Local Climate Governance and the Role of Cooperatives

Carolin Schröder and Heike Walk

Abstract Global climate change and its consequences have led to a wide-ranging re-evaluation process in political and business circles. Two prominent reports—the Stern Review from 2006 and the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC 2007)—underscore the fact that the impact of global warming can no longer be contained at an acceptable level unless emissions are reduced dramatically. Hence, the pressure to act is quite high: comprehensive technical, political and societal innovations have to be implemented within a very short timeframe at global, regional and local levels. But this can only happen if a fundamental re-orientation also takes place within society. At the same time, and due to recent economic crises, sustainable forms of entrepreneurship have returned to the public agenda. One promising form of sustainable social and economic organisation is the cooperative (*Genossenschaft*): for their members, cooperatives represent an opportunity to shape their local communities and environments while sharing resources, knowledge and economic power to their benefit. With a rising number of new cooperatives in the sectors of energy/water, housing/construction, consumption and mobility explicitly referring to climate protection, climate-related activities, in turn, have the potential to inject new life into the cooperative movement and to provide innovative, collective approaches to local climate governance. This following article analyses and discusses the current and potential future roles of cooperatives in the development of local, climate-friendly governance strategies. After a short description of the concept of local climate governance and an introductory definition of cooperatives, the authors will outline research gaps in both fields, and finish with some thoughts on the future role of cooperatives. In addition, the authors aim to make a

C. Schröder (✉) · H. Walk
Center for Technology and Society, Technische Universität Berlin, Berlin, Germany
e-mail: c.schroeder@ztg.tu-berlin.de

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substantial contribution to discussions about the importance of the role of bottom-up strategies in the transition towards a climate-friendly society.

Keywords Urban solidarity · Cooperatives · Societal strategies for sustainability · Collective behaviour · Democratic and climate-friendly economy

1 Local Climate Governance

At the local level, both the relationship between state and society, and the scope of political design possibilities, have changed drastically. This can be ascribed to decreasing public budgets on the one hand, and to changing labour divisions between public, private and third sector on the other. In consequence, local governance studies refer primarily to pluralistic constellations of stakeholders and changed modes of administration. Thus, not only the relevant institutions and stakeholders (individuals, groups, associations, businesses, organisations) have to be taken into account, but also the actual implementation of policies in local decision-making processes, modes of cooperation, the overall context of governance processes (Benz 2004) and a high degree of complexity exacerbated by social, political and economic globalisation.[1] The fundamental acceptance of local governance approaches in science and in practice stems from the fact that public and private participation (citizens, small and medium-sized enterprises—SME) in local organisations and institutions, as well as the political and social reactions to these, are assumed to contribute to proliferating governance mechanisms (Walk 2008; Heinelt 2004). Nonetheless, the actual requirements for democratic legitimisation are being questioned. Empirical results vary widely in focus and methods from, for example, quantitative evaluations of public–private cooperation and of tools for fostering participation (see also Bogumil and Vogel 1999) to qualitative comparative case studies on cooperative arrangements in various political fields.

With climate protection being a comparatively new area for research and activity, one focus of qualitative research has been on the analysis of climate programmes at the local level since the mid 1990s. These early municipal climate programmes obviously concentrated on a "learning by doing" approach, since there was little scientific data available regarding the consequences of climate change (Kern and Alber 2008). And, if representative, these results are mainly available for the global and national levels. Soon after this, networks of municipalities were established in order to cooperate or to exchange knowledge on

[1] These vary from informal forms of cooperation (discussion groups, workshops, forums, etc.) to mainly economically oriented approaches (public limited companies, public–private partnerships) and to formalised networks (special-purpose associations, planning associations, municipal consortia).

climate protection at the local level (e.g. Cities for Climate Protection Campaign, Climate Alliance, Energie-Cités).

At around the same time in the 1990s and early 2000s, in the wake of the 1992 Rio Summit, the quest was for all local governments to initiate Local Agenda 21 (LA21) programmes for their communities, and several comparative European studies of joint local efforts on sustainable development were carried out. These studies stressed the impact of governing structures on the mobilisation of stakeholders, and cooperative management regimes as, for example, the degree of support from central governments to LA21—in addition to the legacy of pre-existing social partnerships—were found to be one of the main explanatory variables for differences in national civil society's activity patterns across different countries (Lafferty and Eckerberg 1998; Lafferty 2001). In particular, the successful interaction between high levels of institutional, social and policy capacity characterised the most dynamic and active local communities across Europe (Evans et al. 2005).

