

**Studies on the Agricultural and Food Sector
in Central and Eastern Europe**

**Perspectives on Institutional Change –
Water Management in Europe**

**Edited by
Insa Theesfeld and Frauke Pirscher**



*LEIBNIZ-INSTITUT FÜR AGRARENTWICKLUNG
IN MITTEL- UND OSTEUROPA*

Perspectives on Institutional Change – Water Management in Europe

Studies on the Agricultural and Food Sector
in Central and Eastern Europe

Edited by
Leibniz Institute of Agricultural Development
in Central and Eastern Europe
IAMO

Volume 58

Perspectives on Institutional Change – Water Management in Europe

**Edited by
Insa Theesfeld and Frauke Pirscher**

IAMO

2011

Bibliografische Information Der Deutschen Bibliothek

Die Deutsche Bibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über <http://dnb.ddb.de> abrufbar.

Bibliographic information published by Die Deutsche Bibliothek

Die Deutsche Bibliothek lists the publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the internet at: <http://dnb.ddb.de>.

Diese Veröffentlichung kann kostenfrei im Internet unter
<www.iamo.de/dok/sr_vol58.pdf> heruntergeladen werden.

This publication can be downloaded free from the website
<www.iamo.de/dok/sr_vol58.pdf>.

© 2011

Leibniz-Institut für Agrarentwicklung in Mittel- und Osteuropa (IAMO)

Theodor-Lieser-Straße 2

06120 Halle (Saale)

Tel. 49 (345) 2928-0

Fax 49 (345) 2928-199

e-mail: iamo@iamo.de

<http://www.iamo.de>

ISSN 1436-221X

ISBN 978-3-938584-52-1

CONTENTS

Mapping institutional change.....	3
<i>Insa Theesfeld, Frauke Pirscher</i>	
Affordability as an institutional obstacle to water-related price reforms.....	9
<i>Erik Gawel, Wolfgang Bretschneider</i>	
Analysing the shortcomings of the Ukrainian urban waste water sector – Institutional options for modernisation	35
<i>Herwig Unnerstall, Nina Hagemann</i>	
Gemeinschaftsgüter und Gemeinwohl – Theoretischer Erkenntnisgehalt und praktische Relevanz für die Regionalentwicklung am Beispiel von Wasserinfrastrukturen und Kulturlandschaften	55
<i>Andreas Röhring, Timothy Moss, Ludger Gailing, Rita Gudermann</i>	
Explaining top-down institutional design: The introduction of River Basin Management in Portugal.....	85
<i>Andreas Thiel, Catrin Egerton</i>	
Decentralization failures in post-socialist fishery management	107
<i>Insa Theesfeld, Oscar Schmidt</i>	

MAPPING INSTITUTIONAL CHANGE

INSA THEESFELD, FRAUKE PIRSCHER

This editorial provides a wider theoretical foundation for the selection of papers in this book and links them with the current debate on institutional change. We develop a conceptual classification to show the similarities and differences of the case studies presented in the remainder of this book.

The basic functions of institutions are defined in accordance with the prevailing understanding of institutions in institutional economics and most areas of social sciences. Institutions are the rules of a society or organisation that facilitate coordination among people by helping them form expectations, which each person can reasonably hold in dealing with others (BLAAS, 1982; NORTH, 1990). They reflect the conventions that have evolved in different societies regarding the behaviour of individuals and groups relative to their own behaviour and that of others. Institutions are made up of formal constraints (e.g., rules, laws, and constitutions), informal constraints (e.g., norms of behaviour, conventions, and self-imposed codes of conduct), and their enforcement characteristics. Consequently they give structure to incentives in human exchange, whether political, social, or economic (NORTH, 1990).

Institutions are not static, but dynamic; i.e., they evolve and change over time. All natural resource management regimes described in this book have seen various periods of fundamental institutional change. Institutional change can occur intentionally, as with a decentralisation process, or spontaneously (HAYEK, 1964; NORTH, 1990; VATN, 2005). In cases in which institutions are not "designed", and even when they are, their operation may be different from the original intentions. Therefore, we also must concentrate on the de-facto institutions rather than simply the de-jure institutions (CASSON et al., 2010). North's "moral and ethical behavioural norms" are often embodied in informal institutions such as religion and caste, which determine the quality and sustainability of formal institutions and thus often regulate socio-economic life (CASSON et al., 2010).

Natural resource regimes, including the water sector, are always changing. Recently there has been a particular need to cope with climate change, which manifests itself in global warming and an increased number of extreme environmental events, and is a major driver for institutional change. In addition, the evidence of irreversible groundwater depletion and contamination triggers actions. Socio-economic drivers

that gain importance include new EU agri-environmental or rural policies, migration, and depopulation. In order to deal with complex ecological problems that are linked with socio-economic drivers, ex-ante, anticipatory, planned adaptation strategies in natural resource governance are required.

Each perspective and conceptualization of adaptation emphasises a different type of policy response (HORSTMANN, 2008). The understanding of adaptation as precautionary and strategic, e.g., as required by the United Nations Framework Convention on Climate Change, emphasises intentional, designed institutional change in contrast to autonomous adaptation.

The contributions in this book illustrate institutional changes in Europe's water sector in a variety of contexts. With our examples we are able to consider the following questions:

- Under what circumstances is institutional change best viewed as a spontaneous, evolutionary process, and when is it the outcome of a deliberate design?
- What leads to intended and unintended effects?

Institutional economics comprises a variety of theoretical approaches to explain institutional change. They differ in the considered causes, processes, and characteristics of outcomes of institutional change. In line with KINGSTON and CABALLERO (2009), we identify two broad categories of processes of institutional change: a) the deliberate creation of institutions through the political process, and b) the spontaneous emergence of institutions (either random or through deliberate design) through evolutionary decentralised selection processes. We follow this classification in this book and map out our cases accordingly.

Purposefully designed institutions might be implemented in a centralised way, either by a single individual or by many individuals or groups. Those groups interact through some type of collective choice or political process in which they lobby, bargain, vote, or otherwise compete to try to implement institutional changes which they perceive as beneficial to themselves, or to block those they view as undesirable. The implementation of the European Water Framework Directive in Portugal (THIEL & EGERTON) or a new water law in the Ukraine (UNNERSTALL & HAGEMANN) are examples of purposefully designed institutions. A prerequisite to designing new institutions is the ex-ante analysis of underlying models, e.g., price calculation regimes, as exemplified by comparative country data of European countries and former Soviet Republics (GAWEL & BRETSCHNEIDER).

In the process of evolutionary institutional change, new institutional forms periodically emerge either at random or through deliberate design and undergo some type of decentralised selection process as they compete against alternative institutions. Thus, the institutional change occurs spontaneously through the uncoordinated choices of many agents, rather than a centralised and coordinated manner, described here by the reforms in the infrastructure sector of household water supply and waste

water disposal in Germany (RÖHRING et al.). Unintended effects occur when under-utilisation of supply and treatment infrastructure systems occurs in shrinking regions (particularly in Eastern Germany). This may threaten the functionality of the systems and the adherence to quality standards.

Like KINGSTON and CABALLERO (2009), we admit that in real-world settings both unintentional, evolutionary processes and intentional processes of design are at work. Further, the Distributional Theory of Institutional Change by Jack Knight explains institutions, and their development, as "not best explained as a pareto-superior response to collective goals or benefits but, rather, as a by-product of conflicts over distributional gains" (KNIGHT, 1992). Thus, as with the elite capture problem in Albania's fishery sector (THEESFELD & SCHMIDT), sub-optimal outcomes occur and unintended outcomes are the result. In line with (CASSON et al., 2010), the study of Albania's fishery sector highlights the de-facto rules-in-use and explains unintended outcomes by studying those informal rule systems.

The following table shows the clustering of contributions according to the theoretical outline of institutional change given above. The covering of these different aspects of institutional change is the additional value of putting the contributions together. There are several links and commonalities among the contributions gathered in this book.

Table 1: Mapping institutional change

	Intentional, purposefully designed institutional change	Evolutionary, spontaneous institutional change
Intended effects	Household water supply, Eastern Europe and former Soviet republics (Gawel & Bretschneider) Urban waste water sector, Ukraine (Unnerstall & Hagemann) Waste water sector, Germany (Röhring et al.) Entire water sector, Portugal (Thiel & Egerton)	
Unintended effects	Fishery sector, Albania (Theesfeld & Schmidt)	Waste water infrastructure, Germany (Röhring et al.)

The book presents a selection of cases of institutional change in the water sector, ranging from intentional decentralisation reforms in Ukraine, Portugal, and Albania, to a spontaneous institutional change in the infrastructure governance system of wastewater management in Germany, analysed by RÖHRING et al. (this volume).

A decentralisation and devolution process is described for Ukraine and Portugal, each of which has a regional level that remains weak in its political decision-making power. THIEL & EGERTON (this volume) analyse reform in the entire water sector of Portugal, namely the implementation of the water law and its main effect: the rescaling from administrative units to hydro-geological units. In

contrast to the Ukraine case, in which UNNERSTALL & HAGEMANN (this volume) elaborate ex-ante determinants for successful institutional change, in Portugal, an ex-post study analyses drivers that led to the current outcome of the reform. The study focuses on the formal implementation of the law rather than how it is de-facto implemented. The latter aspect is therefore studied in the ex-post analysis and the impact study of the decentralisation in the fishery sector of Albania by THEESFELD & SCHMIDT (this volume).

In comparison to the papers dealing with water provision infrastructure (UNNERSTALL & HAGEMANN, this volume; GAWEL & BRETSCHNEIDER, this volume), there are certain particularities in the German water supply case (RÖHRING et al., this volume). RÖHRING et al. (this volume) show that changes in the household water supply and wastewater treatment infrastructure in Germany are rather spontaneous. Whereas considering the management of the resource water as the unit of analysis, and not its infrastructure, we would speak of intended institutional change not least due to the impact of the EU Water Framework Directive, as discussed in the Portugal case (THIEL & EGERTON, this volume). RÖHRING et al.'s work (this volume) offers an outlook on other resources besides water, providing an insight that intended institutional change with cultural landscape management would be even more difficult due to the particular characteristics of a resource system.

The contributors of this book are members of the NIÖ¹ Network, comprising a group of scientists engaged in natural resource management issues from a new institutional economics perspective. The last two annual meetings of the group were held in Halle (Saale) at the Martin-Luther University (2008) and the Leibniz Institute of Agricultural Development in Central and Eastern Europe (IAMO) (2009). This book is comprised of papers presented at both workshops and additional contributions from members of the NIÖ Network after a revision in a double-review process.

CONTRIBUTIONS IN THIS VOLUME

GAWEL's & BRETSCHNEIDER's paper is titled "Affordability as an institutional obstacle to water-related price reforms". Until recently, the main goal of price reforms used for intentional institutional change was to establish efficient prices to cover the full costs of the environment-related service, thus inducing a sustainable resource. However, the distributive aspects of such a price reform have been neglected. The design of a water pricing system represents intended institutional change, with the intent of reaching a socially acceptable pricing system. The authors question is how significantly can institutions (in this case water pricing systems) be intentionally designed to provide affordable water prices, i.e., ensuring affordable access to services for everyone, including the poorest? The

¹ NIÖ = New institutional economists (Neue Institutionenökonomien) is the name of this informal network of researchers.

lack of affordability for some of the population can impede the establishment of sustainable price reforms for all. Therefore, GAWEL & BRETSCHNEIDER argue that affordability as well as efficiency should be considered in political decision making. They show that the indicator currently used by international organisations and governments to measure affordability is misleading. And oversubsidisation can be expected. After discussing the traditional "affordability ratio" measure within the microeconomic household model, the authors propose some theoretical enhancements.

UNNERSTALL & HAGEMANN provide "Analysing the shortcomings of the Ukrainian Urban Waste Water Sector – Institutional Options for Modernization." This contribution analyses the key institutional factors of fiscal federalism that affect the urban waste water sector in Ukraine and are therefore the starting points for an intentional institutional change. First, a description of the physical infrastructure of the waste water sectors is given. Second, key factors for determining an intentional institutional change are identified, based on the decentralisation that has already occurred within the sector. The analysis is based on the Theory of Federalism and the European Charter of Local Self-Government. Very valuable in that respect is the description of the legal situation for the Ukrainian waste water sector and its shortcomings. The contribution concludes with implications for successful intentional institutional reforms.

RÖHRING et al. focus on public goods and public interests in the context of institutional change. Their contribution discusses necessary intended institutional changes, namely the fact that the prevailing forms of providing public goods and defining public interests must be adapted to various drivers. The integration of the concept of public interest and its comparison to the concept of public goods is addressed in the chapter "Public Goods and Public Interest: Theoretical Reflections and Practical Relevance for Regional Development – the Examples of Water Infrastructures and Cultural Landscapes". The paper concludes by summarising the lessons learned from applying the concepts of public goods and public interest to water infrastructures and cultural landscapes. There is a constant institutional change in public interests, as they are defined in a public democratic discourse, and are only valid for a certain time and region. As regards the water sector, the paper also exemplifies the important distinction between a resource (water) and its resource system (infrastructure). RÖHRING et al. show that changes in the water infrastructure system evolve rather spontaneously. A conflict emerges between using water efficiently – using less of it – and using the water infrastructure efficiently, which requires using it to near-maximum capacity.

In their paper titled "Explaining top-down institutional design: the introduction of River Basin Management in Portugal", THIEL & EGERTON analyse the reform of the water governance in Portugal that was necessary to implement the Water Framework Directive (WFD). Here, the decision makers opted for a radical restructuring of the water governance, shifting the governance role from administrative

districts to hydrographic regions. This rescaling is considered intentional formal institutional change. It led to a loss of competencies of the central water authorities and multi-sectoral deconcentrated administration in favour of a newly constituted water administration. The authors use the Distributional Theory of Institutional Change to explain the timing and content of the reform.

THEESFELD & SCHMIDT's text on "Decentralization Failures in Post-Socialist Fishery Management" focuses on the outcomes of institutional change and provides a representative case by analysing the widespread negative side effects of decentralisation. Recently, institutional change in local natural resource governance has been triggered by decentralisation, resulting in a transfer of property rights from the central government to local resource users. However, despite the many successes of such intentional institutional changes, there are risks of unintended effects, including the phenomenon of elite capture. THEESFELD & SCHMIDT investigate elite capture in Albania's Lake Ohrid fishing region and contribute details about decentralisation failures by identifying determinants for and effects of elite capture. The Albanian case shows how blueprint approaches for decentralised management, which ignore the de-facto informal rules, as well as top-down implementation led to further empowerment of privileged locals, who realised personal gains at the expense of distributional inequity within the community. Specific insights are derived from the analysis of implications from the post-socialist context.

REFERENCES

- BLAAS, W. (1982): Zur Rolle der Institutionen in der ökonomischen Theorie, in: LEIPERT, C. (ed.): Konzepte einer humanen Wirtschaftslehre: Frankfurt, Haag-Herchen, pp. 263-292.
- CASSON, M. C., DELLA GIUSTA, M., KAMBHAMPATI, U. S. (2010): Formal and Informal Institutions and Development, *World Development*, Vol. 38, No. 2, pp. 137-141.
- HAYEK, F. A. V. (1964): Arten des Rationalismus, in: HAYEK, F. A. V. (ed.): Gesammelte Werke Von F. A. Von Hayek: Tübingen, Mohr (Paul Siebeck), pp. 75-89.
- HORSTMANN, B. (2008): Framing Adaptation to Climate Change – A Challenge for Building Institutions, *DIE Discussion Paper 23*: Bonn, German Development Institute.
- KINGSTON, C., CABALLERO, G. (2009): Comparing Theories of Institutional Change, *Journal of Institutional Economics*, Vol. 5, No. 2, pp. 151-180.
- KNIGHT, J. (1992): *Institutions and Social Conflict*: Cambridge, Cambridge University Press.
- NORTH, D. C. (1990): *Institutions, Institutional Change and Economic Performance*: Cambridge, Cambridge University Press.
- VATN, A. (2005): Rationality, Institutions and Environmental Policy, *Ecological Economics*, Vol. 55, No. 2, pp. 203-217.

AFFORDABILITY AS AN INSTITUTIONAL OBSTACLE TO WATER-RELATED PRICE REFORMS

ERIK GAWEL^{}, WOLFGANG BRETSCHNEIDER^{**}*

ABSTRACT

Economists argue that prices for environment-related services should reflect full-cost recovery and therefore provide incentives for sustainable use. Efficient pricing, however, is likely to conflict with other competing objectives, amongst others ensuring affordable access to services for all sections of the population, including the poorest (affordability). Welfare economics literature suggests to neglect affordability aspects by separating allocative from distributive impacts of pricing. In practice, this approach runs the risk of rendering impossible any sustainability-oriented institutional change by means of price reforms. An Institutional Economics approach takes competing objectives into account. Hence, the question arises how can water prices be so arranged that they provide the desired incentives and at the same time are socially acceptable, especially affordable? Or more general, in how far can institutions, here water pricing systems, be intentionally designed to provide affordable water prices?

Over the last years the mostly empirical research related to the concept of affordability has accelerated remarkably. However, theoretical contributions are still rare. This article analyzes the question, how the category of affordability might be a general orientation for political decisions in a world where allocation and distribution are not strictly separated. After an illustration of empirical efforts we discuss the traditional "affordability ratio"-measure within the microeconomic household model and some theoretical enhancements. Finally policy-oriented conclusions are drawn for retaining both efficiency and affordability in practical price reforms for environment-related services.

1 AFFORDABILITY, PRICING, AND INSTITUTIONAL CHANGE

Water-related services are key prerequisites for human and economic development, and sustainable management of these resources is also important for maintaining ecosystems. Poor governance and inadequate investment, however, are worldwide

^{*} Helmholtz Centre for Environmental Research, Department of Economics, and University of Leipzig, Institute for Infrastructure and Resources Management.

^{**} University of Leipzig, Institute for Infrastructure and Resources Management.

resulting in large populations not having access to the services or the respective service quality they need. Failure to manage resources effectively is also resulting in increased pressure on these resources, mounting competition for their use among different economic activities, and, in some regions, even conflict. For the case of water, the increased demand is linked with a variety of factors: population increase, pressures for food production, rapid urbanisation, degradation of water quality, and increasing uncertainties about water availability and precipitation regimes, especially due to climate change.

Hence, major economic benefits potentially accrue from improved water resource management and services. The water and sanitation sector is seriously under-financed in many countries. Additional financial resources are a necessary, but not sufficient, condition for meeting the sustainability challenges and for achieving internationally agreed policy objectives. There is also considerable scope to improve the cost-effectiveness of expenditures on services. Efficient pricing plays an important role in this context. In addition, the implementation of effective water policies is often hindered by political and public opposition to increasing the price of resources, which impinges on the establishment of effective financing arrangements and efficient system performance. Thus realising the benefits of improved service policies requires not only more finance, but also improved governance of the sector, as well as effective strategies that can overcome the vested interests and opposition that often block reform.

Therefore, one should consider ways of mobilising more financial resources, financing a sufficient and safe service provision ("cost recovery"), reducing excessive demand and improving the cost-effective use of resources and at the same time being affordable to public budgets, private households and industry sectors. Effective resource management requires finding the right mix of revenues from the so-called "3Ts": tariffs, taxes and transfers (including official development assistance grants) (OECD, 2009). Full cost recovery from tariffs which may theoretically be the ideal solution, in practice remains a distant objective in many countries. Very poor countries can hardly reach moderate cost-recovery targets such as cost recovery for operation and maintenance (O&M). Increasing revenue from tariffs requires a comprehensive approach, which includes reforming tariff levels and structures and increasing bill collection rates, but also increasing levels of service and putting in place social protection measures with respect to affordability.

Over the past years political efforts have been prevailing increasingly that aim at prices for natural resources which display the true social value of the service. One of the most prominent efforts in OECD countries might be the Water Framework Directive of the European Union. Article no. 9 announces that "Member States shall take account of the principle of recovery of the costs of water services, including environmental and resource costs." Being in a process of implementation this directive is a sign of increasing water prices in the future. Recent trends for water-related tariff policies worldwide reveal inter alia (OECD, 2009):

- continued real price increases – at times, substantial – for household service, both in OECD and non-OECD countries,
- continued attention to social concerns, addressed through innovative tariff structures or parallel income-support mechanisms.

Thus, institutional change for protecting scarce resources and enhancing safe and sufficient access to them, especially by means of price reforms, usually faces serious obstacles in practice (see AZEVEDO/BALTAR, 2005; DINAR, 2000; DINAR/SALETH, 2006; FREUND/WALLICH, 1997). The affordability issue might be one of the most important stumbling blocks for efficient pricing. Welfare economics literature suggests to neglect affordability aspects by separating allocative from distributive impacts of pricing. In practice, this approach runs the risk of rendering impossible any sustainability-oriented price reform. A theory-oriented tariff design would only provide for the efficiency of prices and would leave social and distributive aspects to separate measures of welfare policy. However, policy-making is always obliged to take into account allocative and distributive effects of pricing reforms simultaneously.

Therefore, an Institutional Economics approach takes competing objectives into account (section 2). Hence, the question arises how can water prices be so arranged that they provide the desired incentives and at the same time are socially acceptable, especially affordable? The arranging or design of a water pricing system represents an intended institutional change here, with the intended effect to reach a socially acceptable pricing system.

Affordable consumption is a term used to describe consumption patterns for essential goods whose total cost are deemed "affordable" even to those that have a low income. Affordability strives to provide essential goods with a market price for every human being regardless of personal income. The most common approach is to consider the percentage of income that a household is spending on consumption expenditure. Hence, a commonly accepted guideline for affordability of utility services is a service cost that does not exceed a certain percentage of a household's gross income. It is obvious that for a given income and given human needs (flexible) pricing of these services plays an important role for affordability issues.

In order to take affordability of services into account for concrete policy measures (such as tariff constructions or attendant welfare programs) we need to know empirically when and to what extent affordability might be at risk (section 3). In turn, this requires a sound theoretical definition of the concept. Therefore, we discuss the traditional "affordability ratio"-measure and some improvements within the micro-economic household model (section 4). Against this background, the interrelation of pricing and affordability is dwelled on in section 5. Some policy-oriented conclusions are drawn for retaining both efficiency and affordability in practical price reforms for environment-related services (section 6).

Over the last years mostly empirical research with respect affordability issues has been done. Up to now, theoretical considerations however are still rare. In this paper we intend to describe shortly the meaning, a theoretically founded definition and possible empirical applications of the affordability concept. The article analyzes the question, how the category of affordability might be a general orientation for political decisions in a world where allocation and distribution are not strictly separated.

2 TARGETS FOR WATER PRICING AND THE CURRENT INTEREST IN THE AFFORDABILITY ISSUE

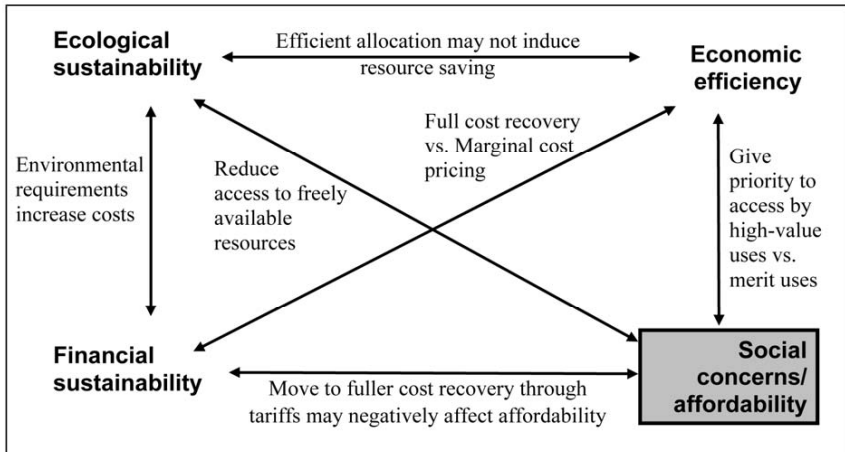
From an economic point of view pricing should first of all make sure that resources are used in an efficient way. However, even in allocation theory we have to face complications by externalities and sustainability requirements as well as conflicts between efficient marginal pricing and full cost recovery for the producer. In practice, at least social concerns and other institutional restraints play an important role for the effective performance of pricing approaches.

Thus, tariffs have to meet diverging financial, economic, environmental and social objectives (Fig. 1), some of which may be conflicting. A major challenge for this institutional change therefore is designing tariffs in a way that strikes an appropriate balance among conflicting goals that can be structured around four dimensions (OECD, 2009; LEFLAIVE, 2009):

- *Ecological sustainability*: As scarce and vulnerable natural resource, water should be used so as to protect the basic ecological functions of natural capital and preserve it for future generations. Savings are part of this objective, which requires avoiding wasteful uses that put unnecessary pressure on the resource (*use efficiency*).
- *Economic efficiency*: As a valuable economic good, resources should be allocated to the uses that maximise overall benefits to society (*allocation efficiency*). This means that unnecessary investment should be avoided if the value of the services or functions they provide is lower than their cost.
- *Financial sustainability*: As activities requiring investment in costly infrastructures, service provision should be kept viable over time and should be able to attract capital, skills and technology by adequately compensating them.
- *Social concerns*: As a public interest good, acceptable levels of services should be accessible and affordable to all, including to lower-income groups. When dealing with social concerns, the focus is primarily on how to protect vulnerable groups and ensure that they have access to services that remain affordable over time. Two questions need to be addressed. The first concerns the portion of the costs that should be covered by revenues; and the second, the share that should be covered by different income groups, family types, or different

geographical units. The way in which costs are allocated provides the basis for considering cross-subsidisation across regions' user groups.

Figure 1: Trade-offs affecting tariff levels and structures for water services



Source: LEFLAIVE, 2009.

According to their respective design increasing tariffs may support efficiency and both ecological and financial sustainability but social concerns might be at risk. Hence, affordability limits have to be assessed before designing service pricing policies. Information is needed on low-income households' current spending on services, ability and willingness to pay (WTP) for improved services (for a current study in Mongolia see SIGEL, 2010). In the absence of this information, the risk is that decisions about tariff levels and structures will be based on exaggerated assessments of affordability constraints that underestimate willingness to pay. In such cases, the result is a vicious circle of underfinanced services, lower than needed investment and maintenance, and lack of access to water services. This hurts the poor most, as they are the first to suffer from low quality services. Moreover, keeping tariffs artificially low prevents the extension of services to the currently unserved and is not an effective measure to help the poor.

We will have a closer look first on the efforts to measure affordability problems (section 3), then we will reconsider the subject theoretically (section 4).

3 APPROACHING AFFORDABILITY ISSUES EMPIRICALLY: ON MEASUREMENT AND POLICY RECOMMENDATIONS

In the past, the empirical measurement has been the main topic of affordability investigations. Since the late 70ies of the 20th century empirical aspects have been increasingly investigated (FEINS/LANE, 1981). The major domain of affordability research concerns housing economics (see CHAPLIN/FREEMAN, 1999; COLEMAN, A., 2008; FISHER et al., 2009; HANCOCK, 1993; LAMONT, 2008; MARKS/SEDGWICK, 2008; MATLACK/VIGDOR, 2006; MEEN/ANDREW, 2008; SEDGWICK, 2008; STONE, 2006; THALMANN, 2003; WHITEHEAD, 1991; YATES, J., 2008). Another block is the affordability investigation affecting utility services (DODONOV et al., 2004; FANKHAUSER/TEPIC, 2007; FANKHAUSER et al., 2008; KESSIDES et al., 2009; MINIACI et al., 2008; MINIACI et al., 2007; OECD, 2003; REYNAUD, 2006). Compared to the amount of papers concerning housing affordability one can agree with FANKHAUSER/TEPIC that the affordability of energy and water (i.e. utility services) is yet "under-researched" (see FANKHAUSER/TEPIC, 2007: 1039).¹

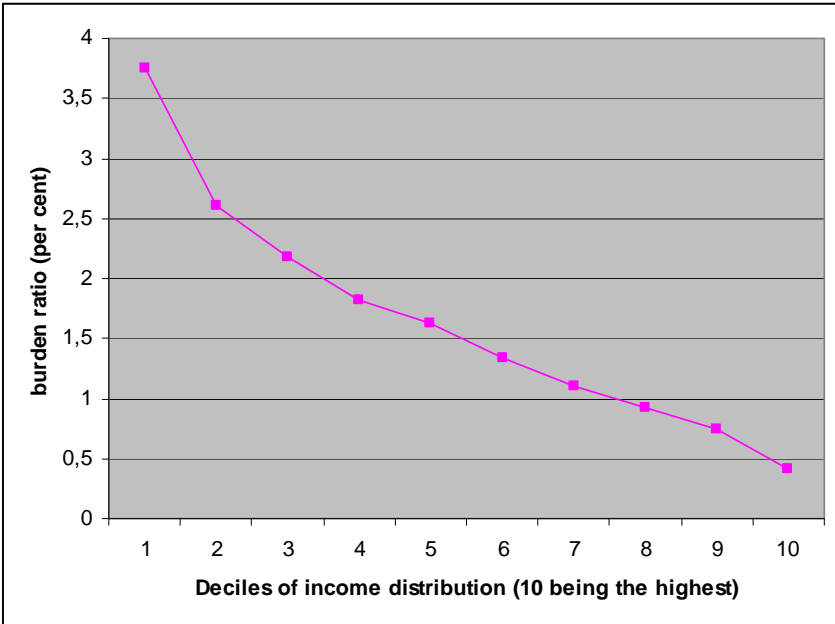
We now consider some efforts in measuring affordability for utility services. A very traditional measure for an affordability diagnosis is the ratio of utility-outlays and income (total expenditure). The affordability ratio has got its plausibility from a certain empirical connectivity; shown e. g. in OECD (2003). For a couple of countries they divided the population in divisions of income distribution. Accordingly the burden ratios for water expenses are presented. The result is that in most countries the ratio declines with a higher income, just like in England/Wales in 1999/2000 (see Figure 3).

This applies not only for England/Wales but also for other OECD countries: "In nearly every data set, the percentage water charge burden on households [...] declines noticeably with each move from a lower to a higher income group." (OECD, 2003: 40).² As far as utility services are inferior goods with low income elasticity these findings are far from being surprising. But this is true only, if the consumption level remains about constant. "This is as would be expected for a utility service that is still dominated by "basic uses" and for which the array of possible luxury uses remains relatively narrow [...]." (ibid.) With such a mind set it is plausible to recommend a social policy that tries to "cut off" the curve at some maximum ratio level so to limit the maximum burden ratio to 3 or 4 %. But doubts regarding this approach are coming up if we take a look at figures for transition countries.

¹ Other domains apparently play even more a minor role in the literature, like health care (GLIED, 2009), education (MURAKAMI/BLOM, 2008), saving (COLEMAN, 2008), and public urban transport (SEREBRISKY et al., 2009).

² In our model (see section 4) this affects the logic that the ray's slope declines with a higher budget.

Figure 2: Water charge burden across household income distribution in England/Wales 1999/2000



Based on OECD (2003: 38).

FANKHAUSER and TEPIC (2007) intend to investigate the affordability situation for utility services for transition countries, namely Central Eastern Europe and the Baltic States, South-eastern Europe, and the Commonwealth of Independent States. They apply the ratio measure with factual payments in the traditional way, and perfectly pursuing the inverse relation between income and burden ratio as in OECD (2003). Thus, they chose some target ratios: 10 % for electricity as well as for heating, 5 % for water and waste water. Basing on these target terms they try to identify problems and hardships regarding expectable price reforms for utility services in those regions.

But the simple ratio concept is devaluated by inconsistent results. Let us pick some findings from FANKHAUSER/TEPIC (2007), in which they identify the household's burden by using the burden ratio with factual expenditures as numerator. They do this for 27 countries and three different utility services: Electricity, heating, and water. Fig. 3 shows the burden ratios for *average* households (left column)

and for the *bottom decile* income group (right column in each case).³ Having the inverse relation between income and burden ratio in back of mind, it is expectable, that the ratios in the bottom decile are higher than for the average households. But in a considerable number of cases the burden ratio of the bottom decile is *lower* than the burden ratio of the average household (the shaded cells in Figure 3). This means that in these cases poorer households are less burdened with service expenditures than the wealthier households are!

