

Justice for Climate Researchers

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PREFACE I

- ▶ **Many co-authors** at IIASA: Caroline Zimm, Jarmo Kikstra, Elina Brutschin, Karl Scheifinger, &ct.
- ▶ The Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6) repeatedly stressed the **difficulty modellers and climate researchers have** in systematically incorporating justice considerations (à la 2023 Scenario Workshop Bangkok)
- ▶ “Fairness” and “(principles of) equity” **won’t cut it**
- ▶ As usual, when there’s trouble brewing, philosophers can (and should!) **come to the rescue**
- ▶ Desiderata: **accessibility** (across disciplines), **power** (in terms of expressiveness), and **modularity** (independence of justice considerations)
- ▶ This could contribute to **dialogue, understanding** and **diagnosis** of justice differences and positions

PREFACE II

nature climate change

Perspective


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Justice considerations in climate research

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 Check for updates

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Climate change and decarbonization raise complex justice questions that researchers and policymakers must address. The distributions of greenhouse gas emissions rights and mitigation efforts have dominated justice discourses within scenario research, an integrative element of the IPCC. However, the space of justice considerations is much larger. At present, there

Figure: [Zimm, Mintz-Woo, et al. \(2024\), doi:10.1038/s41558-023-01869-0](#)

THE FRAMEWORK

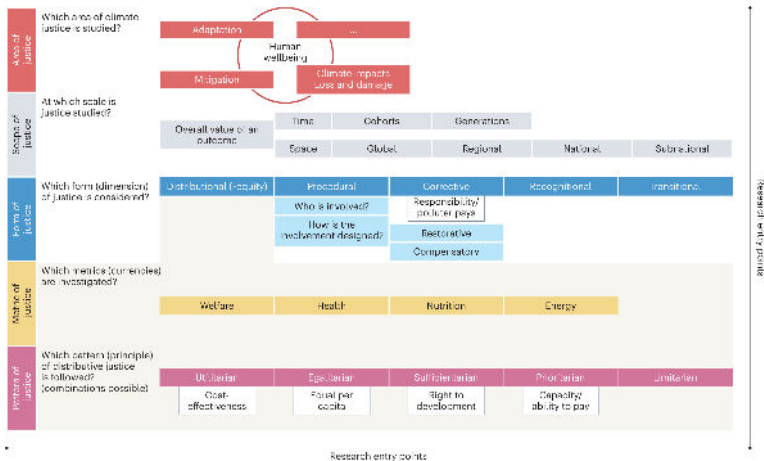


Figure: Zimm, Mintz-Woo, et al. (2024), doi:10.1038/s41558-023-01869-0

INTRODUCING JUSTICE TO NON-PHILOSOPHERS

- ▶ High level: We break justice into **area, scope and form** (form \approx type, dimension, or pillar) of justice
- ▶ The **area is the subject matter** (in the climate context: mitigation, adaptation, Loss & Damage, impacts)
- ▶ The **scope is who is considered**, which involves temporal scope (e.g. discounting, size of cohorts), spatial scope (e.g. regional, global), and the (expanding) circle of considerability (e.g. anthropocentric, sentientist, biocentric)
- ▶ There are many **forms of justice**; focus on most relevant to climate research (distributional, procedural, recognitional, corrective, transitional)
 - ▶ Forms selected for **power and modularity**
- ▶ As distributional includes own aspects, **broken down** more:

DISTRIBUTIONAL JUSTICE

- ▶ We see distributional justice as involving a **metric (or currency) of justice** (proxied by some **indicator**) (e.g. health, proxied by calories; welfare, proxied by consumption)
- ▶ Then there are **patterns (or shapes) of justice**...
 - ▶ For instance, **egalitarian, prioritarian, sufficientarian**...
- ▶ Metric plus pattern equals a **“theory of justice”**
- ▶ We can use this framework to **better understand “equity principles”**
- ▶ Note that **“equal per capita”, “contraction and convergence”** could fit in as **patterns** whereas certain development objectives would be **sufficientarian** (prioritarian?) (“Green Development Rights” framework)

PROCEDURAL JUSTICE

- ▶ How **decision-making** is done
- ▶ The philosophical literature has covered this in **terms of governance**, but we extend it to research
- ▶ Analogue: Which **tools, models and input data** are selected?
- ▶ How are research **results communicated**, e.g., to policy-makers?