As, initially, mainly smaller municipal entities implemented climate programmes, research also concentrated on these (Adger 2001: 9), for example, studies of "Bioenergiedörfer" [bioenergy villages] in Germany or "solar villages" in England. In that context, innovative approaches and structures aimed at the participation of public and private actors (citizens and SME) have developed (Kern and Bulkeley 2009; Kern et al. 2007; Brand and Warsewa 2003; Heinelt 2000). Only in recent years has social research extended to regional climate protection strategies where public, economic and non-professional actors have established various forms of regional governance to promote the issue and to develop action and activities (see, for example, Keppler et al. 2009; Tischer et al. 2006; Späth et al. 2007; Smith 2006; Projekt 100 %-Erneuerbare-Energie-Regionen 2009). But fewer empirical results are available regarding climate protection and climate governance in larger cities and city regions.

Nonetheless, large cities are increasingly implementing integrated approaches, combining strategies of avoidance and adaptation, and attempting to create various synergy effects (Bulkeley and Betsill 2005; Klimzug-Nord (TuTech Innovation GmbH) 2009). Again, the findings available in this area focus on changes in governance structures in the context of climate change at national and international levels (e.g. Foxon and Parrish 2009 for the UK; Tanner et al. 2008 for Japan; Aall et al. 2007 for Norway; Kern and Alber 2008 for OECD countries and the programme "Sustainable Cities" (Villes Durables) founded by the French National Research Agency; see also Caulfield and Larsen 2002). Further scientific findings for the German context are available for the thematic areas of housing/construction, energy/water, consumption and mobility, for example, from the research programme "Klimazwei" of the German Federal Ministry of Education and Research, and from the "Sustainable consumption" focus of that ministry's Socio-Ecological Research programme.

2 Cooperatives as Local Actors

Cooperatives represent a well-established and institutionalised form of civil organisation with a diverse presence worldwide. They are institutionalised forms of collective self-help (Müller 1980). Scientific studies have shown that cooperatives have been particularly effective in times of rapid economic, social and technical change (Röpke 1992), as the general objective of any cooperative is to actively support their members through common efforts across various aims. Their specific logic of collective action is characterised by an appreciation of (internal) democracy and solidarity with a local bearing (Atmaca 2007; Brockmeier and Fehl 2007). And, according to the International Cooperative Association (a non-governmental association currently representing 233 cooperative organisations in 89 countries worldwide), cooperatives "are based on the values of self-help, self-responsibility, democracy, equality, equity and solidarity" while their "members believe in the ethical values of honesty, openness, social responsibility and caring for others" (ICA 1995).

While the first cooperative-like structures evolved within the agrarian sector, cooperatives became especially popular in the late nineteenth and early twentieth centuries when, for example, workers, middle-class craftsmen or retailers founded credit cooperatives in order to cope with the challenges of industrialisation and economic liberalisation and when, for example, citizens founded housing cooperatives all over Europe as a means of overcoming poor housing conditions and to provide affordable accommodation for their members.[2] After a few decades of popularity, the cooperative sector had to cope with both concentration processes and new forms of socio-economic organisation: between 1950 and 1970, the number of registered cooperatives in Germany declined by almost a third (from more than 26,000 down to about 18,500), and in the three subsequent decades by another 50 % (with only 9,500 registered cooperatives by the end of 1999, and a mere 7,500 since 2006; Stappel 2009). This is not necessarily a sign of growing unpopularity, as many cooperatives from all sectors have been turned into non-cooperative forms of organisation, not necessarily losing their objectives (as GmbH, GmbH & Co. KG or AG).

