How effective is participation in public environmental decision-making?

Early findings from a meta analysis of 250 case studies

CSU, 2 September 2014

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Project “EDGE”

Evaluating the Delivery of Participatory and Collaborative Environmental Governance with Evidence-based Methods

Jens Newig, Ed Challies,
Nicolas Jager, Elisa Kochskämper

ERC Starting Grant
2011-2016

Multiple rationales of participation

Emancipation	Legitimacy	Effectiveness
Questioning of authorities	Transparency	Better informed decisions
Empowerment	Democratic values	Acceptance and identification
Self-determination	Preemptive legal protection	Implementation / policy delivery

Newig & Kvarda (2012)

How does participation function effectively?

Theoretically contested

Conflicting evidence

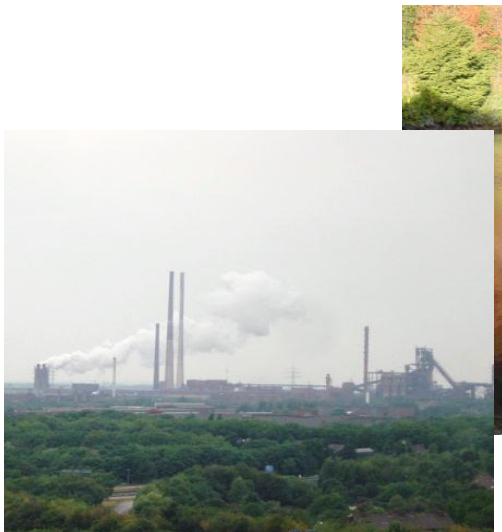
Process → ? Information basis → Acceptance → **Outcome**

Public decision-making processes

Public involvement

Collaborative management

"Good" decisions in the sense of environmental and resource protection, sustainability

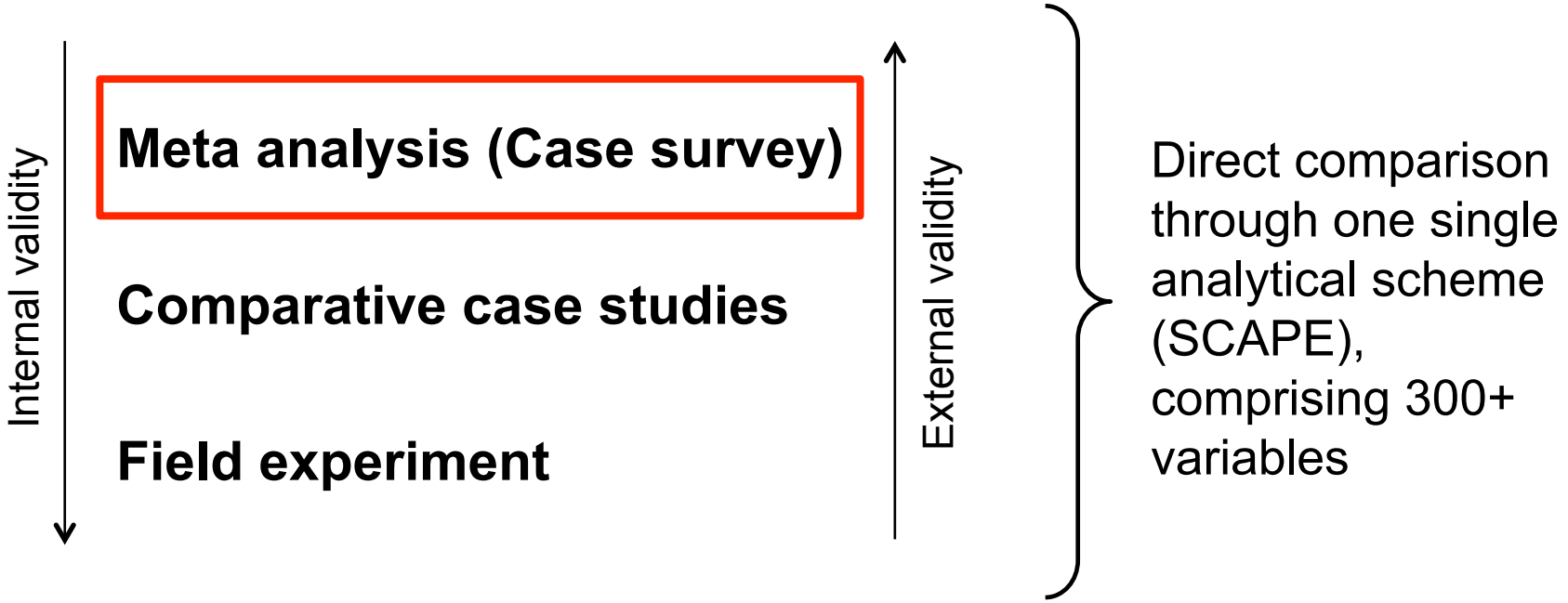


Design: research questions

- How do different modes of participation affect environmental outcomes – as opposed to hierarchical modes of governance ? Under which conditions?

- How can we arrive at comprehensive, precise and unbiased knowledge on ‘what works’ in environmental governance ?

Methods in 'EDGE': Evidence-based approach



- Explore the limits of evidence-based methods

Newig & Fritsch (2009);
Newig et al. (2012, 2013)

Methodology: Case Survey

Knowledge aggregation and integration: Meta-analysis

Source of data / *Method of integration*	Qualitative case studies (unit = case)	Quantitative studies (unit = article)
Narrative / ad hoc	Traditional review	
Qualitative, interpretive	Meta-synthesis	---
Systematic, but not quantitative	Systematic review	
Quantitative or otherwise highly structured (statistical or QCA)	Meta-analysis (in a broader sense): Case survey (case meta-analysis)	Meta-analysis (in the narrowest sense)

Newig & Fritsch 2009

Case survey – step by step

1. Develop research questions – < 2008
2. Decide on methodology – 2008
3. Define case selection criteria – 2009
4. Collect sample data – 2010
5. Design initial coding scheme – 2011
6. Pre-test and iterative revision of coding scheme – 2011
7. Final coding of cases through multiple coders – 2012-2014
8. Measure inter-coder reliability – 2013-2014
9. Resolve important, but not all, coding discrepancies – 2012-2014
10. Statistical analysis of potential biases – 2012–ongoing
11. Analysis of the created data (statistical or other) – 2012 – ongoing
12. Report the study – ongoing!

- Method combines richness of case material with scientific rigor of large-N comparative analysis – seldom applied

Search and identification of cases

Real-world cases [N = ?]

- Public decision-making process (not mere 'engagement')
- Deals with an environmental issue
- Participatory or could have been participatory = sufficiently local process
- Case from a 'Western', democratic, industrialized country (Europe, US/CA, AUS, NZ)

Published cases [>2000]

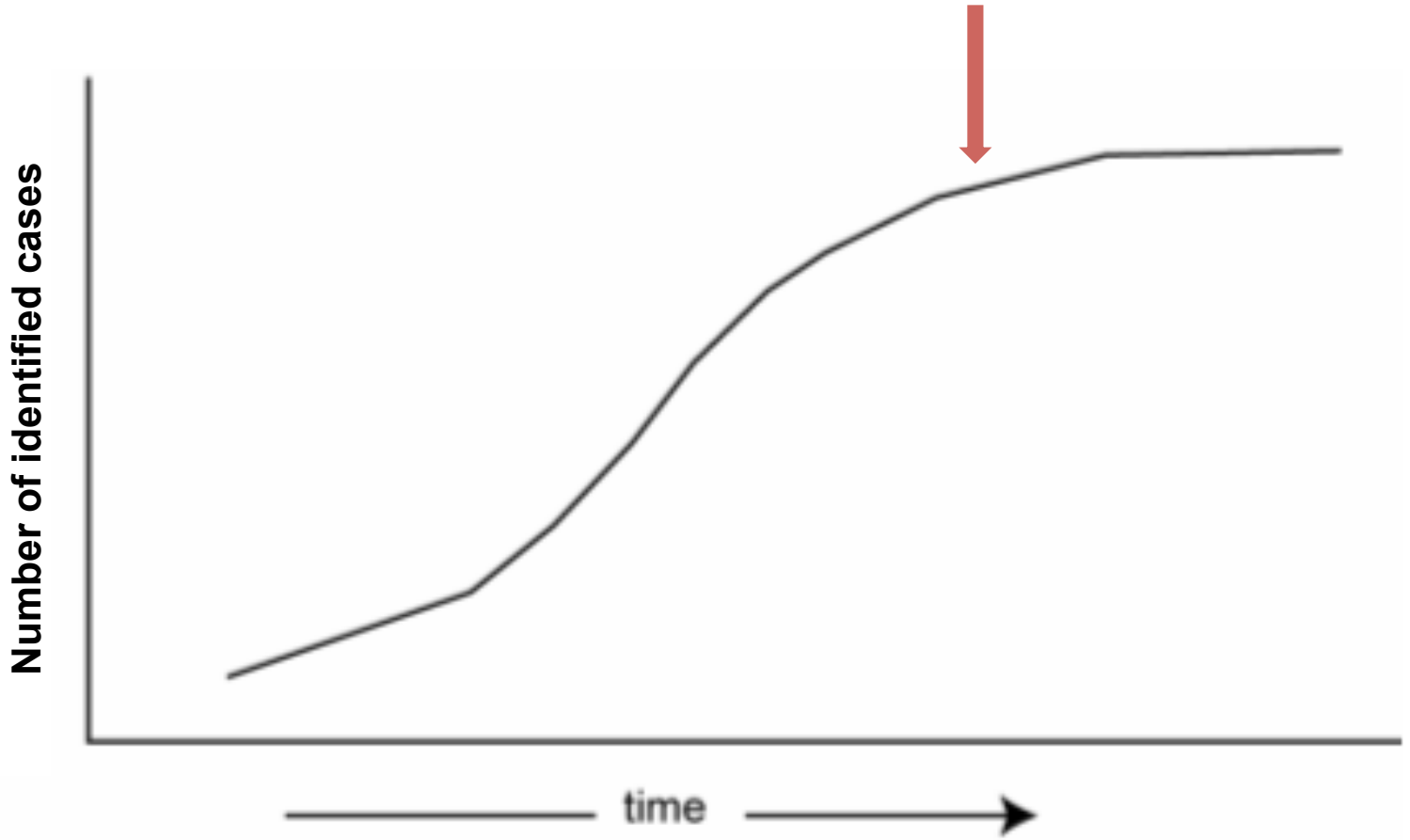
- Identified in > 3000 different texts in a one-year search process

