



Energy Modelling  
Platform for Europe

# EMP-E 2021: Re-Energising Sustainable Transitions in Europe

Energy System Modelling, Methods & Results to  
support the European Green Deal  
26th to 28th October · online

## Sufficiency policies: a systematic review



Benjamin Best, *Wuppertal Institute for Climate, Environment and Energy*, Junior research group “Energy Sufficiency”

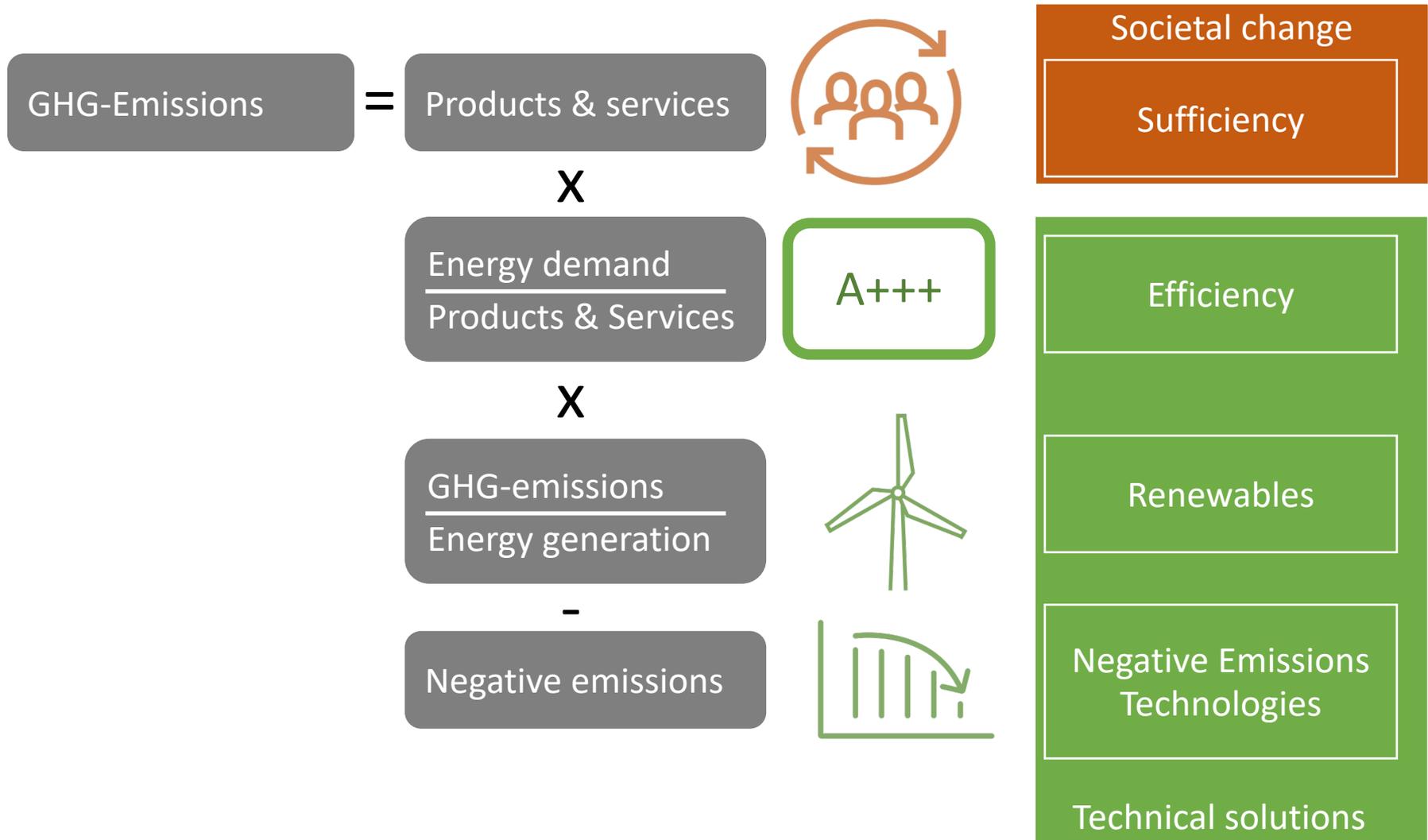
Text and graphics for which no other source is indicated are licensed under a Creative Commons Attribution 4.0 license (CC BY 4.0), Benjamin Best 2021.