Despite declining absolute figures, in Germany, registered cooperatives still have more members than any other form of organisation (some 20.5 million out of 80 million inhabitants) and with a large variety of areas of activity. Almost every farmer is still a member of at least one cooperative. Also, more than 90 % of all bakers and butchers, an average 60 % of all craftsmen and an average 75 % of all retailers are still organised in cooperatives. However, in the financial sector, in particular, a

[2] From that time, two basic types existed: cooperatives with a mainly economic orientation, primarily supporting the mutual self-help of their members (e.g. Germany, the United Kingdom, Sweden) and cooperatives also oriented towards political/social aspects or even resistance, such as in France, where cooperatives have been an integral component of what was termed the "économie sociale" (Ehm 1983: 20).

concentration process of (credit and savings) cooperatives has been observed. Housing cooperatives in Germany are still a major factor, with three million members and 2.2 million units to take care of—which is a good 10 % of the entire national housing market. Nonetheless, the number of new cooperatives remains small, with just 60 newly registered cooperatives in 2003 in Germany (74 in 2006), compared to more than 5,00,000 new businesses being registered (Atmaca 2007).

According to the previously mentioned principle of collective self-help, members of cooperatives aim to make their own decisions, and have their own responsibilities and autonomies while choosing collective ways of problem-solving. While each member is formally a co-entrepreneur with one vote in the obligatory cooperative general assembly, and is independent from their actual monetary contribution to the cooperative, an additional supervisory board and an executive board have to be elected whose activities are based on the general assembly's decisions and the general aims of their respective cooperative. Further characteristics define cooperatives: the voluntary nature of membership, equal rights of all members, internal democracy, participation, solidarity and autonomy of the internal organisation, as well as the general objectives and their implementation (Hanel 1992, cf. Flieger 1996: 33). Patera even describes cooperatives as an "emancipatory social system" (1990: 287). In addition, cooperatives are inextricably linked to the sustainable functioning of local communities and markets. According to Braudel's (1979) three spheres concept of economic activity, cooperatives are important for the production and maintenance of local economies and markets, and are particularly significant from the point of view of building and maintaining trust and reciprocity in local markets and cooperative networks.

But until 2006, it was quite difficult to establish a cooperative.[3] With new national and European laws on cooperatives, the minimum number of members was reduced from seven to three, a facultative advisory board (for small cooperatives) was installed, a facultatively smaller executive board, investing membership and multiple voting rights for members, was introduced—if agreed in the general assembly. At the same time, possible plans for action were expanded. Since then, registered cooperatives in Europe have been free to pursue not only economic, but also social or cultural, including environmental aims, and to establish transnational cooperatives.

3 Local Climate Governance and Cooperatives

While the absolute number of new cooperatives has not increased since 2006—neither in Germany nor in many other countries—the objectives of both existing and newly founded cooperatives are becoming increasingly diverse. As a

[3] In France, a new statute for societies was adopted in 2001 to promote cooperative action between the private and public sector and sustainable economic and social innovation. In the field of housing, this new statute revived the dynamic of social accession to propriety and the local strategy for low-energy housing (Denèfle et al. 2006).

consequence of the changed law, some cooperatives even address sustainable development and climate protection measures explicitly, for example, by declaring climate protection as one of their main objectives, by providing low-energy houses, car-sharing, organic food coops or information and advice on energy-saving and sustainable consumption. Another explanation for the recent small boom in cooperatives in Europe is derived from the consequences of decade-long privatisations and a growing mistrust in the established forms of (capitalist) economy. New cooperatives, mainly in the energy and water sector (e.g. operating local power plants in Austria and Spain), but also in the housing (e.g. in Scandinavia) and consumption (e.g. Switzerland, Italy, Sweden and Denmark) sectors are being formed, again, some with the explicit intention of making a collective contribution to sustainability and climate protection. Not surprisingly, the majority of recently formed cooperatives in Germany are energy cooperatives, as 23 % of all new cooperatives are founded in this sector (Pollich 2009). These mainly operate local or regional solar plants, wind farms and bioenergy plants. Volz (2010) writes that there were about one to two new formations per month in 2010, and around 70 new formations of energy cooperatives for the years 2000–2008 in Germany. Of course, the popularity of small- to medium-scale solutions is not restricted to cooperatives alone; it can rather be seen as part of a larger trend that hungers for economically and socially sustainable organisations.[4]