Codable cases [588]

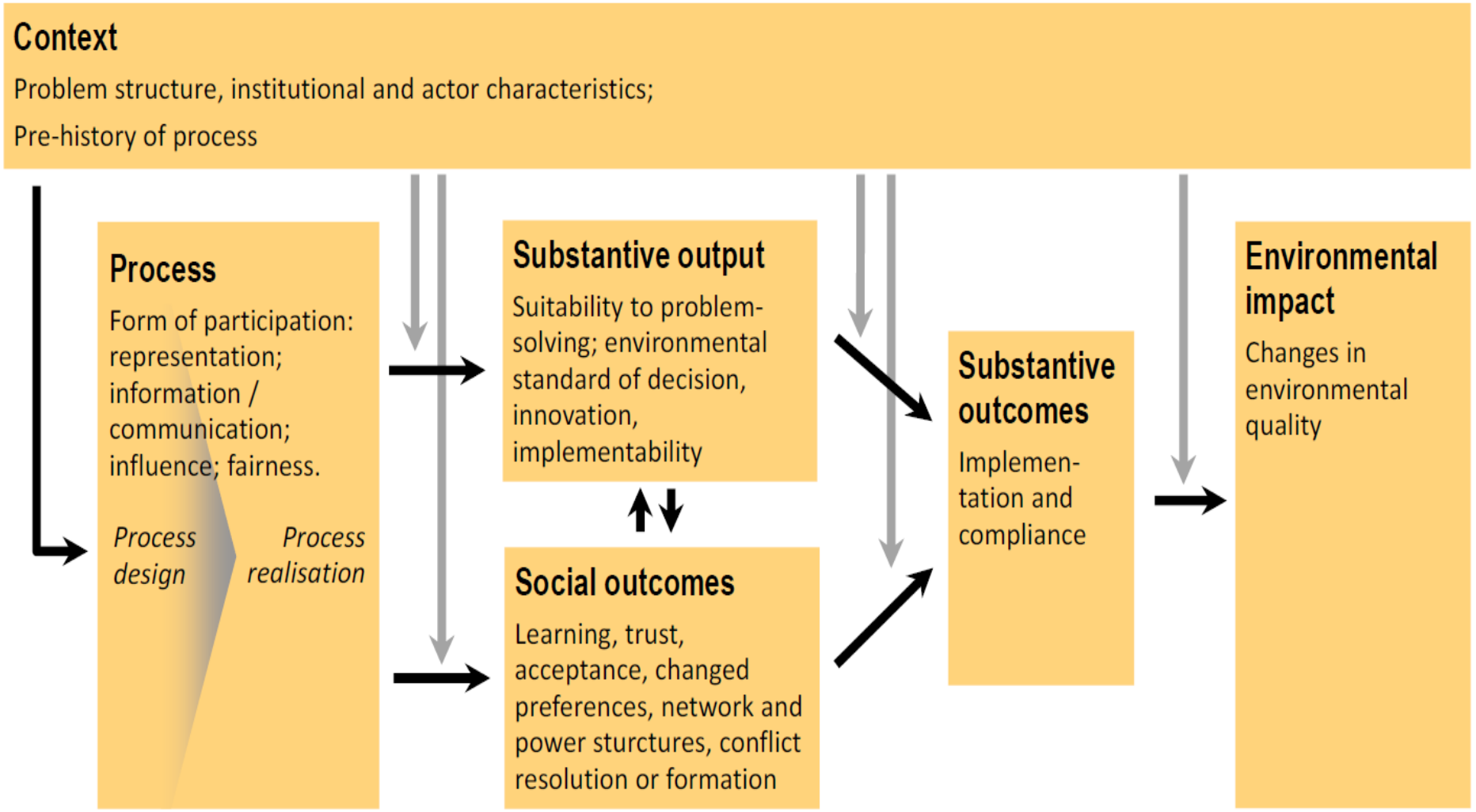
- Sufficient information about context, process and results
- Languages: English, German, French, Spanish

Random sample [n = 250+]

Case search: How did we know we‘re done?



Simplified conceptual framework



Newig et al. (2013)

Hypotheses on the link between participation and the environmental quality of decision

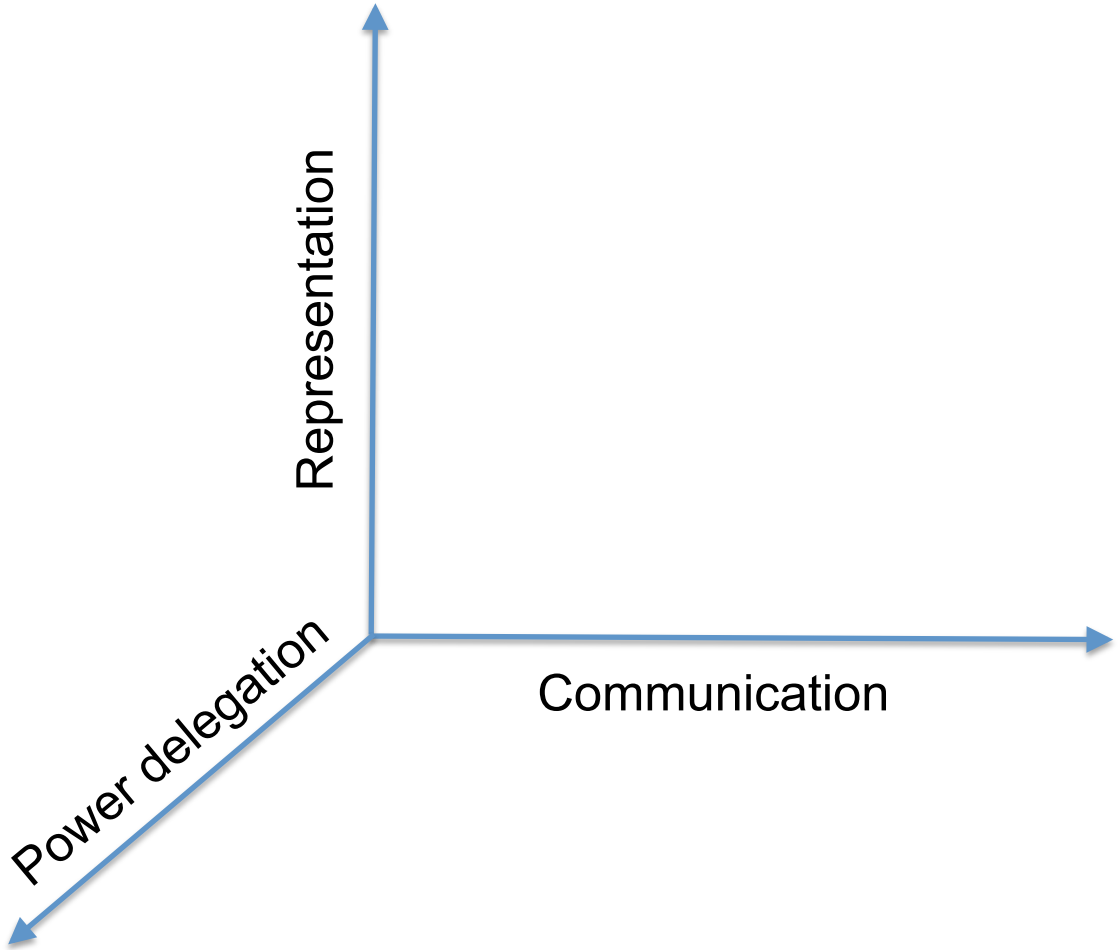
+ Opening-up of decision-making processes for environmental actors
  → stronger representation of environmental groups in the process
  → stronger inclusion of environmental considerations in the output
+ Inclusion of a wider range of participating actors
  → higher degree of environmentally relevant knowledge
  → higher environmental standards of the output
+ Process setting characterised by discursive fairness
  → more environmentally rational decisions, synergy potentials