RECOGNITIONAL JUSTICE

- ▶ **Who is involved** in the decision-making, and how **decision-making is sensitive to contexts** (van Uffelen, 2022)
- ▶ This is mostly new in this context: our view is that this could be reflected (1) in the **composition of researchers and literatures** (gender/ nationality/ socioeconomic class) but also (2) in **implementation** (how climate policies are enacted)
 - ▶ This is challenging: **epistemic benefits** of researcher diversity?

CORRECTIVE JUSTICE

- ▶ How to address **past wrong**
- ▶ **Do we** take emissions to be wrongs?
 1. If so, do they require compensation (**compensatory justice**)?
 2. Do they require resetting some type of status quo (**restorative justice**)?
 3. Do they require acknowledgment or recognition (**(symbolic) reparative justice**)?
- ▶ Here, a philosophically helpful distinction is between **backward-looking considerations** (focused on causal and historical connections) and **forward-looking considerations** (independent of these connections); corrective justice is concerned with backward-looking considerations and the other forms of justice here are not

TRANSITIONAL JUSTICE I

- ▶ Building on Rawls (1971) and Simmons (2010), we use transitional justice to indicate the **justice dynamics of temporal pathways**
- ▶ This **contrasts with distributional justice**, which is usually concerned with **“end-state” or static distributions**
- ▶ In the climate policy community, transitional justice predominantly applies in terms of **“policy sequencing”**, e.g. how should subsidies and carbon pricing be introduced or phased in? (Roughly, questions of efficiency)






TRANSITIONAL JUSTICE II

- ▶ But there is a new and more conceptually ambitious question here about a meta-form of justice, how to **balance different justice considerations** and their **dynamics**:
 1. Considering the **same form of justice**, when or how would it be permissible to trade **that at one time period for another**?
 2. Considering **multiple forms of justice**, when or how would it be permissible to trade **some at one time period for others**?

TAKEAWAYS

1. This is a **powerful, modular and accessible** framework
2. We hope to build on this with a **JustMIP** (model intercomparison project on justice)
3. It can also be used to **elicit preferences over various ideal distributional patterns**
4. We believe this **systematizes and translates** philosophical research for an interdisciplinary climate audience
5. And we hope it provides useful concepts which can promote **successful discussion and diagnosis** of justice differences for researchers and policy-makers

Operationalizing distributional justice with scenario diagnostics

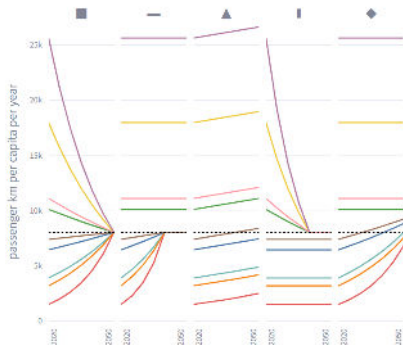
Justice Pattern	Core idea	Observed IAM trajectory	Examples	Scenario Diagnostics
Aggregate Utilitarian	Overall consumption increased	All regions grow		Did the total consumption increase? [dynamic]
				...
				...
Prioritarian	Those worse off have gained most	Lower regions catch up		Did the total consumption share of the lowest 50% of the global population increase? [dynamic]
				...
				...
Egalitarian	Everyone has the same	All regions converge to same point		Is the global GINI of consumption below a threshold? [static]
				Did the Standard Deviation across all regions decrease? [dynamic]
				...
Sufficientarian	Everyone is above a certain threshold	Lower regions grow to floor		Is the entire population above a Sufficientarian threshold? [static]
				...
				...
Limitarian	Everyone is below a certain threshold	Higher regions reduce to ceiling		Is the entire population below a Limitarian threshold? [static]
				...
				...

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Figure: Karl Scheifinger et al. (in prep.)

Operationalizing distributional justice with an interactive web-app I

18 participants
from the
International
Vienna Energy and
Climate Forum



Which scenario do you personally find to be the fairest, based on the graph above?

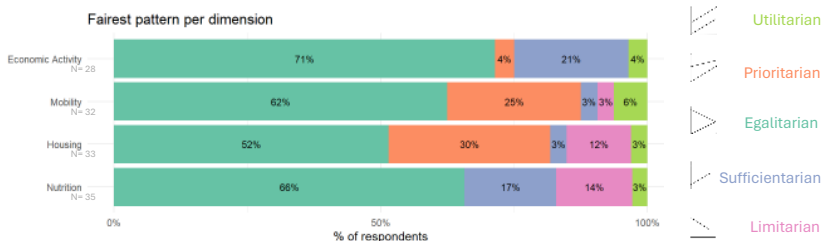


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Figure: [Karl Scheifinger et al.](#) (in prep.)

Operationalizing distributional justice with an interactive web-app II

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