The authors argue that cooperatives will become increasingly important for sustainable and cooperative solutions at the local level as they have the potential to spearhead new behavioural and social patterns of action, oriented towards more sustainable paths: cooperatives address everyday needs (for housing, community, mobility, consumption and sustainable provision of resources). And, increasingly, cooperatives are being conceived of as a viable counter-strategy to the privatisation of municipal enterprises. In addition, cooperatives in principle allow for the greatest possible civic involvement in decision-making processes, with value creation remaining citizen-centric and communally available. The cooperative movement—and especially the formation of new cooperatives—thus has the potential to inject new life into the mobilisation of individuals, civil society, policy-makers and economic actors by actively supporting a transition to sustainable practice in Europe. Although not all cooperatives can necessarily be associated with the civil society (Atmaca 2002, 2007), many cooperatives exist that unite ethical arguments with economically viable and sustainable aspects.

While there is a large variety of formal and informal structures that can be implemented to facilitate urban sustainability, the specific appeal of cooperatives

[4] Flieger (2009) differentiates between four types of energy cooperatives: first, the energy consumer cooperatives concerned primarily with trading and selling energy; second, energy production cooperatives whose members jointly produce energy; third, energy generator consumer cooperatives that pursue integrated solutions, e.g. municipalities that are self-contained in terms of energy (bioenergy villages), and; fourth, energy service cooperatives that offer consultation and procure and purchase energy. The majority of newly established energy cooperatives are in the photovoltaic sector.

lies for one in their integrated sustainability, and for another in their democratic capacities. Based on the aforementioned research results, it can be seen that cooperatives:

- address various social, cultural, ecological and economic aims in order to come up with long-term solutions to the benefit of their members;
- facilitate both individual and collective transitions towards sustainability and resilience as some are already engaged in implementing local green infrastructures, shared use of resources, economically feasible, socially responsible and ecologically sustainable services.

Regarding their long-term focus, they have the capacity to address a variety of social aims as well as everyday needs, to be economically effective in the long term, while combining small-scale economic institutions with social organisation. In addition, they have the potential to add an emancipatory dimension to sustainable action due to their democratic and collective decision-making processes. Some indications can be found, as well, regarding their stabilising influence on local communities and environments.

While there are still some large traditional cooperatives, especially in the energy and water sectors, housing and maybe even mobility sectors, new small cooperatives are being founded as a means for their members to shape their local environments. But it can be assumed that different cooperatives adapt in different ways to those potentials. As the cooperative landscape is quite diverse, any cooperative needs to work economically and efficiently in order to obtain legal status. And they need to implement the decisions made by their members.

With respect to the emancipatory dimension to sustainable action, another specific appeal of cooperatives, often alluded to, is their successful adoption of various forms of collective decision-making. Although the actual extent and structure of participation in cooperatives may vary, many cooperatives have implemented working groups that are entitled to prepare or even take decisions on specific topics (cf. Hanel, 1992; cf. Flieger 1996: 33). In the context of sustainable urban development and climate change, involvement in collective structures such as cooperatives can be seen as a practical opportunity to break down global problems into collective and local ones. For example, if citizens set up their own energy cooperative, they counteract feelings of powerlessness by organising the generation or provision of energy locally as they hope to benefit from their own collective action.

4 The Möckernkiez Initiative

Two of the many types of cooperatives aiming at actively supporting solidarity and sustainable structures are neighbourhood cooperatives and housing cooperatives (or residential building cooperatives). In addition to the cooperative's characteristics already mentioned, they aim to establish networks within their local

surroundings (neighbourhood cooperatives). One such cooperative is the Möckernkiez Initiative in Berlin, Germany. It explicitly targets both the provision of affordable housing and the establishment of good neighbourly relations. Founded in 2007, the Initiative is a registered cooperative with some 500 members in 2011. On their own initiative, their goal is to build and inhabit a new neighbourhood in the inner city. According to their shared visions, they will realise an intergenerational residential area which is, in addition, ecologically sustainable, accessible for people with disabilities, multicultural and socially integrative. They plan to build 10–12 apartment blocks with just under 400 flats and business units. Although still in the planning stages, the members of the cooperative have initiated various work groups in order to develop and discuss their concepts and ideas, as well as their implementation, sometimes with the support of external experts. In addition, regular members' meetings, with discussions on various topics (design of the collective spaces, sustainable mobility concept, structure of participatory processes within the cooperative, etc.) are already on the agenda.

