

La rimozione di CO₂ dall'atmosfera e il progetto Desarc-Maresanus



Aspetti sociali, politici, economici ed etici della rimozione
della CO₂ e della georingegneria solare

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GGR and SRM: social issues

- GGR (some, e.g., DAC) is scalable and sounds very much like pollution control → less socially difficult than SRM
- Since some forms of GGR (e.g., afforestation, ocean fertilisation) mimic or enhance existing natural processes, public perception of GGR is more favourable ('respecting nature') than for SRM ('hacking the planet')

Politics of large-scale GGR & SRM

Distinctive considerations apply to large-scale GGR (and the DM project is L-S) and SRM:

- Who gains from research, development, and use? Who might lose out?
- Who would have a voice in decision-making, and who might not?
- Can traditional environmentalism and environmental policy – oriented toward reducing humans' impacts on the natural world – manage LS-GGR/SRM?

Governance of LS-GGR and SRM

- Who decides what and how much in case of international/global projects (e.g. alkanisation of high seas –as in the DM project– or SAI)?
- Should the developing world take part to the governance?
- GGR and SRM may influence other responses to climate change
- These matters will be contested and politicised
- How and by whom?

The economics of SRM

- SRM is not ‘incredibly cheap’ as it was originally believed
- For or a delivery cost of five to ten billion dollars a year, a fleet of airplanes or balloons could deposit enough aerosols in the stratosphere to counteract within weeks a significant fraction of the global warming caused since industrialization
- SRM is a ‘high leverage technology’, i.e. a technology that could exert large influence over global climate from relatively small inputs

Basic ethical considerations of CE

- Specification: in an ethical perspective
 - Small-scale GGR is a non-issue
 - Large scale GGR is quite similar to SRM (CE)
- Successful CE can lessen a huge amount of human suffering and environmental harm
 - This is a great potential benefit of CE
 - These advantages are amplified if CE could be done without penalisation to the global economy

Policy and ethics of CE I: 'before'

- Moral hazard
- Moral corruption
- Hubris
- Technological fix

Policy and ethics of CE II: 'R&D'

- Principles governing research
Oxford Principles:
 - 1) CE regulated as a public good;
 - 2) Public participation in CE decision making;
 - 3) Disclosure of research and open publication of results
 - 4) Independent assessment of impacts
 - 5) Governance before deployment
- Lock-in and path dependency
- Participation of the vulnerable

Policy and ethics of CE III: 'deployment'

- Procedural justice
- Distributive justice
- Legitimacy
- Responsibility (care and precaution)

Policy and ethics of CE IV: 'post-deployment'

- Termination problem
- Cessations processes
- Designer climates

Conclusion

- In 1996 the first article on the policy and ethics of CE concluded that the conditions for political and moral feasibility of intentional climate change were not satisfied
- A quarter of a century later, with climate impacts more apparent the policy and ethics of CE are still highly controversial