– Participatory decision-making process
  → weakens position of environmental groups in the process
– Opening-up of decision-making processes
  → weaker representation of environmental groups, domination of actors with stronger resource-basis
– Consensual decision-making process
  → decisions taken at the lowest common denominator

Hypotheses on the link between participation and the implementation of environmental decisions

+	Participation facilitates conflict resolution and leads to greater acceptance of the output
+	Involving (potential) policy addressees early in the process increases the degree of implementation and compliance
+	Participatory decision-making process → inclusion of more different/diverse interests → increased the acceptance of a decision and higher likelihood of implementation and compliance
+	Participatory decision-making process → opportunities for the creation of networks → improved implementation and compliance
–	Participation “wakes sleeping dogs“ and increases stakeholders‘ resistance leading to less implementation and compliance

Three-dimensional concept of ‘participation’



The code book

- 315 single variables
- Mostly on a semi-quantitative scale [0;4]
- Covers context, process design & implementation, env.and social outputs, impacts
- Variable value & reliability
- 27 codable hypotheses considering counterfactual scenarios

Newig et al. (2013)

INFU Institut für Umweltkommunikation

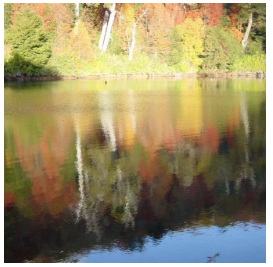
LEUPHANA UNIVERSITÄT LÜNEBURG

Jens Newig, Ana Adzersen, Edward Challies,
Oliver Fritsch, Nicolas Jager

Comparative analysis of public environmental decision-making processes − a variable-based analytical scheme

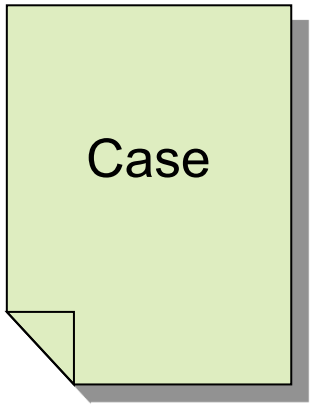
Discussion Paper No. 37 / 13

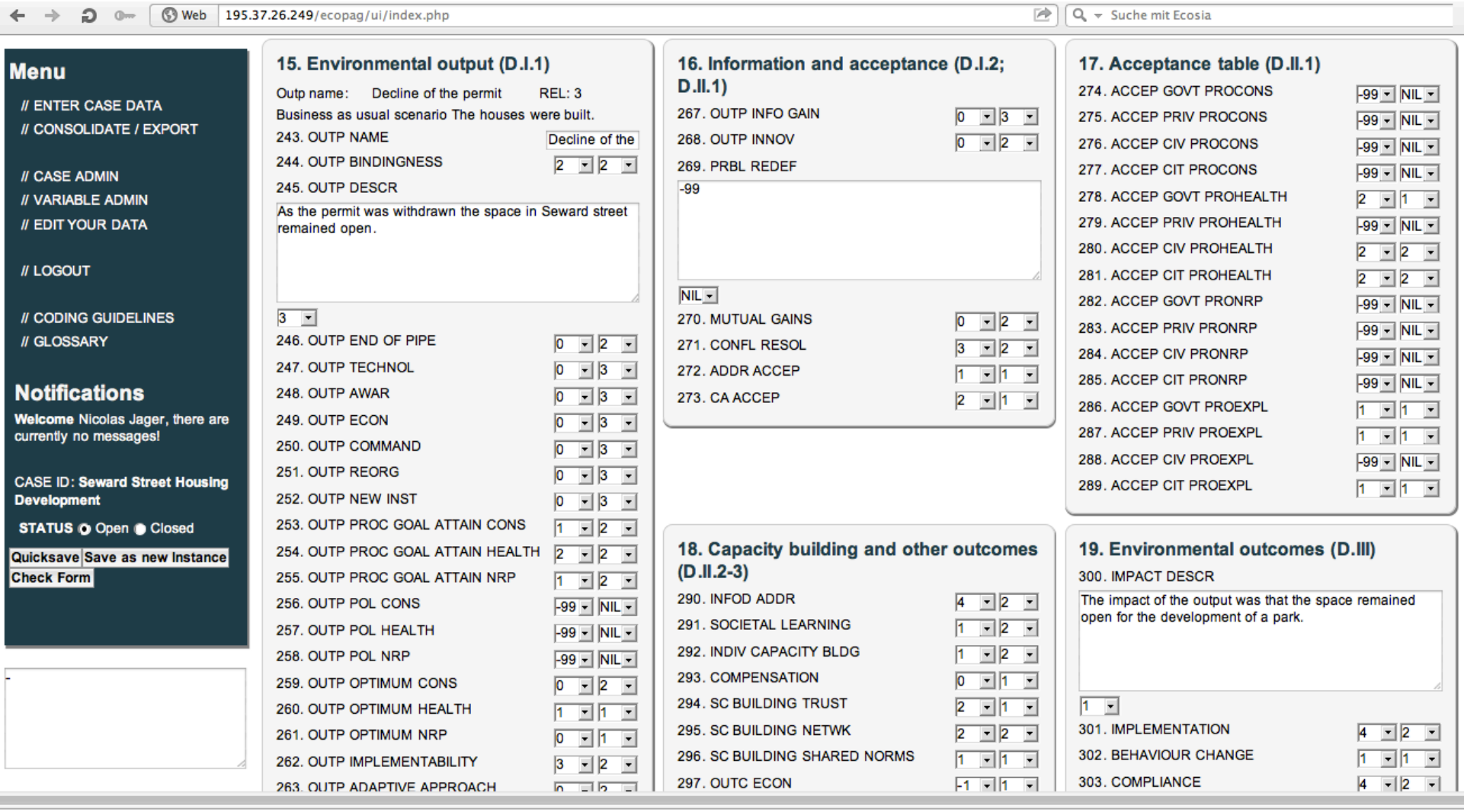




Institute for Environmental and Sustainability Communication
Research Group Governance, Participation and Sustainability