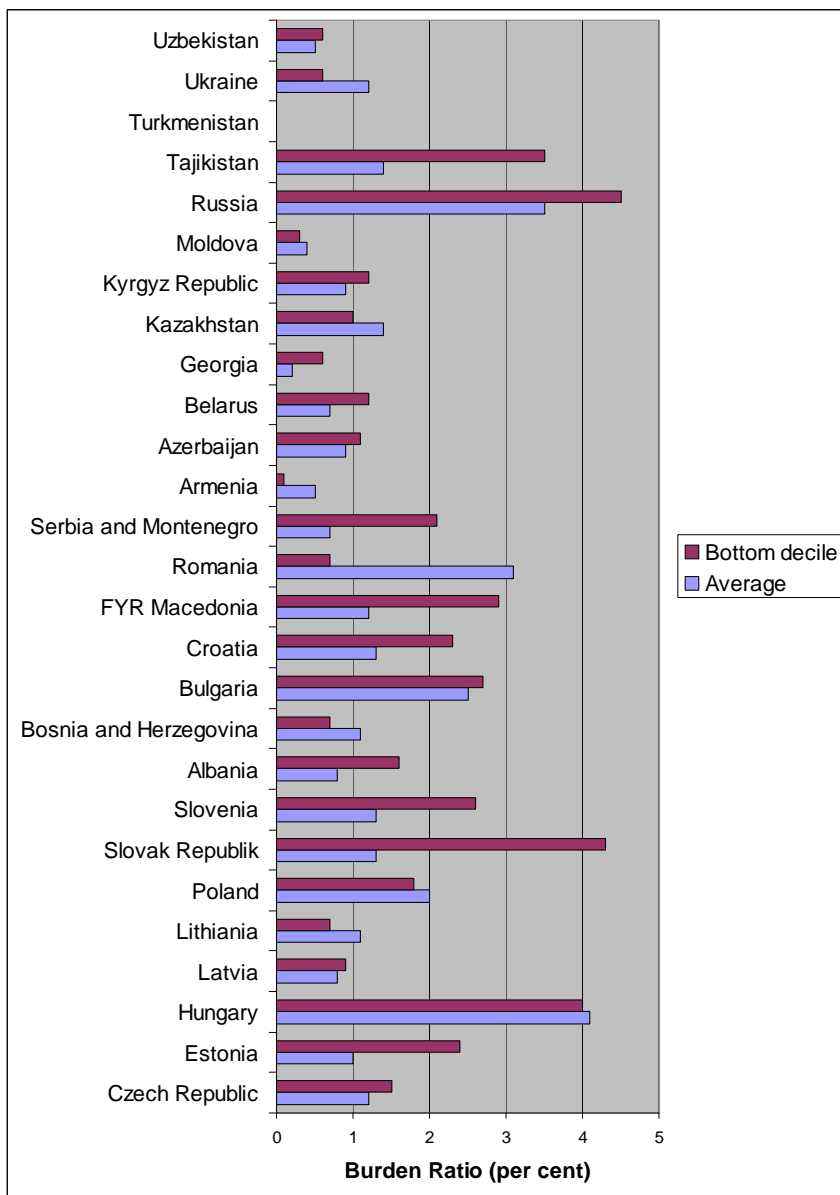
Figure 3: Affordability of utility services, average and bottom decile household (outlays in per cent of total household expenditure)

Country	Electricity		Heating		Water	
	Average	Bottom Decile	Average	Bottom Decile	Average	Bottom Decile
Czech Republic	4,2	5,5	3,4	3,3	1,2	1,5
Estonia	3,2	8,2	5,4	15,4	1,0	2,4
Hungary	5,3	6,3	1,9	1,3	4,1	4,0
Latvia	2,2	2,2	3,2	2,8	0,8	0,9
Lithuania	2,8	3,1	3,7	0,7	1,1	0,7
Poland	4,5	5,7	2,7	1,2	2,0	1,8
Slovak Republic	3,5	11,4	7,9	18,6	1,3	4,3
Slovenia	4,5	9,4	1,2	1,9	1,3	2,6

Source: FANKHAUSER/TEPIC (2007: 1041, 1043).

³ It is to be highlighted that this is a bottom decile in *transition* countries. This might be a quite different quality of poverty than in industrialized OECD economies. How these figures end up in development countries is currently in research, e.g. for Mongolia (see SIGEL, 2010).

Figure 4: Burden ratios of water expenses for households (average and bottom decile) in various transition countries.



Based on: FANKHAUSER/TEPIC (2007, 1041, 1043).

Especially for the case of water there are 9 out of 27 countries where the burden ratio is *lower* in the bottom decile (see Figure 4) than in average; namely in Hungary, Lithuania, Poland, Bosnia and Herzegovina, Romania, Armenia, Kazakhstan, Moldova, and Ukraine. In the heating sector there are even 15 out of 27 countries, where the burden share of the bottom decile is lower than the average. Such a cumulation of an "anomaly" forces to step back for a while in order to rethink the measure that is used. We think of five possible reasons:

- a) Low quality of data⁴;
- b) A high level of non-payment that is a lack of enforcement in pricing (lack of excludability) (FANKHAUSER/TEPIC, 2007: 1041, 1043f.);
- c) Some informal ways of consumption (using a standpost to get water);
- d) A low (social) tariff for low-income-households;
- e) Particular consumption patterns (high income elasticity, low level of consumption of the poor).

Aside from the quality problem of empirical data (case a) we realize some institutional factors (b to d) and finally economic consumption patterns in e) as potential determinants. Formally the individual burden ratio r depends on the expenditure which is composed by price p and demand quantity q as well as the individual income (budget) b :

$$(1) \quad r = p \cdot q / b$$

What can then be said about the function $r(b)$ in order to determine an income-related burden? The demand depends on the respective price and the given budget $q(p, b)$. According to the given tariff structure the price itself may, on the other hand, be dependent on the consumption quantity: $p(q)$. Hence, it is not very clear what happens with burden share when income increases:

$$(2) \quad r = p(q[p, b]) \cdot q(p, b) / b$$

Obviously the total effect of $\partial r / \partial b$ depends on tariff and income elasticity of the considered good. It can be shown that $\partial r / \partial b < 0$ is true for the following conditions:

$$(3a) \quad \varepsilon < 1 \quad \text{if } dp/dq = 0 \text{ (linear tariff)}$$

$$(3b) \quad \varepsilon < 1 / (e+1) \quad \text{if } dp/dq > 0 \text{ (progressive tariff),}$$

where ε denotes income elasticity and e tariff rate elasticity.

Thus, the poor might or might not be more burdened by water consumption than average households. A more detailed economic analysis is needed in this field.

⁴ "The quality of data is generally best for electricity and worst for district heating." (FANKHAUSER/TEPIC, 2007: 1040).

Moreover, the absolute level of burden ratio is doubtful: If the burden ratio depends, *inter alia*, on the consumption patterns and income elasticities what exactly does a ratio of e. g. 5 or 10 % indicate? Is water service really not "affordable" in these cases? In other words: What kind of water poverty do we want to prevent? Does excessive water consumption of high income households (swimming pools, lawn sprinklers) give cause for the assumption of high burden and therefore lowering tariffs?

It becomes apparent that the simple ratio measure might be seriously dysfunctional. Any pricing policy based on such an information tool could be misdirected considerably. Hence we need to go into more theoretical investigations on the measure in section 4.

4 THEORETICAL INSIGHTS IN AFFORDABILITY ISSUES

4.1 On the theoretical performance of a burden ratio

Let us start again with the burden ratio r as traditional measure for examining affordability. For a certain utility good u (e. g. water services) it might be defined as the share of a household's expenditure for this good ($p^u q^u$) in total income (equals total expenditure, budget b):

$$(3) \quad r = p^u q^u / b .$$

If the budget can be spent on either the utility good u or a representative second good c , the ratio r can be graphically described as a ray from the origin in a microeconomic household model (Figure 6). In such a (q^c, q^u) diagram the ray of constant burden ratio follows the equation:

$$(4) \quad q^u = \frac{r}{(1-r)} \frac{p^c}{p^u} q^c .$$

For a given price vector p^c/p^u the ray indicates all consumption combinations of utility and other goods that result in a certain but constant burden share in budget for the utility good.

According to the theorems on intersecting lines the amount of the burden ratio r can be described graphically as follows (Fig. 6): The affordability ray intersects the budget line (e. g. in S) and thus divide it in two parts. The burden share is now given by

$$(5) \quad r = \frac{\overline{ST}}{\overline{RT}} ,$$

that is lower part of intersected budget line divided through its total length. The higher the ray the larger the burden share r .

Usually r is set normatively. Authors and institutions such as World Bank and OECD that work with this kind of affordability concept define a certain target burden ratio, also called "burden threshold" (see KESSELY et al., 2009: 11). In Figure 5 we find a couple of target ratios for utility services applied by different institutions.

Figure 5: Benchmarks used in measuring affordability (in per cent of total household income/ expenditure)

Source	Electricity	Heating	Water	All utility bills
World Bank (2002)	10-15 %		3-5	
WHO (2004)	10 %			
IPA Energy (2003)	10 %	20 %		
UN/ECE		15 %		
UK government		10 %	3 %	
US government		6 %	2.5 %	
Asian Development Bank			5 %	
Ukraine government				20 %

Source: FANKHAUSER/TEPIC, 2007, p. 1040.

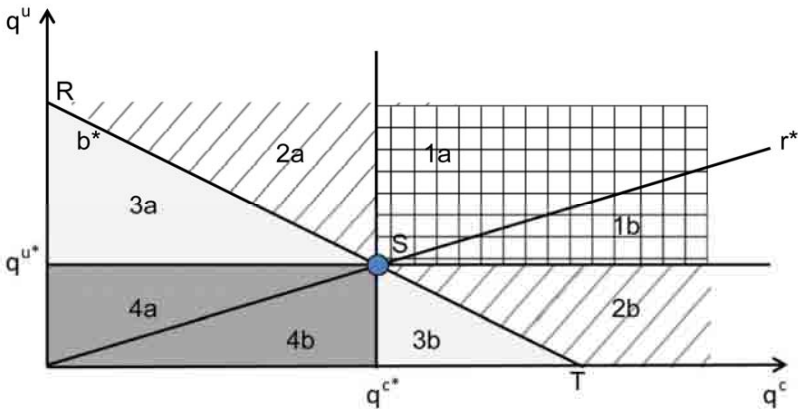
In the household model this normative definition can be seen as based on *two* normatively defined quantities (see again Fig. 6): First, a sort of minimum quantity of the index good u , "necessary to reach a decent standard of living" (KESSELY et al., 2009: 11), represented by q^{u*} in the diagram. Second, a minimum quantity of all goods except the index good, represented by q^{c*} .⁵ This forms a point S, the so-called subsistence bundle and the intersection point of the two minimum quantities q^{u*} and q^{c*} . To meet exactly this subsistence bundle we obtain a target ratio r^* that shows us, for a given price vector, the "basic" burden to be born by the poorest. Therefore, the ray of target burden ratio r^* intersects point S. Pursuing the simple logic of the burden ratio, the diagram says: If a household realizes a consumption bundle above r^* , it is facing affordability problems considering good u . The other way around, if a household realizes a consumption bundle below r^* , it is not facing affordability problems in this respect.

⁵ Needing two normative terms, that are in an opportunity cost relation, one could call this a "normative opportunity cost-clip", which leads to a certain target burden ratio r^* . Thus, we think it is not appropriate to argue (see HANCOCK, 1993: 133) that the concept of burden ratio ignores the phenomenon of opportunity costs (GAWEL/BRETSCHNEIDER, 2010: 6 f.).

For $r = r^*$ equation (4) simplifies to

$$(6) \quad q^u = \frac{q^{u*}}{q^{c*}} q^c$$

Figure 6: Household model of affordability: Case differentiation of indigence



A fourth line intersecting point S is also a very important one: It is the target budget b^* . Like r^* it is actually a secondary normative term, derived from the minimum quantities (multiplied with the given price vector). It is the budget necessary at least to reach the subsistence bundle S. All consumption points to the right (left) of the target budget line b^* calls for a higher (smaller) budget in order to achieve this respective consumption structure.

We now can consider the household's situation depending on in which area they factually end up in. We want to distinguish twice: firstly, under-consumption vs. non-underconsumption; and secondly, reasons for under-consumption, namely ability deficiency (due to budget constraints) vs. willingness deficiency (due to differing preferences). This distinction between ability and willingness is what the microeconomic theory is built on. As a result there are four areas (see Figure 6):

(1) *Non-underconsumption* (grided area 1): Households therein are not facing any underconsumption problem. This is caused by two conditions: First, the household has a budget in his disposal which is greater than the target budget b^* . Second, on his budget line the household chooses a consumption bundle which avoids an underconsumption for both index u and representative

other good c . One might argue that there is no problem for social policy.⁶ But affordability ratio r tells us that in area 1a unaffordability is incurred – wealthy households spend more than the target share on consumption of the index good. This misleading indication could be seen as "wasting-related unaffordability".

(2) *Willingness deficiency-related underconsumption* (striped area 2): One of the goods is underconsumed but not due to budget constraints but following accordant preferences. Households in this area possess a sufficient income enabling them to reach an appropriate consumption level for both goods. However, they just do not choose accordingly. HANCOCK (1993: 131) calls it the case of "perversity of preferences". Though affordability ratio r tells us that for consumption points in area 2a again we face unaffordability: One might argue that this pseudo problem turns out to be a preference-driven (that is: voluntary) "unaffordability".

(3) *Underconsumption due to deficiency of willingness and of ability* (light grey area 3): Here the households have an income available smaller than the target budget b^* . So the households in this light grey area cannot reach the subsistence bundle, but they are somehow making a wrong decision anyway: They are under-consuming one good but, at the same time already consuming more than is necessary from the other. Here we are facing a deficiency of both ability and willingness. Accordingly, a meritoric and a distributional problem arise at the same time. Considered graphically the paternalistic third party would like the household to shift on his budget line at least until the dark grey area starts. That is to say, to reduce the consumption of the "overconsumed" good in favour of the underconsumed one; to underconsume the latter less intense. Systematically after this motion – that is the difference to the same scenario in the striped area – the problem of ability could be tackled. Regarding the affordability ratio r in this field we get a diagnosis of "unaffordability" for the top left area 3a ignoring the mixed-conditioned underconsumption. On the other hand the "affordable"-diagnosis for households down left (area 3b) ignores the deficiency of ability, they have to deal with.

(4) *Pure ability deficiency-related underconsumption* (dark grey area 4): Those households ending up in area 4 consume insufficient quantities of both goods due to a pure distributional problem with an actual deficiency of ability. This area includes those who "do not even have the opportunity to make [an] inappropriate decision." (GLIED, 2008: 15).⁷ According to the affordability ratio r poor households in area 4b do not face any affordability problems: Since they are consuming a very/too small quantity of the good they are considered having no affordability problem. But it is not a convincing solution to overcome affordability

⁶ On the contrary there may arise the problem of overconsumption with respect to scarce resources like water. In this article we have to leave this unconsidered.

⁷ In Figure 6 these are households with a budget equal or smaller than the budget that intersects the ordinate at q^{u*} .

problems by underconsumption. Rather the critical shortage given in area 4b depicts a severe case of unaffordability.

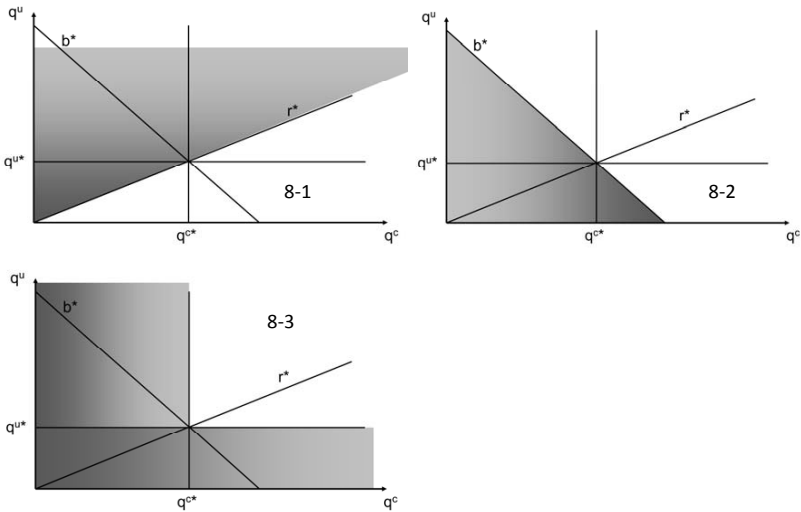
Hence, the traditional ratio r lacks discriminatory power to indicate properly unaffordability cases. Instead it ignores relevant settings (area 4b) and on the other hand it turns unproblematic consumption patterns into pretended problem cases (area 1a).

It becomes apparent here that there are different concepts of water-related indigence underlying the analysis (Fig. 7): Traditional unaffordability alleges a problem if a household spends more on utility good consumption than the target ratio allows (areas 1a+2a+3a+4a in Fig. 6). In contrast income-related indigence suggests that areas 3 and 4 are problematic that is households earn less than needed to afford the subsistence bundle. And from the meritoric perspective of underconsumption public policy is requested to prevent consumption in areas 2+3+4. Comparing these concepts the traditional affordability ratio appears to be particularly unqualified for indicating potential need for public action.

Figure 7: Three concepts of indigence

Concept of Indigence	Areas in Fig. 6	Problem
Burden Share = (Traditional) Unaffordability	1a+2a+3a+4a	Household spends more on utility good consumption than the target ratio.
Budget Restraints	3+4	Household earns less than needed to afford the subsistence bundle.
Underconsumption	2+3+4	Household consumes less than required.

Figure 8 outlines these different assessments graphically. All households ending up with a consumption bundle above the target ray r^* are considered having affordability problems according to the ratio measure (Fig. 8-1). This is contradictory to the other (plausible) assessments of indigence of Fig. 7: All households with consumption points left of the target budget line b^* suffer from unaffordability due to budget constraints (Fig. 8-2). Finally, Fig. 8-3 shows us all cases of effective quantitative underconsumption.

Figure 8: Three concepts of indigence – Graphical analysis

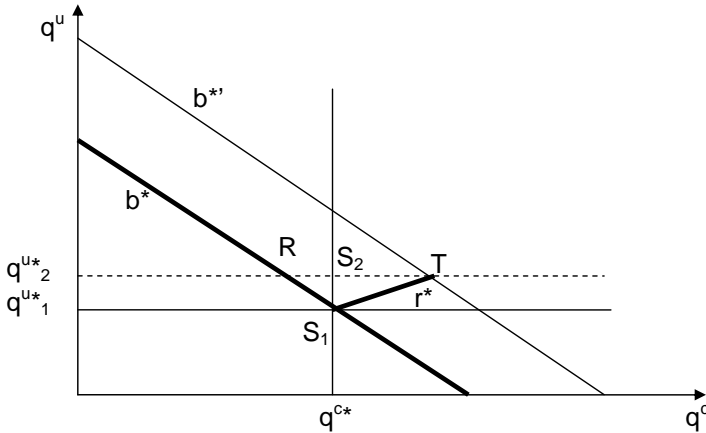
Up to now our analysis assumed a given and fixed minimum standard for the index good u for all types of households. In practice however q^{u*} may vary among households due to different levels of necessity (CHAPLIN/FREEMAN, 1999: 1950). KESSIDES et al. (2009: 15) mention the following aspects:

- different amounts of household members (size),
- different climatic/regional conditions,
- and different technological endowments.

Figure 9 shows the consequences of these different "non-income constraints" (HANCOCK, 1993: 130) for our theoretical affordability analysis: With variations in the level q^{u*} based on the mentioned reasons, several subsistence bundles are realized. This is illustrated in Fig. 9 with a second, a higher minimum level for the index good u , q^{u*}_2 , which may be conceded for certain households. Point R can be reached now with the given budget b^* , yet R indicates underconsumption. So what is the new subsistence bundle now? We obtain S_2 according to the normative consumption standard q^{c*} , but a ratio based approach would suggest the point T instead. In order to maintain the fixed ratio r^* we ought to provide an additional (proportional) quantity of good c as well (distance RT instead of RS_2). To guarantee this an additional income transfer up to $b^{*'}$ would be necessary! There would be neither effectiveness nor efficiency in that social policy. Instead it is more plausible to accept different burden ratios according to certain non-income constraints in order to avoid over-subsidization or overprovision (by realizing point S_2 in Fig. 9). This is due to the fact that the maximum amount of tolerated

burden share can normatively only be justified by enabling the respective minimum standard in consumption.

Figure 9: Variation of q^{u*} and two different new subsistence bundles



Since there is in general no linear function $q^{c*}(q^{u*})$ (that is any *proportional* increase for the basic needs in other goods for increasing index good needs⁸) a fixed burden ratio for all households might be misleading once again.

Wrapping up the objections against (fixed) affordability ratios we may state the following:

1. There is no correlation to a certain minimum consumption level of the index good. Poor households consuming a very/too small quantity of the good are considered having no affordability problem (area 4b).
2. Similarly there is no correlation to a maximum consumption level of the index good. Wealthy households "wasting" the index good are possibly considered having an affordability problem (area 1a).
3. There might be cases of under-consumption which are caused by "perversity of preferences", not by budget restrictions (area 2a).
4. Households are characterized by different amounts of members (household size), different climatic/regional conditions, and different technological endowments. These non-income conditions lead to a different necessity a fixed ratio measure cannot answer to properly.
5. The ratio also depends on the price and income elasticity of demand (that is $q(p,b)$) as well as on the tariff function $p(q)$. In practice neither $p(q)$ nor q are constant and therefore have to be taken into account explicitly.

⁸ Of course one could think of certain cases where this is plausible, e.g. the variation reason of different numbers of household members. But this is a different matter.

standard minimum quantity of the index good u , they cannot afford a certain minimum amount q^{c*} of all other goods.

With the PAA households in the areas 3 and 4 (Fig. 6) are categorized as having affordability problems, and households in the areas 1 and 2 are considered having no affordability problems. This is consistent with the concept of budget constraints (Fig. 8-2): Affordability is a matter of "poor" households. Hence, the objections 1. to 4. (section 4.1) are solved somehow and objection 5. does not play any role here because the concept is compatible with all kinds of tariffs or demand functions. The only question left is does the budget can suffice potentially for both minimum quantity of the index good and of the other good?

We have to notice though that affordability in this concept is simply reduced to the problem of low income. In practice however we face affordability problems and resistance to increasing prices for environment-related goods particularly in the middle class. Thus, PAA departs from the actual challenge to be met in water resources policy.

4.2.2 The residual income approach

For the so-called "residual income approach" (RIA) the crucial criterion is a certain residual income, that a household should have available after having paid the index good u . This normatively given residual income is represented by b^*_{Res} indicating the expenditures that are to be taken to reach q^{c*} :

$$(8) \quad b^*_{Res} = p^c q^{c*} .$$

Unaffordability of the good u is given for households where the following can be observed:

$$(9) \quad b - p^u q^{u*} < b^*_{Res}$$

Using the theorems on intersecting lines (see section 4.1) we alternatively obtain for a household with the target budget b^* (Fig. 10):

$$(10) \quad r = \frac{\overline{ST}}{\overline{RT}} \quad \text{and} \quad \overline{RT} - \overline{ST} = \overline{RS} .$$

If we consider households with a smaller budget than b^* (that is a budget line $\overline{RT'}$) one can imagine that the distance \overline{RS} cannot be reached, once the corresponding distance \overline{ST} on the the budget line is subtracted. These are the households facing affordability problems. They are identified by the formula:

$$(11) \quad \overline{RT'} - \overline{ST} < \overline{RS} .$$

Analogically, considering households with a larger budget than b^* , the upper part of the budget line is longer than the distance \overline{RS} , if the distance \overline{ST} is subtracted.

Within this approach another relative expression is possible:

$$(12) \quad r_{Res} = (b - p^u q^{u*}) / b^*_{Res}$$

For households where $r_{\text{Res}} > 1$, the index good u is affordable. Accordingly, for those households where $r_{\text{Res}} < 1$, unaffordability for the good u is diagnosed.

Fig. 12 gives a concluding overview concerning the different approaches.

Figure 12: Three measures for affordability

Affordability Concept	Traditional Affordability Ratio	Potential Affordability Approach	Residual Income Approach
Indicator	$r = \frac{p^u q^u}{b}$	$r_p = \frac{p^u q^{u*}}{b}$	$b_{\text{Res}} = b - p^u q^{u*}$ $r_{\text{Res}} = (b - p^u q^{u*}) / p^c q^{c*}$
Criterion for Unaffordability	$r > r^*$	$r_p > r^*$	$r_{\text{Res}} < 1$
Corresponding Concept of Indigence	Burden Share	Budget Constraints	
Policy Target	Maximum Income Share	Minimum Standard in Consumption	

Thus, the RIA exactly describes the same as the PAA: Does the given budget enable the household for a certain price vector to afford both minimum standard consumption of good u as well as good c ? RIA and PAA are theoretically equivalent. So the same criticism applies here.

Equivalence can be seen formally by transforming the unaffordability conditions of the respective approaches (Fig. 12):

$$r_p > r^*: \quad \frac{p^u q^{u*}}{b} > \frac{p^u q^{u*}}{b^*} \Leftrightarrow b < b^* \quad (13)$$

$$r_{\text{Res}} < 1: \quad \frac{b - p^u q^{u*}}{p^c q^{c*}} < 1 \Leftrightarrow b - p^u q^{u*} < p^c q^{c*} \Leftrightarrow b < b^* \quad (14)$$

Hence, the PAA and RIA approaches can be identically reduced to a simple income condition $b > b^*$. According to this theoretical framework utility policy should strive towards household budgets beyond b^* and all of the affordability issues seem to be tackled satisfactorily. As a consequence, price reforms with respect to full-cost recovery might be undertaken without any affordability objection if only income disparity was conquered successfully. This turns out to be the well-known welfare economics solution for the distributional problem of pricing.

4.3 Theoretical conclusions

To sum up, a fixed burden ratio measure with *factual expenses* is misleading because it does not separate deficiencies of willing and of ability, fails to interpret appropriately underconsumption and waste of resources and does not take into account non-income restraints. These consistency problems are solved by the

"potential affordability approach" which formally does not need a ratio. In this concept however the affordability issue is simplified to the problem of low income. Thus, the approach departs from the challenge to be actually met that is keeping utilities affordable even beyond absolute poverty. The so-called "residual income approach", working not with a ratio, but with an income difference is theoretically identical with the PAA and therefore does not provide any improvement in this field. Thus, the pricing challenge to be met in water resources management remains: How can we reconcile the conflict between efficiency and affordability requirements that is, how to design efficient water prices while keeping water uses affordable for everyone?

4.4 Monetary burden and pricing – A positive analysis

Since a general measure for "unaffordability" is either theoretically inconsistent or just describes a low-income situation one might leave the normative analysis here and turn towards a positive burden analysis instead – the normative conclusions of which might be drawn from case to case and politically. Instead of seeking out households suffering from "unaffordability" economic analysis can just ascertain a household's given (monetary) burden. According to equation (2) this burden is determined by a plurality of factors among which the price of the resource is the most interesting one for our analysis:

$$(15) \quad r = \frac{p(q) \cdot q(p, b)}{b}$$

We assume that for sustainability reasons a water price increase towards full-cost recovery is needed. Increasing prices though enforce resistance to political efforts for price reforms. Theoretically, the loss of consumer surplus induced by price increase indicates the burden the consumers sustain in this case. As a monetary substitute that can be measured easily in practice the change in expenditures and thus the change in our ratio r might be drawn on. Then we can analyze the expression $\partial r / \partial p$ that is the change in r when price increases.

$$(16) \quad \frac{\partial r}{\partial p} = \frac{dp}{dq} \cdot \frac{\partial q}{\partial p} \cdot qb^{-1} + \frac{\partial q}{\partial p} \cdot pb^{-1}$$

It can be easily shown that $\partial r / \partial p > 0$ if the demand function $q(p)$ is inelastic what can be expected for most water uses.

The effective monetary burden is determined by three strategic variables: budget, price and demand quantity. Turning towards a more political definition of unaffordable water use we can state that it is in practice the price that makes a commodity unaffordable. The consumer's economic responsibility for the quantity q is often

suppressed – due to normative aspects such as human rights for water.⁹ In that sense, affordability means a certain institutional setting that guarantees an autonomously chosen consumption pattern. Adjustments of q are merely tabooed due to the losses in utility that are attended by price- or budget-driven demand adaptations. An adjustment in q though is crucial for obtaining economic efficiency and sustainability.

If unaffordability politically just means "reduction in demand" and thus describes a situation in which consumers cannot afford their former consumption optimum, we get caught in a blocking trap for any price reforms that essentially aims at reducing and restructuring demand. From this perspective, the budget b needs to be sufficient to provide the same consumption bundle regardless changing conditions. If this is not the case government is expected either to adjust income or (water) prices.

Thus, the implicit normative concept of "affordability" may turn out to be an important stumbling block for sustainability-oriented price reforms. Regrettably the attempt to dissolve the conceptualization problem of "affordability" theoretically has not succeeded up to now.

5 CONCLUSION: POLITICAL AND RESEARCH IMPLICATIONS FOR INSTITUTIONAL CHANGE THROUGH PRICING REFORMS

In empirical studies as well as in the just rare academic literature on affordability issues with respect to environment-related services such as water the traditional affordability ratio is rampant. Unfortunately, this measure is theoretically defective and hence practically misleading. Consequently, there appears to be some move in the literature to alternative approaches for measuring affordability, especially a tendency towards the so-called "residual income approach" that try to overcome the weaknesses of a simple ratio measurement.

At least these improvements can be considered theoretically consistent but they go back to the recommendations of academic welfare economics just to separate allocative and distributive problems: Once social policy succeeds in easing relevant income restrictions resource prices can be set in an efficient way. In practice, this Nirvana condition cannot be fulfilled even less by authorities or firms that decide on utility tariffs. For practical water resources management the problem of affordability of water prices cannot be solved this way.

For empirical purposes, the traditional ratio measure with its relatively little data requirements may still be applied as an indicator of initial suspicion. But at least for concrete social policy interventions it appears to give potentially misleading information. The risks of such a misguidance are substantial: If a certain standard

⁹ Just recently the UN General Assembly adopted a resolution recognizing access to clean water and sanitation as human right and claiming "affordable drinking water and sanitation for all" – see www.un.org/ga/search/view_doc.asp?symbol=A/64/L.63/Rev.1&Lang=E [9.9.2010].

level of consumption is ignored it is impossible to identify the problem (of absent ability) in general. And if the ratio is applied with (various) standard consumption levels, an oversubsidization can be expected if affordability should be ensured by price limitations or income transfers.

From an economic viewpoint it is necessary to notice that there are different targets policies have to take into account regarding utility prices. This in mind further theoretical affordability examinations should deal with *effectiveness* and *efficiency* of social policy:

- *Effectiveness*: This is about identifying those households who are actually disadvantaged. It is important not to miss this group. But is also important not aiming at not-disadvantaged groups by mistake. In other words: the measure has to be pinpoint. Unfortunately, we do not have available a theoretically sound definition of what is really meant by "affordability" up to now, that is, in whose favor and by what means policy especially pricing policy should intervene.
- *Efficiency* is meant twofold: On the one hand we have the scarcity of public finance, which of course plays a major role also in the affordability field. Subsidies are widely discussed *uno actu* with the issue of affordability. Thus scarcity here refers especially also to poverty somewhere else, where subsidization is needed as well. It is no antagonism that social concerns should be pursued by taking aspects of efficiency into account. On the other hand we have the scarcity of natural resources. This aspect is about ecological sustainability, and as such a competing concern compared to the socially motivated provision of utility goods.

