



RUPRECHT-KARLS-  
UNIVERSITÄT  
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**mk** MARSILIUS  
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**Kieler Symposium „Future Ocean“:  
Session 7 „Climate Engineering“**

# **Governing Climate Engineering: Regime building under Uncertainty**



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# The argument

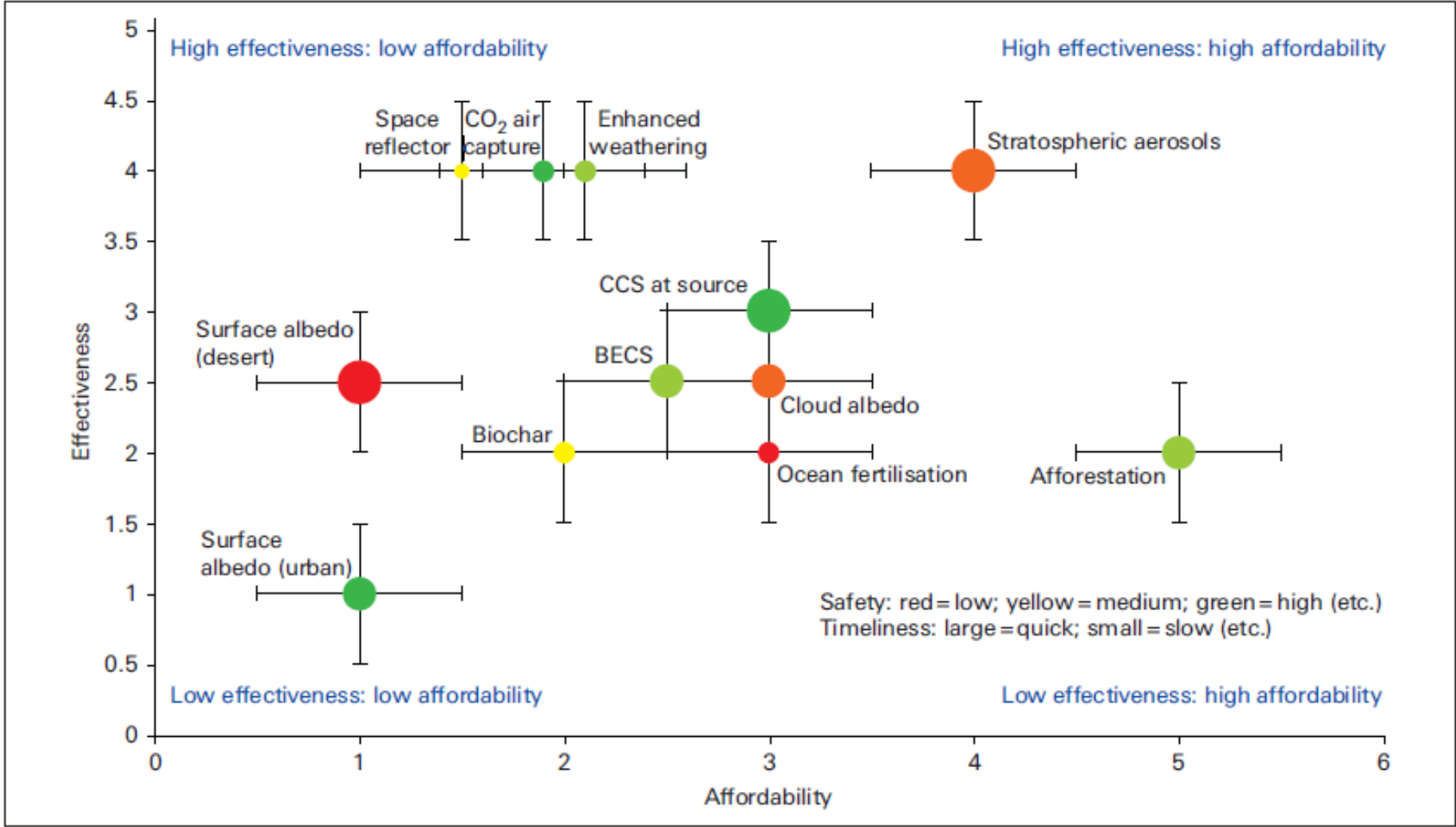
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1. **Assumption:** Climate Engineering, as climate change, poses a typical long-term policy problem, i.e. public goods production with substantial transboundary and transgenerational costs involved (Hovi/Sprinz/Underdal 2009).
2. **Proposition:** Uncertainty and risk characterize CE research (and policy making), necessitating explanatory approaches which conceptualize these variables in regime building processes (Stone 2009; Daase 2002).
3. **Modelling Uncertainty and Risk:** In POLSCI literature three distinct risk approaches can be identified: realism, rationalism, social constructivism (Rathbun 2007).
4. **The Politics of CE Regime building:** Depending on mode of risk assessment, CE regime building focuses on power, information or identities as central factor shaping the regime structure.