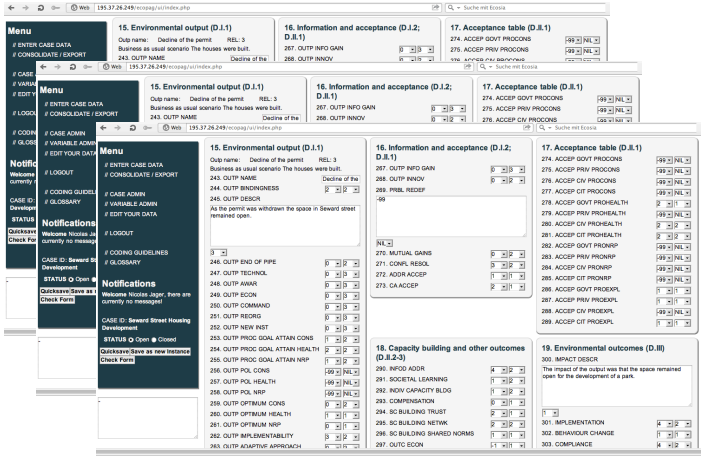
Implementation: the coding procedure




Web
195.37.26.249/ecopag/ui/index.php
Suche mit Ecosia
Menu
// ENTER CASE DATA
// CONSOLIDATE / EXPORT
// CASE ADMIN
// VARIABLE ADMIN
// EDIT YOUR DATA
// LOGOUT
// CODING GUIDELINES
// GLOSSARY
Notifications
Welcome Nicolas Jager, there are currently no messages!
CASE ID: Seward Street Housing Development
STATUS Open Closed
Quicksave Save as new Instance
Check Form
15. Environmental output (D.I.1)
Outp name: Decline of the permit REL: 3
Business as usual scenario The houses were built.
243. OUTP NAME Decline of the
244. OUTP BINDINGNESS 2 2
245. OUTP DESCR
As the permit was withdrawn the space in Seward street remained open.
3
246. OUTP END OF PIPE 0 2
247. OUTP TECHNOL 0 3
248. OUTP AWAR 0 3
249. OUTP ECON 0 3
250. OUTP COMMAND 0 3
251. OUTP REORG 0 3
252. OUTP NEW INST 0 3
253. OUTP PROC GOAL ATTAIN CONS 1 2
254. OUTP PROC GOAL ATTAIN HEALTH 2 2
255. OUTP PROC GOAL ATTAIN NRP 1 2
256. OUTP POL CONS -99 NIL
257. OUTP POL HEALTH -99 NIL
258. OUTP POL NRP -99 NIL
259. OUTP OPTIMUM CONS 0 2
260. OUTP OPTIMUM HEALTH 1 1
261. OUTP OPTIMUM NRP 0 1
262. OUTP IMPLEMENTABILITY 3 2
263. OUTP ADAPTIVE APPROACH
16. Information and acceptance (D.I.2; D.II.1)
267. OUTP INFO GAIN 0 3
268. OUTP INNOV 0 2
269. PRBL REDEF
-99
NIL
270. MUTUAL GAINS 0 2
271. CONFL RESOL 3 2
272. ADDR ACCEP 1 1
273. CA ACCEP 2 1
17. Acceptance table (D.II.1)
274. ACCEP GOVT PROCONS -99 NIL
275. ACCEP PRIV PROCONS -99 NIL
276. ACCEP CIV PROCONS -99 NIL
277. ACCEP CIT PROCONS -99 NIL
278. ACCEP GOVT PROHEALTH 2 1
279. ACCEP PRIV PROHEALTH -99 NIL
280. ACCEP CIV PROHEALTH 2 2
281. ACCEP CIT PROHEALTH 2 2
282. ACCEP GOVT PRONRP -99 NIL
283. ACCEP PRIV PRONRP -99 NIL
284. ACCEP CIV PRONRP -99 NIL
285. ACCEP CIT PRONRP -99 NIL
286. ACCEP GOVT PROEXPL 1 1
287. ACCEP PRIV PROEXPL 1 1
288. ACCEP CIV PROEXPL -99 NIL
289. ACCEP CIT PROEXPL 1 1
18. Capacity building and other outcomes (D.II.2-3)
290. INFOD ADDR 4 2
291. SOCIETAL LEARNING 1 2
292. INDIV CAPACITY BLDG 1 2
293. COMPENSATION 0 1
294. SC BUILDING TRUST 2 1
295. SC BUILDING NETWK 2 2
296. SC BUILDING SHARED NORMS 1 1
297. OUTC ECON -1 1
19. Environmental outcomes (D.III)
300. IMPACT DESCR
The impact of the output was that the space remained open for the development of a park.
1
301. IMPLEMENTATION 4 2
302. BEHAVIOUR CHANGE 1 1
303. COMPLIANCE 4 2

Implementation: the coding procedure

Case

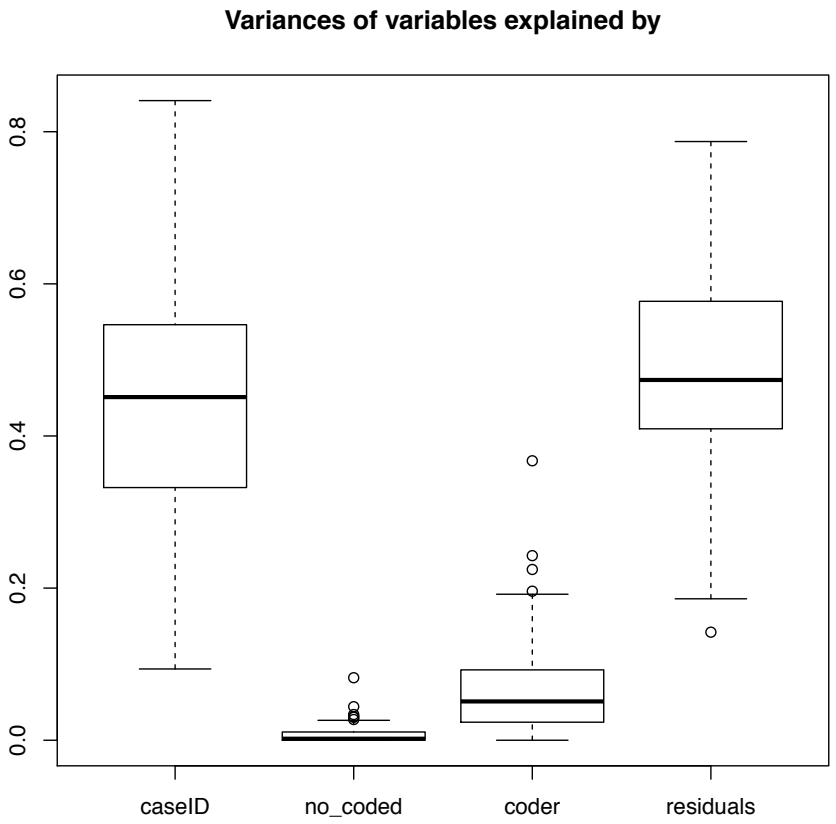


Case Data Set

Database with huge potential for analysis

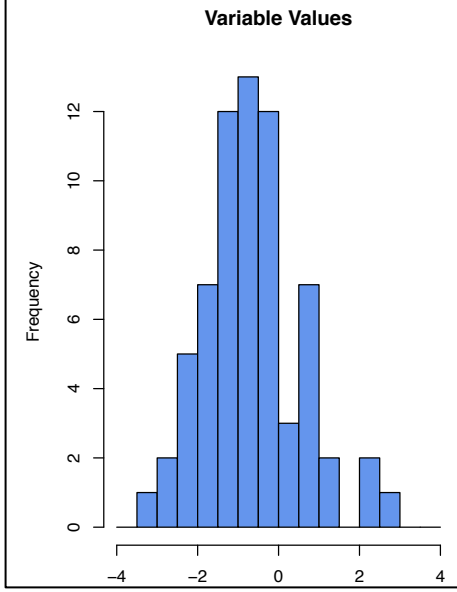
Analysis: identification of biases

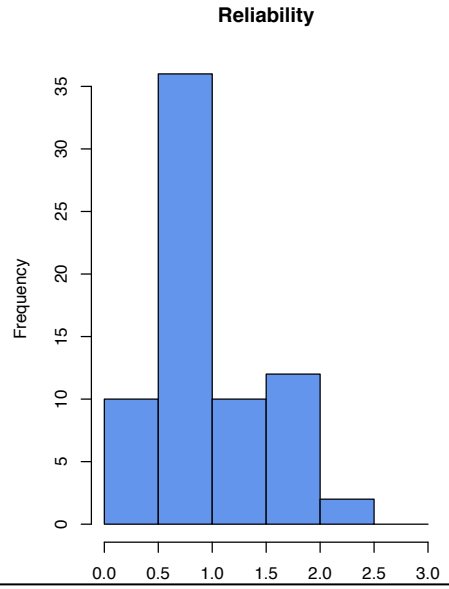
- Information reliability
- Coder personalities
- Learning effects
- Geography and time
- …



Steckbrief
X51..SC_GEN_TRUST_GOVT

n:	70
Mean:	–0.523
Standard–Dev:	1.205
Sum –99:	0
Sum NIL:	3
Spearman's Rho:	–0.304
Discordant –99:	0
REL mean:	1

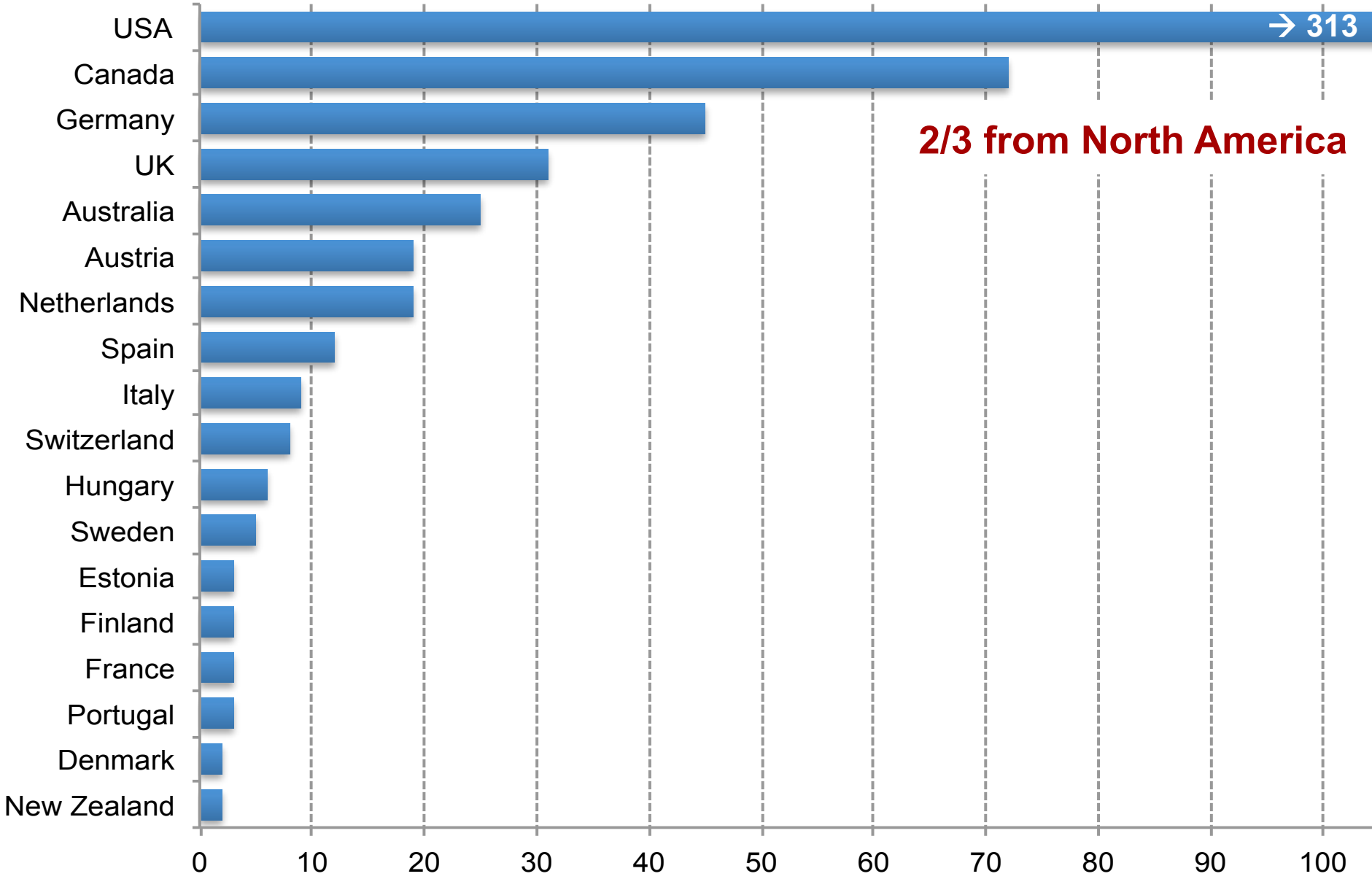




Characterising the universe of 588 codable cases

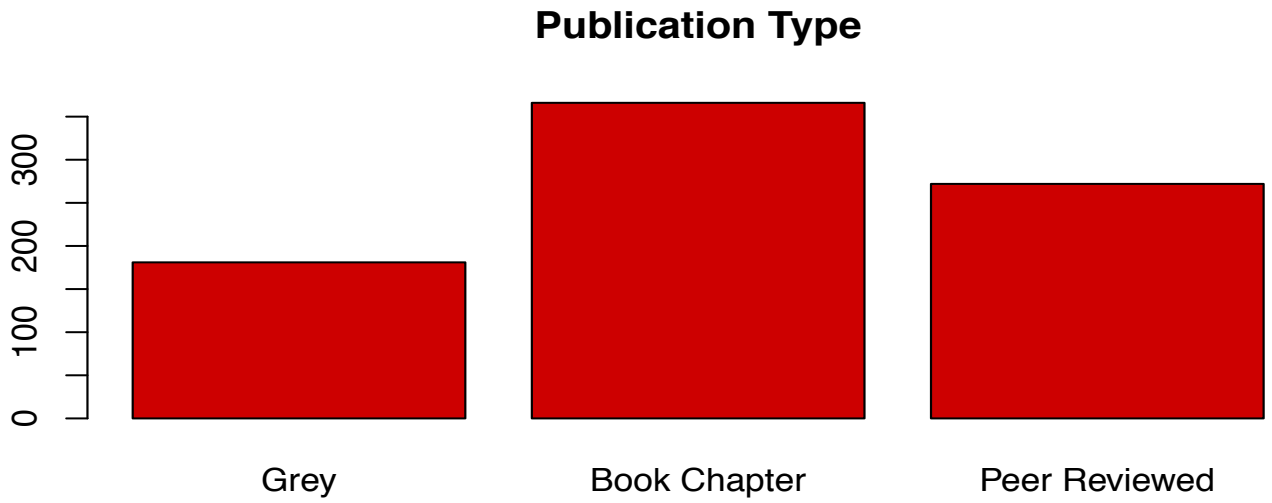
Countries represented (n > 1)

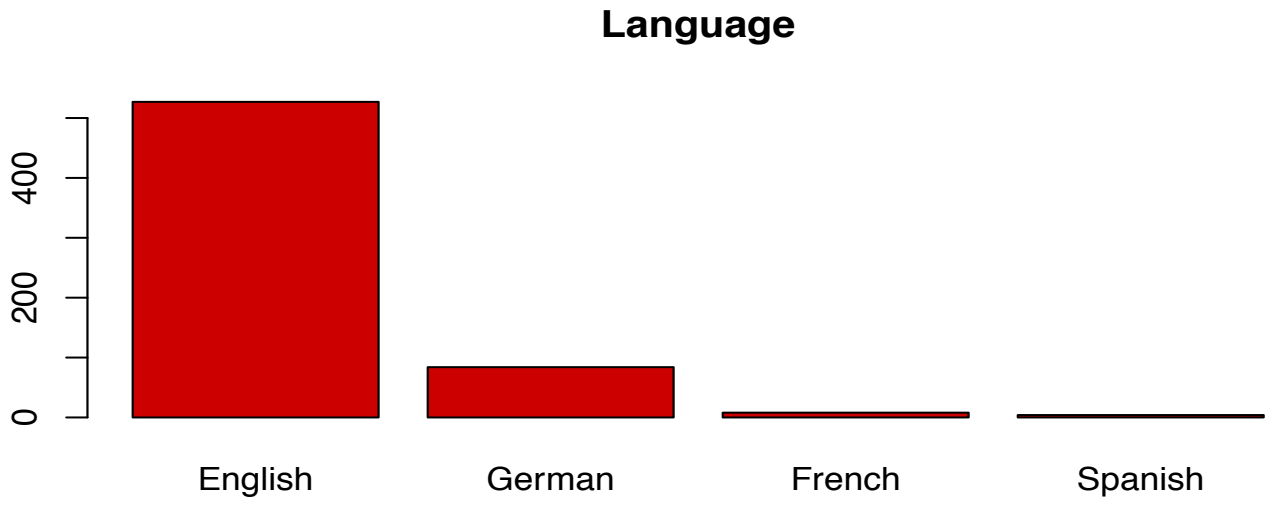
N= 588



Types of publications

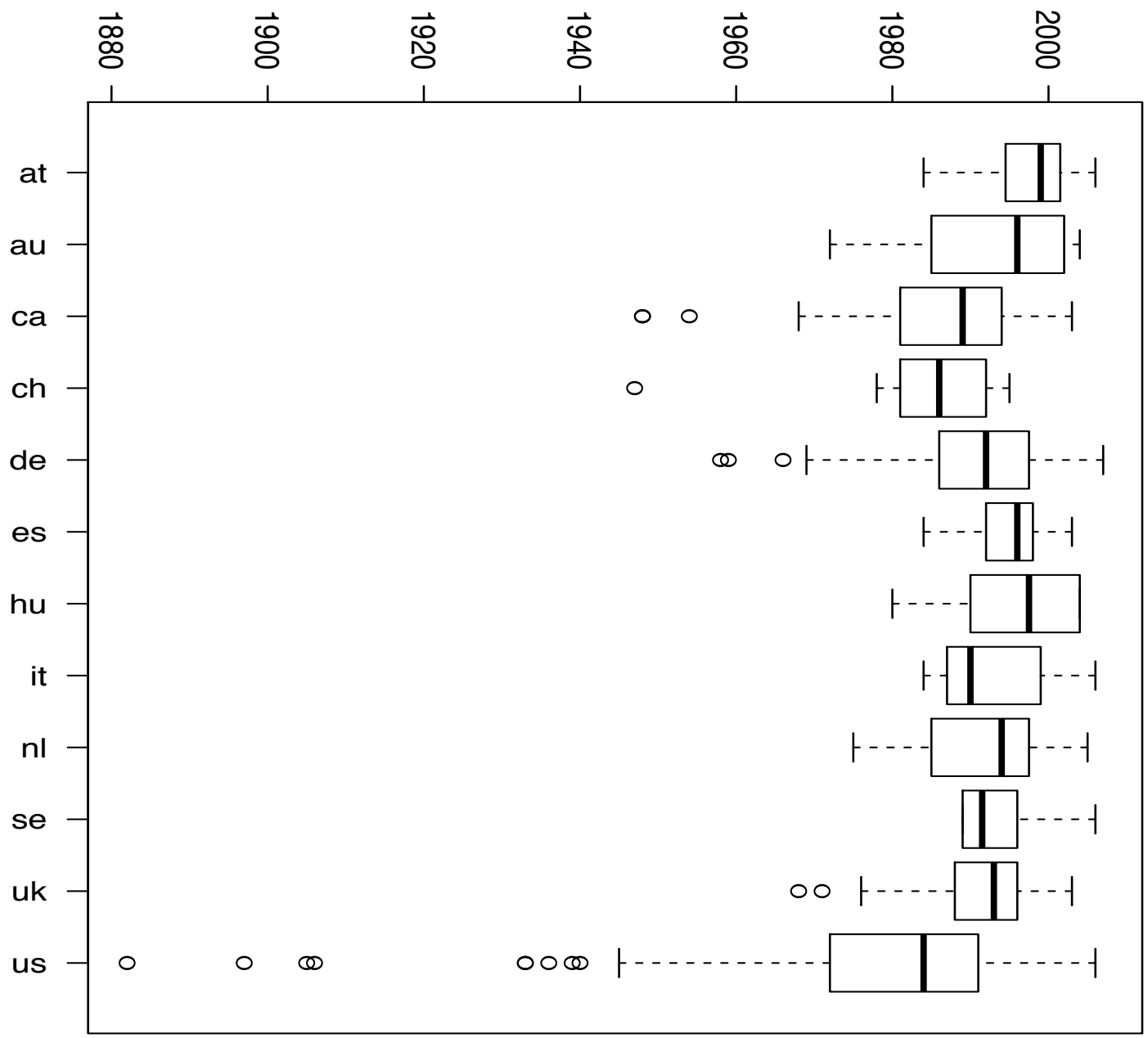
N= 588 (multiple types possible)





