

Voluntary climate mitigation by individuals, firms, communities and cities

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Introduction

This poster integrates the results of four different modules of the ClimPol project (Climate Policy Making for Enhanced Technological and Institutional Innovations). These modules deal with climate change mitigation behavior of individuals (ClimPol module B1), firms (D2), small rural/peri-urban communities (B2), and cities and counties (A2). The common topic of voluntary action for climate change mitigation links these modules. We define voluntary action as the action, when an individual, a firm, a community or a city have a negative impact on the natural environment and reduce it without being legally obliged to do so (Thalmann and Baranzini, 2004). Some selected findings of the four modules are presented and integrated with respect to the two guiding questions:

- Why do individuals, firms, small communities and cities take voluntary action to mitigate climate change?
- What is the advice for efficient voluntary action?

Focus	Individuals
Project title	Perception of climate change among consumers
Team	Christina Tobler, Dr. Vivianne Visschers, Prof. Dr. Michael Siegrist Consumer Behavior, ETH Zürich
Guiding questions	What are the determinants of climate-friendly behaviours and willingness to accept mitigation policy measures?
Methodology	1. Survey in randomly selected households from the German-speaking part of Switzerland (N=916); 2. Multiple regression analysis.
Why do they take voluntary action?	<ul style="list-style-type: none"> • People are more willing to behave climate-friendly if they perceive this action as beneficial for the climate. • This is particularly true for the willingness to accept policy measures (such as carbon taxes or subsidies for renewable energy) as well as for direct and indirect behaviour. • With regard to mobility, however, the habit strength of people's past mobility behaviour plays the most important role.
Advice for efficient voluntary action	<ul style="list-style-type: none"> • Efficient interventions should take the characteristics of the targeted behaviour into account, e.g. habits of mobility. • For most types of behaviour, it seems promising to emphasize the actual climate benefit when promoting the mitigation action.
Reference	• Tobler Ch., Visschers V., Siegrist M. (in preparation). Addressing climate change: Determinants of consumers' willingness to act and support policy measures.

Focus	Firms
Project title	The voluntary agreement of Swiss car importers
Team	Alexandra Quandt, Prof. Dr. Philippe Thalmann Research Lab on the Economics and Management of the Environment, EPFL
Guiding questions	How do Swiss car importers perceive climate policy? What were the motives for signing the voluntary agreement? How to evaluate the voluntary agreement?
Methodology	1. Case study on Voluntary Agreement of Swiss car importers; 2. 20 semi-structured expert interviews with managers and PR managers of Swiss car importing firms, experts from science, the Swiss administration and NGO's; 3. Interview coding (Atlas.ti) and content analysis.
Why do they take voluntary action?	<ul style="list-style-type: none"> • Firms signed the voluntary agreement for strategic reasons, e.g. as response to public pressure or in order to postpone or dilute stringent climate policy measures, such as a carbon tax. • The voluntary agreement enhances the degree of information exchange between firms, strengthening their network ties. This, however, can be a threat to market competition. • Voluntary action for climate change mitigation is linked with other motives, e.g. energy security, cost effectiveness, marketing etc.
Advice for efficient voluntary action	<ul style="list-style-type: none"> • Linking voluntary action for climate change mitigation with other issues, such as energy security or cost effectiveness, might strengthen the incentive for participation. • However, in order to reach a stringent emissions reduction target, voluntary agreements are less effective than market-based instruments.
Reference	• Bömer A. (2010). Voluntary approaches in climate policy: Lessons learnt in Switzerland. Paper for the 11th biennial conference of the International Society of Ecological Economics. 22-25 August 2010, Oldenburg, Germany.

Integration and conclusions

- Concerns about climate change are not the only drivers for voluntary action on greenhouse gas (GHG) mitigation. ClimPol research on firms, communities and cities shows that it is essential to *emphasize synergies* between GHG mitigation and other factors: increased security of energy supply, higher cost effectiveness, local development, strategic networking, etc.
- Yet, it is essential that mitigation action is perceived *beneficial for the climate*, as concludes the survey of Swiss households. Therefore, information for public at large in communities and cities should be provided to explain the benefits of mitigation action, e.g. energy saving lamps, recycling, etc. The information should *reflect on the specificity* of the community or city, the targeted behavior, and its feasibility.
- According to the case study in the community of Urnäsch, different criteria are relevant for the different actors: some actors consider the potential consequences, others - concrete energy projects or even visions of the ideal-type future states. Thus, information should be given on *all relevant aspects*.