In the meantime economic research is requested to deal with affordability claims analyzing both the effectiveness of affordability measures and the trade-offs between efficiency and social concerns. Thus, inconsistent objections and irrational resistance to water price reforms might be laid open. This can be seen as a certain contribution to remove institutional barriers to sustainable water pricing. Furthermore, potential pricing and tariff instruments have to be developed in order to take affordability requirements into account while minimizing welfare losses.¹⁰

As discussed above future prices of environment-related utility services are expected to increase for several reasons. In order to enable an efficient institutional design of pricing strategies and thus institutional change for sustainability affordability issues and their trade-offs with competing objectives have to be taken into account by decision-makers. Particularly, implicit normative concepts of "political unaffordability" and their economic impacts have to be uncovered in order to avoid blocking reforms. For that further research is needed to give an appropriate measuring of the phenomenon in practice and to find pricing instruments that refer properly to

¹⁰ See e. g. the ongoing debate on increasing block tariffs as a means for involving social concerns in pricing (MERAN/VON HIRSCHHAUSEN, 2009).

the identified affordability gaps. It remains the difficult task for social sciences to provide helpful and prudent orientation in this field.

REFERENCES

- AZEVEDO, L. G. T. DE, BALTAR, A. M. (2005): Water pricing reforms: Issues and challenges of implementation, in: BISWAS, A. K., TORTAJADA, C., BRAGA, B. P. F., RODRIGUEZ, D. (eds.): Water pricing and public-private partnership, London.
- BRETSCHNEIDER, W. (2011): Ensuring affordability for the provision of energy and water utility services, Diss. Thesis, Leipzig.
- CHAPLIN, R., FREEMAN, A. (1999): Towards an accurate description of affordability, *Urban Studies*, 36(11): 1949-1957.
- COLEMAN, A. (2008): Inflation and the measurement of saving and housing affordability, *Motu Workung Paper 08-09*.
- DARMANIN, J. (2008): The computation of a housing affordability index for Malta, *Bank of Vallette Review*, 37: 25-34.
- DINAR, A. (ed.) (2000): The Political Economy of Water Pricing Reforms, Oxford.
- DINAR, A., SALETH, R. M. (2006): Issues in water pricing reforms: From getting correct prices to setting appropriate institutions, *The international yearbook of environmental and resource economics 2005/2006*: 1-51.
- DODONOV, B., OPITZ, P., PFAFFENBERGER, W. (2004): How much do electricity tariff increases in Ukraine hurt the poor?, *Energy policy*, 32(2): 855-863.
- FANKHAUSER, S., TEPIC, S. (2005): Can poor consumers pay for energy and water? An affordability analysis for transition countries, *Energy Policy*, 32(2): 1038-1049.
- FANKHAUSER, S., RODIONOVA, Y., FALCETTI, E. (2008): Utility payments in Ukraine: Affordability, subsidies and arrears, *Energy Policy*, 36(11): 4168-4177.
- FEINS, J. D., LANE, T. S. (1981): How much for housing? New Perspectives on Affordability and Risk, Cambridge, Mass.: Abt Books.
- FISHER, L. M., POLLAKOWSKI, H. O., ZABEL, J. E. (2009): Amenity-based housing affordability indexes, *Real Estate Economics*, 37(4): 705-746.
- FREUND, C., WALLICH, CHR. (1997): Public-sector price reforms in transition economies: Who gains? Who loses? The case of household energy prices in Poland, *Economic development and cultural change*, 46(1): 35-59.
- GAWEL, E., BRETSCHNEIDER, W. (2010): Investigating the affordability of utility services – From the ratio measure to the residual income approach, Paper presented at the 14th Annual Conference of The International Society for New Institutional Economics, 17-19 June 2010 in Stirling, Scotland.
- GLIED, S. A. (2008): Mandates and the affordability of health care, *NBER Working Paper No. 14545*, Cambridge, Mass., National Bureau of Economic Research, <<http://papers.nber.org/papers/w14545.pdf>> (21 January 2010).
- HANCOCK, K. E. (1993): "Can pay? Won't pay?" or Economic principles of "affordability", *Urban Studies*, 30(1): 127-145.

- KESSIDES, I., MINIACI, R., SCARPA, C., VALBONESI, P. (2009): Toward defining and measuring the affordability of public utility services, *World Bank Policy Research Working Paper 4915*, The World Bank/Development Research Group/Environment and Energy Team, <http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2009/04/28/000158349_20090428083002/Rendered/PDF/WPS4915.pdf> (21 January 2010).
- LAMONT, CH. (2008), Policy Forum: Housing Affordability: What are the Policy Issues – Housing affordability crisis: Fact or fiction?, *The Australian Economic Review*, 41(2): 194-199.
- LEFLAIVE, X. (2009): Experience of OECD countries in water pricing, Presentation at *ONEMA-conference*, 9th of December 2009.
- LERMAN, D. L., REEDER, W. J. (1987): The affordability of adequate housing, *ARUEA Journal*, 15(4): 389-404.
- MARKS, G. N., SEDGWICK, S. T. (2008): Policy Forum: Housing Affordability: What are the Policy Issues – Is there a housing crisis? The incidence and persistence of housing stress 2001-2006, *The Australian Economic Review*, 41(2): 215-221.
- MATLACK, J. L., VIGDOR, J. L. (2006): Do rising tides lift prices? Income inequality and housing affordability, *NBER Working Paper Series, No. 12331*.
- MERAN, G., HIRSCHHAUSEN, CHR. VON (2009): Increasing block tariffs in the water sector: A semi-welfarist approach. *Discussion Papers, German Institute for Economic Research; Vol. 902*, Berlin: DIW.
- MEEN, G., ANDREW, M. (2008): Planning for housing in the post-Barker era: Affordability, household formation, and tenure choice, *Oxford Review of Economic Policy*, 24(1): 79-98.
- MINIACI, R., SCARPA, C., VALBONESI, P. (2008): Measuring the affordability of basic public utility services in Italy, *Giornale degli Economisti e Annali di Economica*, 67(2): 185-230.
- MINIACI, R., SCARPA, C., VALBONESI, P. (2007): Distributional effects of price reforms in the Italian utility markets, "*Marco Fanno*" Working Paper 50.
- MORAKAMI, Y., BLOM, A. (2008): Accessibility and affordability of tertiary education in Brazil, Colombia, Mexico, and Peru within a global context, *The World Bank, Policy Research Working Paper 4517*.
- OECD (2003): Social issues in the provision and pricing of water services, Paris, Organization for Economic Co-operation and Development.
- OECD (2009): Managing water for all: An OECD Perspective on Pricing and Financing, Paris, Organization for Economic Co-operation and Development.
- REYNAUD, A. (2006): Assessing the impact of public regulation and private participation on water affordability for poor households: An empirical investigation of the French case, *Working Paper University of Toulouse*, Toulouse.
- SEDGWICK, S. T. (2008): Policy forum: Housing Affordability: What are the Policy Issues – Editor's Introduction, *The Australian Economic Review*, 41(2): 187-193.
- SEREBRISKY, T., GÓMEZ-LOBO, A., ESTUPIÑÁN, N., MUÑOZ-RASKIN, R. (2009): Affordability and subsidies in public urban transport: What do we mean, what can be done? *Transport reviews*, 29(6): 715-739.
- SIGEL, K. (2010): Environmental sanitation services in peri-urban ger areas in Darkhan (Mongolia): A description of current status, practices, and perceptions, *UFZ Report 02/2010*.

- STONE, M. E. (2006): What is housing affordability? The case for the Residual Income Approach, *Housing Policy Debate*, 17: 151-184.
- THALMANN, PH. (2003): "House poor" or simply "poor"?, *Journal of Housing Economics*, 12: 291-317.
- WHITEHEAD, C. M. E. (1991): From need to affordability: An analysis of UK housing Objectives, *Urban Studies*, 28(6): 871-887.
- YATES, J. (2008): Policy forum: Housing Affordability: What are the Policy Issues – Australia's housing affordability crisis, *The Australian Economic Review*, 41(2): 200-214.

ANALYSING THE SHORTCOMINGS OF THE UKRAINIAN URBAN WASTE WATER SECTOR – INSTITUTIONAL OPTIONS FOR MODERNISATION

HERWIG UNNERSTALL^{}, NINA HAGEMANN^{**}*

This paper analyses the key institutional factors of fiscal federalism that determine the functioning of urban wastewater sector in Ukraine and that are therefore the starting points for an intentional institutional change. After describing the situation in Ukraine waste water sector with reference to requirements set by the Millennium Development Goals and the requirements of the EC-Urban Waste Water Treatment directive, five general institutional requirements for effective local self-government (fiscal federalism) are identified. They are based on the Theory of Federalism and the European Charter of Local Self-Government. Third, along the line of these requirements, the institutional and legal situation for the Ukrainian urban waste water sector will be described and the critical shortcomings in institutional development will be identified. Forth, the contribution suggests necessary preconditions and intentional institutional changes for a successful reform in Ukraine's wastewater sector.

1 INTRODUCTION

Water services infrastructure management is a central area of public service provision due to specific characteristics. Access to clean drinking water and sanitation is a basic need communities need to provide for their citizens and is generally bound to a physical infrastructure. Ukraine is still a transition country, a fact that makes governance more difficult than in established rule of law governed democracies and market economies. The transformation process towards democracy and market economy has been quite rocky: In some cases new laws and regulations had to be established, in others rules had to be revised. But most important are informal rules as a heritage from Soviet times: Changing laws and regulations alone does not make a transformation work, but mentality has to be changed for rules to become rules in use. In the case of urban wastewater infrastructure operation and maintenance the financial aspect is crucial. The lack of awareness of environmental problems and preservation of natural resources is another obstacle for sustainable

^{*} Protestant Academy Hofgeismar, Email: herwig.unnerstall@ekkw.de.

^{**} Helmholtz Centre for Environmental Research – UFZ, Permoserstr. 15, 04318 Leipzig.

development in the sector. Citizens have only a weak basis for public participation in decision making on public service provision. The contribution analyses the key institutional factors that determine the functioning of urban wastewater sector in Ukraine and that are therefore the starting points for institutional reforms. The analysis is based on the theoretical approach of Fiscal Federalism identifying conditions for an efficient decentralisation approach. The non-compliance with these conditions results in a (gradual) loss of efficiency in federal performance. The aim of the paper is to analyse the current state of local governance in Ukraine against the background of these conditions and derive the implications for the wastewater sector and for realistic attempts for rehabilitation and modernisation.

Section 3 provides a description of the situation in the Ukrainian wastewater sector with reference to the standards set out in section 2 and identifies modernization needs. In section 4, five general institutional requirements for effective local self-government are identified, taking into account the decentralization that exists in the sector and drawing on the theory of federalism and on the European Charter of Local Self-Government. Against this background, section 5 analyses the institutional and legal situation in Ukraine and identifies critical shortcomings in the country's institutional development. This forms the basis for a brief discussion of options for institutional reform in section 6.

2 INTERNATIONAL AND EUROPEAN STANDARDS FOR THE WASTE WATER SECTOR

On international level the relevance of the sanitation and waste water treatment has been acknowledged for several years, like in the Millennium Development Goals (MDGs) of 2002, where the aim to "halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation" was constituted.¹ However, the requirements regarding wastewater relate only to sanitation and are generally limited to issues of hygiene and health. The aim "access to basic sanitation" has been substantiated within the WHO/ UNICEF Joint Monitoring Program (JMP) as access to improved sanitation facility meeting one of different technical options.² The underlying aim is to ensure hygienic separation of human excreta from human contact.³ Preserving the ecologic quality of aquatic ecosystems and larger range of their services are not within the scope of this MDG.

More demanding than the MDGs are the aims of the European Community's Urban Waste Water Treatment Directive (UWWTD).⁴ The UWWTD requires

¹ MDG Goal 7, Target 3 (<http://www.un.org/millenniumgoals/enviro.html>).

² Flush/pour flush to piped sewer system or to septic tank or to pit latrine, ventilated improved pit latrine, pit latrine with slab and composting toilet, <http://www.wssinfo.org/definitions-methods/watsan-ladder/>.

³ JMP (n.d.).

⁴ Council Directive of 21 May 1991 concerning urban waste water treatment (91/271/EEC), OJ L 135, 30.5.1991, p. 40.

that larger settlements or agglomerations are provided with collecting systems for urban wastewater, specifically:

- at the latest by 31 December 1998 for agglomerations of more than 10,000 population equivalent (p.e.) for urban wastewater discharging into receiving waters which are considered "sensitive areas" as defined under Article 5,
- at the latest by 31 December 2000 for agglomerations with a p.e. of more than 15,000, that discharge in "normal areas",
- at the latest by 31 December 2005 for those with a p.e. of between 2,000 and 15,000.

With regard to cleaning standards, the Directive distinguishes between sensitive areas and normal areas according to the sensitivity of the area into which wastewater is discharged. General standards are set for biological and chemical oxygen demand and for total suspended solids, which represent the requirements of "secondary treatment" that have to be met by all agglomerations with more than 2,000 p.e. unless they discharge into coastal waters. More demanding and more specific emission limit values are established for agglomerations in sensitive areas with more than 10,000 and 100,000 p.e. respectively. This constitutes the "more stringent treatment" required in Art. 5 para. 2 UWWTD. For smaller agglomerations (< 2,000 p.e.) "appropriate treatment" is required which, post-discharge, allows the receiving waters to meet the relevant quality objectives and the relevant provisions of the UWWTD and other Community directives. The requirements relating to collecting systems are formulated only in broad terms (Art. 3 para. 2 with Annex I A):

"Collecting systems shall take into account waste water treatment requirements. The design, construction and maintenance of collecting systems shall be undertaken in accordance with the best technical knowledge not entailing excessive costs, notably regarding:

- volume and characteristics of urban waste water,
- prevention of leaks,
- limitation of pollution of receiving waters due to storm water overflows."

Given that formal Ukrainian national standards are (in some respects) higher than EU standards, the question of the harmonization of national with EU legislation, as agreed in Art. 51 Para. 1, 2 and in Art. 63 Para. 3 Partnership and Cooperation Agreement of 1998, should not prove to be critical. The more serious problem is that of effective implementation, i.e. whether the institution in charge of maintaining the wastewater system has the capacity to perform this task – including the capacity to raise the necessary funds for it.

Water service provision in urban areas displays an number of characteristics. Due to the fact that for infrastructure the amount of sunk costs is quite high water

infrastructure systems are in most cases natural monopolies. For example, the sewer system cannot simply be removed and rebuilt somewhere else. Because of high investment costs for a sewerage system in most cases to erect a second system is usually economically absurd. However, the existence of a monopoly does call for certain state intervention such as tariff regulation, the definition and control of standards for wastewater treatment and discharges because insufficient waste treatment endangers water resources and ecological quality of waters.

3 WASTEWATER SECTOR IN UKRAINE

It should be noted from the outset that the requirements of the MDGs regarding sanitation have been met in Ukraine. In 2004 96 % of the population had access to improved sanitation facilities; by 2007 this had increased to 99 %. This is almost certainly the reason why the MDGs adapted to the national Ukrainian context contain no goals relating to the urban wastewater sector and only ones relating to drinking water supply. With regard to the different disposal pathways and, in particular, the requirements of the UWWTD regarding the establishment of collecting systems, the data available from different institutions are somewhat divergent. The figures for central sewerage systems in urban areas range from 70 % to 96 % and in rural areas between 7 % and 20 %. The most detailed data available (from the EAP TASK FORCE/OECD) confirm the lower number for urban areas for the centralized sewerage system.

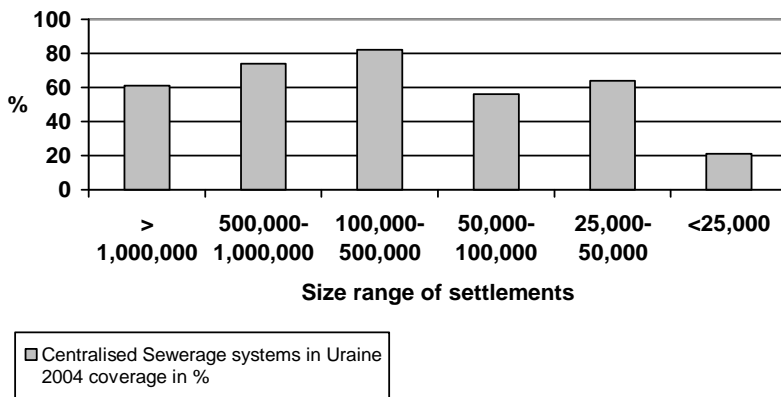


Figure 1: Own figure based on data of EAP TASK FORCE/OECD, 2007, p. 13.

No comprehensive, nationwide data are available for the cleaning capacity of the wastewater treatment plants. The de facto standard of these plants is often described as mechanical-biological; this can generally be regarded as being similar to "secondary treatment" in the terms of the UWWTD. The lack of any more advanced

treatment is confirmed in a number of reports dealing with the water sector in Ukraine. This is in open contradiction to the national legal requirements, which are more demanding than the UWWTD for "normal areas". In addition, these reports describe the state of the physical infrastructure (i.e. the sewerage system and treatment facilities) as being "at the brink of collapse" because its equipment is often antiquated and the requisite maintenance has been neglected for years⁵. The main indicator for the quality of the collection system is the number of blockages per year per km of sewers. The numbers in Ukraine range from 0.92 to 20.2 and from 0.876 to 23.28 depending on the data source. Compared to the numbers in advanced industrialized countries such as Australia, where the range is between 0.6 and 1.06, these figures are quite high, reflecting the age of the network. Thus, the prospects for achieving the MDGs appear shaky. The amount of investment needed to achieve the MDGs in Ukraine in relation to the sanitation sector, with a focus on renovation (85 %), have been estimated at € 770 million. This figure was based on the assumption that the rate of deterioration is about 20-50 % on average across the EECCA region and that there is a need for rehabilitation for 10 % of the infrastructure only at a later stage. However, to meet European wastewater treatment standards (described as full biological treatment for all settlements >2000 inhabitants) the investment needs are much higher. The Danish Environmental Protection Agency (DEPA) and the Danish Cooperation for Environment in Eastern Europe (DANCEE) have put the costs of new investment at about € 2.4bn and for renovation at about € 2.6bn within the period 2004-2011⁶.

Formal responsibility for the wastewater sector lies at the level of local communities, which were given formal ownership of the infrastructure for water supply, sanitation and wastewater treatment by presidential decree in 1994. Local self-governance was also guaranteed in the constitution of 1996 and is still in the constitution of 2004. The way these basic rules are elaborated will be discussed in section 5 against the background of the theory of decentralization. This will be complemented first by a comparative legal perspective on local self-governance to be outlined in section 4.

4 THEORY OF (FISCAL) FEDERALISM AND LOCAL SELF-GOVERNMENT IN THE SHAPE OF THE EUROPEAN CHARTER OF LOCAL SELF-GOVERNMENT

Water service provision in urban areas displays a number of characteristics. Due to the fact that for infrastructure the amount of sunk costs is quite high water infrastructure systems are in most cases natural monopolies. For example, the sewer system cannot simply be removed and rebuilt somewhere else. Because of high investment costs for a sewerage system in most cases to erect a second system is usually economically absurd. However, the existence of a monopoly

⁵ DEPA/DANCEE (2003), p. 23.

⁶ DEPA/DANCEE (2003).

does call for certain state intervention such as tariff regulation, the definition and control of standards for wastewater treatment and discharges because insufficient wastewater treatment endangers water resources and ecological quality of waters.

The theory of fiscal federalism postulates a set of conditions for the efficient provision of public goods and services by local jurisdictions. It can be regarded as the main theoretical foundation of the European Charter of Local Self-Government (ECLSG)⁷ which also is an expression of the centuries-long tradition and experience of local self-administration in Western Europe. Starting from the assumption of generally decentralized water supply and sanitation services achieved through the transfer of property rights to local jurisdictions as in Ukraine, the question arises how the regulatory framework for the local entities responsible should be designed in order to enable them to perform their tasks effectively.

The theoretical approach of fiscal federalism is well known in economics for a long time. It has been defined as "the process of transferring functions, powers, competencies and responsibilities from the central Government to local governments. Such a transfer of powers and functions must be accompanied with a transfer of the necessary financial resources to exercise these powers by introducing local taxes to local budgets that have been granted new powers."⁷ Federalism is based on the assumption that federalism "provides a sustainable system of political decentralization" and enhances development.⁸ OLSEN⁹ established the term fiscal equivalence which means that the unit where a service is provided should also be with the unit that has the decision making power and the financial responsibility. The underlying argument is that of the efficiency criteria because economic efficiency increases when the decision-making actors are hold financially responsible to reduce incentives for spending beyond their means. Decentralization becomes important when it comes to the governance of e.g. public services that are focused on small units such as water provision and sanitation. One reason for decentralisation is that of transaction costs concerning access to information decrease: At local level information about specific information and knowledge are available. However, the approach requires that either no external costs exist or they are low, otherwise a broader approach is necessary.

The crucial question is: How a system of federalism provides for its own survival, i.e. the survival of sub-national governmental levels that cannot be overruled by national governments intervention. This approach makes it possible to compare different federal systems and describe why some of them are successful and others are not.

Two directions of this theory can be differentiated. The classical, more idealistic approach (also called First Generation Fiscal Federalism – FGFF) regards the actors

⁷ INTERNATIONAL CENTRE FOR POLICY STUDIES (2006), p. 7.

⁸ WEINGAST (2007), p. 275.

⁹ OLSEN (1969).

as benevolent who aim at maximizing citizens' welfare and looks at the (optimal) allocation of tasks among different governmental levels and the corresponding organization of fiscal instruments to increase overall welfare. The more empirical approach (also called Second Generation Fiscal Federalism – SGFF) focuses on the incentives actors have at different governmental levels in a given institutional setting.¹⁰ For example political actors may have their re-election in mind and this might not comply with solely benevolent action. This means that SGFF takes a closer look at the existing institutions: formal as well as informal, with the respective incentives for public decision makers.¹¹ Oates mentioned another aspect that is important for transition economies that are often characterized by a past of a highly centralized governmental system: "(...) the potential of fiscal decentralization for improving economic and political performance must be evaluated in terms of the specific circumstances that characterize the current state of a developing nation"¹². Fiscal federalism is therefore not a "one-size-fits-all" approach but the degree of decentralization as well as the organization has to be proven individually for each public good. The second approach is especially important for countries in transition such as Ukraine where the political system is not consolidated and the institutional basis is quite weak and informal rules are of crucial importance in intergovernmental relations.

WEINGAST lists five conditions for effective federal systems and emphasize incentives political actors face therein¹³. It should "provide a first step towards understanding some of the institutions necessary to support decentralization that provides political officials with incentives to improve social welfare".¹⁴

4.1 Hierarchy

The necessary condition for fiscal federalism is that there is a kind of hierarchy of government levels. This is not only in federal states the case, but also often in generally centralized states where at least some competencies are delegated to lower level authorities (e.g. France). How the assignment and distribution of power and competencies varies across systems can be described by reference to four more conditions.

4.2 Regulatory autonomy

All government levels have to have the respective regulative autonomy in their jurisdiction in order to be able to fulfil their duties that given by the central level

¹⁰ WEINGAST (2008).

¹¹ OLSEN (1990).

¹² OATES (1999), p. 1143.

¹³ WEINGAST (2006).

¹⁴ WEINGAST (2006), p. 5.

according to the needs of the jurisdiction.¹⁵ Historical experience in Europe with the development of municipal self governance,¹⁶ that has left its mark in the ECLSG, allows to specify regulatory autonomy by aspects of autonomous legislation (cf. Art 4 §2 and §4 ECLSG), territorial sovereignty,¹⁷ autonomy in local personnel management (cf. Art. 6 §2 ECLSG), organisational sovereignty (cf. Art. 6 §2 ECLSG), financial autonomy/fiscal sovereignty (cf. Art. 9 ECLSG), territorial planning sovereignty, and effective legal protection (cf. Art. 11 ECLSG).¹⁸ These aspects often are gradual, i.e. they can be fulfilled in more or less manner. A comparison of western models of local self-government demonstrates that a number of different designs may be possible for each of these aspects and in combination. If jurisdictions are not granted these a coherent set of competencies from an economic point of view this arrangement is inefficient and (transaction) cost rise in many aspects. This is also crucial for a more factual aspect of local self-governance that concerns the size of the local communities. Some of the differences in local government structures throughout Europe may be explained with the averaged size of communities. They vary from 1,722 inhabitants in France up to 31,379 in Sweden.¹⁹ The size is a crucial factor for the realisation of economies of scales at the provision of communal services, e.g. at the provision of water supply and sanitation. But the size of a community is not by itself determining the option to take advantage of economies of scale. They can also be realised and hence the lack of critical size²⁰ can be compensated by inter-communal/inter-municipal cooperation. This has been acknowledged in the ECLSG in Art. 10 §1.

4.3 Common market condition

Each jurisdiction must be able to free trade with other jurisdiction within a nation state otherwise the competition with other jurisdictions will be undermined and hinders economies of scale. Even though in the case of water services infrastructure we are not concerned with competition in a pure economics sense this aspect has to be taken into account because "voting-by-feet"²¹ can be an important factor to increase competition between jurisdictions as an incentive for governments to provide local public goods to meet the needs of consumers. This aspect can be expanded for cases where municipalities would like to cooperate and bundle their

¹⁵ In Terms of the ECLSG (Art. 3 §1): "Local self-government denotes the right and the ability of local authorities, within the limits of the law, to regulate and manage a substantial share of public affairs under their own responsibility and in the interests of the local population."

¹⁶ For an overview on models of local self-government in Western Europe, see MARTINEZ SORIA (2007).

¹⁷ It describes the geographical scope of the autonomous rights of the local government, not the protection against revision of boundaries of the territory.

¹⁸ MARTINEZ SORIA (2007), p. 1036.

¹⁹ Calculated on data provided by CEMR (2007).

²⁰ There is a long discussion whether there is a minimum size that will not be taken up here.

²¹ The concept of voting by feet has become famous by TIEBOUT (1956).

resources and for cases where they would like to outsource certain parts of public service provision in order to realize efficiency gains.

4.4 Budget restrictions

Subordinated governments are responsible for their actions especially when it comes to financial tasks. Local governments should not spend money beyond their means and occurring deficits should not be compensated through horizontal or vertical inter-jurisdictional transfer payments. The idea behind this condition is that inter alia the subsidization of inefficient enterprises will decrease. However, this condition requires reciprocally that condition one is fulfilled and that jurisdictions have at least a certain degree of regulatory autonomy as regards budgetary issues, inter alia control over their expenses, e.g. by some degree of discretion on the magnitude of public services, control over local charges and taxes (cf. Art. 9 §3 ECLSG), adequate financial resource (cf. Art. 9 §1 ECLSG), sufficiently diversified and buoyant sources of revenues. This condition does not necessarily require that communal budget are always balanced. Especially the rehabilitation of and investment in expansion of public infrastructure can often not be financed out of current receipts and may call for the option to lend money (at least) at national capital markets. This option has also been recognized in Art. 9 §8 ECLSG. How to finance local communities is the most intricate question. In cases where the budget is composed of state funds without any orientation on economic power of the jurisdiction the incentives for actors to attract investors are quite low. Instead WEINGAST²² favors a non-linear approach where a certain percentage of the transfer payments from the federal government depend on the economics performance of the jurisdiction. This is supposed to increase incentives to foster economic growth in the jurisdictions. WEINGAST argues that "subnational governments that raise a substantial portion of their own revenue tend to be more accountable to citizens, to provide the services people want, to provide market-enhancing public goods and to be less corrupt".²³ On the other hand obligatory tasks of local communities require sufficient financial resource in order to fulfil them independent from overall performance of the local economy (cf. Art. 9 §2 ECLSG). These necessary funds may also be provided by a system of horizontal intergovernmental fiscal transfers (cf. Art. 9 §5 ECLSG). Finally, experience show that the only orientation towards raising revenues through attracting economic activities in local communities may enter in an inefficient competition between them and may also be to the detriment of the environment, e.g. in the case of (in terms of revenues unproductive) nature conservation. However, the stronger the financial independence of a local community through autonomous controlled sources the more it is accountable vis-à-vis its citizens who have an interest in efficient use of their dues. As a side effect lower

²² WEINGAST (2006), p. 19.

²³ WEINGAST (2006), p. 14.

levels gain power vis-a-vis higher levels because more financial independence results in more political independence.

4.5 Institutionalized authority

Political independence is an indispensable requirement for an effective decentralized assignment of responsibilities. Institutions are needed that prevent national governments from interfering in local competencies or take back competencies that have been granted to local governments. Especially in cases where local communities want to make investments institutional stability is an important aspect. Otherwise, there is a risk of losing money. One option for securing this kind of stability is to safeguard local self-governance by constitutional provisions (cf. Art. 4 §1 ECLSG) as it is done in a number of European states (e.g. Germany and Switzerland). A clear definition and delineation may also provide stability in competencies. This can be reached e.g. by providing full and exclusive competencies for the local communities (cf. Art. 4 §4 ECLSG), by restricting state supervision of activities of local authorities to the aim to ensure compliance with law and with constitutional principles (cf. Art. 8 §2 ECLSG) and finally by providing the right of recourse to a judicial remedy in case of conflicts in order to secure free exercise of powers (cf. Art. 11 ECLSG). When the "institutionalisation" condition is not fulfilled subordinated governments cannot be sure that their decisions will not be overruled by higher level authorities. In such a case the incentives to act independently without national political backing is quite low because the outcome might not be maintained.

5 LOCAL GOVERNANCE IN UKRAINE AND ITS IMPLICATIONS FOR THE WASTEWATER SECTOR

How can local governance in Ukraine be described against the background of the conditions discussed in section 4 and what are the implications for the wastewater sector in Ukraine and its necessary rehabilitation and modernisation? This approach for the analysis of the current situation of the wastewater infrastructure in Ukraine gives crucial hints for institutional reforms, even though this analysis will not be able to cover all aspects regarding economic and legal criteria sufficiently.

5.1 Hierarchy

The Ukrainian state structure consists of four different administrative levels: The national level and 24 oblasti²⁴ (regions) which are further divided into 490 raions (districts). At the lowest administrative level are municipalities, i.e. 458 cities, 886 towns/villages and 28,540 settlements.²⁵ One major difference between the oblast/raion level and the municipal level is that in the case of the former executive power is performed by state administrations limiting the operating range of the respective

²⁴ Plus the Crimea autonomous republic of Ukraine.

²⁵ OECD (2009), p. 70 based on data of the Ministry for housing and communal economy of Ukraine.

governments. Oblasts and rayons are essentially part of the state administration with some kind of democratically legitimized organs/boards (radas) that have only very limited powers. Only the municipalities have their own administration for executing power. This means that the actual freedom of decision-making is limited and dependence on state authority in financial respects is high. In the end incentives for efficient governance are limited at the Oblast and Rada level.

5.2 Regulatory autonomy over economies

The condition regulatory autonomy over economies can be divided into two different aspects that will be further discussed in this paragraph: The delineation of competencies as well as the size of the communities and interjurisdictional cooperation.

5.2.1 Delineation of competencies

The Ukrainian state has a long tradition of centralization going back to soviet times and continuing after declaring independency in 1991. Before 1991 water and energy management was provided by the state and even though it was economically inefficient, services were provided satisfactorily given the fact that the state budget provided funds respectively, energy was cheap and environmental specifications were low²⁶.

However in 1994 the ownership of infrastructure for water supply, sanitation and waste water treatment was transferred from state ownership to local governments²⁷. This went hand in hand with a cutback in state support for energy and water services and an increase in energy prices²⁸. The constitution of 1996 took up the principle of local self-governance²⁹ including a right for local governments to invest in the communal property and to ensure its management. The principle was renewed in the constitutions of 2004 that still in force at the moment. The constitutional provisions have been substantiated in the Law on Local Self-Government (ULSG) from May 21, 1997.³⁰ Ukraine has also signed the ECLSG in 1996 and ratified it in 1997.³¹ The constitution does not contain a blanket clause that gives the local communities exclusive right to deal with *all* issues of local character (omnicompetence), but only according to the ordinary law.³² The most important law is the ULSG.

²⁶ WORLD BANK (2006).

²⁷ Decree of the President on Strengthening the Economic Fundamentals of Self-Governance in Ukrainian Cities No. 84 of 12 March 1994.

