



Utrecht University

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Information and
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Ministry of Agriculture,
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and Climate Policy

Beyond the results of models: additional purposes for modelling in the policy process

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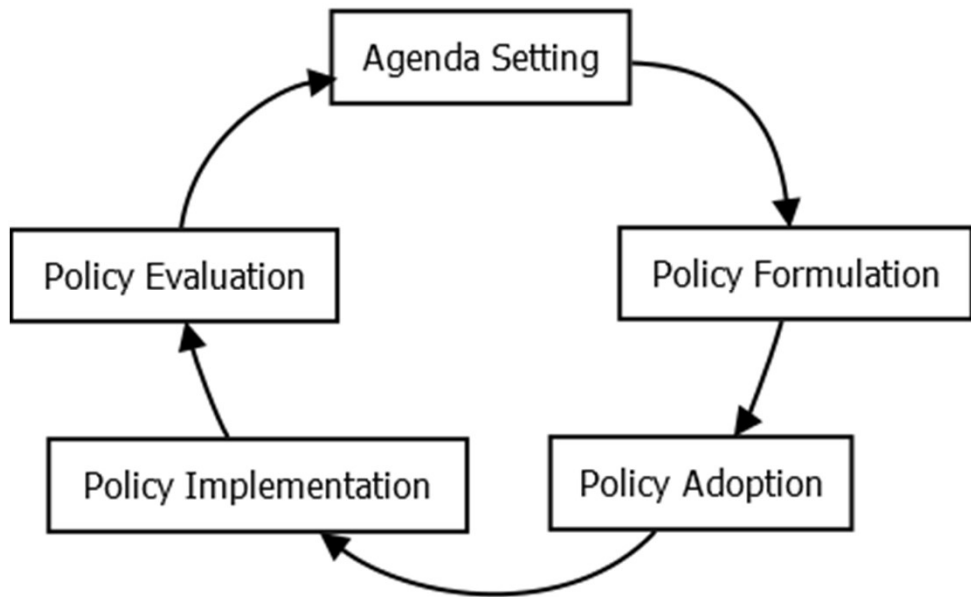
12-11-2021

Key takeaways from this talk:

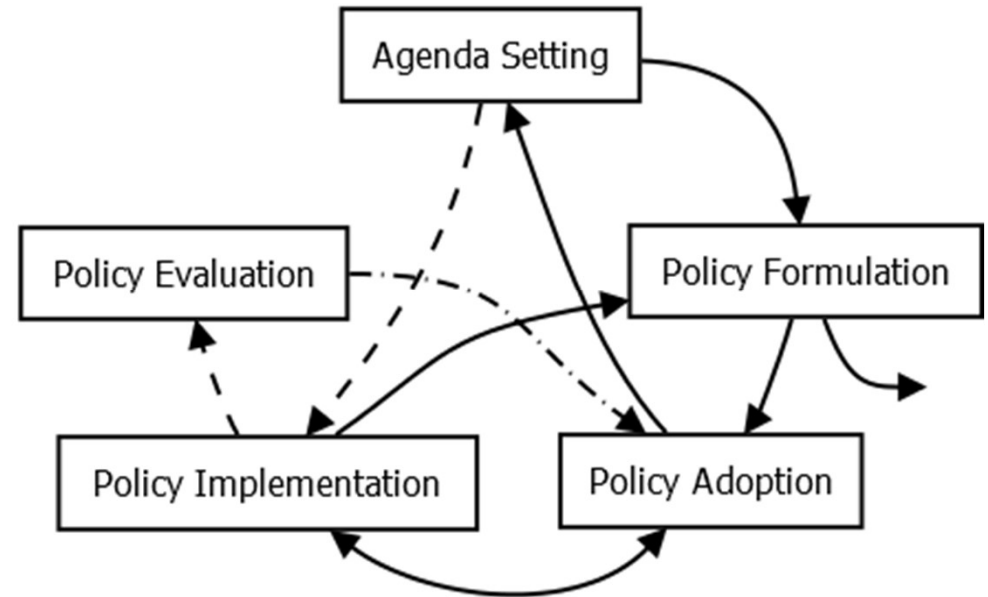
Goal: use ABM to improve real policy processes

- The process to create an ABM can serve a valuable purpose in policy development.
- The process to create an ABM can be more important than the outcome of the ABM to the policy process.
- Three proposed process purposes of models:
 1. Improve the understanding of complexity
 2. Improve alignment in world views of stakeholder
 3. Guide the policy process with suggestions for next steps