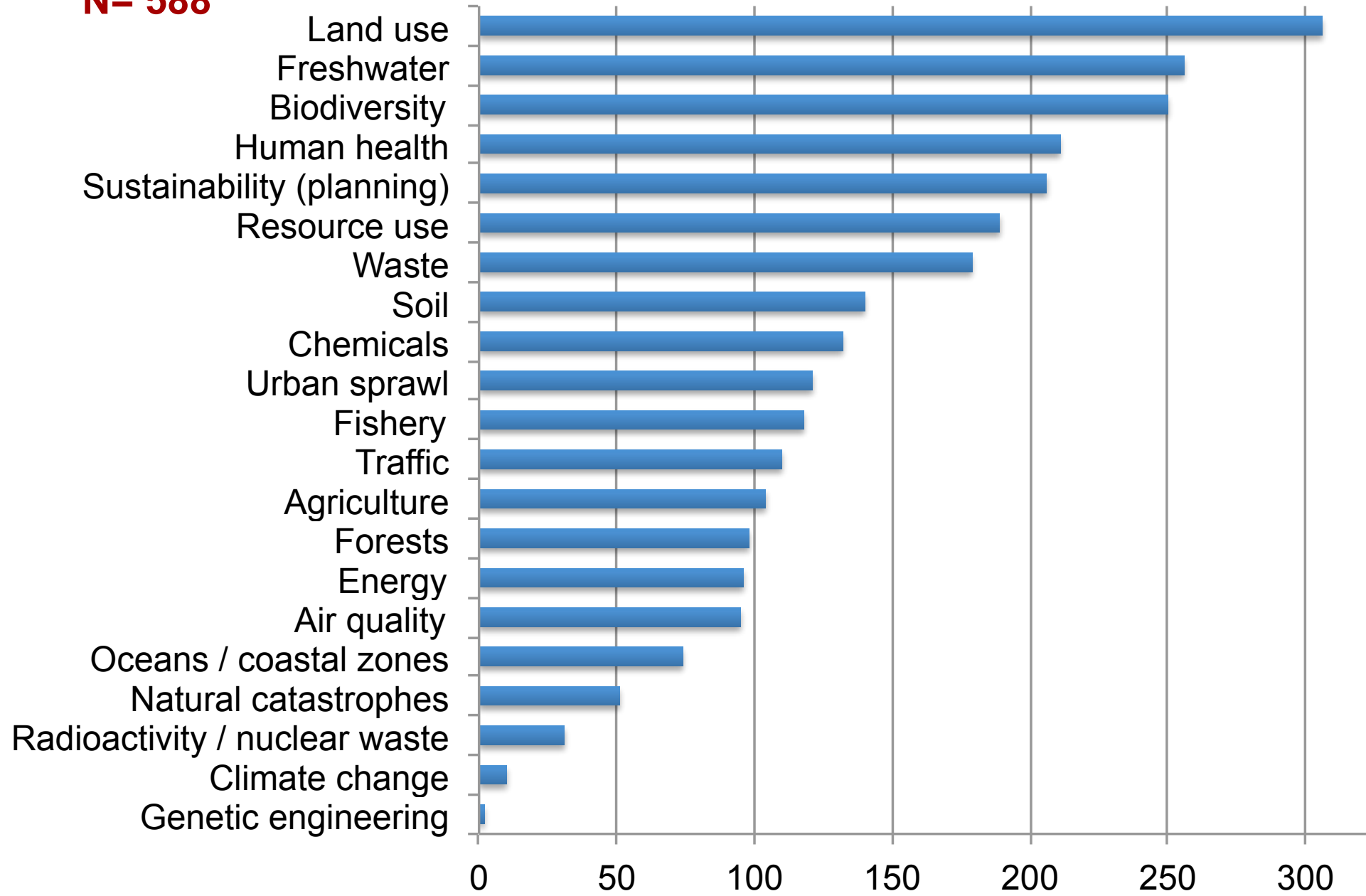
Case start dates in the most important countries