By enhancing each member's participation in the planning process, they hope to include individual ideas. This initiative explicitly considers itself not only as a cooperative for building and administrating flats and business units, but also as a network of civil society members, based on various other associations and institutions, who have an active role in shaping their neighbourhood and improving the quality of life locally.

Since the cooperative has not yet started to build the quarter, the extent to which its ambitious aims will be realised is unclear at present. According to the statements of members of the cooperative, however, the many possibilities for communication have already triggered learning processes among members and the executive board, as well as among political representatives of the neighbourhood in such a way that there is plenty of dedication and expertise within the discussions. Furthermore, the general public's reception of their project can be described as positive. As informal networks and media spread the idea as well, there seems to be a real opportunity for promoting local sustainability and solidarity through the implementation of cooperative projects.

5 Empirical Flaws

Although cooperatives have gained some attention in the media recently, their potential role in local climate protection activities has not yet been acknowledged sufficiently within the scientific community or among the civic society or political leaders. For example, many topics are rarely discussed, such as local collective approaches to climate protection and energy saving; local networks and cooperations between committed individuals; initiatives and local administration; as well as forms of collective action directed towards local sustainable development and climate protection. Some detailed, but not systematic, insight into the importance

of supporting social solidarity can be gained from the experiences of member cities of the Climate Alliance and of ICLEI Local Governments for Sustainability.

Another research gap can be identified when it comes to relating collective action with climate protection. Climate-related research on lifestyles and consumption, however, has primarily drawn upon findings from environmental sociology and environmental psychology (Spaargaren and Mol 2008). It has concentrated either on everyday life (overview in Rhein 2006; cf. Huber 2001; Reinhardt 2007) or on specific behaviour such as mobility (Hunecke 2000) or consumption (Stieß and Hayn 2005), but has focused primarily on the observation of one individual in his or her specific life situation and not on the possibilities of, and for, collective action. A significant weakness of these more individual, lifestyle-oriented approaches, however, is the lack of clarity regarding units of analysis and difficulties with validation of the findings, given the challenges of trying to distinguish concrete social groups and the common lack of stability of life patterns (Michailow 1994; Müller 1989 and others).[5] Furthermore, solidarity-oriented constellations of actors and activity contexts have been given almost no attention in environment-related lifestyle research, which until now has been primarily oriented at the level of the individual citizen (see, for instance, Wolf 2009). But solidarity-oriented actors deserve further systematic research from a European comparative perspective, especially regarding their potential to shape society, and given their demands for "far-reaching and sometimes total change" (Rucht 2000: 51). Scholars have observed that many grassroots social movement organisations involved in the so-called global justice movement, for example, have developed an interest in "local sustainable economic development projects" and hence propose "viable alternatives to dominant economic practices and lifestyles" (della Porta and Diani 2006: 78). What is missing, though, are empirical results regarding collective-based action and specifics of cooperatives in (larger) cities and regions.

While the local level in general has received more attention in urban research, the relationship between urban research and climate protection is vague. Some authors suggest that the local level will be of particularly great significance in the context of climate change. They argue that an issue as comprehensive as climate change can only be solved through individual and collective contributions (Satterthwaite 2008; Caulfield and Larsen 2002), within their specific construction/spatial social, political and economic structures, and must be supported by local

[5] A particular challenge for this field of research is that most individuals pursue ecologically ambivalent "patchwork" lifestyles (Reusswig, 1994), and individual contributions to environmental protection frequently differ in scope even within individual lifestyle groups. The latter challenge is rendered even greater by the fact that individuals frequently think of possible action options available to them only in combination with their resources and the objective and subjective scope of options or action (Tanner, 1998). Environmental action is thus always situation- and context-specific (on inconsistent environmental behaviour, see Tully, 2000; see also Schultz, 1998; Slovic, 1995; Preisendörfer, 1993) and, according to Tully (2008), also regional-specific.

politics (Bardou 2009) as well as participatory decision-making processes (Bacqué et al. 2005; Sintomer et al. 2009). Adger (2001: 1) even assumes that collective action for local climate protection is one of the essential, as-yet unexploited capacities of human societies. In this context, he describes local characteristics, size and structure of a group, availability of resources, collective access to resources as well as the desired respectively actual distribution of individual advantages as major influencing factors (ibid.: 11; cf. Geißel 2006; Pelling and High 2005; Pretty 2003). Nevertheless, two areas with a need for further research can be identified from these studies: first, there is a lack of fitting participation strategies for this level. The question of how to mobilise the civil society for climate-friendly, energy-efficient and renewable energy activities is left open. Second, most of the former research focuses on rural regions; metropolitan regions and larger cities have been neglected up until now.