²⁸ WORLD BANK (2006).

²⁹ Constitution of Ukraine 1996, Section XI, Local Self-Government.

³⁰ Law of Ukraine of 21.05.1997 № 280/97-BP.

³¹ Law of Ukraine of 15.07.1997 No.452/97-BP on the Ratification of the European Charter of Local Self-Government. Unlike many other countries the Ukraine has not excluded any of the provision of the ECLSG from application (cf. <http://conventions.coe.int/Treaty/Commun/ListeDeclarations.asp?NT=122&CV=1&NA=&PO=999&CN=999&VL=1&CM=9&CL=ENG>).

³² This is not really deviating from European traditions. Constitutional rooting is found in many constitutions; however, whether there is a domain of issues completely detracted from state

The allocation of responsibilities of local authorities and between several different authorities is in many cases unclear. The power of local governments is often vaguely formulated: Responsibilities and competencies are based in different laws, formulation of duties and competencies are ambiguous. Competencies are often regulated not only in legislation on the institutions (e.g. local self-government) but also in legislation on subject matters (e.g. water management) without explicitly changing the other piece of legislation respectively.³³ However, even with the same piece of legislation delineation of competencies between state administration and local administration is difficult or somewhat unreasonable. This can be illustrated at the provision regarding inter alia consumer services. The ULSG knows two types of competencies exclusive (self-governing) powers and delegated ones, that are (Art. 1 ULSG):

"powers of executive bodies, vested by law in the local self-government bodies, as well as powers of local self-government bodies which are delegated to the corresponding local state administrations, on the decision of raion and oblast councils".

As regards the consumer services (Art. 30 ULSG) the powers are divided as follows:

"a) exclusive (self-governing) powers: to manage objects of ... consumer ... services, ..., which are the communal property of the corresponding territorial communities, to ensure their proper maintenance and efficient use, and to provide residents with the necessary level and quality of services;

....

b) delegated powers:

to fulfill measures of expansion and improvement of ... public utility services,"

According to these provisions there is the option that the competence/authority for maintaining the sewage systems and the competence to expand a given system may be separated from each other. Firstly, there is the difficulty to delineate these competencies given the rehabilitation needs in Ukraine (cf. section 3). Secondly, it is very questionable to separate these issues, especially if one looks at the financing: should two authorities impose charges. Thirdly, given that there is only the option for separation: there are no conditions given, that have to be fulfilled for the decision of the raion or oblast councils to transfer (or retransfer) the competence; it is just (arbitrary) political will of the council. Finally, it seems curious that the democratically elected and legitimized (city, village, settlement) council has no say in the

intervention cannot be derived from the constitutional text but only identified by reviewing the constitutional praxis (cf. MARTINEZ SORIA, 2007, p. 1024 f.). "Omnicompetence" is found only at a minority of states (cf. MARTINEZ SORIA, 2007, p. 1036 ff.)

³³ This lack of coherence in legislative activity seems to be typical for post soviet countries (cf. CAPONERA/NANNI, 2007, p. 83).

decision of the transfer of executive power but the elected raion or oblast councils. Even within the local community the delineation of competencies between the actors (council v. executive body of the council)³⁴ is not easy. "According to Article 26 §1 no. 26 ULSG the council may exclusively "establish local taxes and fees, and their amounts, within the limit determined by law". Article 28 lit. a no. 2 ULSG adds that the executive body of the council may exclusively (self-governing) "establish, in the procedure and within the limits determined by legislation, fees for household, communal, transportation and other services provided by enterprises and organizations which are the communal property of the corresponding territorial community".

The problems to delineate competencies would be of minor importance if there was a functioning system of administrative courts to solve disputes over competencies. However currently available sources tells that the system of administrative courts is still in the phase of establishment and not reliable.³⁵ Any dispute carried to court will therefore have large transaction costs.

The additional factor, that general material and financial resources are distributed in the same uncoordinated and unreliable way,³⁶ provides another reason why it is difficult to distribute responsibilities for the provision of public services.

The World Bank³⁷ sums up, that the ULSG does not efficiently define the responsibilities of the municipalities as owners of the enterprises and that a law that clearly defines the relationship is missing. To provide municipalities with high quality services the management of the enterprises is not efficient enough regarding the problem-solving competence of economic questions and too dependent on the political will of local governments. The relationship between enterprises and local authorities is not efficiently organized and the legal framework does not provide a sufficient basis. This makes the enterprises highly dependent on political decisions. In practice intervention concerning human resources decisions and on tariffs are major areas of conflict between municipalities and enterprises.³⁸

5.2.2 *Size of communities and interjurisdictional cooperation*

Another problem for the efficient provision of public services in Ukraine by local communities has to be seen in the size of the communities. From the numbers above can be drawn that the average size of a local community in Ukraine is around ~1,500 inhabitants. This is at the lower end of the range that is found in Europe and is similar to the situation in France³⁹. In the French model historically grown communities are preserved – no matter how small they are. There is no fusion of

³⁴ The community itself seems not to have the status of a legal entity.

³⁵ SIGMA, 2006, p. 37 ff. and BLUE RIBBON (2009), p. 99.

³⁶ NAVRUZOV (2002).

³⁷ WORLD BANK (2006).

³⁸ To the problem of tariff calculation see section 5.3.

³⁹ Cf. OECD (2009), p. 88 and CEMR (2007).

communities that allows for economies of scale in public administration as in Germany in a number of waves over the last decades. The results of this approach to local self-government can be summarized as follows:

"This leads to nonviable communities that in practice cannot administer local self-government. ... The central state reacts usually by restricting the assignment of tasks and duties for local communities to those that can be performed by all communities, ...".⁴⁰

In Ukraine "small communities (primarily rural municipalities) have limited capability with regard to fulfilling a number of functional duties in relation to the management and provision of water services. These problems result from the lack of capacity and expertise in village councils with regard to legal interpretation, contractual arrangements, interactions between utility providers, tariff procedures, regulatory impact assessment as well as raising external financing for infrastructure development."⁴¹

The lack of critical size for the efficient provision of public services could be compensated by inter-communal/inter-jurisdictional cooperation. However, several provisions in Ukrainian legislation effectively frustrate this opportunity. Firstly, there is no mechanism for such a cooperation defined in the ULSG.⁴² Secondly, with respect to water supply, sanitation and waste water treatment local self-governments are not allowed to transfer their responsibilities as owner of the infrastructure to any other entity,⁴³ as privatisation of water infrastructure in any form is prohibited by the Law of Ukraine "On the Privatization of State Property" (No2163-XII of 4 March 1992).

5.3 Common market condition

This condition is not so important in the case of the management of water services infrastructure because the enterprises are closely connected with the municipalities, and services are therefore limited to the respective jurisdictions. But the exclusive (self-governing) powers, e.g. bargaining powers, are in some cases restricted to the area of the local community, which might have an adverse impact on the efficient provision of public services, e.g. Art. 30 a) No. 12 ULSG:

"to involve, on a contractual basis, non-communal enterprises, institutions and organizations *of the corresponding territorial community*, in providing transportation and communication services to the population..."⁴⁴

⁴⁰ MARTINEZ SORIA (2007), p. 1021.

⁴¹ OECD (2009), p. 72.

⁴² OECD (2009), p. 78.

⁴³ OECD (2009), p. 85.

⁴⁴ Emphasis added by authors.

5.4 Budget restrictions

Budgetary aspects contain different aspects: The distribution of the state budget to lower level authorities and the right to raise taxes, especially concerning tariff setting for water services.

5.4.1 Local budgets in general

Theoretically, the power of control regarding the local budget lies with the local governments. However, there are several bodies that control the income and the application of the funds that are allocated from the state budget.

The budget allocation is one of the major challenges for managing public service provision such as water supply and sanitation. Even though the municipalities are vested with a budget by the state problems occur in this respect because the accountability of the local government vis-à-vis the citizens is less effective as in cases where municipalities' direct income would be higher. "If the degree of freedom depends on the length of one's leash, the leash in this instance refers to the financial resources left at the council's disposal."⁴⁵ Currently, local taxes and fees do not exceed three percent of local budget revenues.⁴⁶ Over ninety percent of local budget expenditures are allocated to compulsory, socially protected expenditures,⁴⁷ e.g. by a constitutional provision that obliges the state and the local communities – not to reduce the existing network of state and communal health institutions (Art. 49 Para. 3 Constitution of Ukraine 2004). So local governments are bound to financially maintain an overzealed network of health facilities.⁴⁸ As socially protected expenditures almost completely depend on transfers from the national budget, the executive bodies make decisions de facto, while the role of council is merely to establish these decisions de jure. In practice, therefore, local council leadership in determining community development strategies is limited due to the lack of financial and economic independence.⁴⁹

The Canadian Urban Institute specified several problems that result from the current Ukrainian system: "(...) the wide use of transfers prevents the stimulus of economic development activity and the increase in budget receipts; the volume of transfers can at any time become subject to changes in accordance with the decisions of central power bodies."⁵⁰

⁴⁵ NAVRUZOV (2001), p. 124.

⁴⁶ WORLD BANK (2008), p. vi.

⁴⁷ NAVRUZOV (2001), p. 124.

⁴⁸ WORLD BANK (2008), p. xiii.

⁴⁹ NAVRUZOV (2001), p. 124.

⁵⁰ CANADIAN URBAN INSTITUTE (2005), p. 15.

5.4.2 *Tariff-setting for communal water services*

At the procedure for tariff-setting for communal water services question of regulatory autonomy and budgetary restrictions overlap. Tariffs are the most important financial basis for the (communal owned) enterprises, but here they face major structural difficulties. It is not only a problem between enterprises and municipalities but also between municipalities and higher level authorities: The formula on which tariffs are calculated is defined by the cabinet of ministers which is quite static and far from reality.⁵¹ The factors are set and cannot be altered either by local governments or enterprises. Enterprises therefore complain about discrimination because they are unable to react to e.g. an increase in energy prices.⁵² In addition experts mentioned that several other factors such as the amount of water loss that is allowed to be calculated far below the actual amount. The whole process makes it difficult or even impossible for enterprises to adjust to changing circumstances and to consider specific local conditions. However, municipalities are vested with the authority to decide on actual tariffs and might allow for lower tariffs as economic efficient, but in such a case they are supposed to add the sum from the local budget.

In cases where tariffs for consumers are lower than economically justified tariffs calculated by the enterprises the municipality has to remunerate this difference. Even though this is the law the municipalities do not observe it, because they do not have the funds. On the other hand regulations exist according to which the state is responsible to step in where municipalities are not able to cover the costs for providing public services. But this is not the case either. The insufficient legal situation (especially the distribution of competencies) results in interventions of national actors in cases where they are not satisfied with local government decisions.

Therefore they face two difficulties in the respect that tariffs not even cover the operating cost: The actual basis for tariff calculation is far from reality and does not enable enterprises to cover their costs and in addition the municipalities do not comply with the legal framework and worsen the overall financial situation of the enterprises.

5.5 Institutionalized authority

Before independence the responsibilities for water provision and other services such as energy lie with the central government and were exercised by a command and control regime.⁵³ Efficiency was not reached due to this kind of governance, low energy prices and "huge state capital grants"⁵⁴. Having this in mind it is easy to understand that municipalities were given the responsibility for the enterprises

⁵¹ Cabinet of Ministers of Ukraine, Ordinance of 12 July 2006, No. 959 on the Determination of the regime of tariff-setting in the area of water supply and sewerage service.

⁵² Cf. OECD (2009), p. 75.

⁵³ WORLD BANK (2006).

⁵⁴ WORLD BANK (2006), p. 35.

could not keep that standard without having the political power and financial means and with increasing energy prices.⁵⁵

Institutional instability caused by insufficient legal structures as well as the dominant role of informal institutions is probably the most important factors that hinder the rehabilitation of the sector. In addition the centralized character of Ukraine is a reason for instability especially at the local level: In federal states such as Germany competences of lower level authorities are defined by the constitution whereas in Ukraine the constitution only vaguely defines local government competencies and leaves the concrete definition to respective laws. But these laws are often also vaguely defined and in addition they are subject to change. Especially in an environment of frequently changing national governments this becomes problematic. Furthermore overlapping responsibilities or non-existent regulations result in intervention of national government actors in municipal issues.

One of the main reasons why it is extremely difficult to develop a solid basis for local self-government is the power application of central political bodies that interfere in local and regional issues.⁵⁶ Several attempts have been carried out to avoid and overcome overlapping responsibilities as well as concurrent legislation. In many other cases laws and regulations are not explicitly defined and therefore not efficiently applicable. The weak legal basis is probably the most important obstacle for enterprises and administrative actors, because actors are unable to find reliable scope of action in formal institutions they fall back in old habits using informal structures to provide stability for their actions.⁵⁷

VAN ZON also criticizes the missing societal grounding of decisions: "No polity has been created that is a reflection of society and that could adapt political structures to changing social needs, creating preconditions for evolutionary institutional change. The continuing deep divide between the state and society can be considered as one of the major causes of failed modernization attempts".⁵⁸ He sees similarities between Ukraine and third world countries, but acknowledges that Ukraine faces the problem that in comparison to them in Ukraine the state has more regulating power than developing countries.⁵⁹

7 SUMMARY AND OUTLOOK

The current state of local self-governance in Ukraine does neither comply with the requirements of the European Charter of Local Self-Government (ECLSG) – as the administrative and financial power remains with the (local) state administrations –⁶⁰

⁵⁵ WORLD BANK (2006), p. 35.

⁵⁶ CANADIAN URBAN INSTITUTE (2005).

⁵⁷ MERKEL/CROISSANT (2000), p. 17.

⁵⁸ VAN ZON (2002), p. 404.

⁵⁹ VAN ZON (2002).

⁶⁰ See as well BLUE RIBBON COMMISSION, 2009.

nor with the theoretically derived condition for effective federalism. Having this result in mind the poor performance of the wastewater sector in Ukraine is not surprising and it is not realistic to expect that the necessary rehabilitation program will be carried out without previous institutional changes. However, just adapting to the requirements by the ECLSG alone would probably not solve all problems, as local communities in Ukraine are often simply too small to be able to perform the task of modernising the wastewater sector. One option would be to change the territorial administrative division of Ukraine by consolidating small local communities into larger entities and moving away from the French model of self-government. Another option, expanding the options for inter-communal cooperation would still need a minimum of administrative capacities unless the law provide well defined, easy to handle models for it. Finally a re-centralisation at the next administrative level of raion would be an option from the economic point, but this level at the moment is part of the state administration and requirements of local self-government are not at all fulfilled by them.

LITERATURE

- BLUE RIBBON COMMISSION (2007): Policy Recommendations on Economic and Institutional Reforms, Kyiv, available at: http://www.un.org.ua/brc/en_adp_src/Policy%20Recommendations_ENG.pdf.
- CANADIAN URBAN INSTITUTE (2005): Prospects for Strengthening Regional Governance in Ukraine in the context of Initiated Reforms – Analytical Report. Available at: http://www.rgd.org.ua/project_publications/publications_list/RGD_Regional_Governance_Report_July_05.pdf.
- CAPONERA, D., NANNI, M. (2007): Principles of Water Law and Administration – National and International, 2nd ed. 2007, Taylor and Francis.
- CEMR (Council of European Municipalities and Regions) (2007): EU sub-national governments: An overview 2007 edition, http://www.ccre.org/docs/nuancier_2006_en.pdf; date of access 19.04.2010).
- COUNCIL OF EUROPE (1985): European Charter of Local Self-Government <http://conventions.coe.int/Treaty/ger/Treaties/Html/122.htm>; date of access 21.04.2010.
- DEPA/DANCEE (Danish Environmental Protection Agency/Danish Cooperation for Environment in Eastern Europe (2003): Environmental Financing Strategy for the Municipal Water and Wastewater Sectors in Ukraine. Background Analysis. Available at: <http://www.oecd.org/dataoecd/53/19/34055317.pdf>.
- DR. HETTLER&PARTNER, BAUMANN, E. (2004): Konzeptarbeitung zur Modernisierung typisierter Kläranlagen in der Ukraine, http://www.dr-hettler-partner.de/pdf/Abschlussbericht_FKZ_380_01_073.pdf; date of access 19.04.2010.
- DREBERIS/SEDD (Stadtentwässerung Dresden) (2009): Grenzüberschreitendes Wassermanagement in der ukrainisch-polnischen Grenzregion von Bug und San; Umweltbundesamt, <http://www.umweltdaten.de/publikationen/fpdf-l/3691.pdf>; date of access 19.04.2010.
- EAP TASK FORCE/OECD (Environmental Action Programme Task Force/Organisation for Economic Cooperation and Development) (2007): Financing Water Supply and Sanitation in EECCA Countries and Progress in Achieving the Waterrelated Millennium Development Goals (MDGs), www.oecd.org/dataoecd/36/10/39174956.pdf; date of access 19.04.2010.

- EUROPEAN COMMISSION (n.d.): Report on the Results of the negotiation on the accession of Cyprus, Malta, Hungary, Poland, the Slovak Republic, Latvia, Estonia, Lithuania, the Czech Republic and Slovenia to the European Union – Prepared by the Commission's departments, http://ec.europa.eu/enlargement/archives/pdf/enlargement_process/future_prospects/negotiations/eu10_bulgaria_romania/negotiations_report_to_ep_en.pdf; date of access: 19.4.2010.
- INTERNATIONAL CENTRE FOR POLICY STUDIES (2006): Fiscal Decentralization in Ukraine in the Context of Local Government Reform. Kiev.
- JMP (WHO&UNICEF Joint Monitoring Programme) (n.d.): <http://wssinfo.org/definitions/infrastructure.html>, date of access 18.04.2010.
- MARTINEZ SORIA, J. (2007): Kommunale Selbstverwaltung im europäischen Vergleich, in: MANN/PÜTTNER (Hrsg.): Handbuch der kommunalen Wissenschaft und Praxis, Bd. 1, 3. Aufl., Berlin, Heidelberg 2007, pp. 1015-1044.
- MERKEL, W., CROISSANT, A. (2000): Formale und informale Institutionen in defekten Demokratien, *Politische Vierteljahresschrift*, Vol. 41, pp. 3-30.
- MINISTRY OF THE ENVIRONMENT/DANCEE (Danish environmental assistance to Eastern Europe) (2004): Financial needs of achieving the Millennium Development Goals for water and sanitation in the EECCA region – Summary report; February 2004; www.ecoaccord.org/english/wi/2004/MDG-En.pdf, date of access 19.04.2010.
- NAVRUZOV, Y. (2002): Local Government in Ukraine, in: MUNTEANU, I., POPA, V. (eds.): Developing New Rules in the Old Environment, Budapest, pp. 109-159.
- OATES, W. E. (1999): An Essay on Fiscal Federalism, *Journal of Economic Literature*, Vol. 37, No. 3, pp. 1120-1149.
- OECD (2009): Dealing with Post-Decentralisation Implications in the Water Sector – Based on country experience cases, www.publicconsulting.at/.../oecd_dealing_with_post_decentralisation_implications_decentralisation_study_2009.pdf, date of access 19.04.2010.
- OLSEN, M. (1990): The IRIS Idea, IRIS, U Maryland, Cited according to Oates 1999, An Essay on Fiscal Federalism, *Journal of Economic Literature*, Vol. 37, No. (3): 1148.
- OLSON, M. (1969): The Principle of "Fiscal Equivalence": The Division of Responsibilities among Different Levels of Government, *The American Economic Review*, Vol. 59, No. 2, pp. 479-487.
- SCHNEIDER, E. (2005): Das politische System der Ukraine. Eine Einführung. Wiesbaden.
- TIEBOUT, C. (1956): A Pure Theory of Local Expenditures, *Journal of Political Economy*, Vol. 64, pp. 416-424.
- VAN ZON, H. (2002): Alternative scenarios for Ukraine, *Futures*, Vol. 34, pp. 401-416.
- WEINGAST, B. R. (2006): Second Generation Fiscal Federalism: Implications for Decentralized Democratic Governance and Economic Development. Discussion Paper.
- WEINGAST, B. R. (2007): The Economic Role of Political Institutions. Market-preserving federalism and economic development, in: MERCURO, N.: Law and Economics. London et al., pp. 273-305.
- WEINGAST, B. R. (2008): The Performance and Stability of Federalism: An Institutional Perspective, in: MENARD, C., SHIRLEY, M. M.: Handbook of new Institutional Economics, Berlin et al., pp. 149-172.

WHO/UNICEF (2010): Joint Monitoring Programme for Water Supply and Sanitation – Estimates for the use of Improved Sanitation Facilities, Ukraine, Updated March 2010.

WORLD BANK (2006): Ukraine: Addressing Challenges in Provision of Heat, Water and Sanitation. Available at: <http://siteresources.worldbank.org/INTUKRAINE/147271-1089983407712/20931047/HeatandwatersectorEng.pdf>.

WORLD BANK (2008): Ukraine: Improving Intergovernmental Fiscal Relations and Public Health and Education Expenditure Policy: Selected Issues; Report No. 42450-UA <http://siteresources.worldbank.org/INTUKRAINE/Resources/UkrainePFRFinalEng2.pdf>; date of access 19.04.2010.

**GEMEINSCHAFTSGÜTER UND GEMEINWOHL –
THEORETISCHER ERKENNTNISGEHALT UND PRAKTISCHE
RELEVANZ FÜR DIE REGIONALENTWICKLUNG AM BEISPIEL
VON WASSERINFRASTRUKTUREN UND
KULTURLANDSCHAFTEN¹**

*ANDREAS RÖHRING**, *TIMOTHY MOSS**, *LUDGER GAILING**, *RITA GUDERMANN***

**PUBLIC GOODS AND PUBLIC INTEREST: THEORETICAL REFLECTIONS
AND PRACTICAL RELEVANCE FOR REGIONAL DEVELOPMENT –
THE EXAMPLES OF WATER INFRASTRUCTURES AND CULTURAL
LANDSCAPES**

ABSTRACT

This paper argues the importance of concepts of public goods and public interest for regional development from an institutionalist perspective. It analyses the strengths and limitations of each of the concepts by comparing their disciplinary roots, purpose, thematic foci, spatial scope and recent trends in the literature. The paper then applies this understanding of both concepts to the public good problems and public interests commonly associated with water infrastructures on the one hand and cultural landscapes on the other – selected as public goods of particular importance to regional development. An empirical study of institutional arrangements and governance mechanisms in Berlin-Brandenburg then illustrates how characteristic public goods problems can be addressed. For instance, the paper exemplifies the important distinction between a resource (water) and its resource system (infrastructure). In the highly institutionalized field of water management a dilemma emerges between using water efficiently

* Leibniz-Institut für Regionalentwicklung und Strukturplanung (IRS), Flakenstr. 28-31, 15537 Erkner.

** Freie Universität Berlin, Fachbereich Wirtschaftswissenschaften, Institut für Wirtschaftspolitik und Wirtschaftsgeschichte, Boltzmannstr. 20, 14195 Berlin.

¹ Der Beitrag beruht auf Ergebnissen des Leitprojektes "Regionale Governance-Muster in der Kulturlandschafts- und Infrastrukturpolitik in Geschichte und Gegenwart" der Forschungsabteilung "Institutionenwandel und regionale Gemeinschaftsgüter" des Leibniz-Instituts für Regionalentwicklung und Strukturplanung (IRS), die veröffentlicht wurden in BERNHARDT/KILPER/MOSS (Hrsg.): Im Interesse des Gemeinwohls. Regionale Gemeinschaftsgüter in Geschichte, Politik und Planung, Campus-Verlag, Frankfurt am Main/New York (NY), 2009.

by using less of it and using the water infrastructure efficiently, which requires using it to near-maximum capacity. In conditions of sharply declining water use – as experienced by so-called shrinking regions – the response is often to encourage water consumption. As regards cultural landscapes, the challenge is, rather, about how to encourage cross-sectoral thinking and acting between the various policy fields which generate cultural landscapes in the absence of formalized institutional arrangements. The paper concludes by summarizing the lessons learned from applying the concepts of public goods and public interest to water infrastructures and cultural landscapes.

1 DEBATTEN UM GEMEINSCHAFTSGÜTER UND GEMEINWOHLZIELSTELLUNGEN IM KONTEXT INSTITUTIONELLEN WANDELS

Das Gemeinwohl wird oft dann thematisiert, wenn öffentliche Güter und Dienstleistungen durch politische Weichenstellungen und neue Herausforderungen als bedroht empfunden werden. Aktuelle Beispiele sind die auf einen Institutionenwandel gerichteten Debatten über die Privatisierung von infrastrukturellen Leistungen wie der Trinkwasserversorgung oder über institutionelle Anpassungserfordernisse an gesellschaftliche Herausforderungen wie den Klimawandel oder den Wandel der Kulturlandschaft, die nach gemeinschaftlichem Handeln verlangen.

Im Zentrum der Diskussion steht dabei nicht nur die oft kontrovers diskutierte Frage, "was" zum Gemeinwohl gehört, sondern auch, "wie" es angesichts der spezifischen Eigenschaften der zum Gemeinwohl beitragenden Gemeinschaftsgüter und den daraus resultierenden institutionellen Anforderungen gesichert werden soll. Deshalb sind Gemeinwohldebatten immer zugleich Diskurse über Institutionen² und Governance, die einerseits die Inhalte des Gemeinwohls, andererseits aber auch das Verhältnis zwischen privaten und öffentlichen Gütern neu bestimmen. Damit verbunden ist ein Wandel in der Rolle des Staates (vgl. SCHUPPERT, 2004), der traditionell als Sachwalter des Gemeinwohls dargestellt und verstanden wird. Gleichzeitig wachsen die Ansprüche zivilgesellschaftlicher Organisationen an die Sicherung des Gemeinwohls vor dem Hintergrund der Interessen mächtiger global organisierter wirtschaftlicher Akteure.

Obwohl die Begriffe Gemeinwohl und Gemeinschaftsgüter auf den ersten Blick viel gemeinsam haben, sind sie als theoretische Konzepte in der Literatur bisher kaum in Beziehung gesetzt worden (vgl. MOSS et al., 2009). "Gemeinwohl" und

² Institutionen sind – nach dem erweiterten sozialwissenschaftlichen Verständnis – allgemein anerkannte und somit auch relativ stabile Regelsysteme, welche die Basis von verlässlichen Verhaltensmustern einzelner oder korporativer Akteure bilden. Sie umfassen gesellschaftliche Normen, rechtliche Regelungen und Verteilungssysteme (für Macht und/oder Ressourcen), etablierte Verfahren sowie Handlungs- und Beziehungsmuster. Siehe GÖHLER, "Wie verändern sich Institutionen?"; MAYNTZ/SCHARPF, "Der Ansatz des akteursorientierten Institutionalismus".

"Gemeinschaftsgüter" sind auch zentrale Kategorien der Raumentwicklungspolitik, allerdings oft nur implizit. Die Abwägung privater und öffentlicher Belange im Dienst des Wohls der Allgemeinheit gehört zur Kernaufgabe der Raumplanung. So zeugt etwa das Leitbild des regionalen Ausgleichs in der Europäischen Union wie auch in der deutschen Raumordnung von einem Gemeinwohlverständnis, das sich am Wohlfahrtsgedanken orientiert. Das Konzept der Gemeinschaftsgüter bildet hingegen den Grundpfeiler der traditionellen Infrastrukturtheorie aus den 1960er Jahren. Die Sicherung von Gemeinwohlzielen und die Bereitstellung von Gemeinschaftsgütern galten so lange als selbstverständliches Fundament und Anspruch raumplanerischer Praxis und Theorie, dass sie in den vergangenen Jahrzehnten selten explizit thematisiert wurden. Seit den 1990er Jahren haben sich allerdings die Rahmenbedingungen wesentlich verändert. Bisherige Formen der Bereitstellung von Gemeinschaftsgütern und der Bestimmung von Gemeinwohlzielen müssen an den Verlust traditioneller staatlicher Steuerungsmöglichkeiten, den demographischen Wandel, die raumstrukturellen Auswirkungen von Globalisierung und Liberalisierung sowie die Entstehung neuer Akteurskonstellationen und Kräfteverhältnisse und die damit verbundene Ausdifferenzierung der öffentlichen und privaten Interessen angepasst werden.

Für das in den vergangenen Jahren gewachsene raumwissenschaftliche Interesse an der Erforschung von Gemeinschaftsgütern und Gemeinwohlvorstellungen können folgende Ursachen gesehen werden:

Erstens wächst in Politik und Forschung die Kritik an der Dominanz regional-ökonomischer und wirtschaftspolitischer Ansätze mit einer einseitigen Orientierung an der Stärkung der ökonomischen Wettbewerbsfähigkeit von Regionen. Verlangt wird eine stärkere Berücksichtigung von Gütern und Dienstleistungen, die von allgemeinem öffentlichen Interesse und damit für die Regionalentwicklung von hoher strategischer Bedeutung sind (vgl. HARVEY, 2000). Diese international geführte Debatte spiegelt sich in Deutschland etwa in den gegenwärtigen Diskussionen um den Stellenwert der drei Leitbilder der Raumordnung (BMVBS, 2006) wider. Dabei stellt sich die Frage, inwieweit die beiden Leitbilder mit klarem Gemeinschaftsgutbezug ("Daseinsvorsorge sichern" und "Ressourcen bewahren, Kulturlandschaften gestalten") faktisch – wenn nicht auch politisch – im Schatten des ersten, wachstumsorientierten Leitbilds ("Wachstum und Innovation") stehen.

Zweitens wird heute im Zuge der Debatten über die veränderte Rolle des Staates sowie den Wandel von Lebensbedürfnissen die Bedeutung räumlich relevanter Gemeinschaftsgüter für regional- und stadtentwicklungspolitische Ziele wiederentdeckt. Liberalisierungs- und Privatisierungstendenzen, neue Versorgungsentgüsse (und -überkapazitäten), höhere Umweltstandards und neue Ansprüche an die Qualität der Kulturlandschaft als Lebensraum und Standortfaktor betreffen in erster Linie Gemeinschaftsgüter und werfen Fragen über die Neuausrichtung öffentlicher Ziele sowie veränderter Formen der Bereitstellung auf. Allerdings werden entsprechende Diskussionen oft unter dem Druck tagespolitischer Themen oder

finanzieller Handlungszwänge auf Kosten einer systematischen und fundierten Auseinandersetzung geführt.

Drittens verändert sich parallel zum institutionellen Wandel in der Bereitstellung vieler Gemeinschaftsgüter auch der Raumbezug ihrer Steuerung. Unter den heutigen Bedingungen der Europäisierung des rechtlichen Rahmens, der Internationalisierung wirtschaftsräumlicher Verflechtungen und – nicht zuletzt – des demographischen und raumstrukturellen Wandels ändern sich die Versorgungs-, Nutzungs- und Steuerungsräume vieler Gemeinschaftsgüter. So lässt sich im Falle der Infrastruktursysteme ein Bedeutungsgewinn der europäischen Ebene beobachten, zum Beispiel durch Richtlinien zur Institutionalisierung des Flussgebietsmanagements. Starke Veränderungen im Verbrauch (infolge des Strukturwandels) verschärfen räumliche Differenzierungen zwischen *cold-spots* und *hot-spots* der Ressourcennutzung noch (vgl. LIBBE/MOSS, 2007 und MOSS, 2008a). Diesen Herausforderungen der Europäisierung müssen sich auch regionale Akteure bei der Inwertsetzung von Kulturlandschaften stellen.

Viertens werfen neuere Vorstöße zur Europäisierung des Gemeinwohls – wie im Weißbuch zu Dienstleistungen von allgemeinem Interesse (EUROPÄISCHE KOMMISSION, 2004) – die Frage nach der räumlichen Bestimmungsebene von Gemeinwohlbelangen auf. Das Bestreben der EU, hier einheitliche Standards durchzusetzen, steht im Widerspruch zu regionalspezifischen, oft historisch geprägten Vorstellungen von Gemeinwohl, etwa in der Gestaltung der Daseinsvorsorge (vgl. AMBROSIUS/SCHMITT-EGNER, 2006) und in der Entwicklung von Kulturlandschaften. Die Vielfalt europäischer Werte- und Regelsysteme im Umgang mit Gemeinschaftsgütern nicht (nur) als Hindernis im Prozess der Harmonisierung zu verstehen sondern als Potential zu nutzen, ist eine besondere Herausforderung für die Politik. Die Operationalisierung neuer institutioneller EU-Regelungen in den Mitgliedsstaaten ist nicht nur von der inneren Kohärenz des Regelwerks, sondern vor allem von der Anpassungsfähigkeit bestehender Institutionen auf lokaler, regionaler und nationaler Ebenen abhängig.