N= 588



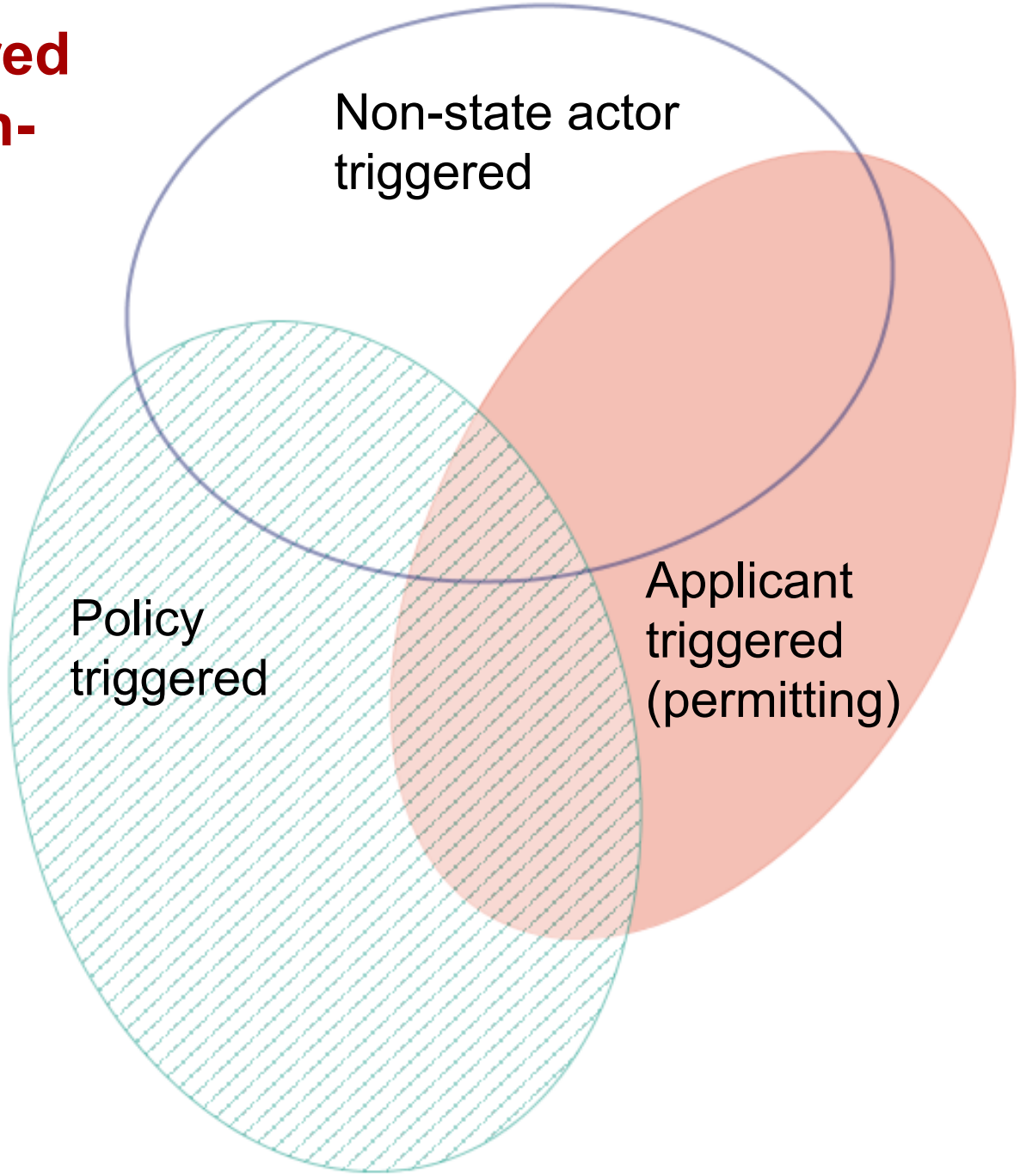
Issue areas

N= 588



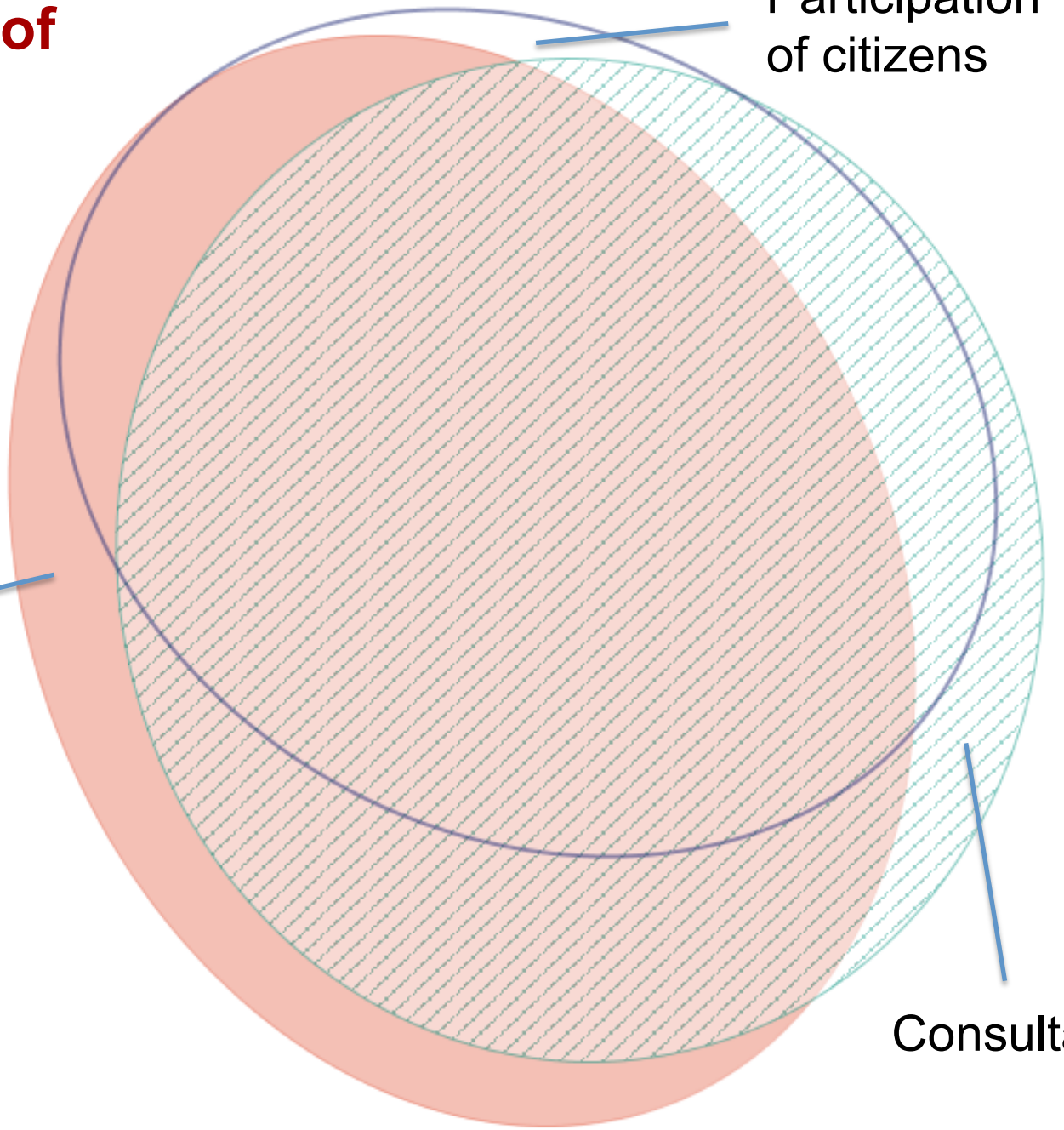
Who triggered the decision-making process?

N = 588



Dimensions of participation

N = 588



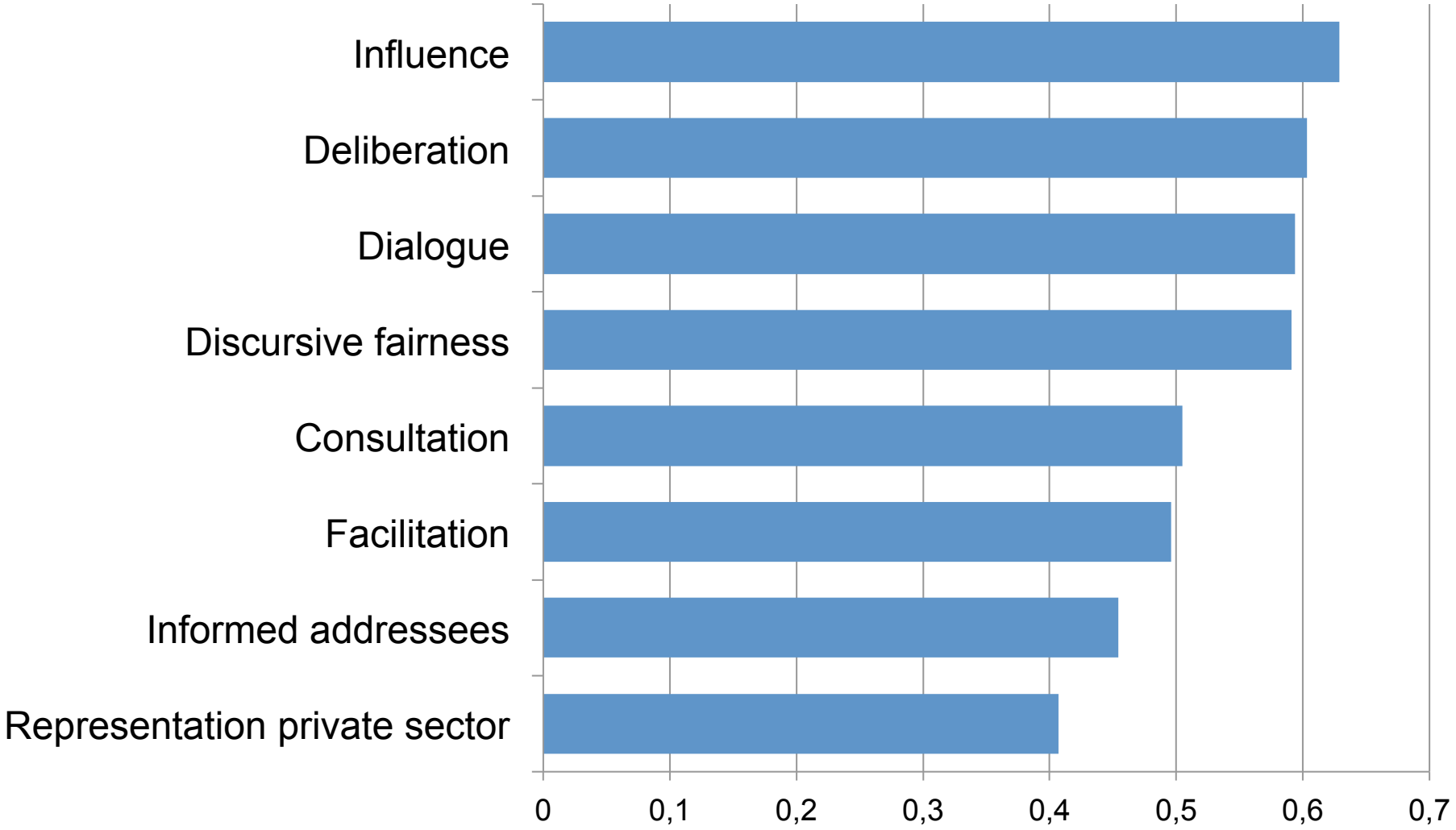
Early results:
Analysis of 185 cases

Early results: What influences the acceptance of a decision?

	Acceptance by citizens	Acceptance by civic actors
Representation of citizens	0.36**	0.17*
Representation of civic actors	0.15	0.23**
Influence	0.52**	0.40**
Dialogue	0.41**	0.30**
Discursive fairness	0.46*	0.34**
Deliberation	0.42**	0.30**
Comprehensible information	0.30**	0.27**
Informed adressees	0.33**	0.28**
Adaptive / flexible process design	0.23**	0.23**

Spearman correlation coefficient, *p ≤ 0.05, **p≤0.01, n=185

What influences conflict resolution?



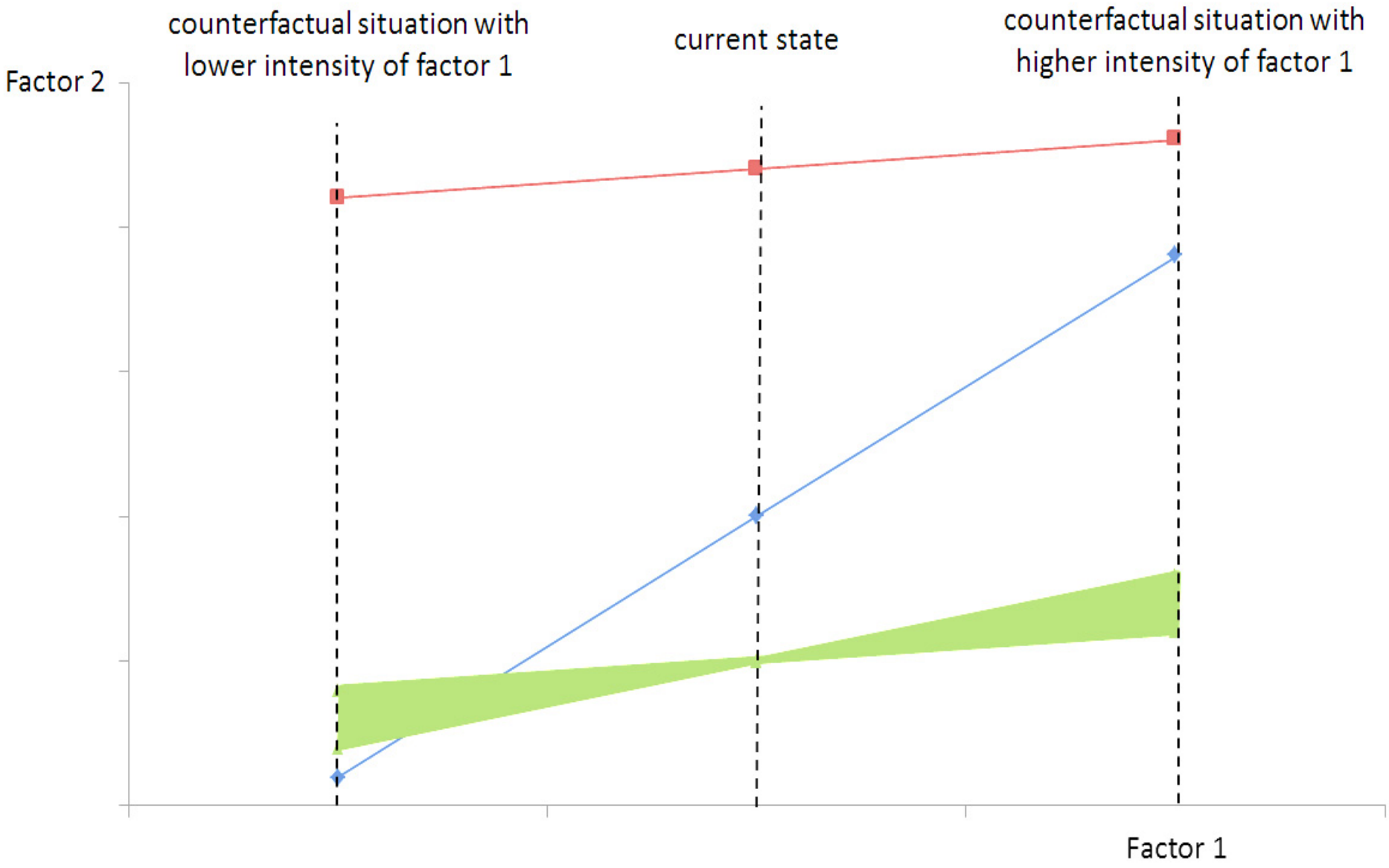
Spearman correlation coefficient, $p \leq 0,05$, n=185

Early results: Links between participation and environmental outputs & outcomes

	Output standards Human Health	Output standards Conservation	Behavior change & implementation
Representation pro-conservat.	0.32**	0.35**	0,22**
Representation pro-health	0.25**	0.09	0.16*
Representation of citizens	0.08	0.02	0.14
Representation of civic actors	0.20**	0.21**	0.12
Representation of priv. actors	0.17*	0.25**	0.13
Overall acceptance of output	0.50**	0.54**	0,56**
Discursive fairness	0.30**	0.39**	0.44**
Information of participants	0.29**	0.43**	0.35**
Consultation (potential)	0.26**	0.41**	0.29**
Consultation (actual)	0.22**	0.36**	0.38**
Deliberation / dialogue	0.31**	0.42**	0.43**
Participant influence on decis.	0.38**	0.49**	0.38**
External transparency	0.28**	0.38**	0.28**

Spearman correlation coefficient, *$p \leq 0.05$, **$p \leq 0.01$, n=185

Coding hypotheses:
Detecting causality in a single case



Hypotheses on the link between participation and the environmental quality of decision

+	Opening-up of decision-making processes for environmental actors	
	→ stronger representation of environmental groups in the process	**0.48**
	→ stronger inclusion of environmental considerations in the output	**0.43**
+	Inclusion of a wider range of participating actors	
	→ higher degree of environmentally relevant knowledge	**0.40**
	→ higher environmental standards of the output	**0.25**
+	Process setting characterised by discursive fairness	
	→ more environmentally rational decisions, synergy potentials	**0.42**
–	Participatory decision-making process	
	→ weakens position of environmental groups in the process	**0.10**
–	Opening-up of decision-making processes	
	→ weaker representation of environmental groups, domination of actors with stronger resource-basis	**0.06**
–	Consensual decision-making process	
	→ decisions taken at the lowest common denominator	**0.20**

mean values [0;1] across 185 cases

Hypotheses on the link between participation and the implementation of environmental decisions

+	Participation facilitates conflict resolution and leads to greater acceptance of the output	**0.43**
+	Involving (potential) policy addressees early in the process increases the degree of implementation and compliance	**0.33**
+	Participatory decision-making process	
	→ inclusion of more different/diverse interests	**0.50**
	→ increased the acceptance of a decision and higher likelihood of implementation and compliance	**0.39**
+	Participatory decision-making process	
	→ opportunities for the creation of networks	**0.34**
	→ improved implementation and compliance	**0.23**
–	Participation “wakes sleeping dogs“ and increases stakeholders‘ resistance leading to less implementation and compliance	**0.07**

mean values [0;1] across 185 cases

Conclusions

Methodology

Strengths

- Rigorous synthesis of largely untapped pools of data and knowledge
- Strong external validity
- Applicable to a wider range of topics and disciplines

Biases & pitfalls

- Publication bias
- Validity of case narratives
- Bias caused by choice of saturation in case search process
- Resource intensive

Participation & environmental outcomes

- Strong evidence, that overall, various aspects of participation and collaboration do lead to stronger environmental outputs and outcomes
- Strong influence of actors preferences
- Surprisingly little influence of citizen participation
- More analysis need to identify conditions and constraints!

Publications

Concepts and early results of a pre-study case survey (> 45 cases):

- Newig, J., Fritsch, O. (2009) Environmental Governance: Participatory, Multi-Level – And Effective? *Environmental Policy and Governance* 19, 197-214.

Code-book:

- Newig, J., Adzersen, A., Challies, E., Fritsch, O., & Jager, N. (2013). *Comparative analysis of public environmental decision-making processes: a variable-based analytical scheme. INFU Discussion Paper No. 37 / 13 (Vol. 37/13). Lüneburg.*

Concept of participation:

- Newig, J., Kvarda, E., (2012) Participation in environmental governance: legitimate and effective?, in: Hogl, K., Kvarda, E., Nordbeck, R., Pregernig, M. (Eds.), Environmental Governance. The Challenge of Legitimacy and Effectiveness. Edward Elgar, pp. 29-45.

Case survey methodology:

- Newig, J., Fritsch, O. (2009) The case survey method and applications in political science. APSA 2009 Paper. Available at SSRN: http://ssrn.com/abstract=1451643, Toronto.

Case studies on participation in the implementation of European water policy:

- Newig, J., & Koontz, T. M. (2014). Multi-level governance, policy implementation and participation: the EU's mandated participatory planning approach to implementing environmental policy. *Journal of European Public Policy, 21(2), 248-267.*
- Koontz, T. M., & Newig, J. (2014). Cross-level information and influence in mandated participatory planning: Alternative pathways to sustainable water management in Germany's implementation of the EU Water Framework Directive. *Land Use Policy, 38(0), 594-604.*

THANKS

to Nicolas Jager,

Edward Challies, Ana Adzersen, Oliver Fritsch...

... and many, many, others!