GEFÖRDERT VOM



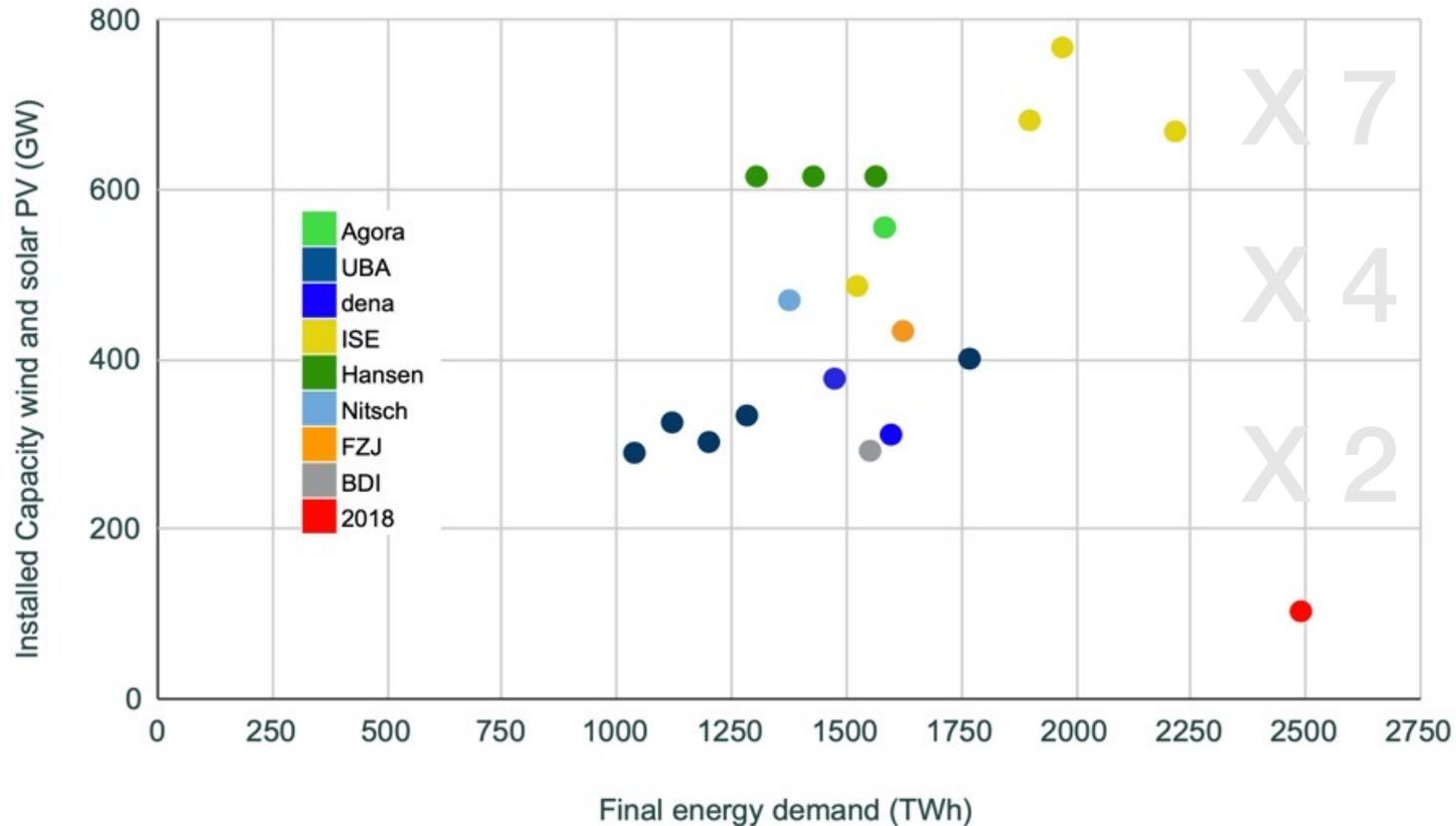
hosted in cooperation  
with the European Commission





Source: Kaya-Identity; Kuhnenn (2021): Wie schaffen wir 1,5°C? Ein globales Suffizienzzenario, <https://youtu.be/74vqct8PoQY>.

**Final energy demand and sum of installed capacity of wind and solar in state of climate-neutrality (95-100%) of different scenarios for Germany.**



Source: based on Wiese, F.; Thema, J.; Cordroch, L.: Strategies for climate neutrality. Lessons from a meta-analysis of German energy scenarios (submitted to Advances in Applied Energy)

# Why we need a sufficiency policy database

- offering policymakers concrete options for action
- argumentation support for NGOs
- back up demand assumptions in scenarios and models with concrete policy measures
- basis for policies to be implemented in a model

# Sources and categories of the database

## Sectors

*Transport, Buildings, Industry, Agri-food, Energy, Cross-sectoral*

## Policy level

*International, EU, national, regional (NUTS1/2), local (NUTS3+)*

## Policy goal

*e.g. reduction of live stock or living space*

## Indicator

*e.g. animal products or m<sup>2</sup> / capita*

## Sufficiency type

*reduction, substitution, general*

## Policy Instruments

*Definition by UNFCCC 2000 + description*

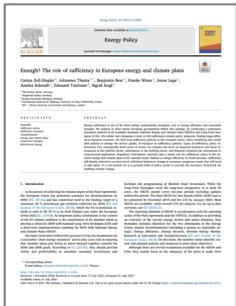
## Quantifications, implementation examples