Fünftens gewinnen insbesondere auf regionaler Ebene – teilweise quer zu den politisch-administrativen Räumen von Gebietskörperschaften – vielfältige Funktions- und Handlungsräume sowie deren soziale Konstruktion an Bedeutung. Die raumkonstituierende Wirkung von Kulturlandschaften wird beispielsweise sichtbar, wenn Akteure an ihre identitätsstiftenden und imagebildenden Potentiale anknüpfen, sich vernetzen und gemeinsame Projekte entwickeln (vgl. GAILING/RÖHRING, 2008b). Diese Prozesse werden teilweise auch von Förderansätzen der Europäischen Union, zum Beispiel zur integrierten Entwicklung ländlicher Räume, getragen.

Um den Erkenntnisgehalt und die Grenzen von Gemeinwohl- und Gemeinschaftsgutkonzepten aus raumwissenschaftlicher Perspektive zu untersuchen, werden im Folgenden die dahinter stehenden theoretischen Ansätze gegenübergestellt (2).

Daran anknüpfend werden Gemeinwohlvorstellungen und Gemeinschaftsgutprobleme im Umgang mit Wasserinfrastruktursystemen und Kulturlandschaften als raumgebundene Gemeinschaftsgüter herausgearbeitet und empirisch am Beispiel von Steuerungsansätzen in Berlin-Brandenburg untersetzt (3). Abschließend werden zusammenfassende Erkenntnisse über die Anwendung von Gemeinschaftsgüter- und Gemeinwohlkonzepten auf Wasserinfrastrukturen und Kulturlandschaften abgeleitet (4).

2 GEMEINSCHAFTSGÜTER UND GEMEINWOHL – ERKENNTNISGEHALT UND GRENZEN DER THEORETISCHEN ANSÄTZE

Gemeinschaftsgüter und Gemeinwohl haben unterschiedliche theoretische Wurzeln. Daraus ergeben sich unterschiedliche Perspektiven auf Problemstellungen des institutionellen Wandels. Während die Gemeinschaftsgutforschung stark von der ökonomischen Gütertheorie geprägt und auf Probleme der Allokationsmechanismen für kollektiv genutzte Güter ausgerichtet ist, die über Marktmechanismen allein nur schwer bereitzustellen sind, ist die Gemeinwohlforschung in den Rechts-, Politik- und Geschichtswissenschaften verankert und orientiert sich damit eher an Inhalten und Prozessen der Bestimmung und Sicherung von Interessen einer Gemeinschaft (vgl. MOSS et al., 2009). Erkenntnisgehalt und Grenzen beider Ansätze sollen im Folgenden vorgestellt werden.

2.1 Gemeinschaftsgüter

Die volkswirtschaftliche Literatur differenziert zwischen verschiedenen Typen öffentlicher (und privater) Güter, klassischerweise anhand der Kriterien Rivalität in der Nutzung und Ausschließbarkeit. Demzufolge bestehen bei privaten Gütern – wie zum Beispiel privaten Wohnhäusern – zwar Rivalität in der Nutzung, aber die Möglichkeit, andere Nutzer davon auszuschließen. Trifft mindestens eines dieser Kriterien nicht zu, so handelt es sich um Gemeinschaftsgüter, die analytisch in reine öffentliche Güter, *common pool resources* beziehungsweise Allmendegüter sowie Club- beziehungsweise Zollgüter unterteilt werden. Diese Kategorisierung sagt allerdings nichts über die Eigentumsverhältnisse der verschiedenen Formen von Gemeinschaftsgütern aus. Allmendegüter ohne Eigentümer werden als "open access-Güter" bezeichnet (vgl. OSTROM, 1990). Beispiele für reine öffentliche Güter – bei denen Nichtrivalität und Nichtausschließbarkeit zusammentreffen, sind Umweltgüter wie das Klima oder saubere Luft. Das trifft jedoch nur dann zu, wenn keine Rivalität in der Nutzung durch Ressourcenknappheit vorliegt. Die Kombination von Nutzungsrivalität und freiem Zugang kann ohne Vorherrschen von effektiven Regeln zur Übernutzung der Ressource aufgrund der sogenannten Trittbrettfahrerproblematik führen (vgl. HARDIN, 1968).

Hinzu kommt das Problem, dass Gemeinschaftsgüter oft als nichtintendierte Effekte, quasi als "by-product" verschiedener ökonomischer Aktivitäten entstehen. Diese Effekte können negative (zum Beispiel Wasserverschmutzung) – wie auch positive

Wirkungen (etwa kulturlandschaftliche Qualitäten) entfalten. Solche Prozesse der Generierung von Gemeinschaftsgütern sind schwer zu steuern oder in eine marktwirtschaftliche Kostenkalkulation zu internalisieren. Nach der klassischen ökonomischen Lehre führt insbesondere der Umstand, dass niemand von der Nutzung von Gemeinschaftsgütern ohne weiteres ausgeschlossen werden kann, zu Problemen der Bereitstellung von Gemeinschaftsgütern über den Markt (SAMUELSON, 1954). Aus diesen Sachverhalten leitet die klassische ökonomische Lehre das Gebot staatlicher Intervention zur Korrektur von Marktversagen ab. Diese Interventionen erfolgen in Form gesetzlicher Regelungen, finanzieller Anreize beziehungsweise Subventionen und durch die direkte Bereitstellung der Gemeinschaftsgüter durch die öffentliche Hand. Als weitere Kategorien sind sogenannte Clubgüter zu nennen. So werden Güter bezeichnet, zu denen nur bestimmte Akteure Zugang haben und andere, etwa über finanzielle oder technische Hürden, von einer Nutzung ausgeschlossen werden (BUCHANAN, 1965). Für die Nutzer dieser Clubgüter – wie beispielsweise stadttechnische Infrastruktursysteme oder Golfplätze – herrscht keine Rivalität, solange Kapazitätsgrenzen nicht überschritten werden.

Die Kritik an den klassischen Theorieansätzen zu Gemeinschaftsgütern richtet sich auf eine Reihe unterschiedlicher Schwächen:

Erstens lassen sich viele Güter oder Leistungen in der Praxis nicht eindeutig der einen oder anderen Kategorie zuordnen. In der Realität liegen zumeist Mischformen vor. Beispielsweise weist Wasser als Niederschlag, in Grundwasserleitern und in Versorgungsleitungen jeweils unterschiedliche Ausmaße von Rivalität und Ausschließbarkeit auf. Gemeinschaftsguteigenschaften hängen damit nicht zwangsläufig mit einer bestimmten Ressource zusammen, sondern müssen nach deren Erscheinungsform differenziert werden.

Zweitens sagen die Eigenschaften von Rivalität und Ausschließbarkeit nichts über die mit der Multifunktionalität dieser Güter verbundenen privat nutzbaren bzw. gemeinschaftlichen Funktionen aus, das heißt über deren eigentliche gesellschaftliche Bedeutung. Landwirtschaftliche Flächen, obwohl meist als private Güter zu klassifizieren, erfüllen oft vielfältige gemeinwohlorientierte Funktionen, zum Beispiel für das Landschaftsbild, den Landschaftswasserhaushalt oder den Naturschutz.

Drittens liegen Gemeinschaftsgutprobleme oft weniger im gemeinsamen Nutzen als im ungerегelten Nutzen (vgl. BROMLEY, 1992). Dies gilt nicht nur für Güter ohne klare Besitzverhältnisse, wie den Meeresboden oder die Luft sondern aufgrund der Wirkung von externen Effekten auch für einzelne Funktionen von auf den ersten Blick "geregelten" Ressourcen und Gütern wie Boden, Landschaft und Infrastruktur.

Viertens wird die klassische Gütertheorie vor allem in der Institutionenökonomik und Politikwissenschaft für die Annahme kritisiert, dass mit den Eigenschaften eines Gemeinschaftsguts zwangsweise bestimmte institutionelle Regelungsformen verbunden werden. Diese Annahme – so die Kritik – basiert auf einer Reduktion

der Motive menschlichen Handelns auf das Prinzip der Nutzenmaximierung durch rationales Handeln. Dies übersehe die Vielzahl von handlungsrelevanten Kontextbedingungen und individuellen Handlungsmotiven sowie die Existenz vielfältiger institutioneller Lösungen für Allmendeprobleme in der Praxis, die über die klassischen Lösungsvarianten von Hierarchie (staatliche Interventionen) und Markt (Privateigentum) weit hinausgehen (vgl. OSTROM, 2005).

Fünftens wird von Politik-, Rechts- und auch Wirtschaftswissenschaftlern darauf hingewiesen, dass Gemeinschaftsgüter nicht nur über ihre physischen Eigenschaften definiert, sondern vielmehr politisch durch institutionelle Regelungen bestimmt werden und Wandlungen unterliegen. Eine wesentliche Grundlage für die Realisierbarkeit institutioneller Regelungen ist der technische Fortschritt, der eine Zugangsregulierung oder eine leistungsabhängige Kostenbeteiligung bei der Nutzung von Gemeinschaftsgütern überhaupt erst ermöglichen kann. Aus diesem Grund plädieren Historiker für eine Unterscheidung zwischen theoretischen und historischen Kategorien von Gemeinschaftsgütern. Was ein Gemeinschaftsgut ausmacht, hängt von dem besonderen zeiträumlichen Kontext seiner Bereitstellung und Nutzung ab. Die unterschiedlichen institutionellen Arrangements für die Wasserversorgung in Deutschland, Frankreich und Großbritannien mögen hierfür als Beispiel dienen.

Daraus folgt, dass die Bestimmung, Bereitstellung und Sicherung von Gemeinschaftsgütern nicht wertneutral, sondern hochgradig politisch ist. Walzer geht in seiner Theorie der Güter davon aus, dass alle Güter soziale Güter sind und eine gemeinschaftliche Bedeutung haben, weil "ihre Konzeption und Erzeugung soziale Prozesse sind" (WALZER, 1992: 32). Die "Distributionskriterien und -arrangements stecken nicht im Gut selbst beziehungsweise im Gut an sich, sondern im sozialen, das heißt im gesellschaftlichen Gut" (ebd.: 34). Dabei tragen soziale Bedeutungen von Gütern (nach WALZER) "historischen Charakter, und so wandeln sich die Verteilungspraktiken, die gerechten wie die ungerechten, im Lauf der Zeit" (ebd.: 35). Was privat oder öffentlich ist oder sein soll, ist somit immer Ergebnis eines Prozesses sozialer Meinungsbildung und politischer Entscheidungsfindung. Das Konzept der Gemeinschaftsgüter wird damit "aus der ökonomischen, quasiobjektiven Definition herausgelöst und in einem politischen Diskurs geführt" (ALTVATER, 2003: 178). KAUL et al. (1999) verweisen auf drei Dimensionen für die Bestimmung dessen, was "öffentlich" an *global public goods* ist: die Öffentlichkeit des Konsums, der Verteilung und der Entscheidung über Güter. In Anspielung auf die Doppelbedeutung von "Gut" und den Begründungszusammenhang mit öffentlichen Interessen wird die Normativität von Gemeinschaftsgütern in den Vordergrund gestellt. Die Begriffe *goods* und *bads* werden als Kategorien aufgeführt, nicht um eine normative Bewertung vorzunehmen, sondern um auf die Normativität der Güterbestimmung und -regulierung aufmerksam zu machen (ALTVATER, 2003: 178). Aus diesen sozialwissenschaftlichen Erweiterungen ergibt sich eine Annäherung des Gemeinschaftsgutansatzes an das theoretische Konzept des Gemeinwohls.

2.2 Gemeinwohl

Im Gegensatz zu dem wissenschaftlich relativ klar umrissenen Begriff des Gemeinschaftsgutes stellt das Gemeinwohl ein normatives Konstrukt dar, denn das Wohl der Allgemeinheit gilt idealerweise als zentrales Leitbild politischen Handelns. Das Begriffsverständnis reicht allerdings von einer abstrakten Leerformel bis hin zu einer juristischen Kategorie (zum Beispiel im Grundgesetz oder Enteignungsrecht). Als kleinster gemeinsamer Nenner lässt sich das Gemeinwohl als Interesse aller beziehungsweise der Allgemeinheit definieren. Es steht damit im Gegensatz zum Interesse Einzelner oder zu Gruppeninteressen. Bereits mit dieser einfachen Definition werden Probleme der tautologischen Verwendung (Gemeinwohl als das Wohl der Allgemeinheit) sowie der verwandten Begrifflichkeiten (zum Beispiel "öffentliches Interesse") sichtbar. Oft wird das Gemeinwohl auch durch Gegenbegriffe (Eigennutz, Egoismus, Profitinteresse *et cetera*) definiert. Nicht selten wird es ferner unausgesprochen und implizit mitgedacht, zum Beispiel bei der Verwendung der Begriffe Gerechtigkeit, Solidarität, Sozialverträglichkeit oder Nachhaltigkeit. Welche Personen und sozialen Gruppen zur Allgemeinheit zu rechnen sind, wird ebenfalls unterschiedlich bestimmt. Dies gilt auch für den Raum, auf den sich der Begriff bezieht: Das Gemeinwesen kann so unterschiedlich strukturierte Einheiten wie die einzelne Gemeinde, eine Region, eine Nation oder auch eine Staatengemeinschaft, etwa die Europäische Union, umfassen (vgl. ANDERHEIDEN, 2006). Durch die Bindung von Gemeinwohlvorstellungen an bestimmte politische Systeme haben Verwaltungsgrenzen eine erhebliche Bedeutung für die Raumbezüge des Gemeinwohlkonzepts. So stellen gerade Prozesse der Europäisierung und Globalisierung national ausgerichtete Gemeinwohlverständnisse immer mehr in Frage.

Gegenwärtig erleben wir in Europa eine Wiederbelebung der Diskussion um das Gemeinwohl. Die auslösenden Faktoren sind vor allem die Megatrends ökonomischer Globalisierung und politischer Europäisierung sowie die damit einhergehenden Liberalisierungen, Kommerzialisierungen und Privatisierungen öffentlicher Dienstleistungen (vgl. AMBROSIOUS/SCHMITT-EGNER, 2006). Während Nationalstaaten ihr Monopol bei der Bestimmung des Gemeinwohls verlieren und liberale Wirtschafts- und Finanzpolitiken die Spielräume staatlichen Handelns reduzieren beziehungsweise verändern, markiert die heutige Gemeinwohldebatte den Versuch, im Sog einer "Ökonomisierung" der Politik übergeordnete gesellschaftliche Ziele zu thematisieren, neu zu definieren und zeitgemäße Formen ihrer Umsetzung zu finden. In diesem Zusammenhang erlebt auch die Gemeinwohlforschung seit dem Ende der 1990er Jahre eine Renaissance (vgl. AMBROSIOUS/SCHMITT-EGNER, 2006; MÜNKLER/FISCHER, 2002; ANHEIER/THEN, 2004; ANDERHEIDEN, 2006).

Die Bedeutung offener Gemeinwohldefinitionen wird vor allem von neueren rechtswissenschaftlichen Forschungen betont. Nach Ansicht von ENGEL (2001) sind Gemeinwohldefinitionen Ausdruck einer modernen Demokratie und notwendig, da Menschen nicht nur von Interessen geleitet werden (wie die *rational choice*-Analyse

betont), sondern auch von Ideen (wie die Diskursanalyse betont). In diesem Sinne kommt dem fortlaufenden Aushandeln des Gemeinwohls für das Individuum (Kognition, Selbstwertgefühl), für die soziale Koordination (bessere Steuerung durch Lerneffekte), für den Staat (Kontrolle der Politiker, politische Heuristik und zusätzliche Legitimation) und für das Recht (bessere Steuerung durch Recht, Anreizwirkung des Rechts) eine hohe Bedeutung zu (ebd.). An die Stelle des substantialistischen Gemeinwohlbegriffs trete ein prozeduraler, dessen Substanz erst in einem Prozess der beteiligten Akteure ausgehandelt wird. Das dabei auftretende Gemeinwohldilemma bestehe darin, dass solch ein offener politischer Prozess eine verbindliche Festlegung des Gemeinwohls eigentlich ausschließe (SCHUPPERT, 2002). Inhaltlich genauer zu bestimmende Gemeinwohlbelange müssen somit im demokratischen Meinungsbildungsprozess ausgehandelt werden und gelten entsprechend nur für bestimmte Raum- oder Zeitkontexte. Mit der Prozeduralisierung der Gemeinwohlbestimmung ist jedoch auch das Problem der Legitimation staatlicher Autorität verbunden: Auch der Staat muss nun, statt Gemeinwohlziele zu bestimmen, einen Aushandlungsprozess koordinieren.

Dieses prozedurale Verständnis von Gemeinwohl hat sich in der Wissenschaft immer mehr durchgesetzt, bleibt jedoch vor allem hinsichtlich seiner Operationalisierung umstritten. Wenn allgemein akzeptiert wird, dass Gemeinwohlbelange für spezifische Gemeinschaften und in bestimmten raumzeitlichen Kontexten als Produkt eines gesellschaftlichen Aushandlungsprozesses zu bestimmen sind, dann stellt sich die Frage, wie dieser Prozess gestaltet werden kann. Wie kann Gemeinwohl in öffentliche Debatten zielführend eingebracht werden und welche Machtverhältnisse bestimmen diesen Diskurs? Wer übernimmt die Verantwortung für den Aushandlungsprozess? Welche Kommunikationsformen eignen sich dafür? Welche Maßstäbe zur Beurteilung von Gemeinwohl werden angesetzt? Für einzelne Politik- und Aufgabenfelder gibt es erste Ansätze für eine operative Anwendung eines prozeduralen Gemeinwohlverständnisses (SACHBE, 2004). Die Aufgabe, das "prozedurale Gemeinwohl" legitim, praxisnah und handlungsanleitend herzuleiten, erweist sich jedoch als außerordentlich schwierig.

2.3 Gegenüberstellung von Gemeinschaftsgütern und Gemeinwohl

Zwar wird im Zusammenhang mit Gemeinschaftsgütern häufig mit dem Gemeinwohl argumentiert, allerdings bestehen grundsätzliche Unterschiede zwischen den Erkenntnisinteressen und den Herangehensweisen der Gemeinwohl- und Gemeinschaftsgüterforschung, die mit unterschiedlichen theoretischen Zugängen verbunden und bisher nicht systematisch verknüpft worden sind.

Der Gemeinschaftsgüteransatz ist schwerpunktmäßig auf die Analyse von Problemen der Bereitstellung öffentlicher Güter zur Ableitung von institutionellen Lösungsansätzen ausgerichtet. Sein zentrales Merkmal – die Güterkategorisierung nach den Kriterien von Rivalität und Ausschließbarkeit – dient der Analyse grundlegender Probleme beim Umgang mit kollektiven Gütern. Gemeinschaftsgüter werden nicht

anhand von Gemeinwohlvorstellungen, sondern von Allokationsproblemen definiert und betrachtet: Es handelt sich also um Bereitstellungs- und Verteilungsfragen sowie um Regeln kollektiven Handelns, welche die Verfügbarkeit knapper Ressourcen sicherstellen sollen. Ein öffentliches Interesse wird dabei als selbstverständlich vorausgesetzt, allerdings werden die soziale oder politische Konstruktion des "Öffentlichen" nur unzureichend berücksichtigt.

Bei den Debatten über das Gemeinwohl hingegen liegt der Schwerpunkt auf der Bestimmung seiner Inhalte und deren Operationalisierbarkeit. Die Gemeinwohlforschung orientiert sich somit an der Bestimmung gesellschaftlicher Ziele. Hierbei werden wiederum die spezifischen Eigenschaften der zum Gemeinwohl beitragenden Güter oder Dienstleistungen vernachlässigt. Die geeigneten institutionellen Arrangements, um das Gemeinwohl zu maximieren, stehen ebenfalls nicht im Vordergrund.

Eine Verknüpfung der weitgehend parallel verlaufenden Debatten um Gemeinschaftsgüter und Gemeinwohl bietet jedoch mehrere Vorteile: Der von den gesellschaftlichen Bedürfnissen und Zielen ausgehende Gemeinwohlansatz ermöglicht, Güter in ihrem Zusammenhang und ihren Wechselwirkungen zu betrachten. Debatten über das Gemeinwohl können daher eine Orientierung für den heute stärker politisch verstandenen Begriff der Gemeinschaftsgüter bieten, indem die hinter den Gemeinschaftsgütern stehenden öffentlichen beziehungsweise kollektiven Interessen und deren Aushandlung im Mittelpunkt stehen. Im Gegensatz dazu kann die Bezugnahme auf Gemeinschaftsgütereigenschaften dazu beitragen, der Gefahr einer "rhetorischen Leere" bei der Bestimmung des Gemeinwohlbegriffs zu begegnen. In dem Maße, wie Gemeinschaftsgüter auch als soziales Konstrukt gelten steht die Frage nach der Berücksichtigung von Gemeinwohldimensionen bei institutionellen Arrangements zur Regelung der Zugänglichkeit von Gemeinschaftsgütern. Debatten über das Gemeinwohl könnten also davon profitieren, mit Hilfe des Gemeinschaftsgutbegriffs den Bezug zu konkreteren Inhalten und Kontexten zu schaffen. In Abbildung 1 werden Gemeinschaftsgut- und Gemeinwohlansatz zusammenfassend gegenübergestellt.

Abbildung 1: Gemeinschaftsgut- und Gemeinwohlanatz im Vergleich

	Gemeinschaftsgutansatz	Gemeinwohlanatz
<i>Erkenntnisinteresse</i>	Problembeschreibung zur Optimierung der Bereitstellung öffentlicher Güter und zur Ableitung geeigneter institutioneller Arrangements	Zielorientierung auf Interessen der Allgemeinheit bzw. das öffentliche Interesse
<i>Disziplinäre Wurzel und Erweiterungen</i>	Ökonomische Gütertheorie, durch Neoinstitutionalismus, sozialhistorische Allmendeforschung und neue politikwissenschaftliche Ansätze erweitert	Rechts-, politik- und geschichtswissenschaftliche Forschungen zu gesellschaftlichen Zielen
<i>Zentrale Kategorisierungen</i>	Private Güter, (reine) öffentliche Güter, Allmende (<i>common pool resources</i>), Club-/Zollgüter	Allgemeine(s) Wohl bzw. Interessen, öffentliche(s) Wohl bzw. Interessen
<i>Gegenstände</i>	Materielle (zum Beispiel Wasser) und nichtmaterielle (zum Beispiel Bildung) Güter und Dienstleistungen	Breites Spektrum gesellschaftlicher Gemeinwohlbelange
<i>Erklärungsgehalt</i>	Analyse der Eigenschaften eines Gutes zur Bestimmung geeigneter Steuerungsmöglichkeiten	Substantialistische oder prozedurale Analysen von Gemeinwohl zur Bestimmung gesellschaftlich akzeptabler Normen
<i>Neuere Entwicklungen</i>	Sensibilisierung für die Komplexität und Normativität der Güterbestimmung; Interesse an "global public goods" und "common heritage" im Zuge des globalen Wandels	Erweiterung von abstraktem Gemeinwohl zu Gemeinwohlzielstellungen; Historisierung, Kontextualisierung und Prozeduralisierung des Gemeinwohls; Forschungen zu Gemeinwohl in der EU
<i>Raumbezug</i>	Raumbezüge eher implizit: nach räumlicher Reichweite der Güter und institutionellen Regelungen gerichtet	Eher vage und situative räumliche Verortung des "Gemeinwesens": von der Gemeinde bis zum Weltall
<i>Raumpolitische Relevanz</i>	Förderung positiver und Minimierung negativer externer Effekte als zentrale Ziele von Raumentwicklung und -politik	Rekurs aufs Gemeinwohl als zentrale Kategorie der Raumplanung und regionalen Förderpolitik

Quelle: Eigene Darstellung.

3 WASSERINFRASTRUKTUREN UND KULTURLANDSCHAFTEN ALS RAUMGEBUNDENE GEMEINSCHAFTSGÜTER – GEMEINSCHAFTSGUTPROBLEME UND GEMEINWOHLZIELSTELLUNGEN

In diesem Abschnitt sollen die Zusammenhänge zwischen Gemeinschaftsgutproblemen und Gemeinwohlzielstellungen am Beispiel von Wasserinfrastrukturen und Kulturlandschaften unter Heranziehung von empirischen Forschungsergebnissen aus der Region Berlin-Brandenburg thematisiert werden. Wasserinfrastrukturen und Kulturlandschaften sind in ihrer Funktion und Wirkungsweise sehr unterschiedliche Gemeinschaftsgüter, die für die Raumentwicklung von großer Bedeutung sind. Das kommt auch in neueren raumpolitischen Leitbildern auf nationaler und europäischer Ebene zum Ausdruck. So zählen zu den drei raumordnerischen Leitbildern der Ministerkonferenz für Raumordnung (2006) sowohl "Daseinsvorsorge sichern" als auch "Ressourcen bewahren, Kulturlandschaften gestalten" (BMVBS, 2006). Als Gemeinschaftsgüter sind Wasserinfrastrukturen und Kulturlandschaften in ihrer Wirkungsweise jeweils stark von ihren physisch-materiellen Eigenschaften und ihrer Raumgebundenheit geprägt, weisen unterschiedliche Gemeinschaftsgut- und Institutionenprobleme auf und sind jeweils mit spezifischen Gemeinwohlzielstellungen verbunden. Daher werden im Folgenden beide Gemeinschaftsgüter analysiert und vergleichend gegenübergestellt.

3.1 Wasserinfrastrukturen

Infrastruktursysteme gelten als klassische Gemeinschaftsgüter, die dem Gemeinwohl dienen. So prägte Ernst Forsthoff in den 1930er Jahren das Verständnis von Daseinsvorsorge als staatliche Aufgabe zur Bereitstellung der für ein sinnvolles menschliches Dasein notwendigen Güter und Leistungen, welches bis heute nachwirkt (vgl. FORSTHOFF, 1938; HELLERMANN, 2000; LIBBE/TRAPP, 2005). Aber auch die Europäische Union beruft sich auf die besonderen Merkmale sogenannter Dienstleistungen von allgemeinem Interesse, die im Weißbuch der Europäischen Kommission verankert sind und zu denen auch Infrastruktursysteme der Ver- und Entsorgung gehören (EUROPÄISCHE KOMMISSION, 2004). Der EG-Vertrag definiert diese als "marktbezogene Tätigkeiten, die im Interesse der Allgemeinheit erbracht und daher von den Mitgliedstaaten mit besonderen Gemeinwohlverpflichtungen verbunden [sind]" (EUROPÄISCHE KOMMISSION, 2006). Diese Leistungen sollen flächendeckend, zuverlässig, umweltverträglich und bezahlbar sein. Entsprechend dem Gesetz zur Neufassung des Raumordnungsgesetzes (GEROG) ist die "Versorgung mit Dienstleistungen und Infrastrukturen der Daseinsvorsorge (...) zur Sicherung von Chancengerechtigkeit in den Teilräumen in angemessener Weise zu gewährleisten" (GEROG § 2 Abs. 2 Nr. 3). Dadurch erhalten die Gemeinwohlziele nicht nur eine soziale, sondern auch eine räumliche Dimension. Über die Art und Weise der Realisierung dieser Zielstellung wird gegenwärtig eine Debatte über die Zukunft des Prinzips gleichwertiger

Lebensverhältnisse und die diesbezügliche Rolle von Infrastruktursystemen geführt (vgl. STRUBELT, 2006; AKADEMIE FÜR RAUMFORSCHUNG UND LANDESPLANUNG, 2006). Infrastrukturmaßnahmen sind vielfach "die wichtigsten Instrumente der öffentlichen Planung zur Steuerung der räumlichen Entwicklung" (WEGENER, 1980). Aus der Vielfalt, aber auch aus dem Konfliktpotential dieser Ziele entstand im Rahmen der Debatte um die Daseinsvorsorge eine starke Tradition der staatlichen Infrastrukturverantwortung.

Die Gestaltung der institutionellen Rahmenbedingungen zur Realisierung dieser Gemeinwohlzielstellung wird allerdings von Problemstellungen beeinflusst, die sich aus den spezifischen Eigenschaften von Infrastrukturen und den damit verbundenen gütertheoretischen Zusammenhängen ergeben. Nach JOCHIMSEN (1966) und FREY (2005) besitzen technische Infrastruktursysteme physisch-technische Merkmale, die ökonomische Besonderheiten aufweisen und die nach der klassischen Gütertheorie eine Bereitstellung über den Markt erschweren oder unmöglich machen. Hierzu gehören die weitgehende Unteilbarkeit beziehungsweise Standortgebundenheit der Anlagen, die lange Lebensdauer, der netzartige beziehungsweise leitungsgebundene Aufbau und die Infrastrukturleistungen (FREY, 2005; TIETZ, 2007). Für die gütertheoretische Einordnung ist zunächst die Möglichkeit der Zugangsregulierung unter dem Aspekt der Ausschließbarkeit von Nutzern von Interesse. Der Zugang zu leitungsgebundenen Wasserver- und Entsorgungsanlagen ist durch den technischen Anschluss und die Zahlung einer Nutzungsgebühr begrenzt. Leitungsgebundene Infrastruktursysteme werden deshalb oft als Club- oder Netzwerküter klassifiziert. Eine Nutzungsrivalität besteht – allein auf die Infrastrukturnetze bezogen – bis zu einer gewissen Kapazitätsgrenze nicht. Wenn diese allerdings überschritten wird, können die negativen Folgen für die Nutzer erheblich sein. Solange Ver- und Entsorgungssysteme unterhalb der Kapazitätsgrenze funktionieren, können Betreiber und Nutzer davon profitieren: Je mehr Personen das Gut nutzen, desto geringer sind die hohen Fixkosten für jeden einzelnen. Der Mehrwert dieser sogenannten Netzwerküter wird so nicht nur vom Produzenten, sondern in hohem Maße auch von den Nutzern bestimmt. Entscheidend für die effektive und effiziente Bereitstellung des Gutes ist die Schaffung einer kritischen Masse in der Aufbauphase technischer Infrastruktursysteme und (in schrumpfenden Regionen heute besonders relevant) die Erhaltung dieser kritischen Masse. Zu den ökonomischen Besonderheiten der Wasserinfrastrukturbereitstellung gehören neben den sinkenden Durchschnittskosten aber auch die fehlende Rivalität im Konsum als Effizienzhemmnis und sogenannte meritorische Güterfunktionen – das heißt die Sicherstellung einer flächendeckenden Grundversorgung zu günstigen Preisen. Aus dieser Argumentationslogik wird hinsichtlich der institutionellen Regelungen oft die Notwendigkeit der staatlichen Planung, Regulierung, Finanzierung und – bei Bedarf – Bereitstellung abgeleitet (vgl. FREY, 2005).

Dass institutionelle Regelungen nicht allein durch den Gütercharakter eines Infrastruktursystems determiniert sondern institutionell und historisch geprägt sind,

wird angesichts der institutionellen Vielfalt von Wasserversorgungssystemen mit den gleichen Merkmalen als Netzwerk- beziehungsweise Clubgüter innerhalb Europas deutlich. In Deutschland erscheint die Organisation der Siedlungswasserwirtschaft mit ihren traditionellen monopolartigen Strukturen und kommunalen Zuständigkeiten auf den ersten Blick stabil. Hieraus allerdings den Schluss zu ziehen, dass die Wasserver- und Abwasserentsorgung Deutschlands vom institutionellen Wandel technischer Infrastruktursysteme nicht betroffen ist, wäre weit gefehlt. Der Prozess der Transformation verläuft einfach anders: eher eigenständig als staatlich gesteuert, punktuell statt flächendeckend, eher schleichend als bruchartig und vielschichtig statt eindimensional (vgl. LIBBE/MOSS, 2001). Dieser Prozess ist durch eine wachsende Bedeutung von Effizienzsteigerung und Kostenminimierung als betriebsstrategische Ziele am besten mit dem Begriff der Kommerzialisierung zu fassen (vgl. MOSS/NAUMANN, 2007). Dies gilt sowohl für öffentliche wie auch privatwirtschaftliche Betriebe, wenngleich Kommerzialisierungstendenzen bei privaten und privatrechtlich organisierten Unternehmen stärker ausgeprägt sind.

