is a starting point for deeper discourse.



- Expanding use cases for IAM's comes with risks
- Communicating results
- Updating Shared Policy Assumptions (SPA's)
- Wishlist of better sectoral representation for policy assessment

Expanding use cases for IAM's

Are IAMs <u>always</u> the tool for new questions?

As IAMs are used to answer new questions they need to remain true to their original use case. Development and maintenance of the core model is important for transparency.



Communicating results

Wait, they all lead to <2°C? Is there a wrong answer?

But I know how

l'm no scientist.

There is a risk of decision paralysis without guidance from those who understand the complexities.

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to cherry pick.

Updating Shared Policy Assumptions (SPA's)

#### **Cooling Example**



GCAM-REF: Based on SSP2
GCAM-CWF: Augmented SSP1 including efficiency + Kigali Amendment

Mixing and matching RCP-SSP-SPAs is not a straight forward process for generating a baseline that allows for clear assessments of policies.

Further development of SPAs and creating a process for continuous identification of policies for inclusion might result in better more up-to-date baselines.



Wishlist of better sectoral representation for policy assessment



Wishlist for policy relevance:

# Thank You

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