*reference whenever we find it*

Project reports,  
policy proposals

Journal articles  
(scenarios, policy  
analysis)

Collaboration with  
policy experts



# Instrument types

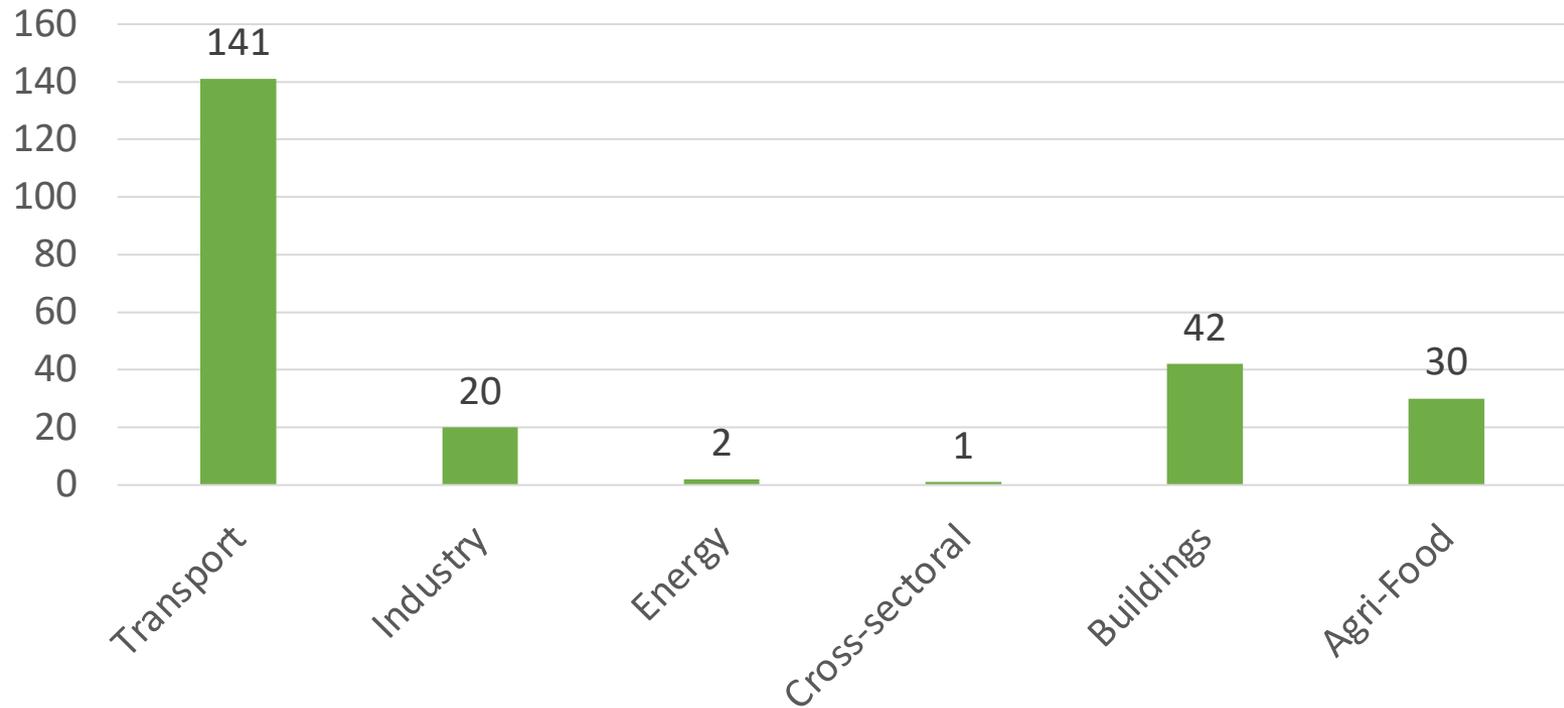
- **economic** (e.g. taxes, tradable certificates, market reform),
- **fiscal** (e.g. subsidies and grants, tax exemptions and public expenditures for infrastructure),
- **voluntary agreements**,
- **regulation** (laws, standards and product identification),
- **information**,
- **education** (institutional),
- **research and development**,
- **other** (e.g. plans)
- **not specified**