Bisher wurden Wasserinfrastrukturen als technisch-organisatorische Einheiten betrachtet. Es ist jedoch notwendig, das durch die Leitungen fließende Wasser als Umweltgut einzubeziehen. Dadurch wird die Güteranalyse deutlich komplexer. Ver- und Entsorgungssysteme für Wasser dienen in erster Linie der Aufbereitung und Bereitstellung natürlicher Ressourcen bzw. der Entsorgung nach ihrer Nutzung. Diese Umweltgüter besitzen einen anderen Gütercharakter als die Ver- und Entsorgungssysteme, die sie transportieren. Wasser ist in der Regel eine *common pool resource*, die erhebliche Nutzungsrivalitäten aufweist. Deshalb sind institutionelle Regelungen wie vor allem die EU-Wasserrahmenrichtlinie (WRRL) aus dem Jahr 2000 auf den Schutz dieses Umweltgutes und die Erreichung eines "guten Zustands" für Oberflächengewässer und Grundwasserkörper innerhalb von klaren Fristen durch eine Ökologisierung des Gewässerschutzes nach ökologischen und hydromorphologischen Gütekriterien gerichtet. Dazu dienen Bewirtschaftungspläne und Maßnahmenprogramme unter Mitwirkung der Öffentlichkeit durch Anhörung und Information nach Art. 14 WRRL und die verstärkte Anwendung wirtschaftlicher Steuerungsinstrumente, um die Umweltziele nach Art. 4 WRRL zu erreichen (vgl. RUMM et al., 2006). Dieser hybride Steuerungsansatz, den die WRRL verfolgt, besteht aus einer Kombination von klassischen, ordnungsrechtlichen Vorgaben und Verfahrensregeln mit neuen, eher prozeduralen Steuerungsmodi, die auf die sektor- und gebietsübergreifende Koordinierung, die Abwägung konkurrierender Interessen und die Sensibilität für räumliche Besonderheiten ausgerichtet sind. Dabei wird ein ungewöhnlich hoher Koordinierungsaufwand mit Politikfeldern jenseits des Gewässerschutzes erforderlich. Das betrifft in erster Linie die Landwirtschaft (vor allem zur Reduzierung diffuser Belastungen), die Raumplanung (für eine vorsorgende Flächennutzung und Verbesserung der Gewässerstruktur) und den Naturschutz (zur Sicherung bzw. Entwicklung wassergeprägter Ökosysteme und Landschaften). Die flussgebietsbezogene Bewirtschaftung von Wasserressourcen hat auch zu einer neuen räumlichen Organisation geführt.

In diesen unterschiedlichen Gütereigenschaften von Netzwerk- und Umweltgütern und den daran anknüpfenden institutionellen Regelungen zeigt sich ein grundsätzliches Dilemma bei der Bewirtschaftung von Ver- und Entsorgungssystemen, das die Gütertheorie offenbart: Es liegt im Interesse der Nachhaltigkeit, den Verbrauch von Umweltgütern so weit wie möglich zu minimieren, aber es liegt im Interesse der Nutzer und Betreiber eines Infrastruktursystems, die Auslastung dieses Netzwerkutes so weit wie möglich (unterhalb einer Sicherheitsreserve) zu maximieren. Daraus ergibt sich aus unterschiedlichen Gemeinwohlzielstellungen ein Gemeinschaftsgutproblem zwischen dem Netzwerkgut "Wasserinfrastruktur" und dem Umweltgut "Wasser".

Einen gesellschaftlich akzeptablen Ausgleich zwischen diesen unterschiedlichen (Gemeinwohl-)Interessen zu erzielen, ist das Ziel institutioneller Regelungen. In Zeiten eines wirtschaftlichen Wachstums – und eines Ausbaus der Infrastruktur – wurden diese Regelungen oft zugunsten einer sicheren Wasserversorgung und auf Kosten des regionalen Wasserhaushalts ausgelegt. Heute führt der demographische und wirtschaftliche Strukturwandel jedoch in vielen Teilen Ostdeutschlands zu einem unter Wasserwirtschaftlern zuvor weitgehend unbekanntem Problem: Überkapazitäten und Unterauslastungen ihrer Ver- und Entsorgungsnetze. Die Kombination von Kapazitätsausbau und Verbrauchsrückgang hat jedoch zu einer Reihe von Folgeproblemen für die ostdeutsche Siedlungswasserwirtschaft geführt (vgl. MOSS/HÜESKER, 2010). Die Unterauslastung der Netze und Anlagen führt zu einer Gefährdung der Funktionsfähigkeit und der Einhaltung qualitativer Mindeststandards aufgrund längerer Standzeiten des Wassers in den Leitungen (vgl. KOZIOL, 2004). Mit dem Rückgang des Wasserverbrauchs sinken auch die Einnahmen durch Wasser- und Abwassergebühren. Angesichts des hohen Niveaus der Fixkosten sind die Möglichkeiten, Kosten einzusparen, sehr begrenzt. Es entsteht die sogenannte Fixkostenfalle. Um die Einbußen wettzumachen, die ihnen durch rückläufige Verbrauchswerte entstanden sind, sehen sich die Versorgungsbetriebe gezwungen, die Gebühren für Wasser und Abwasser deutlich anzuheben und ihre Tarifsysteme weniger verbrauchsabhängig zu gestalten (vgl. MOSS, 2008b).

Das Dilemma von Überkapazitäten und Unterauslastungen wird besonders in Situationen extremer Ressourcenknappheit kritisch. Beispielsweise warnten Hydrologen, Wasserwirtschaftler und Klimaforscher in einer extremen Trockenperiode im April 2007 vor einer zunehmenden Wasserknappheit. So forderte Gerhard Löper vom Wasser- und Schifffahrtsamt (WSA) Brandenburg: "Ich kann die Bürger nur aufrufen, Wasser zu sparen" (Märkische Allgemeine Zeitung vom 27. April 2007). Auf der anderen Seite beklagten Vertreter von ostdeutschen Wasserversorgungsunternehmen die negativen Folgen von Wassersparmaßnahmen für ihre unterausgelasteten Infrastruktursysteme. Ralf Schüler, Geschäftsführer der Deutschen Vereinigung für Wasserwirtschaft, Abwasser und Abfall (DWA) formulierte zugespitzt: "Es ist letztlich im Interesse des Bürgers selbst, auch einmal mehr zu duschen" (Tageszeitung vom 2. April 2007). Diese zugespitzten

Positionen spiegeln das Spannungsfeld zwischen der Kommerzialisierung von Wasserdienstleistungen und dem Schutz von Wasserressourcen vor dem Hintergrund des institutionellen Wandels in Wasserwirtschaft und Umweltschutz wider. Hinter diesem Gemeinschaftsgutproblem zwischen Netzwerkgut und Umweltgut vollzieht sich eine weitere Ausdifferenzierung der Interessen von Akteursgruppen (vgl. WISSEN, 2009). Die regionale Ausprägung des Gemeinschaftsgutproblems wird durch Wirkungen des Klimawandels verschärft, der den durch eine jahrzehntelange Trockenlegung von landwirtschaftlichen Flächen durch Melioration beeinflussten Landschaftswasserhaushalt und die zu geringe Grundwasserneubildung zusätzlich beeinträchtigen.

Die gegenseitige Bezugnahme der beiden Debattenstränge über Infrastrukturen und Wasserressourcen ist allerdings gering (MOSS, 2008b). Für die Umsetzung der Umweltziele der WRRL werden Versorgungsunternehmen durchaus als Partner betrachtet und (teilweise) involviert; auf den Wandel ihrer eigenen wirtschaftspolitischen Rahmenbedingungen wird aber kaum Bezug genommen. Umgekehrt erfolgt die Debatte über Privatisierungen in der Wasserwirtschaft weitgehend ohne Rekurs auf die Umsetzung der WRRL, sieht man von der oft zitierten Aussage ab, dass Wasser kein ökonomisches Gut sei.

Auffällig bei der öffentlichen Diskussion über die Zukunft von Infrastruktursystemen ist heute die Dominanz der aus dem Gütercharakter abgeleiteten Frage, wie infrastrukturelle Leistungen erbracht werden sollen: ob privat- oder kommunalwirtschaftlich, ob dezentral oder zentral, ob abgaben- oder steuerfinanziert. Dagegen fehlt eine systematische Zieldiskussion. Welche Funktionen Infrastruktursysteme unter den veränderten Rahmenbedingungen erfüllen sollten und inwieweit ihre traditionellen regionalpolitischen Ziele noch – oder wieder – Gültigkeit haben, wird kaum thematisiert. Der Begriff des Gemeinwohls wird am ehesten von den Kommunen zur Abwehr von Versuchen verwendet, ihre Einflussnahme über die Ver- und Entsorgungsunternehmen einzuschränken, etwa als Argumente gegen die Aufhebung des Anschluss- und Benutzungszwanges oder gegen die Einführung marktwirtschaftlicher Steuerungsmechanismen wie Kosten-Nutzen-Analysen.

Das Politikfeld der Ver- und Entsorgung ist diesbezüglich bislang eher für seine Persistenz bekannt. Infrastrukturplaner orientieren sich vorzugsweise an etablierten Strukturen und Verfahren und entwickeln Vorstellungen über die künftige Entwicklung in der Regel ohne Einbeziehung einer breiteren Öffentlichkeit. Tatsache ist jedoch, dass sie zunehmend unter Druck geraten, sich den neuen Anforderungen zu stellen: der demographische Wandel, die technologische und marktwirtschaftliche Reife alternativer Technologien, der Klimawandel, neue Verbrauchsmuster im Zusammenhang mit neuen Lebensstilen und wirtschaftsräumlichen Strukturen und die Anforderungen des Umwelt- und Gewässerschutzes fordern die relevanten Akteure zu einer Neuorientierung der Infrastrukturplanung und -politik heraus. Der Zwang zum Handeln kann eine größere Bereitschaft zur gemeinsamen Zielfindung generieren. Positiv gewendet: Die vielfältigen Gemeinschaftsgutfunktionen

und Gemeinwohlinteressen, die Wasserinfrastrukturen über die originären Leistungen der Ver- und Entsorgung hinaus leisten – wie etwa für die Hygiene, den Gewässerschutz, den Brandschutz oder den Naturschutz (über Wasserschutzgebiete) – sollten künftig bei deren Weiterentwicklung stärker beachtet werden. Dadurch könnten wichtige Synergieeffekte erschlossen werden und der hohe Finanzbedarf für Wasserinfrastrukturen im politischen Raum besser vermittelt werden. Erst dann wird eine gemeinwohlorientierte Zieldiskussion bessere Chancen auf Erfolg haben, die den gegenseitigen Abhängigkeiten zwischen der Realisierung einer ökologisch orientierten Gewässerschutzpolitik und den Handlungsbedingungen und -orientierungen von Wasserver- und Abwasserentsorgungsbetrieben gerecht wird. Wenn auch wichtige Schritte in Richtung integrierter Ansätze in den letzten Jahren in Deutschland geleistet worden sind, erfolgt die Integrationsleistung bisher überwiegend *innerhalb* eines bestimmten Teilsystems der Wasserwirtschaft und viel weniger quer zu unterschiedlichen Handlungsbereichen.

3.2 Kulturlandschaften

Seit einigen Jahren werden Kulturlandschaften von Politik und Forschung – nicht zuletzt wegen ihrer Bedeutung für die Stabilisierung strukturschwacher Räume – als Potential für die Regionalentwicklung thematisiert (vgl. FÜRST et al., 2008). Dadurch wurde die Kulturlandschaft zu einem Kernbegriff zahlreicher politisch-programmatischer Dokumente und erscheint mit Verweis auf die identitätsstiftende Wirkung quasi "per se" als Gemeinwohlbegriff. Beispiele sind das Europäische Raumentwicklungskonzept von 1999, das die Inwertsetzung von Kulturlandschaften im Rahmen integrierter Raumentwicklungskonzepte fordert (EUROPÄISCHE KOMMISSION, 1999), oder die 2006 von der Ministerkonferenz für Raumordnung verabschiedeten neuen Leitbilder und Handlungsstrategien für die Raumentwicklung in Deutschland mit dem Leitbild "Ressourcen bewahren, Kulturlandschaften gestalten" (BMVBS, 2006). In der Realität ist die Kulturlandschaftsentwicklung jedoch im Spannungsfeld zwischen politischen Steuerungsansprüchen und realen Entwicklungen durch widersprüchliche Prozesse charakterisiert: Einerseits werden prägende historische (natürliche und bauliche) Landschaftselemente in Wert gesetzt, Traditionen wiederbelebt und breite Debatten über die Erhaltung von Kulturlandschaften geführt. Andererseits unterliegen Kulturlandschaften einem anhaltenden Wandel, wobei infolge von Globalisierungs-, Transformations- und Restrukturierungsprozessen deutliche Nivellierungstendenzen festgestellt werden (SCHENK, 2001). Im Kern ist das Dilemma der Kulturlandschaftsentwicklung auf Problemstellungen zwischen Gemeinwohlanprüchen und den mit ihrem Gütercharakter zusammenhängenden spezifischen institutionellen Regelungen und Steuerungsmöglichkeiten zurückzuführen (vgl. GAILING/RÖHRING, 2008a).

Kulturlandschaften erbringen Leistungen, die gemeinschaftlich in Anspruch genommen werden können: Sie bieten Erholungsmöglichkeiten, von ihnen gehen identitätsstiftende und imagebildende Wirkungen aus und sie bilden Grundlagen

zur Sicherung kultureller, landschaftlicher und biologischer Vielfalt. Daran wird deutlich, dass Kulturlandschaft vor allem ganzheitlich wirkt, denn ihr Wert besteht – so auch nach dem Europäischen Raumentwicklungskonzept (EUREK) – "in der gesamten Zusammensetzung und nicht in einzelnen Elementen" (EUROPÄISCHE KOMMISSION, 1999, S. 80). Dennoch beeinflussen die einzelnen heterogenen Elemente die Kulturlandschaft in ihrer Gesamtheit wesentlich. Dabei ist zu berücksichtigen, dass sie jeweils mehrere Funktionen mit unterschiedlichen Gütereigenschaften und oft konkurrierenden Zielstellungen erfüllen. So steht die Landwirtschaft im Spannungsfeld zwischen der Erzeugung von landwirtschaftlichen Produkten als private Güter und den als Kuppelprodukt entstehenden Wirkungen auf die Kulturlandschaft (vgl. BAHNER, 1996 und HAMPICKE, 1996). Die Erholungsfunktion einer Kulturlandschaft, die als reines öffentliches Gut verfügbar ist, kann durch einen zum Beispiel von Entwicklungen in anderen Sektoren ausgelösten Kulturlandschaftswandel, wie den zunehmenden Anbau von Biomasse als Monokulturen zur Energieerzeugung den Charakter einer *common pool resource* annehmen und als solche der Gefahr der Beeinträchtigung ausgesetzt sein. Aus gütertheoretischer Perspektive handelt es sich daher bei Kulturlandschaften um ein Gemeinschaftsgut, das in der Regel aus Mischformen von sogenannten *common pool resources*, privaten und öffentlichen Gütern sowie Klubgütern besteht.

Die Kulturlandschaft entsteht und entwickelt sich demzufolge weitgehend durch externe Effekte oder als Nebenprodukt des Umgangs mit ihren vielfältigen Elementen und Bestandteilen. Die Kulturlandschaft ist daher "ein Residualprodukt einer Vielzahl von Handlungen, die jeweils eigene Zwecke verfolgen. In ihr schlagen sich die Ergebnisse von Arbeit, Verkehr, Wohnen, Freizeit, Tourismus, Konsum, Landschaftsplanung und Naturschutz nieder, doch ist ihre reale Gesamtheit von niemandem gewollt" (SIEFERLE, 2003, S. 74-75). Die Handlungsorientierungen der Akteure in Bezug auf den Umgang mit der Kulturlandschaft werden dabei durch die Wirkung formeller sektoraler Regelungen und ökonomischer Anreize sowie individueller Wertvorstellungen geleitet. Dadurch gewinnen unterschiedliche normativ geprägte Vorstellungen von Kulturlandschaft die jeweils auf spezifische Qualitäten gerichtet sind, als informelle Institutionen eine große Bedeutung. So haben Land- und Forstwirte ein stark nutzungsorientiertes Kulturlandschaftsverständnis, während die historische Geographie und die Landschaftsästhetik in ihren traditionellen Sichtweisen auf eine "historisch gewachsene Kulturlandschaft" fokussiert sind (vgl. GAILING, 2008).

Aufgrund der Multifunktionalität der Kulturlandschaft kann es kein eigenständiges Regelsystem geben, das auf ihre intendierte Entwicklung zur Umsetzung von fest definierten Gemeinwohlzielen gerichtet ist. Eine direkte Kulturlandschaftsgestaltung ist ohnehin nur durch die gezielte Inwertsetzung von historischen und baulichen Relikten des industriellen Erbes, die Gestaltung von Landschaftsparken oder Maßnahmen zur Pflege und Entwicklung historischer Kulturlandschaftselemente in Naturschutzgebieten, aber auch durch Initiativen einer bewussten

kulturlandschaftlichen Image- und Identitätsbildung möglich. Bei der Vermarktung kulturlandschaftlicher Qualitäten und Images, die an den spezifischen Alleinstellungsmerkmalen einer Kulturlandschaft anknüpfen, können Probleme von "Trittbrettfahrerverhalten" auftreten, wenn regionale Akteure einerseits von der Qualität oder dem Image einer Kulturlandschaft profitieren, andererseits aber nicht zur Bewahrung dieser Qualität beitragen.

Auch wenn heute die gesamte Landschaft in Mitteleuropa in dem Sinne als Kulturlandschaft bezeichnet wird, dass sie durch das Handeln des Menschen beeinflusst ist, unterscheiden sich die einzelnen Kulturlandschaften voneinander. Aufgrund der räumlichen Bindung ihrer Entstehung und ihrer raumkonstituierenden Wirkung (insbesondere als Identitätsraum) ist die Kulturlandschaft daher ein regionales Gemeinschaftsgut (vgl. RÖHRING, 2008). Daraus ergibt sich die Möglichkeit, Kulturlandschaften als Raumbezug von Regionalisierungsprozessen zu nutzen und Handlungsräume zu konstituieren (vgl. GAILING/RÖHRING, 2008b).

Allerdings ist es notwendig, bei der Formulierung von Gemeinwohlzielstellungen und ihrer Operationalisierung die Wirkungszusammenhänge der Entwicklung der Kulturlandschaft als regionales Gemeinschaftsgut und die sich daraus ergebenden Handlungsoptionen zu berücksichtigen. Im fünften Grundsatz der Novelle des Raumordnungsgesetzes von 2008 wird der Erhalt und die Entwicklung der Kulturlandschaften mit den "Zielen eines harmonischen Nebeneinanders, der Überwindung von Strukturproblemen und zur Schaffung neuer wirtschaftlicher und kultureller Konzeptionen" verbunden. Hinter derartigen Sätzen in programmatischen Dokumenten steht vielfach der Versuch einer konsensorientierten und legitimierenden Formulierung von Gemeinwohlzielstellungen. Ihre Operationalisierung erscheint jedoch angesichts der mit dem Gemeinschaftsgutcharakter von Kulturlandschaften verbundenen Problemstellungen schwierig. Dabei wird auch oft verdrängt, dass eine Konkurrenz der Werte typisch für politisch-planerische Entscheidungen im Umgang mit der Kulturlandschaft ist und Konflikte zwischen verschiedenen Ansprüchen an die Landschaftsnutzung die Regel sind.

Dies wirft neue Fragen nach der Entwicklung von Zielstellungen für die Kulturlandschaftsentwicklung sowie nach Möglichkeiten und Grenzen ihrer Beeinflussung auf, die einen ganzheitlichen Zugang zur Problemstellung erfordern und dem Gemeinschaftsgutcharakter der Kulturlandschaft gerecht werden. Die erläuterten güter- und institutionentheoretische Zusammenhänge der Kulturlandschaftsentwicklung und die mit Kulturlandschaften verbundenen Gemeinwohlzielstellungen führen zu einem Gemeinschaftsgutproblem, das in einem Spannungsverhältnis zwischen der Heterogenität der institutionellen Zugänge zur Kulturlandschaft einerseits und der regionalen Steuerung ihrer gemeinwohlorientierten Nutzung als ganzheitlich wirkendes, regionales Entwicklungspotential andererseits besteht. Die institutionelle Herausforderung liegt hier in der Steuerung eines Gemeinschaftsguts, welches (im Gegensatz zu Wasser beziehungsweise Wasserinfrastrukturen) keine klare institutionelle Zuordnung genießt, sondern von dem Zusammenspiel sehr

unterschiedlicher Institutionensysteme geprägt ist, wie zum Beispiel jenen für Naturschutz, Landwirtschaft, Forstwirtschaft, Raumplanung und Tourismus. Das erschwert die Umsetzung neuerer raumplanerischer und regionalpolitischer Ziele für Kulturlandschaften als Impulsgeber für die Regionalentwicklung insbesondere dort, wo die Qualitäten und Eigenarten von Kulturlandschaften beeinträchtigt worden sind und/oder wo sie infolge des gesellschaftlichen Strukturwandels zu den (wenigen) Stärken einer Region gehören.

In Berlin-Brandenburg sind zwei Ausprägungen dieses Gemeinschaftsgutproblems zu erkennen: Auf der einen Seite besteht ein Spannungsverhältnis zwischen den konkurrierenden und überlappenden Handlungsräumen von sektoralen Politiken und den Kulturlandschaften in ihren unscharfen natur-, kultur- beziehungsweise identitätsräumlichen Grenzen. Das räumliche *misfit* zwischen politisch-administrativem Territorium und gebietsübergreifenden Kulturlandschaften ist besonders in der Hauptstadtregion eine große Herausforderung für eine regionale Kulturlandschaftspolitik dar. Auf der anderen Seite besteht ein Spannungsverhältnis zwischen übergeordneten (und häufig selektiven) Steuerungsansätzen gerade der Landesregierungen und dem Handeln regionaler kulturlandschaftlicher Initiativen. Hier geht es um Fragen der *multi-level-Governance* im Umgang mit kulturlandschaftlichen Potentialen. Dieses Gemeinschaftsgutproblem soll am Beispiel von ausgewählten regionalen Entwicklungsansätzen der Landesplanung in Berlin-Brandenburg, des ländlichen Raumes und des Naturschutzes, die Aspekte der Kulturlandschaftsentwicklung einbeziehen, verdeutlicht werden (vgl. GAILING/RÖHRING, 2009).

Um die Vielfalt der Kulturlandschaften des gemeinsamen Planungsraumes Berlin-Brandenburg als regionales Potential zu erschließen, wurde 2007 im Rahmen der Neuaufstellung der Landesentwicklungsplanung ein Ansatz zur Etablierung kulturlandschaftlicher Handlungsräume entwickelt (MINISTERIUM FÜR INFRASTRUKTUR UND RAUMORDNUNG DES LANDES BRANDENBURG/SENATSWERWALTUNG FÜR STADTENTWICKLUNG DES LANDES BERLIN, 2007 und 2009). Dieser Ansatz, der am Integrationspotential der Kulturlandschaft anknüpft, soll auch einen Beitrag zum Umgang mit dem oben genannten Spannungsverhältnis zwischen den heterogenen Steuerungsansätzen und der Ganzheitlichkeit der Wirkung von Kulturlandschaft leisten. Seine Umsetzung, die nur auf der regionalen Ebene erfolgen kann, wird jedoch wesentlich von sektoralen Rahmenbedingungen beeinflusst, die auf der Landesebene ausgestaltet werden. Sie sind gegenwärtig in unterschiedlichen regionalen Ansätzen verankert, wie am Beispiel der ländlichen Entwicklung und des Naturschutzes dargestellt werden soll.

Die Programme der ländlichen Entwicklung (die bisherige EU-Gemeinschaftsinitiative LEADER, die heute in den ELER-Ansatz integriert ist sowie die Integrierte ländliche Entwicklung im Rahmen der Bund-Länder-Gemeinschaftsaufgabe) sind auf Gemeinwohlziele einer nachhaltigen Entwicklung der ländlichen Räume als Lebens-, Arbeits-, Erholungs- und Naturräume gerichtet. Sie sollen zu einer

positiven Entwicklung der Agrarstruktur, einer langfristigen Stärkung der wirtschaftlichen Leistungsfähigkeit und zur Schaffung von Arbeitsplätzen beitragen: "Ob bei der integrierten ländlichen Entwicklung, bei LEADER-Projekten oder bei der Unterstützung von Investitionsvorhaben, die Sicherung und Schaffung von Arbeitsplätzen stehen an erster Stelle, wenn dafür Fördermittel fließen sollen" (SCHULZE, 2008). Unter dieser Prämisse werden auch die Inwertsetzung des Natur- und Kulturerbes des ländlichen Raums sowie die Herstellung und Vermarktung regionaler Produkte als Entwicklungspotentiale gesehen. Durch die Instrumente der ländlichen Entwicklung wurden auf regionaler Ebene in einem auf der Partizipation regionaler Akteure beruhenden prozeduralen Prozess der Erarbeitung von regionalen Zielvorstellungen Kooperations- und Vernetzungsprozesse sowie neue Governanceansätze initiiert. Diese Governanceansätze sind durch den Zugang zu finanziellen Ressourcen in das Mehrebenensystem der ländlichen Entwicklung eingebunden. Die damit gegebenen Möglichkeiten regionaler Akteure, kulturlandschaftliche Handlungsräume mit integrierten Gemeinwohlzielstellungen herauszubilden, werden allerdings eingeschränkt. Ursachen dafür sind eine unzureichende institutionelle Integration der Instrumente zur Entwicklung des ländlichen Raumes und dadurch eine unzureichende Berücksichtigung der Komplexität und der Verflechtungen kulturlandschaftlicher Entwicklungsziele sowie die Ausrichtung der Handlungsräume auf die Landkreise als Förderkulisse, die außerdem stark an die jeweiligen Förderperioden gebunden sind. So hatten sich im Rahmen von LEADER+ Lokale Aktionsgruppen im Zusammenhang mit Naturparks gebildet. Mit der neuen Förderperiode 2007-2013 wurden diese kulturlandschaftlichen Raumbezüge weitgehend zugunsten der Landkreise aufgegeben.

Unterschiedliche Raumbezüge von Handlungsräumen führen zu Problemen von "Spatial fit". So beispielsweise gegenüber dem Naturschutz mit seinen langfristig etablierten Großschutzgebieten als Handlungsräume. Die auf den "Schutz der Natur, der Umwelt und der gewachsenen Kulturlandschaft" gerichteten Gemeinwohlziele des Naturschutzes fanden 1992 Eingang in die neue Verfassung des Landes Brandenburg. Seitdem haben sich jedoch die institutionellen Rahmenbedingungen durch Deregulierung und Verwaltungsreformen verändert, so dass eine Anpassung der Gemeinwohlziele, weg von ökologischen Kernzielen mit der Dominanz des Arten- und Biotopschutzes und hin zu Aufgaben der Regionalentwicklung, der Strukturpolitik und der ökonomischen Wertschöpfung erkennbar wurde (vgl. GAILING/RÖHRING, 2009). Großschutzgebiete werden daher inzwischen als "Modellregionen für Schutz und Nutzung Brandenburger Landschaften" bezeichnet. Damit verbunden war die Entwicklung neuer Wertschöpfungspartnerschaften zwischen Naturschützern und ökonomisch orientierten Akteuren sowie die Herausbildung neuer institutioneller Arrangements zur touristischen Entwicklung und Vermarktung regionaler Produkte. Obwohl dadurch eine stärkere Annäherung der Entwicklungsziele der ländlichen Entwicklung und des Naturschutz und die Herausbildung von Synergien verbunden sind, bleiben traditionelle Konfliktpotenziale erhalten. Das betrifft heute insbesondere die Umsetzung der FFH-Richtlinie als

Mehrebenenproblem der Realisierung von EU-Politik. Durch konkurrierende sektorale und regionale Gemeinwohlziele entstehen "Problems of institutional interplay" die nicht nur in Flächennutzungskonflikten, sondern auch in der Konkurrenz um Identitäten und Images sichtbar werden.

Die Umsetzung integrierter Ansätze der Kulturlandschaftsentwicklung und der Etablierung kulturlandschaftlicher Handlungsräume auf regionaler Ebene erfordert jedoch eine Koordinierung der Ressortaktivitäten auf Landesebene. Dazu sind eine Abstimmung sektoraler Gemeinwohlziele und ihre Verankerung in den institutionellen Rahmenbedingungen sowie finanzielle Anreize als Impulse für regionale Management und Projektaktivitäten erforderlich. Probleme ergeben sich vor allem aus Unterschieden hinsichtlich der Ausstattung mit finanziellen Ressourcen und der Pfadabhängigkeit institutioneller Strukturen. So verfügt beispielsweise die ländliche Entwicklungspolitik über relativ umfangreiche finanzielle Mittel zur Umsetzung ihrer sektoralen Gemeinwohlziele. Dagegen bestehen im Naturschutz mit den Großschutzgebieten institutionell abgesicherte stabile Handlungsräume. Auf regionaler Ebene existieren darüber hinaus kulturlandschaftliche Netzwerke und Initiativen, die sich auf vielfältige Themenstellungen von der Lösung regionaler Probleme des Kulturlandschaftswandels über die touristische Vernetzung bis hin zur Erhaltung typischer Kulturlandschaftselemente richten. Je nach ihrer Stabilität, ihrem Zugang zu Ressourcen und ihrer Akzeptanz in der Region sind kulturlandschaftliche Netzwerke in der Lage, selbst Handlungsräume zu konstituieren. Sie stehen dabei in einem Spannungsfeld zwischen ihren spezifischen regionalen Zielen und Ansprüchen und den Spielräumen, die ihnen Regelungen auf Landes-, Bundes- und europäischer Ebene für die Realisierung eröffnen.

Angesichts der Vielfalt an Gemeinwohlbelangen und den spezifischen Gemeinschaftsgutproblemen stellt sich im gesellschaftlichen Umgang mit der Kulturlandschaft in jedem zeiträumlichen Kontext neu die Frage, wie eine prozedurale Aufstellung und Institutionalisierung von Gemeinwohlzielen erfolgen kann und wie dabei die Interplay-Probleme zwischen den Institutionensystemen angesichts der ungleichen Ausstattung mit Ressourcen, Macht und institutionellen Strukturen gelöst werden können. Die Komplexität kulturlandschaftlicher Gemeinwohlbezüge deutet auf ein Dilemma kulturlandschaftlicher Governance hin: Einerseits bietet der Kulturlandschaftsbegriff umfassende Integrationschancen, andererseits droht eine Überforderung und Instrumentalisierung regionaler Akteure, die das Management der heterogenen Bezüge ohne staatliche institutionelle Unterstützung und ohne eine ausreichende eigene Machtbasis nur schwerlich leisten können.

3.3 Vergleich von Wasserinfrastrukturen und Kulturlandschaften

Die Gemeinsamkeit von Wasserinfrastrukturen und Kulturlandschaften besteht darin, dass sie jeweils keinen eindeutigen Gütercharakter aufweisen. Während Wasserinfrastrukturen in Verbindung mit der Ressource Wasser durch die Dualität von Netzwerkgut und Umweltgut sowie die damit verbundenen unterschiedlichen Gemeinwohlzielen charakterisiert sind, ist die Kulturlandschaft als Gemeinschaftsgut

das Ergebnis des Umgangs mit vielfältigen öffentlichen und privaten Gütern. Daraus ergeben sich Konsequenzen für die Entwicklung von Gemeinwohlzielen, institutionellen Arrangements und integrierten Steuerungsansätzen sowie Herausforderungen für die intendierte Gestaltung von institutionellen Interplay-Prozessen und damit verbundenen Konfliktpotenzialen. Abbildung 2 veranschaulicht zusammenfassend Gemeinschaftsgutcharakter, Gemeinwohlzielstellungen sowie damit zusammenhängende institutionelle Dimensionen und Steuerungsansätze der regionalen Gemeinschaftsgüter Wasserinfrastrukturen und Kulturlandschaften.