When focusing on local climate strategies, practice and scientific research also need to connect to—and solve—complex issues, such as economic efficiency, the organisation and allocation of infrastructures and resources in cities, societal and political aspects of actual urban lifestyles, communication and education, and their accumulative, reinforcing and neutralising effects at a local level.

6 Conclusion: The Potential Roles of Cooperatives in a Climate-friendly Society

With their large number of members all over the world, cooperatives have the potential to support a transition towards sustainable and resilient practice and to contribute to local adaptations to the "grand urban challenges". Accepting what has been written here before, three aspects are to be considered when researching potential future roles of cooperatives in the context of local climate governance:

1. Parallelling a still ongoing trend of centralisation, there is a trend towards smaller cooperatives. With new legal frameworks, cooperatives' foci might be expanded and the implementation of a variety of locally adapted cooperatives can be imagined. So, if there is to be a "new localism" of sustainable, climate-oriented urban development (cf. Bulkeley & Kern 2006; Collier and Löfstedt 1997), cooperatives could be one element of combining positive local social and economic effects within this process. Political support will be crucial and may open up to forms of local governance that actively promote sustainable development and local climate governance.

2. Nonetheless, the structure of cooperatives can still be considered as somewhat restrictive, as members have to pay a membership fee and any cooperative is subject to its economic efficiency. Jobs created so far are mostly limited to executive boards and a few members of administrative staff (if any). If there is to be a more prominent role for cooperatives in the future, it is, for one, important to note that most cooperatives so far handle shared, but not public, property, and

for another, to reflect on how, and in what terms, cooperative structures could be implemented locally to benefit a wider circle of citizens and consumers. This has been considered in some of the literature on multi-stakeholder cooperatives, posing the question: which forms of local solidarity do they actually implement, and what social and economic models can be developed from these? And if an increasingly important role for cooperation between private and civil-societal forms of engagement at the local level can be assumed, then such cooperatives could take on a leading role in mobilising social capital at local and regional levels, especially if economic interests are one, but not the most prominent, motivation.

3. The question of climate justice and/or fairness at the local level remains unexplored. Although several scientific studies address that question at the global level (Barker et al. 2008; Adger et al. 2006), it has yet to be determined how individual and collective action in the context of climate change affects the management and distribution of local (material and immaterial) resources. If innovative forms of local solidarity can be implemented, maybe intra-urban partnerships, intra-cooperative and multicultural partnerships or local networks could work with similar models; maybe they would devise innovative (or long-lost) ideas for including various groups of citizens, political and economic actors into the shaping of their local and global sustainable futures.

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Author Biographies

Dr.-Ing. Carolin Schröder is postdoctoral researcher at the Technical University of Berlin. With a background in urban planning, she has been focusing on participation and cooperation in urban and regional planning as well as urban governance and management forms. In addition, her work is dedicated to the problems and chances of interdisciplinary and transdisciplinary research, which has also been a recurring subject in her publications. Over the last decade, she has been in charge of coordinating several research projects, she has taught at several universities and is currently in charge of the research area "participation" at the Centre for Technology and Society, Technical University of Berlin. She is the author of "Akteure der Stadtteilentwicklung", Oekom/Steiner Verlag.

PD Dr. Heike Walk is political scientist and postdoctoral researcher at the Centre for Technology and Society at the Technical University of Berlin. Her dissertation thesis (completed in 2000) deals with ways in which NGOs can influence international climate policy. In 2007, she completed her postdoctoral thesis (*Habilitation*) on "Governance and Participation in the Multi-Level System of Climate Policy." She has published books and papers on participatory democracy, governance, civil society, social movements, climate and energy policy and sustainability. Since 2003, she has been Co-editor of the social science journals, "Citizenship and Democracy" at the publishing house VS Verlag für Sozialwissenschaften.