Focus	Small rural/peri-urban communities
Project title	Future energy systems of rural/peri-urban communities: Integration of stakeholder preferences and energy analysis
Team	Evelina Trutnevte, Dr. Michael Stauffacher, Prof. Dr. Roland W. Scholz Natural and Social Science Interface, ETH Zürich
Guiding questions	Does the community of Urnäsch need an energy strategy? How can Urnäsch deal with the challenges of climate change and energy security? What is the role of energy technologies and efficiency improvements? (The questions were jointly defined with people from practice)
Methodology	1. Transdisciplinary case study in the Swiss community of Urnäsch (2300 inhabitants), in collaboration with the mayor of Urnäsch, the head of regional environmental agency, the head of regional association for energy information, and the director of local electricity utility; 2. Structured interviews with 11 energy consumers, 7 energy or equipment suppliers, and 11 experts and representatives from academia; 3. Multi-criteria assessment of energy scenarios.
Why do they take voluntary action?	<ul style="list-style-type: none"> • Stakeholders and decision makers sometimes have visions of the ideal-type energy system and these visions might become drivers for voluntary action in the energy sector. • These visions often go beyond climate change mitigation - they refer to the energy system as a whole, they include other objectives such as cost efficiency, and they involve one's experiences or values, e.g. the vision of energy independence.
Advice for efficient voluntary action	<ul style="list-style-type: none"> • Climate mitigation should be addressed by emphasizing its synergies with local development, cost effectiveness, energy security etc. • Visions alone are incomplete guides for decision making, because the required action and the potential consequences might not be clear. Thus, provision of information on the required energy projects and the relevant assessment criteria would lead to informed decisions. • Information should be given on different levels: about visions, projects and the potential consequences, because the different actors consider the different criteria.
References	• Trutnevte E., Stauffacher M., Scholz R. W. (in preparation). Supporting energy initiatives in small communities by linking visions with energy scenarios and multi-criteria assessment. • Cloos L., Trutnevte E., Bening C., Hendrichs H., Wallquist L., Stauffacher M., Scholz R.W. (2010). Energiestrategien kleiner Gemeinden und kleiner und mittlerer Unternehmen. Der

Focus	Cities and counties
Project title	Diffusion of climate policy adoption
Team	Lena Maria Schaffer, Prof. Dr. Thomas Bernauer International Relations, ETH Zürich
Guiding questions	What are the reasons to voluntarily commit to the Mayor's Climate Protection Agreement when there are powerful incentives to do otherwise? What influence do interdependence and network effects play?
Methodology	1. Spatial analysis of the participation patterns in voluntary initiatives in U.S. counties (cross-sectional data on 3100 U.S. counties); 2. Analysis of the diffusion of voluntary initiatives in cities over 10,000 inhabitants in 6 Midwestern states (Time-series cross-sectional data on 740 cities over 66 months); 3. 20 phone interviews and questionnaire with mayors and representatives of cities as well as officials in Washington, about 20 questionnaires.
Why do they take voluntary action?	<ul style="list-style-type: none"> • Decision to act and when to act depends on the characteristics of the county or the city. • Generally, larger cities act as policy frontrunners, either because they have higher capacity to act or more need to act. Units that are comparatively wealthy belong to the first adopters. • Cities do not only act as green cities for the benefit of global environmental policies, but rather put concerns regarding energy efficiency and cost reduction locally as a motive to implement local climate change policies. • Mayors blame the U.S. federal inaction on the climate change issue as the top reason to have engaged in the initiative. • Linking of climate change with other issues such as energy efficiency and cost reductions for local governments would increase incentive for participation. • Public involvement and information should be organized to explain benefits from e.g. recycling and other measures taken.
Advice for efficient voluntary action	<ul style="list-style-type: none"> • Schaffer L.M. (2009). Voluntary Climate Change Initiatives in the U.S.: Testing Spatial Dependence in Participation. Presentation at the Annual Meeting of the International Studies Association. 15-18 February 2009, New York, USA.
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