Abbildung 2: Wasserinfrastrukturen und Kulturlandschaften im Vergleich

	Wasserinfrastrukturen	Kulturlandschaften
<i>Gegenstand (Gemeinschaftsgut)</i>	Umweltgut "Wasserhaushalt" und Netzwerkgut "Wasserinfrastruktur"	Kulturlandschaft als ganzheitliches Konstrukt vielfältiger Elemente und Bestandteile; von der Wahrnehmung vor dem Hintergrund unterschiedlicher Kulturlandschaftsverständnisse abhängig
<i>Gemeinschaftsgutcharakter</i>	Netzwerkgut "Wasserinfrastruktur" als Clubgut und Umweltgut "Wasserhaushalt" als Common-Pool-Resource	Kulturlandschaft als heterogenes regionales Gemeinschaftsgut, bestehend aus vielfältigen öffentlichen und privaten Gütern
<i>Produktion/Reproduktion</i>	Wasserinfrastruktur ein meritorisches Gut, private Bereitstellung im Auftrag des Staates	Weitgehend als externer Effekt, intendierte Entwicklung nur begrenzt möglich
<i>Gemeinschaftsgutprobleme</i>	Spannungsverhältnis zwischen Wasserinfrastrukturen als Netzwerkgüter und dem Schutz von Wasserressourcen als Umweltgüter aufgrund unterschiedlicher Handlungslogiken	Spannungsverhältnis zwischen der Heterogenität der institutionellen Zugänge und der Ganzheitlichkeit als regionales Entwicklungspotential
<i>Institutioneller Rahmen</i>	Zwei Institutionensysteme mit unterschiedlichen Zielstellungen und Handlungslogiken	Institutionelle Zersplitterung durch Heterogenität und Multifunktionalität (Problems of interplay); großer Einfluss informeller Institutionen
<i>Entwicklungsdynamik</i>	Starkes Beharrungsvermögen	Anfällig für schleichenden Wandel
<i>Institutionenwandel</i>	Bewusster Institutionenwandel mit intendierten aber auch nicht-intendierten Effekten	Spontaner, sektorspezifischer Institutionenwandel oft mit nicht-intendierten Effekten
<i>Gemeinwohlziele</i>	Teilweise konfligierende Gemeinwohlziele der Versorgungssicherung und Ressourcenerhaltung	Kulturlandschaft als abstraktes Gemeinwohlziel; Vielfalt sektoraler und regionaler kulturlandschaftsbezogener Gemeinwohlziele
<i>Steuerungsprobleme</i>	Koordination der unterschiedlichen Steuerungs- und Handlungslogiken von Umwelt- und Netzwerkgütern	Sicherung der Multifunktionalität durch aktiven Umgang mit der institutionellen Heterogenität durch Governanceansätze
<i>Raumbezüge</i>	Infrastrukturnetze, Flusseinzugsgebiete, Gebietskörperschaften	Identitätsbasierte Raumbezüge als Anknüpfungspunkt für Handlungsräume; Probleme der Überlagerung mit anderen Raumkonstrukten (Problems of fit)

Quelle: Eigene Darstellung.

4 ERKENNTNISSE ÜBER DIE ANWENDUNG VON GEMEINSCHAFTSGÜTER- UND GEMEINWOHLKONZEPTE AUF WASSERINFRASTRUKTUREN UND KULTURLANDSCHAFTEN

Abschließend sollen aus der Untersuchung der Zusammenhänge zwischen Gemeinschaftsgutproblemen und der Formulierung und Umsetzung von Gemeinwohlzielstellungen in Bezug auf die regionalen Gemeinschaftsgüter Wasserinfrastrukturen und Kulturlandschaften zusammenfassende Erkenntnisse über den Erklärungsgehalt beider Ansätze für institutionentheoretische Problemstellungen der Raumentwicklung gezogen werden. Aktuelle Debatten über den Umgang mit Wasserressourcen und die künftige Bereitstellung von Wasserinfrastrukturen sowie die Erschließung der Potentiale von Kulturlandschaften für eine qualitative Regionalentwicklung machen die Defizite sowohl hinsichtlich einer integrierten Herangehensweise als auch bei der Berücksichtigung der spezifischen Eigenschaften dieser regionalen Gemeinschaftsgüter bei der Formulierung von Gemeinwohlzielen und der Gestaltung institutioneller Arrangements deutlich.

Der Gemeinschaftsgutansatz bietet mit seinem bewährten analytischen Gerüst der Güterkategorisierung anhand nutzungsbezogener Merkmale nach Rivalität und Ausschließbarkeit und die damit verbundene Komplexitätsreduzierung sowie der Wirkung externer Effekte die Möglichkeit, grundlegende Probleme des Akteursverhaltens zu identifizieren. Darüber hinaus führt die sozialwissenschaftliche Öffnung des Gemeinschaftsgutansatzes durch die Einbeziehung von Prozessen der sozialen Konstruktion von Gemeinschaftsgütern zu neuen Erkenntnissen, auch wenn dadurch insbesondere bei regionalen Gemeinschaftsgütern die physischen Gütereigenschaften nicht völlig ausgeblendet werden können. Auf diese Weise wird die Gemeinschaftsgutforschung anschlussfähig für normativ geladene Gemeinwohldebatten. Aus der Analyse der Eigenschaften einzelner Güter und ihrer sozialen Konstruktion lassen sich Gestaltungsoptionen für institutionelle Regelungen ableiten. So verlangen technische Infrastruktursysteme als Netzwerküter, die der Verteilung von Umweltgütern dienen, besondere Institutionen und Governanceformen, die dieser Doppelfunktion Rechnung tragen. Bei Kulturlandschaften liegt der Schwerpunkt angesichts der Heterogenität der institutionellen Zugänge auf Regelungen, welche die vielfältigen (negativen wie positiven) externen Effekte beeinflussen und dabei an den identitätsstiftenden und imagebildenden Potentialen anknüpfen.

Der Gemeinwohlansatz bietet sozialwissenschaftlich fundierte Orientierungen für raum- und fachplanerische beziehungsweise regionalpolitische Ziel- und Steuerungsdiskussionen im Umgang mit regionalen Gemeinschaftsgütern. Für die gegenwärtigen Debatten über die Zukunft der Daseinsvorsorge, die sich stark auf Formen der infrastrukturellen Bereitstellung (zum Beispiel öffentlich versus privat) beziehen, liefert sie damit wichtige Anregungen für die entscheidende Frage, welchen öffentlichen – und vor allem regionalpolitischen – Zielen Infrastruktursysteme dienen (sollen). Nicht nur für Wasserinfrastrukturen sondern

auch für Kulturlandschaften sind, wenn auch in unterschiedlichem Maße Ökonomisierungsprozesse des Gemeinwohls sichtbar. Bei Kulturlandschaften kann der Gemeinwohlansatz auch dazu beitragen, die Pluralität und Konkurrenz von "öffentlichen Interessen" besser zu verstehen. Dabei plädiert die neuere Forschung gegen ein zu rigides, substantialistisches und für ein offenes, prozedurales Verständnis von Gemeinwohl. Der Gemeinwohlansatz sollte dabei die Wertpluralität und die Überlagerung unterschiedlicher Ansprüche berücksichtigen, die sich aus den unterschiedlichen Gütern und Güterfunktionen in ihrem Zusammenhang und in ihren Wechselwirkungen ergeben. Die Einbeziehung von Gemeinschaftsgütereigenschaften in Gemeinwohldiskursen kann dazu beitragen, der Gefahr einer "rhetorischen Leere" bei der Bestimmung des Gemeinwohlbegriffs zu entgehen und zur Herausbildung wirksamer institutioneller Arrangements beitragen.

Die mit Wasserinfrastrukturen und Kulturlandschaften verbundenen Gemeinschaftsgutprobleme im Spannungsfeld von Umweltgut und Netzwerkgut bzw. zwischen heterogenem Gemeinschaftsgut und ganzheitlicher Wirkung sind auf ihren dualen bzw. heterogenen Gütercharakter zurückzuführen. Darin liegt auch eine wesentliche Ursache für die bestehenden Integrationsdefizite hinsichtlich der Gemeinwohldiskurse beider Gemeinschaftsgüter. Der jeweilige Gütercharakter prägt auch die auf die Regelung des Umgangs mit Wasserressourcen und Wasserinfrastruktur sowie mit den einzelnen Elementen und Bestandteilen der Kulturlandschaft gerichteten sektoralen Institutionensysteme. Damit sind unterschiedliche institutionelle Kulturen in Bezug auf die Wirkungskraft formeller Institutionen, die Bedeutung von Hierarchien, die Ausstattung mit Ressourcen, die Wirkung ökonomischer (marktlicher) Anreize sowie den Einfluss informeller Institutionen verbunden. Daraus resultieren unterschiedliche Machtkonstellationen und Handlungslogiken, die eine institutionelle Integration und die Zusammenführung von Gemeinwohldiskursen erschweren. Diese Integrationsleistung zu vollbringen ist eine wesentliche Herausforderung für künftige prozedurale partizipative Gemeinwohldiskurse.

Sowohl am Beispiel von Wasserinfrastrukturen als auch Kulturlandschaften ist deutlich geworden, dass historische Persistenzen und Wandlungsprozesse von physischen Strukturen, institutionellen Arrangements und Gemeinwohlorstellungen sowohl in ihrem zeitlichen als auch räumlichen Kontext berücksichtigt werden müssen. Durch die Raumbezüge regionaler Gemeinschaftsgüter haben sich funktionale Handlungsräume infrastruktureller Ver- und Entsorgung oder kulturlandschaftliche Handlungsräume herausgebildet, die an identitätstiftenden Potenzialen anknüpfen. Diese raumkonstituierende Wirkung regionaler Gemeinschaftsgütern steht im Spannungsfeld zur wachsenden Bedeutung der europäischen Ebene für die Festlegung von Rahmenbedingungen zur Formulierung von Gemeinwohlzielstellungen. Das betrifft insbesondere die Institutionensysteme, die stark durch formelle Institutionen geprägt oder vom Ressourcentransfer abhängig sind. Wasserressourcen und -infrastrukturen sind davon stärker betroffen, als das eher schwach

institutionalisierte Gemeinschaftsgut Kulturlandschaft, das allerdings durch europäische Regelungen beispielsweise im Bereich der Agrarpolitik indirekt beeinflusst wird. Damit ist auch eine Europäisierung von Gemeinwohlbestimmungen verbunden. Dennoch bleiben im Zuge der räumlichen Rekonfiguration staatlichen Handelns viele historisch gewachsene Regelungsformen bestehen. Teilweise bieten sich neue Einflussmöglichkeiten auf regionaler und kommunaler Ebene zur Berücksichtigung von regional spezifischen – sozialökonomischen, politischen, technischen und ökologischen – Kontextbedingungen.

LITERATUR

- AKADEMIE FÜR RAUMFORSCHUNG UND LANDESPLANUNG (2006): Gleichwertige Lebensverhältnisse: Eine wichtige gesellschaftspolitische Aufgabe neu interpretieren!, Positionspapier aus der ARL 69: Hannover.
- ALTVATER, E. (2003): Was passiert, wenn öffentliche Güter privatisiert werden?, *Peripherie, H. 90-91*, S. 171-201.
- ANDERHEIDEN, M. (2006): Gemeinwohl in der Republik und Union: Tübingen.
- ANHEIER, H. K., THEN, V. (Hrsg.) (2004): Zwischen Eigennutz und Gemeinwohl. Neue Formen und Wege der Gemeinnützigkeit: Gütersloh.
- AMBROSIUS, G., SCHMITT-EGNER, P. (Hrsg.) (2006): Europäisches Gemeinwohl. Historische Dimension und aktuelle Bedeutung. Wissenschaftliche Konferenz, Universität Siegen, 24.-25. Juni 2004: Baden-Baden.
- BAHNER, T. (1996): Landwirtschaft und Naturschutz. Vom Konflikt zur Kooperation: Frankfurt am Main.
- BERNHARDT, CH., KILPER, H., MOSS, T. (Hrsg.) (2009): Im Interesse des Gemeinwohls. Regionale Gemeinschaftsgüter in Geschichte, Politik und Planung: Frankfurt am Main/New York (NY).
- BROMLEY, D. W. (Hrsg.) (1992): Making the Commons Work. Theory, Practice, and Policy: San Francisco.
- BUCHANAN, J. M. (1965): An Economic Theory of Clubs, *Economica, Jg. 32*, S. 1-14.
- ENGEL, CH. (2001): Offene Gemeinwohldefinitionen, *Rechtstheorie, Jg. 32*, S. 23-52.
- EUROPÄISCHE KOMMISSION (2004): Mitteilung. Weißbuch zu Dienstleistungen von allgemeinem Interesse: Brüssel, KOM 374.
- EUROPÄISCHE KOMMISSION (2006): Europäische Union. Konsolidierte Fassung des Vertrages über die Europäische Union und des Vertrages zur Gründung der Europäischen Gemeinschaft, *Amtsblatt der Europäischen Kommission, C 321E*, S. 1-324.
- EUROPÄISCHE KOMMISSION (Hrsg.) (1999): EUREK – Europäisches Raumentwicklungskonzept. Auf dem Weg zu einer räumlich ausgewogenen und nachhaltigen Entwicklung der Europäischen Union. Angenommen beim Informellen Rat der für Raumordnung zuständigen Minister in Potsdam, Mai 1999: Luxemburg.
- FORSTHOFF, E. (1938): Die Verwaltung als Leistungsträger: Stuttgart.
- FREY, R. L. (1979): Die Infrastruktur als Mittel der Regionalpolitik: Bern/Stuttgart.

- FÜRST, D., GAILING, L., POLLERMANN, K., RÖHRING, A. (Hrsg.) (2008): Kulturlandschaft als Handlungsraum. Institutionen und Governance im Umgang mit dem regionalen Gemeinschaftsgut Kulturlandschaft: Dortmund.
- GAILING, L. (2008): Kulturlandschaft – Begriff und Debatte, in: FÜRST, D., GAILING, L., POLLERMANN, K., RÖHRING, A. (Hrsg.): Kulturlandschaft als Handlungsraum. Institutionen und Governance im Umgang mit dem regionalen Gemeinschaftsgut Kulturlandschaft: Dortmund, S. 21-34.
- GAILING, L., RÖHRING, A. (2009): Kulturlandschaften als regionale Entwicklungspotentiale – Integriertes Handeln und sektorale Gemeinwohlziele, in: BERNHARDT, CH., KILPER, H., MOSS, T. (Hrsg.) (2009): Im Interesse des Gemeinwohls. Regionale Gemeinschaftsgüter in Geschichte, Politik und Planung: Frankfurt am Main/New York (NY), S. 181-222.
- GAILING, L., RÖHRING, A. (2008a): Institutionelle Aspekte der Kulturlandschaftsentwicklung, in: FÜRST, D., GAILING, L., POLLERMANN, K., RÖHRING, A. (Hrsg.): Kulturlandschaft als Handlungsraum. Institutionen und Governance im Umgang mit dem regionalen Gemeinschaftsgut Kulturlandschaft: Dortmund, S. 49-69.
- GAILING, L., RÖHRING, A. (2008b): Kulturlandschaften als Handlungsräume der Regionalentwicklung. Implikationen des neuen Leitbildes zur Kulturlandschaftsgestaltung, *RaumPlanung 136*, S. 5-10.
- GEROG [Gesetz zur Neufassung des Raumordnungsgesetzes] 2008.
- BMVBS [Bundesministerium für Verkehr, Bau und Stadtentwicklung] (Hrsg.) (2006): Leitbilder und Handlungsstrategien für die Raumentwicklung in Deutschland. Verabschiedet von der Ministerkonferenz für Raumordnung am 30.06.2006: Berlin.
- GÖHLER, G. (1997): Wie verändern sich Institutionen? Revolutionärer und schleichender Institutionenwandel, in: ders. (Hrsg.): Institutionenwandel: Opladen, S. 21-56.
- HAMPICKE, U. (1996): Der Preis einer vielfältigen Kulturlandschaft, in: KONOLD, W. (Hrsg.): Naturlandschaft – Kulturlandschaft. Die Veränderungen der Landschaften nach der Nutzbarmachung durch den Menschen: Landsberg am Lech, S. 45-76.
- HARDIN, G. (1968): The Tragedy of the Commons, *Science, Bd. 162, H. 3859*, S. 1243-1248.
- HARVEY, D. (2000): Spaces of Hope, Edinburgh.
- HELLERMANN, J. (2000): Örtliche Daseinsvorsorge und gemeindliche Selbstverwaltung: Tübingen.
- JOCHIMSEN, R. (1966): Theorie der Infrastruktur. Grundlagen der marktwirtschaftlichen Entwicklung: Tübingen.
- KAUL, I., GRUNBERG, I., STERN, M. A. (1999): Global Public Goods. International Cooperation in the 21st Century: Oxford.
- KOZIOL, M. (2004): Folgen des demographischen Wandels für die kommunale Infrastruktur, *Deutsche Zeitschrift für Kommunalwissenschaften, 43 (1)*, S. 69-83.
- LIBBE, J., MOSS, T. (2007): Wandel in der Wasserwirtschaft und die Zukunft kommunalpolitischer Steuerung, *Zeitschrift für Umweltpolitik und Umweltrecht, H. 3*, S. 381-403.
- LIBBE, J., TRAPP, J. H. (2005): Gemeinwohlsicherung als Herausforderung. Kommunale Steuerungspotenziale in differenzierten Formen der Aufgabenwahrnehmung. Eine Positionsbestimmung: Berlin (= Networks, 17.10.2007, <http://www.networks-group.de/veroeffentlichungen/DF9160.pdf>).

- MINISTERIUM FÜR INFRASTRUKTUR UND RAUMORDNUNG DES LANDES BRANDENBURG/
SENATSVERWALTUNG FÜR STADTENTWICKLUNG DES LANDES BERLIN (Hrsg.) (2007):
Kulturlandschaften. Chancen für die regionale Entwicklung in Berlin und Brandenburg:
Potsdam.
- MINISTERIUM FÜR INFRASTRUKTUR UND RAUMORDNUNG DES LANDES BRANDENBURG/
SENATSVERWALTUNG FÜR STADTENTWICKLUNG DES LANDES BERLIN (Hrsg.) (2009):
Landesentwicklungsplan Berlin-Brandenburg (LEP B-B): Potsdam.
- MAYNTZ, R., SCHARPF, F. W. (1995): Der Ansatz des aktorsorientierten Institutionalismus,
in: dies. (Hrsg.): *Gesellschaftliche Selbstregelung und politische Steuerung*: Frankfurt am Main,
S. 39-70.
- MOSS, T. (2008a): "Cold spots" of Urban Infrastructure. "Shrinking" Processes in Eastern
Germany and the Modern Infrastructural Ideal, *International Journal of Urban and Regional
Research*, Jg. 32, H. 2, S. 436-451.
- MOSS, T. (2008b): Transformation der Wasserpolitik in Ostdeutschland, in FRANZKE, J. (Hrsg.):
Wasser. Zukunftsressource zwischen Menschenrecht und Wirtschaftsgut, Konflikt und
Kooperation: Potsdam, Brandenburgische Landeszentrale für politische Bildung, S.125-137.
- MOSS, T., GUDERMANN, R., RÖHRING, A. (2009): Zur Renaissance der Gemeinschaftsgut- und
Gemeinwohlforschung, in: BERNHARDT, CH., KILPER, H., MOSS, T. (Hrsg.): *Im Interesse
des Gemeinwohls. Regionale Gemeinschaftsgüter in Geschichte, Politik und Planung*:
Frankfurt am Main/New York (NY), S. 31-49.
- MOSS, T., HÜESKER, F. (2010): Wasserinfrastrukturen als Gemeinwohrlträger zwischen globalem
Wandel und regionaler Entwicklung – Institutionelle Erwiderungen in Berlin-Brandenburg.
IAG Globaler Wandel – Regionale Entwicklung. Diskussionspapier 4: Berlin, Berlin-
Brandenburgische Akademie der Wissenschaften/Materialien der Interdisziplinären Arbeits-
gruppen.
- MOSS, T., NAUMANN, M. (2007): Neue Räume der Wasserbewirtschaftung – Anpassungsstrategien
der Kommunen, in: HAUG, P., ROSENFELD, M. T. W. (Hrsg.): *Die Rolle der Kommunen in
der Wasserwirtschaft*: Baden-Baden, *Nomos (Schriften des Instituts für Wirtschaftsforschung
Halle, Bd. 25)*, S. 139-159.
- MÜNKLER, H., FISCHER, K. (Hrsg.) (2002): *Gemeinwohl und Gemeinsinn. Rhetorik und
Perspektiven sozial-moralischer Orientierung*: Berlin.
- OSTROM, E. (1990): *Governing the Commons. The evolution of institutions for collective action*:
Cambridge/New York.
- OSTROM, E. (2005): *Understanding institutional diversity*: Princeton.
- RÖHRING, A. (2008): Gemeinschaftsgut Kulturlandschaft – Dilemma und Chancen der
Kulturlandschaftsentwicklung, in: FÜRST, D., GAILING, L., POLLERMANN, K., RÖHRING, A.
(Hrsg.): *Kulturlandschaft als Handlungsraum. Institutionen und Governance im Umgang
mit dem regionalen Gemeinschaftsgut Kulturlandschaft*: Dortmund, S. 35-48.
- RUMM, P., VON KEITZ, ST., SCHMALHOLZ, M. (Hrsg.) (2006): *Handbuch der EU-Wasserrahmen-
richtlinie. Inhalte, Neuerungen und Anregungen für die nationale Umsetzung*: 2., neu
bearbeitete und wesentlich erweiterte Auflage, Berlin, Erich Schmidt Verlag.
- SACHBE, CH. (2004): Die Organisation des Gemeinwohls in der Bürgergesellschaft. Dritter
Sektor und Steuerprivileg, in: ANHEIER, H.K., THEN, V. (Hrsg.): *Zwischen Eigennutz und
Gemeinwohl. Neue Formen und Wege der Gemeinnützigkeit*: Gütersloh, S. 61-91.

- SAMUELSON, P. A. (1954): The pure theory of public expenditure, *Review of Economics and Statistics*, Jg. 36, S. 387-389.
- SCHENK, W. (2001): Kulturlandschaft in Zeiten verschärfter Nutzungskonkurrenz. Genese, Akteure, Szenarien, in: AKADEMIE FÜR RAUMFORSCHUNG UND LANDESPLANUNG/ ÖSTEREICHISCHE GESELLSCHAFT FÜR RAUMPLANUNG (Hrsg.): Die Zukunft der Kulturlandschaft zwischen Verlust, Bewahrung und Gestaltung: Hannover, S. 30-44.
- SCHULZE, D. (2008): Rede zur Vorstellung des Forschungsberichts der Akademie der Wissenschaften zum Thema "Nutzung ländlicher Räume" am 23.10.2008, in Ministerium für Ländliche Entwicklung, Umwelt und Verbraucherschutz, 12.11.2008, <http://www.mluv.brandenburg.de/cms/detail.php/bb2.c.526425.de>.
- SCHUPPERT, G. F. (2004): Gemeinwohl und Staatsverständnis, in: ANHEIER, H. K., THEN, V. (Hrsg.): Zwischen Eigennutz und Gemeinwohl. Neue Formen und Wege der Gemeinnützigkeit: Gütersloh, S. 25-59.
- SCHUPPERT, G. F. (2002): Gemeinwohl, das. Oder: Über die Schwierigkeiten, dem Gemeinwohlbegriff Konturen zu verleihen, in: SCHUPPERT, G. F., NEIDHARDT, F. (Hrsg.): Gemeinwohl – Auf der Suche nach Substanz: Berlin, S. 19-64.
- SIEFERLE, R. P. (2003): Die totale Landschaft. Neue Urbanität. Das Verschmelzen von Stadt und Landschaft, in: OSWALD, F., SCHÜLLER, N. (Hrsg.): Neue Urbanität. Das Verschmelzen von Stadt und Landschaft: Zürich, S. 59-76.
- STRUBELT, W. (2006): Auf der Suche nach der Gleichwertigkeit der Lebensverhältnisse. Oder: Die Suche nach verloren gegangenen Sinn der Zeit?, *Informationen zur Raumentwicklung*, H. 6-7, S. 305-308.
- TIETZ, H.-P. (2007): Systeme der Ver- und Entsorgung. Funktionen und räumliche Strukturen: Wiesbaden.
- WALZER, M. (1992): Sphären der Gerechtigkeit: Frankfurt am Main/New York.
- WEGENER, M. (1980): Die Bedeutung des Infrastrukturbereichs für Stadt- und Regionalmodellen, in: PFAFF, M., ASAM, W. (Hrsg.): Integrierte Infrastrukturplanung zur Verbesserung der Lebensbedingungen in Städten und Gemeinden: Berlin, S. 33-55.
- WISSEN, M. (2009): Wassermangel im Überfluss – Zum Spannungsverhältnis von Infrastruktur- und Wasserhaushaltsproblemen, in: BERNHARDT, CH., KILPER, H., MOSS, T. (Hrsg.): Im Interesse des Gemeinwohls. Regionale Gemeinschaftsgüter in Geschichte, Politik und Planung: Frankfurt am Main/New York (NY), S. 115-152.

EXPLAINING TOP-DOWN INSTITUTIONAL DESIGN: THE INTRODUCTION OF RIVER BASIN MANAGEMENT IN PORTUGAL

*ANDREAS THIEL**, *CATRIN EGERTON***

The paper develops an understanding of the social construction of the scale based on the Distributional Theory of Institutional Change and examines the re-scaling of water governance in Portugal. This re-scaling is considered as intentional formal institutional change. The central water authority and multisectoral deconcentrated administrations have lost competencies in favour of newly constituted water administrations. The level of water governance shifted from administrative districts to hydrographic regions. The central state and the Ministry of the Environment played a significant role in this process. The paper analyses determinants of institutional change and concluded that time preferences, mental models of associated networks, credibility and transaction and transition costs of governance affected the timing and content of the reform.

1 INTRODUCTION

Since the adoption of the WATER FRAMEWORK DIRECTIVE (WFD) (2000), water management has been and continues to be significantly restructured in Europe, providing an important driver for institutional change. In this context, the paper presents research on one of the issues raised by the WFD: "the right geographical scale ...for water management" (CEC, 2007). The WFD organizes water management according to River Basin Districts, which mostly coincide with hydrogeographic boundaries, although the scale of the administrative bodies managing the districts are not stipulated. The Commission recognises differences in national legal and institutional frameworks, noting that "In particular countries with a federal structure, water management falls at least partly under the competence of sub-national or regional authorities." (CEC, 2007, p. 16). MOSS (2004) has assessed the German case, for which he found "minimal change to existing institutional

* Division of Resource Economics, Institute for Economic and Social Sciences of Agriculture, Faculty for Agriculture and Horticulture, Humboldt University of Berlin, Unter den Linden 6, 10099 Berlin, Germany, Phone: ++49-(0)30-2093-6068, Fax: ++49-(0)30-20936497, Email: a.thiel@staff.hu-berlin.de.

** Centre for Environmental and Sustainability Research (Cense), Department of Environmental Sciences and Engineering, Faculty of Sciences and Technology, New University of Lisbon, 2829-516 Caparica, Portugal, Phone: ++351 963992749, Email: catrin.egerton@gmail.com.

arrangements", concluding that "The problem of spatial fit between the River Basin Districts and political territories of water management in Germany has been resolved in favour of the existing structures" (MOSS, 2004, p. 91). Water authorities of the German Länder will retain their legislative and executive powers over water management in accordance with the federal structure of government in Germany. In another federal country, Spain, river basin management has been increasingly passed to the subnational level of the elected comunidades, sometimes even breaking up River Basin Districts into the competency of several comunidades. Thus, in Spain, what we term "re-scaling" occurred.

In line with HOWITT (2003, p. 151) we view scale as having three dimensions: size, level and relation. Re-scaling then implies a horizontal element, i.e. changes in the size of the area covered by a uniform institutional structure or by a physical infrastructure, a vertical element, i.e. the level within a vertically nested set of jurisdictions with which the respective institutional/ physical infrastructure is associated, and a relational element, i.e. changes in the vertical and horizontal interlinkages to other institutional/ physical structures and the environment (nested sets of rules (OSTROM et al., 2007)). In this paper we want to specifically reconstruct and theorize about why re-scaling of water governance happened in the case of Portugal, thereby contributing to an understanding of the social construction of scale (re-scaling) of resource governance (BRENNER, 2004, p. 96). Citing SWYNGEDOUW (2007 or 1990), HOWITT (2003) argues that scale needs to be grasped through empirical practices rather than through theory and finds it paradoxical to theorize scale independent from geographical context (HOWITT, 2003, p. 151). We conceptualise re-scaling as intentional formal institutional change, develop a heuristic framework based on the Distributive Theory of Institutional Change for explaining re-scaling of water governance in Portugal and examine its value for explaining the institutional change observed. We define governance as "the establishment, reaffirmation or change of institutions to resolve conflicts [or to coordinate] over environmental resources" (PAAVOLA, 2007, p. 94). Re-scaling implies change in the scale associated with governance. It comprises what Paavola named "generic governance functions", i. e. "1) exclusion of unauthorized users; 2) regulation of authorized resource uses and distribution of their benefits; 3) provision and the recovery of its costs; 4) monitoring; 5) enforcement; 6) conflict resolution and collective choice" (PAAVOLA, 2007, p. 94). An understanding of state agency is key, referring to the role of levels of government and key actors in shaping policy outcomes. In a unitary state like Portugal, where sectoral political leadership plays a significant role such an understanding needs to include motivations of key actors (in this case the minister), a factor which has not received much attention in theories of institutional change and debates on re-scaling.

The paper is structured as follows: firstly, we introduce concepts of scale and present an overview of the Distributional Theory of Institutional Change. Secondly, we outline the development of the scalar organisation of the water administration

in Portugal, followed, thirdly, by a detailed analysis of the question of what triggered re-scaling of water governance in Portugal. Finally, we interpret our findings in the context of re-scaling of water governance in other European Member states.

Qualitative data for the empirical study has been gathered from a literature review which included peer reviewed articles, as well as extensive use of official government reports and newspaper articles. These data sources have been verified by a number of key interviews which were conducted across a range of sectors, and in both academic and policy circles.

2 SCALE, RE-SCALING, AND THEORIES OF INSTITUTIONAL CHANGE

Critical geographers highlight that re-scaling strategies, i.e. the social construction of scale, can be constitutive of multiple ends. Thus, scale is not an ontologically given category (MARSTON, 2000, p. 220) but seen as "political" involving shifts in the relationships between state and society (GUALINI, 2006, p. 885). Theories of this process stress the centrality of state agency to resolve contradictions and crises in the territorial regulation of development processes (*idem* p. 886). By the same token, re-scaling has significant implications for resource management.

A number of scholars analyse scale against a normative background of match or mismatch between social and ecological systems (e. g. CASH, 2006). LEE (1993) contends that where "human responsibility does not match the spatial, temporal, or functional scale of natural phenomena, unsustainable use of resources is likely, and it will persist until mismatch of scales is cured" (LEE, 1993 quoted in FOLKE et al., 2007). Re-scaling redefines how resource management relates to the three problems of "fit", "scale" and "vertical and horizontal interplay" (YOUNG, 2002) for resource management.

YOUNG (2002) highlights the numerous implications of re-scaling. Shifts in scale imply variations in the number of actors involved, contexts, logics of action selection, the relationships of power among them, perception of environmental problems, uncertainty of system's behaviour, financing mechanisms and accountability. Furthermore, the forces that drive actors' behaviour at different levels and their social context vary, their complexity varies, and actors at different levels apply different "logics of action selection" because of different contexts (YOUNG, 2002, p. 140ff). Last but not least, economies of scale and scope (FRITSCH et al., 2005; VARIAN, 2003) are important concepts often used to justify physical and institutional upscaling.