# Examples of sufficiency measures

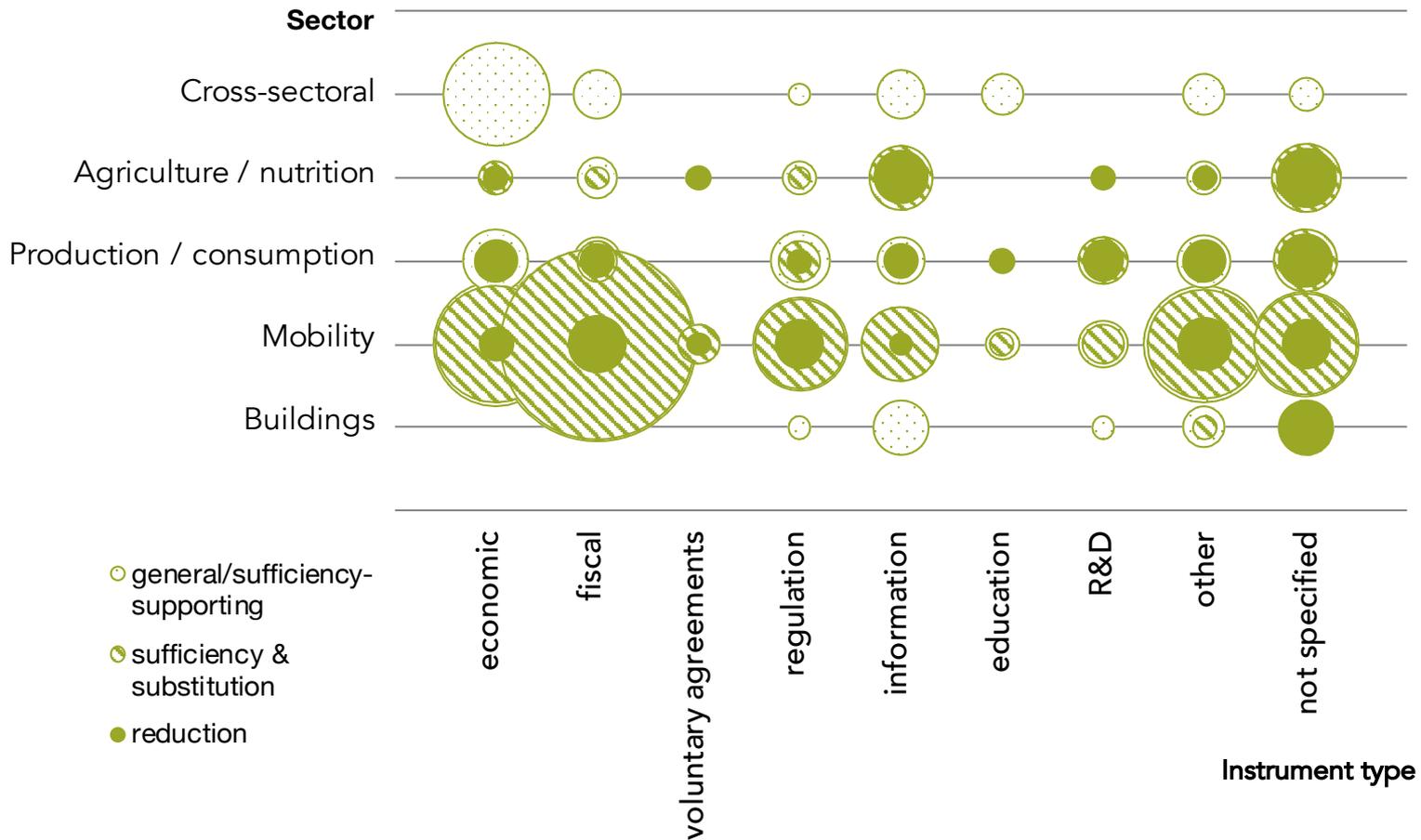
Sector	Policy-goal	Measure/action	Indicator	Policy Instrument	Sufficiency type	Quantification
Agri-Food	reduction of live stock	Diet shift (meat, 100% vegetarian)	consumed meat / capita	communication, e.g. mass media campaigns and food labelling, school-based intervention programs for a healthy diet, economic: meat tax or animal protein tax	2	-22% in 2030 (in relation to food-related emissions)
Cross-sectoral	Growth Independence	No growth of the national economy, from 2030	GDP	Welfare measurement beyond GDP, rollback of growth policy	1	580 bn. tkm in 2050; reference ~1.000 bn. tkm in 2050
Transport	Avoid (reduce commuting)	Promotion of teleworking	pkm	40% of working time free to choose	2	35,9 bn. pkm p.a.

# A first count ...

Measures per sector  
N = 239



# EU-NECPs: Sufficiency Policies



# Discussion

- What could you use a list of sufficiency measures for?
- What would the database need to contain for you to use it?
- How do you prefer to use a database? (e.g., notion.so, graphical user interface, excel, online spreadsheet).