The policy process in theory

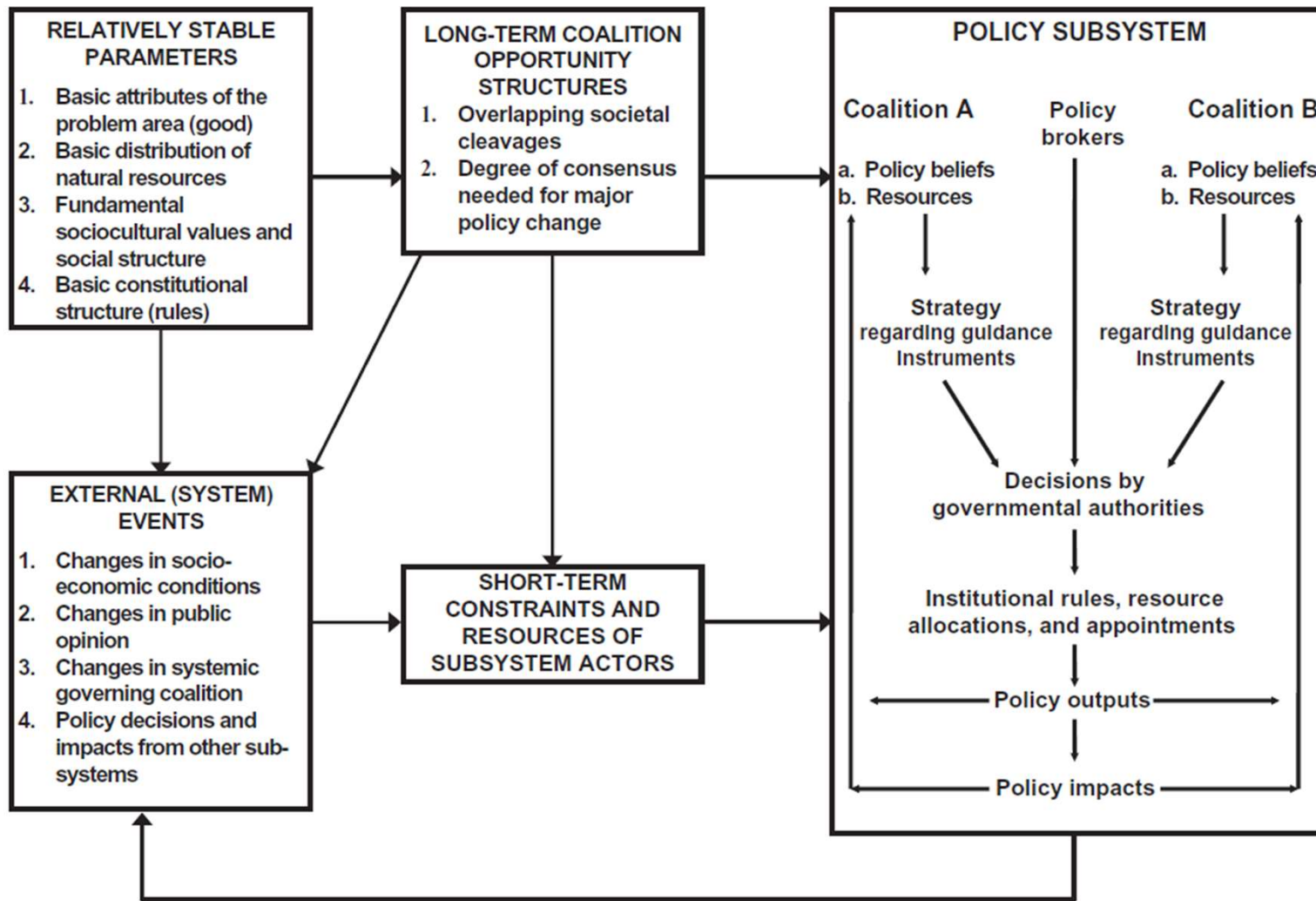


A policy process in practice



The policy process is usually not a neatly structured process

Advocacy Coalition Framework



Dutch context for policy modelling?

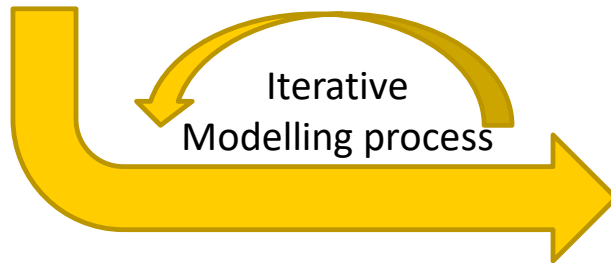
2007 Advocacy Coalition Framework Flow Diagram

Case study: monitoring the EV-transition

Participatory modelling

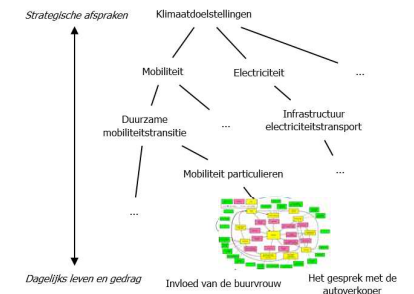


Various stakeholders with different perspectives

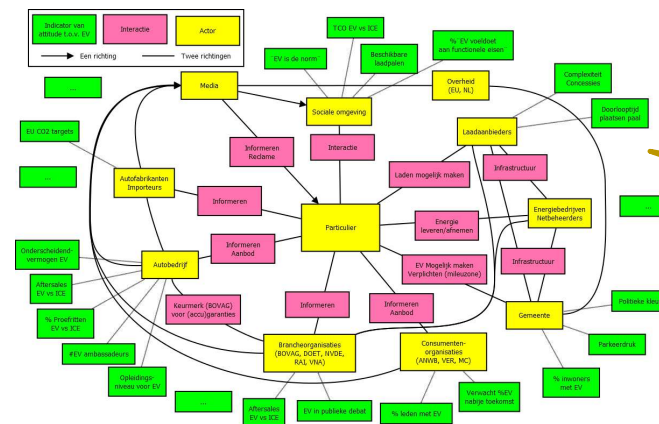


Questions from policy developers w.r.t. non-fiscal indicators:

1. Vague goal; help us understand and get “a grip on things”!
2. How do others understand it?
3. Tell us what to do!



#	Indicator	Actor	Kwantificatie	Prioriteit	Complexiteit
1	Aftersales inkomsten ICE vs EV	Autobedrijf	Verhouding	4	5
2	# EV-Ambassadeurs bij autobedrijf/verkopers	Autobedrijf	Aantal per bedrijf	3	3
3	# Proefritten, %EV, % ICE	Autobedrijf	Aantallen of %	3	2
4	% "EV is de norm"	Sociale Omgeving	% mensen eens met "EV is de norm" of score 1 tot 10	3	3
5	% EV's in aanbod vanuit fabrikanten	Autobedrijf	% van aanbod	3	3
6	Attitude van de media	Sociale Omgeving, Media	Aantal artikelen/items en houding daarin.	3	4
7	EU CO2 targets fabrikanten (2021, 2025, 2030)	Autofabrikant	Ordinaal (laag, hoog, etc) of absolute waarden	3	1
8	TCO EV vs TCO ICE	Sociale Omgeving	% of absolute waarde	3	2
9	Winstmarge EV t.o.v. winstmarge ICE/anders	Autobedrijf	% of absolute waarde	3	1
10	# Gemeentes met een sloopregeling	Gemeente	Aantal	2	2
11	# Gemeentes met milieuzones	Gemeente	Aantal	2	2
12	% EV verkoop VS ICE verkoop	Autobedrijf	% van verkopen	2	2
13	% EV's in 2e hands markt aanbod	Sociale Omgeving	% van de verkopen	2	1
14	Lokale beschikbaarheid laadpalen	Sociale Omgeving	Aantal laadpalen delen door aantal EV's in gebied (by PCG)	2	2
15	Sentimentsmetingen	Sociale Omgeving	Sentimentsmeting op sociale media over "EV", enquête	2	4



“I knew it is complex, but now I know why it is complex.”

Six principles when using Agent Based Modelling to impact the policy process

1. Acceptance is more important than correctness or validity.
2. It is not about finding The Answer, it is about finding valuable insights.
3. Stakeholders are involved during development.
4. Create value without empirical evidence.
5. Communicate in an understandable way.
6. Explicitly state what the ABM does and doesn't do.

Discussion

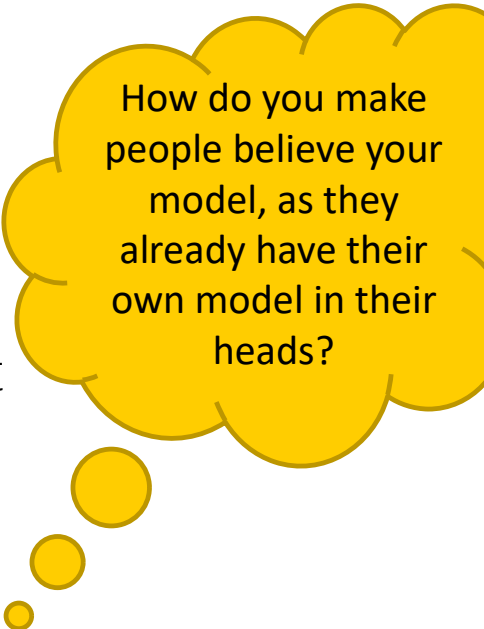
- Subjectivity! What about validation and objective science?
 - Goal to **improve** policy process, not to “solve” it.
 - Later policy process phases would require more validation.
- The proposed purposes are not always applicable.
 - Different purposes for different phases of policy process.
 - Challenge to be involved in earlier policy process phases.

Requires different way
for policy developers
and academics to
collaborate.

Key takeaways from this talk:

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How do you make people believe your model, as they already have their own model in their heads?

To leave you with some questions...

- What are your thoughts on the difference and distinction between process purposes and output purposes for ABM's and our simulations?
- Do you know of additional process purposes?
- Suggestions for additional principles?
- Anything else you want to discuss? Let me know!
- Contact: a.t.melchior@uu.nl