Our focus with regards to re-scaling is the spatial scale associated with the regulation of natural resource use (PAAVOLA, 2007), and how the spatial scales of jurisdictions that adopt certain operational governance functions have been constructed. The spatial scales of governance functions are defined as levels, which have been "socially constructed" and labelled (e.g. regional, national, local).

In this paper we concentrate on changes in the social setting deciding over the level of governance and only address indirect human drivers that affect properties of transactions in passing.

The concept of the river basin as the "natural" unit for water management has been criticised by human geographers working on scale issues. They point out that it is presented as a clear-cut and uncontroversial concept which has become a globally hegemonic, practically uncontested, discourse (MOLLE, 2009; WARNER et al., 2008; MOLLE, 2007; MOSS, 2004; MOSTERT, 2008). By presenting it as "natural", as most experts and administrators in the field in Portugal have also done, debate is closed concerning the scale at which water management is implemented, and the inherently political nature of the choices being made are concealed (WARNER et al., 2008, p. 123-124). In fact, re-organising water management to fit ecosystem boundaries is not obvious, as discrete river basins are often hard to define in biophysical terms and difficulties of institutional mismatch may emerge in relation to other spatially organised political units (MOSS, 2004; MOSTERT, 2008). Thus, we can say that proactive intention of certain actors is necessarily one important factor for explaining the way organisational and political economic tradeoffs between different scalar arrangements of water governance are decided.

Authors make a distinction between economic or efficiency oriented and distributional theories of institutional change. Capturing the essence of Distributional Theories of Institutional Change, THEESFELD (2005) explains that they describe "the process of institutional change ...through differentially resourceful actors that negotiate about institutional change in view of their interests." KNIGHT (1992) specifies institutions as "sets of rules that structure social interactions in particular ways". These rules "(1) provide information about how people are expected to act in particular situations, (2) can be recognized by those who are members of the relevant group as the rules to which others conform, and (3) structure the strategic choices of actors in such a way as to produce equilibrium outcomes" (KNIGHT, 1992, p. 54). Institutions affect the payoffs from alternative strategic behaviour as they provide the information that structures strategic action and lowers uncertainty about the strategic action of actors leading to shared expectations. It entails an equilibrium which institutionalizes "a common way of doing things" (KNIGHT, 1995, p. 96). Often, these interactions are characterized by conflict. Institutions, and their development, is thus "not best explained as a pareto-superior response to collective goals or benefits but, rather, as a by-product of conflicts over distributional gains" (KNIGHT, 1992, p. 20).

Knight pays particular attention to power relationships affecting institutions. He defines power as "the ability to affect one's feasible set (of choices)...[A] change in the informal rules of a society can be generated by changes in either the distributional consequences of those rules or the relative bargaining power of the actors" (KNIGHT, 1992, p. 145). In the case of emergence of institutions, coordinated action provides an added value, which is subject to distribution. Alternatively, a

previously agreed equilibrium situation may be re-negotiated as the bargaining situation has changed. For the purpose of understanding institutional change, we specify a heuristic based on THEESFELD (2005), SCHLÜTER (2001) and KNIGHT (1992) to assess these changes in bargaining power or distributional outcome. Actors differ in their means and incentives (ends/expected benefit) to change institutional arrangements, and therefore shape the changes in the agreed institutional equilibrium.

As we deal with change of formal institutions of water governance in Portugal we have to address the role of the state and the specificities of its relations to actors involved in the legislative process. Most commonly, the Distributional Theory of Institutional Change addresses changes in informal, decentralised institutional arrangements. Often institutionalist theories emphasise that the state provides for services in exchange for which actors pay taxes (NORTH, 1988). The state is defined as "an organisation that disposes of the ...monopoly of violence which extends across a territory whose borders are defined by its taxing authority" (own translation of NORTH, 1988, p. 21). The state will try to maximize its income but is constrained by the opportunity costs of citizens because rivals may emerge that can provide the same services, i. e. property rights and their implementation through governance. Knight highlights two aspects of the role of the state in negotiations which we want consider: a) that it "expands the number of ways in which the two aspects of the institutionalization process, the creation and the social recognition of a new rule, can be accomplished" (KNIGHT, 1992, p. 189), and b) "state actors, either administrative officials or political representatives, have their own interests... the direct interest [material benefits] in the benefits accruing to those actors who serve as external enforcers and the indirect [political] interests in the effects of the distributional consequences of formal institutions on the long-term interests of the state" (KNIGHT, 1992, p. 190). Based on the empirical material we considered conventional public choice view of state action as insufficient to explain re-scaling. First, those directly involved into the decision, government ministers and high-level bureaucrats had no direct or indirect benefit from the administrative reform besides gains in idealist terms. In fact, we would argue that, on the contrary, the majority of actors expected to lose from the introduction of Regional Hydrographic Administrations (Administrações Regionais Hidrográficas – ARHs). As we will also describe below none of the established administrations or politicians gained in prestige, monetary terms or power resources because of the decision to re-scale water governance and the minister voluntarily stepped down after the legislature when re-scaling was decided. Second, the issue can be considered to be perceived as one of internal state organisation in which citizens did not have much interest. The 90 % Parliamentary vote in favour of the overall reform of the law, of which re-scaling was an important part, illustrates that parties did not expect to derive political gain from this reform. For these reasons, in this paper we chose to develop and examine a heuristic derived from Knight's distributional theory of institutional change to explain re-scaling instead

of relying for example on a conceptualisation based on public choice theory, which would principally stress the role of personal gains of politicians, parties or bureaucrats. Instead, the framework we developed based on the distributional theory of institutional change allows us to analyze the detailed, contingent changes in power resources and actor orientations that we found to be responsible for re-scaling of water governance in Portugal. Thus, in addition we detail other relevant components of state involvement, specifically positional and sanction power, and pertinent mental models¹ of the key actors, especially the minister, acting on behalf of the state.

3 CASE STUDY BACKGROUND: WATER GOVERNANCE IN PORTUGAL

Continental Portugal has historically been politically centralised, a tendency that was reinforced under the dictatorship (1926-1974). Following the fall of the dictatorship in 1974, significant powers were devolved and local authorities were strengthened. In 1979 five Regional Coordination Commissions (*Comissão Coordenadora Regional – CCR*) were established (North, Centre, Lisbon and the Tagus Valley, Alentejo and the Algarve) with the purpose of coordinating regional planning and intersectoral cooperation. Since the beginning of the nineties the central government ministries generally have representatives at this level. However, at a decision-making level the country remains highly centralised (SOROMENHO-MARQUES, 2004).

Until the transposition of the EU WFD into national law in 2005, Portuguese water law was somewhat fragmented (CUNHA SERRA, 2003). During the dictatorship period, water management was centralised and followed what has elsewhere been called the "hydraulic paradigm": utilising water for economic development, specifically irrigation in agriculture, with an emphasis on infrastructures for surface water provision, state managerialism, and with little consideration for the environment (SAURÍ and DEL MORAL, 2001 for the case of Spain). From the late 1970s onwards significant infrastructure investments were launched, and this was accelerated by entry to the EU in 1986. EU Directives were transposed into national law, and large amounts of funding were directed to agriculture and water infrastructures for domestic water supply and sanitation. A slightly more holistic approach to water management was adopted in this period (CORREIA, 1999), and environmental issues became a concern. The concept of river basin management was sidelined in favour of concentrating on achieving compliance with European water supply and sanitation standards (I 5; THIEL, 2009).

¹ Mental models are "the internal representations that individual cognitive systems create to interpret the environment and the institutions are the external (to the mind) mechanisms individuals create to structure and order the environment. Some types of mental models are shared intersubjectively." (DENZAU and NORTH, 1994)

Until 1994 at the "deconcentrated" level of administration, water was managed by the five Regional Coordination Commissions within their geographical administrative boundaries. Short after the newly created Ministry of Environment started operating in 1993, environmental issues, including water, were separated from the Regional Coordination Commissions by the introduction of the Regional Directorates for Environment and Natural Resources (*Direcção Regional Ambiente e Recursos Naturais – DRARNs* – which had the same geographical boundaries as the Regional Coordination Commissions). Competencies for managing water resources were shared between the National Water Institute (INAG) and the five Regional Directorates for Environment and Natural Resources. In 1994 legislation was drawn up stipulating that water taxes were harmonized and levied at the deconcentrated level. However, there was uncertainty on the part of users with respect to the sums to be paid (the tax values were not published), with the result that the new regime was difficult to implement and many users stopped paying altogether. Regional Directorates for Environment and Natural Resources were to undertake monitoring of water use, implementing and enforcing national legislation, issuing licenses, river basin planning for non-transboundary rivers, and impact assessments. INAG would plan and execute infrastructures works, river basin planning for transboundary rivers and overall supervision of the deconcentrated administrations. Despite reforms, interviewees referred to the deconcentrated bodies as "letter boxes" of the central level. Regional Directorates for Environment and Natural Resources complained about insufficient funds (from the Ministry of Environment) to carry out their functions. Resources for inspecting users were few, and penalties were low. It was acknowledged at all levels that, particularly concerning registration and monitoring of groundwater users, big implementation gaps existed (THEIL, 2009a). In 2002 environmental, land use and water management were again subsumed under the Regional Coordination Commissions, creating the CCDRs (*Comissão Coordenadora dos Desenvolvimento Regional – Coordination Commissions for Regional Development*). This development indicated the increasing competencies of the Ministry of Environment, and the intention to unite water and environmental management, economic development, land use management, and administrative support to municipalities.

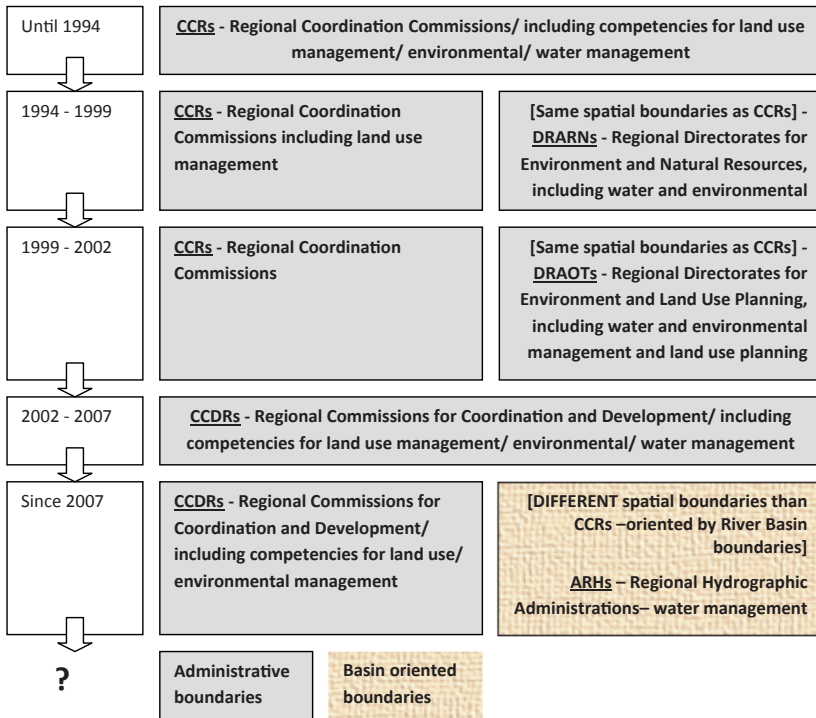
At the European level the WFD was adopted (during the Portuguese presidency) in 2000 (CEC, 2000), with a deadline for transposition of 2003. Its transposition in Portugal was significantly delayed because of extensive efforts to develop the law according the preferences of the various Ministers of the Environment in office. Following José Socrates, who held the position until 2003 and was a firm advocate of river basin planning², another three ministers held office over a period of two years. Altogether, the six versions of the legislation were developed by several expert commissions. When it was transposed in December 2005 as *Lei da Água* (Water Law), after adoption by the government it had a parliamentary majority

² Jose Socrates later became Prime Minister in the Government which took power in 2005.

of 90 % while only a simple majority was required. The passing of the law followed the advent of a new government headed by José Socrates as Prime Minister. It was accompanied by a raft of legislations detailing its application. Of particular importance were the new economic and financial regime (TRH – Taxa de Recursos Hidricos), which regulated taxes for various activities and a law which defined public and private waters and user rights.

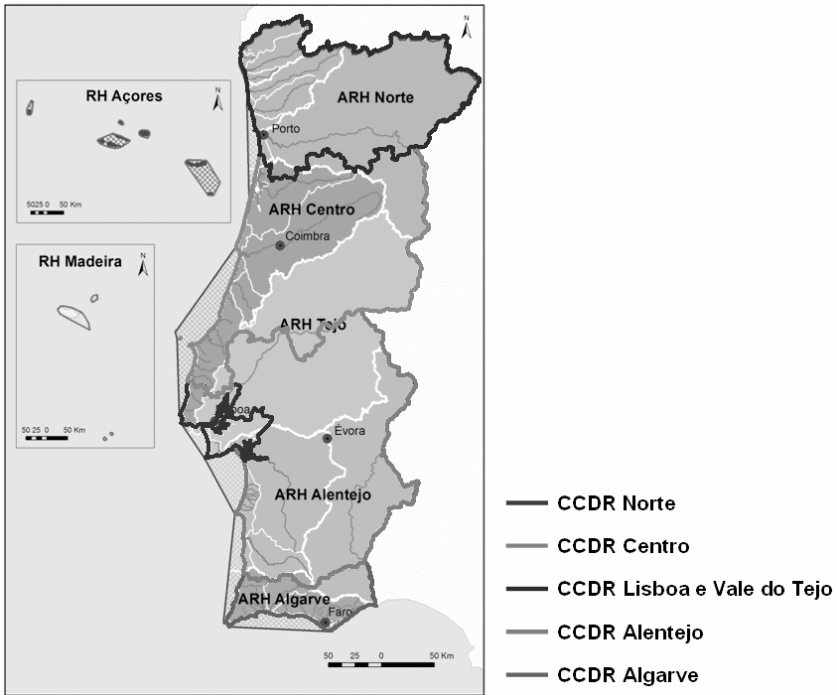
The Water Law of 2005 aimed to: harmonise and update previous laws; transpose the WFD; and introduce new principles to the water sector. Its main terms related to the re-scaling of water governance through the introduction of Regional Hydrographic Administrations (ARHs). The ARHs assumed water competencies from the Coordination Commissions for Regional Development (CCDR) and took over important competencies from INAG. The ARHs are deconcentrated organs of the Ministry of the Environment and have a considerable degree of administrative and financial autonomy. They are intended to generate approximately two-thirds of their income by themselves. The ARHs are responsible for a range of activities, including the elaboration and execution of river basin management plans, the identification and monitoring of water resources, registration, licensing, enforcement of licenses, financing of water use, execution of certain works, Environmental Impact Assessments and ensuring public and stakeholder participation. The ARHs were established according to river basin areas, and are not territorially congruent with the CCDR (see Figure 1). The 15 river basins identified in mainland Portugal were grouped into 8 hydrographic regions, which are managed by 5 administrative regions. The underlying logic of this process was not made transparent. Apparently, efforts were made to consider aquifers as well as surface water, and also the implications of boundaries for specific municipalities (I 8). The ARH administrative bodies – North, Centre, Lisbon and the Tagus Valley, Alentejo, and the Algarve – have their headquarters in the same town as the CCDR, and often in the same building. Thus, much of the administrative infrastructure remained the same, and many staff were transferred from the CCDR to the new ARH (and also from INAG in the case of ARH Tejo) (I 8).

Figure 1: Timeline of restructuring of administrative structure below the central level in Portugal between 1990 – today



INAG and the CCDR experienced significant changes in competencies as a result of the establishment of the Regional Hydrographic Administrations. INAG (now designated as the National Authority for Water) lost several responsibilities, and now focuses on coordination. It retains responsibility for national level planning, coordination and regulation, and for international cooperation: it approves River Basin Plans, checks that environmental objectives are met, and, in theory, ensures that measures across river basin regions are coordinated. The CCDR lost all competencies for the water sector, but are still responsible for guaranteeing environmental protection of water from a land management perspective.

Figure 2: Boundaries of Administrations of Hydrographic Regions (ARH) and deconcentrated central administrations (CCDRs)



Source: BRITO et al., 2008.

Notes: Shades of grey: Delimitations of 5 River Basin Authorities;

Lines: Delimitations of CCDRs/ areas of 5 deconcentrated central administrations (CCDRs).

4 CHANGES IN POWER RESOURCES AND THE ASSESSMENT OF RE-SCALING OF WATER GOVERNANCE IN PORTUGAL

Following Knight, we argue that institutional "development and change are functions of the distributional conflict over substantive social outcomes ..." (KNIGHT, 1992, p. 210). KNIGHT (1992), SCHLÜTER (2001) and THEESFELD (2005) developed a heuristic of the most significant variables shaping the pathways of institutional change. We adapted this set of factors based on our empirical work on re-scaling of water governance in Portugal. It testifies that the state has a pre-eminent role in changes in governance, because of its pre-eminent positional power, its role in actor networks and the way it provides a focal point for discussion and decision making. Considering this we developed the following heuristic to determine changes in bargaining power and distributional outcome that drove institutional change

between 2005 and 2008: a) dynamic considerations (time preference), b) determinants of credible commitment (exit costs, uncertainty, positional and sanction power), c) legitimising network (information, skills and mental models) and d) transaction and transition costs, and their distribution. Both bargaining power and distributional outcome of bargaining are altered. The choice situation we identified was between remaining with the existing scalar organisation of water governance, or re-scaling it. As re-scaling did, in fact, occur, we try to uncover which drivers disrupted the previously agreed equilibrium as a consequence of (perceived) changes in the asymmetry of bargaining powers and/or distributional outcomes of alternative institutional arrangements.

Re-scaling of water management in Portugal occurred via a regular legislative process. The Ministry of Environment was in charge of managing the legislative proposal, other Ministries were consulted where appropriate, and eventually all ministers forming the government had to agree on the joint government proposal (I 7). The government proposal was then submitted to a parliamentary vote. Simultaneously, politics of consultation, participation and lobbying took place involving, for example, the National Water Council (Conselho Nacional de Água – CNA), and sectoral interests which interacted directly with the relevant ministries (for example, energy and industry interests engaged with the Ministry of Economy). Nevertheless, several commentators considered that time and opportunity for consultation and participation were minimal (I 8). The opinions of associations of specific users such as the municipalities, or the Confederation of Farmers, were solicited (I 5,6,7,9,10,11). Politicians had direct influence on decision making, while water users and lobbyists had an indirect influence, as did public bodies whose competencies were reorganised as a result of the re-scaling. The main organisations directly affected by changes in water management were part of the Ministry of Environment.

5 DYNAMIC CONSIDERATIONS

Knight suggests that changes in time preferences of actors shape agreement on institutional arrangements. Patience can make actors hold out on arrangements; impatient actors will tend to prefer current gains over future (potentially higher) gains (THEESFELD, 2005, p. 75). Relative changes and differences in time preference between negotiating actors therefore affect the strategies and expectations of actors.

It seems that contingent, dynamic considerations and time preference had a significant effect on the adoption of the Water Law and subsequent re-scaling of water management and added to state actors' credibility (dealt with in the next section). In 2005, the socialist party had just come into power with an absolute majority and with a four year term of office ahead of it. It was necessary to embark on the re-shaping of water governance promptly, as it required long term political commitment. Furthermore, there had been repeated work on this issue in the preceding years, led by different ministers. The underlying reason for continued work on this issue

was the need to transpose and implement the European WFD (CEC, 2000), i.e. the development of River Basin Plans, cost recovery, registration, monitoring requirements and participation (MAOTDR, 2007). In order to avoid the threat of penalties and associated negative consequences for the reputation of Portugal, the transposition of the WFD – through either substantial modification of existing law, or through entirely new water legislation – was necessary. Re-scaling would therefore be linked to a general overhaul of water legislation and competencies. The WFD set deadlines and therefore altered time preferences: River Basin Plans were to be adopted by 2009. In addition, according to various accounts, the existing water governance arrangement was performing poorly in relation to monitoring, evaluation and improvement of the quality and quantity status of water bodies (MAOTDR, 2008). This combination of factors explain the timing, although not the content, of the reform. As one senior government official put it, the WFD did not make river basin administrations compulsory, but it did "create an environment in which Portugal was able to draw on historical memories of river basin management... because of the WFD, we arrived at [the current] model." (15).

Nevertheless, in theory such a situation of urgency should have tended towards maintenance of the status quo because those in charge had shorter time preferences – and were therefore in a weaker position – than those in favour of maintaining the existing system. A modification of the existing law, to meet the tight deadlines of the WFD within the existing administrative set-up rather than an overhaul of competencies and their spatial delimitation could have been expected. Nonetheless, the existing constellation and especially the ideology of the legitimizing network of experts that the new minister was part of favoured a more radical change of water governance.

6 DETERMINANTS OF CREDIBLE COMMITMENT

Changes in the degree of credibility of commitment to either of the alternative institutional arrangements (equilibria) concerning re-scaling provide a crucial explanation in our case. We consider credible commitment as a situation in which there is certainty that a promise will be followed by action. It results in a higher likelihood that one actor will be convinced to accept the commitment of another actor (KNIGHT, 1995, p. 108-109 quoted by THEESFELD, 2005, p. 75). In our case several variables underline the credibility of state actors: exit costs, levels of certainty, and positional and sanction powers. a) Exit costs relate to bargaining power; "An actor with realistic exit options can survive several rounds in the bargaining game by having low costs of non-coordination." (KNIGHT, 1995, p. 118 quoted by THEESFELD, 2005, p. 75). Thus, an expectation of high exit costs by certain actors made adherence to the corresponding strategies less likely. b) Changes to the degree of uncertainty of implications of alternative arrangements are potential drivers of institutional change. We consider two interrelated sources of uncertainty: first, political consequences, and second, substantive consequences,

in terms of the performance of water management. High political and substantive exit costs increase credible commitments of actors. Furthermore, credibility depends on whether an actor has the means to implement his commitments. Thus, c) changes in positional and sanction power play a significant role. Power assigned to a position, as opposed to emerging from characteristics of an individual, arises from a strategic position that offers an actor access to important information, controlling power over assets, or the opportunity to carry out credible threats (SHLEIFER and TREISMANN, 1998, p. 20, quoted by THEESFELD, 2005, p. 77). We consider it jointly with sanction power which enables actors to push their alternatives. It ensures commitment in a twofold way by reducing the expected benefits of non-compliance (with coordination) and making compliance a more beneficial long-term strategy (KNIGHT, 1992, p. 179). At first sight exit costs from the abolishment of water management seems to be unlikely. However, political and substantive exit costs and options do exist as the negotiations on re-scaling and the economic-financial regime need to be viewed jointly. We need to consider political exit costs of non-agreement on the economic-financial regime and changes in substantial exit costs of implementation failure. Furthermore, the degree of certainty of either to occur and changes in capacities of actors to impose preferred options are also related.

Together with the dynamic considerations made above, changes in exit costs, certainty about them, and changes in sanction power explain why a decision was taken at this moment in time, as well as the content of the reform. The European Commission threatened to take Portugal to court for its failure to transpose the WFD on time, and that way increased Portuguese certainty on the political and financial costs of non-transposition. Furthermore, recent decisions by the European court and penalties that were handed out to other member states increased certainty about opportunity costs of substantive non-compliance. With the election of an absolute majority credibility of the socialist government to carry out the institutional reform of the water sector increased significantly. The Ministry of Environment obtained additional political influence in relation to other actors (such as the farming sector, energy companies or municipalities) through obtaining competency over European funds and regional development. One informant from the Ministry stated that competency for regional development "although it is less talked about, added an enormous [political] weight to the Ministry of Environment because the overall management of community funds passed to us, and so we are now perceived not just as an organ who discusses in theory how water ought to be organised, but as actually going to the field and putting millions of euros into projects" (15). Additionally, heightened urgency, for reasons explained above, and exit costs of non-implementation of the economic/financial regime made the government commitment to take action on water governance more credible. The conviction spread that reform of the sector was imminent.

With regard to the content of the reform, credibility of the Ministry of Environment and therefore also the government furthermore depended on internal support, particularly from the Coordination Commissions for Regional Development and INAG. The positional power of the minister in charge of both these entities overcame their opposition at relative low bargaining costs. Both the agricultural sector (I 11, 5, 6) and municipalities (I 5, 9, 10) initially opposed the economic-financial regime. However, the minister's superior sanctioning power and range of competencies vis à vis these actors specifically in the water domain overcame their opposition.

7 LEGITIMIZING NETWORK MEMBERSHIP

Other factors which explain the key role of the Minister include access to information, knowledge and opinions, the organisation of "ideological support" for the Minister's position, and his membership in networks of knowledge at the time of the reform. Network members have a bargaining advantage due to superior information access. Further, "Information is a further key power resource" (KNIGHT, 1992, p. 41 quoted by THEESFELD, 2005, p. 76). "... [I]nfluencing actors' alternatives, hiding institutional alternatives, or adding new alternatives is only possible in a situation of information asymmetry" (KNIGHT, 1992, p. 46). We found that in our case study changes in the information on alternatives was widely available after many years of discussion of institutional alternatives, and so this factor was not decisive. Furthermore, THEESFELD (2005, p. 77) considers soft (personal skills) and hard skills (education and experience (SCHLÜTER, 2001)

In addition, formal positional and sanction powers of the state actor made persuasive skills with regard to opposition at lower governmental levels dispensable. We therefore consider network membership the most relevant factor in this category.

The personality of the Minister of the Environment who took office in 2004 made a significant difference to the content of the reform. The Minister was formerly an academic who had worked extensively on water and environmental issues in Portugal. At the end of the eighties he was the director of the National Water Administration, and had already expressed a preference for river basin management (THIEL, 2009a). He formed part of the group of national experts on water and was consulted on water issues. When the new minister took office, he also took operational charge of water policy (I 7). In comparison to previous ministers he had a clear advantage in relation to his understanding of the sector, which was backed up by an extensive network of experts and included support from the Prime Minister³ (I 6). As one Ministry interviewee working on water reforms stated, "We have one great advantage, which is that the Minister's subject area is water, and he knows the sector very well... It is a great help, because he immediately

³ Who himself had been Minister for the Environment previously and who had attempted to issue the first Water Law

knows what the issues are, and this eases decision-making immensely" (I). River Basin Management had been advocated over a long period of time by the national professional association (Associação Portuguesa dos Recursos Hídricos – APRH), of which the Minister was also a member (I 11). The reform therefore followed the predominant mental model of the professional network which secured widespread support, lowering bargaining costs to gain support by the sector. Initially, this idea was defended more in professional circles than in political ones. One opinion which was proffered was that the "political powers never regarded [river basin management] as a good idea, because it was subversive with regard to the existing system, but in professional communities the idea was always defended" (I 5). However, convergence of mental models among political parties, particularly with regard to water pricing, and agreement to enhance monitoring, participation and performance of water governance had been accomplished during negotiations on the previous six versions of the water law. Structuring the reform in accordance with the predominant mental models lowered bargaining costs. While, as a state actor the Minister apparently did not have any material benefits from this reform, he gained personal prestige by finally implementing the reform he fought for throughout a decade (I 4,5,6,7). Moreover, we have to consider the political economy aspect expressed through political benefits from the reform of the water sector when we look at state involvement into decision making. Nevertheless, the vote on the reform in the Parliament makes this aspect of the reform appear irrelevant given that 90 % of the Members of Parliament supported the reform.

8 DISTRIBUTION OF COSTS

In this section we consider changes in the perception of transaction and transition costs of alternative institutional arrangements, their determinants and their distribution among actors in relation to the emergence of institutional change. They shaped the details of the reform and the spatial delimitation of the jurisdictions of each Regional Hydrographic Administration. Transaction costs affect the payoffs of cooperation, and, thus, change distributional consequences of bargaining outcomes (THEESFELD, 2005, p. 77). As they differ across actors, power asymmetries emerge. We would further add transition costs, "that is, the costs of decision making for institutional change and the costs of implementing institutional reforms" (CHALLENGE, 2000, p. 7). Transition costs or operational transaction costs and their distribution depend on the assessed monitoring, enforcement, and operational adaptation costs of institutional alternatives, which in turn depend on technology of monitoring and enforcement and the specific provisions that are made. We need to ascertain whether technologies to enforce or monitor arrangements were adapted, or whether proposed arrangements were redesigned to redistribute costs. Moreover, costs may have changed as characteristics of the transactions changed (e. g. frequency, technology of water use, or exclusion technology) in the period before agreement on the Water Law.

Transaction and transition costs, and their distribution, played a decisive role in the agreement, specifically with regard to the reorganisations. In contrast, the characteristics of transactions and resources changed only in a marginal way⁴ and therefore does not have much of an explanatory role. The amount and distribution of transaction and transition costs became the most important obstacle to the reform of the water sector. The Ministry of Finance argued that the reform led to additional costs of creating new public entities (the Regional Hydrographic Administrations) at a time when there was a general drive to reduce public expenditure. The central government only wanted to "retain the fundamental attributes, but in principle [to] allow society to manage for itself the goods at its disposal in a simplified way, as long as it is in accordance with the law" (I 1). Thus, in order to overcome resistance of the Ministry of Finance, the Water Law was shaped in such a way that no additional costs emerged for the state. Effective implementation of water pricing as part of the Water Law became even more important in order to auto-finance the reform. It was intended that water users would pay for the reform through the new water tariffs. Nevertheless, this necessity would heighten transition costs (political costs of implementation) in the short term, which was accepted because of a shared understanding (mental models) on the need for pricing and supranational pressures. This distinction between short and long term costs is widely recognised. A member of a newly established ARH pointed out that, "...the problem is surviving this [initial implementation] phase; but if we manage to survive this we will have for the first time in the history of water resources [in Portugal] the necessary formalised means to ensure effective management of water resources" (I 3). New water bodies are to be self-financing, which increases incentives to become effective in raising water fees (a major aim of the legislation). In addition, a significant fund was established (50 % of all income of the ARHs) to redistribute financial resources between the "richer" and "poorer" ARHs, to cater for consistent water standards across Portugal (THIEL, 2009). Further measures were introduced with the aim to reduce the administrative burden for the state, make the new legislation acceptable to water users and minimize transition and transaction costs. The legislation allowed the ARHs to launch private enterprises in order to obtain further funds and to delegate competencies to private and public entities, shifting burdens to other actors. Second, the new delimitation of water administrations differs from previous territorial boundaries, specifically in relation to the most significant rivers for Portugal, the transboundary rivers, which would now only be administered by one entity, whereas previously, for example, the Tagus river was administered by three Coordination Commissions for Regional Development. They had to coordinate their strategies before entering into talks with upstream Spain (I 6). This national coordination on the level of the basin is now made redundant saving transaction costs (MINISTÉRIO DO AMBIENTE, 2008). Third, in

⁴ With the exception of the Algarve where water sources shifted from groundwater to surface waters (THIEL, 2009) and the installation of the Alqueva dam in Alentejo which is to provide surface waters for tourism and agricultural development.

order to economize on transaction and transition costs the Water Law put significant emphasis on technological change for implementing exclusion and monitoring, which also increased certainty of the substantive performance of water management and the degree of excludability of water use. Web-based applications are intended in order to lower operational transaction costs. Effective registration is required to ensure that the auto-financing regime of the administrations is successful. There are high expectations for the development of a GIS-based information database and technology to exclude and monitor water users, although similar previous attempts by INAG have apparently failed (I 4). Fourth, it is no coincidence that the five ARHs, which manage one or several entire river basins, have been headquartered in the same locations as the CCDR. One interviewee put this particularly strongly, stating: "In my opinion, the main motive that [the ARH] exist in the format they have taken is because of the ease of passing to a new regime which is similar to the CCDR" (I12). Furthermore, transition costs would be minimized, as partially existing networks and coordination mechanisms between different resource regimes could be maintained. