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Multi-criteria decision analysis in climate policy
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Challenges of a multiple objectives approach

• When you have multiple objectives, some are quantitative and some are qualitative
  • Traditional energy and climate models concentrate on quantitative criteria:
    • GDP
    • Employment
    • CO₂
    • Harder to include qualitative measures
• Don’t provide guidance as to what is “preferred” or prioritised
  • Job creation vs cost
  • Poverty alleviation vs GHG mitigation potential
• Often decisions are not transparent, participative or repeatable
How can MCDA help overcome these challenges?

- MCDA provides a variety of tools that:
  - Support structured approaches to framing the decision process that makes it transparent, defensible and repeatable
  - Allow for engagement of stakeholders throughout the decision process, thereby increasing buy-in and access to data
  - Allow for quantitative and qualitative criteria to be considered simultaneously on an equal footing
    - Quantitative scales, proxy scales and constructed scales
  - Allow for exploring trade-offs and the implications thereof in a structured fashion (through weighting and compensation)
  - Conducting sensitivity and uncertainty analysis
  - Ultimately it’s about a “Good process” vs necessarily a “good answer”
Uses of MCDA

- Used for complex problems:
  - Multiple stakeholders with different views
  - Multiple criteria/objectives
- Transparent and defensible decision processes
- Historically used for discrete decision problems rather than policy setting
Challenges

• (Very) time consuming and resource intensive
• Requires ongoing engagement from stakeholders
• Requires a skilled decision analyst
• Stakeholders may argue that the process is not accessible/understandable
• People looking for a single point result without appreciating:
  • Process as important as the outcome
  • Results are sensitive to the input parameters (like any modeling)
  • Uncertainty/sensitivity analysis an important part of exercise and interpretation of the results
Has MCDA been used in climate policy?

- South Africa:
  - Mitigation potential analysis
  - Co-benefits of mitigation technologies analysed:
    - Jobs
    - Contribution to GDP
    - Water
    - etc
  - Qualitative high level analysis which allowed stakeholders to come to grips with the multiple impacts of climate mitigation technologies
Has MCDA been used in climate policy?

- **Colombia:**
  - Attempt to rank mitigation options on a qualitative (1-5 scale) for >70 co-benefits
  - However scoring scales were not well defined
  - Stakeholder fatigue after ranking x alternatives – put down any answers

- **Chile:**
  - Attempted to used MCDA in their climate planning process
  - After trying to quantify multiple objectives, ended up with three parameters – feasibility of implementation, abatement cost and abatement potential
  - Provided a sound platform for engagement on the multiple development issues
In summary...

- MCDA approaches require time and resource investment and stakeholder engagement
- Having said this, if decision making around policy is to truly engage with multiple development objectives, MCDA provides an established set of approaches
Thank You

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