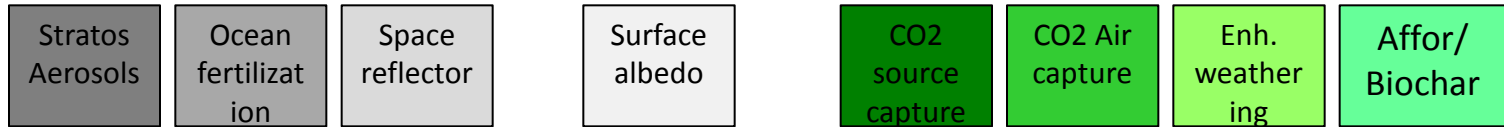
# Risks in POLSCI and International Relations Theory

	<b>Realism</b>	<b>Rationalism</b>	<b>Cognitivism</b>	<b>Soc. Constr.</b>
Nature of reality	Objectively real	Objectively real	Obj., but subj. perceived	Soc. Construct. but reified as obj.
Conception of Risk	Fear of predation / possibilistic	Ignorance of benefits/costs probabilistic	Confusion	Indeterminacy
Tools for Risk	Power	Information	Cogn. shortcuts	Norms/Identity
Learning	Realization of objective truth	Updating of information	Mastery of complexity	Acquisition of identity: socializ. / persuasion
Sit. structure	Prisoners dil.	Mixed motive; Collect. good	Mixed motive	Game character may change
Regime building	Power shapes regime struct	Information + credibility		Identity formation

Figure 5.1. Preliminary overall evaluation of the geoengineering techniques considered in Chapters 2 and 3.

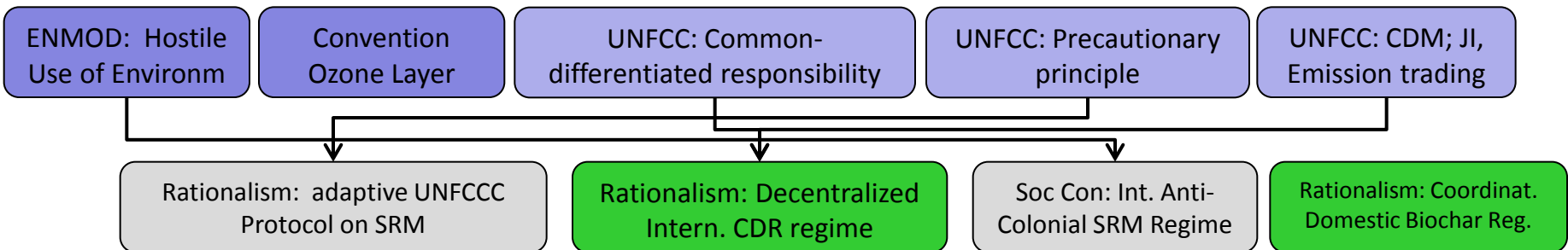
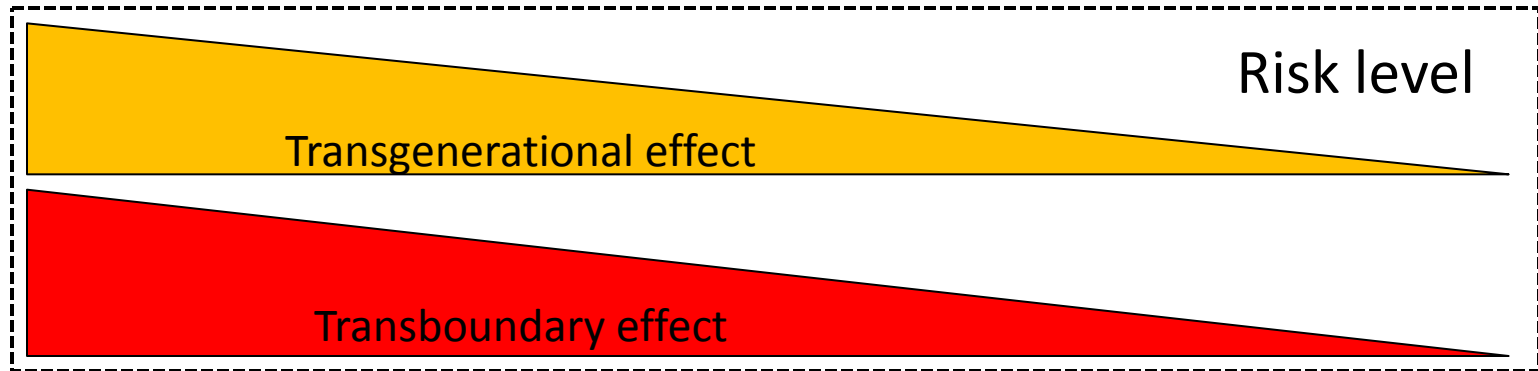


# CE techniques – Risks – Regime building



SRM

CDR



# Conclusions

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1. Review of POLSCI risk concepts suggests more (transdisciplinary) dialogue is needed to identify areas for theoretical/empirical synthesis
2. Comparison of risk levels based on transboundary / transgenerational effects suggest that SRM and CDR will be regulated by different regime types.
3. CDR regime building has already started: domestically with regulation of terrestrial albedo / geological sequestration and internationally with afforestation/sink problematique in Kyoto Protocol.
  - Rationalists regime theory suggests that sunk costs in existing treaties will lead parties to adapt existing regulations rather than negotiating new ones.
  - SRM regime building, if managed cooperatively, will probably be centralized. High risk potential (scale of transboundary + generational effects) require either strong transparency, verification or compliance mechanisms and/or a strong communal identity to absorb unintended and unevenly spread adverse effects.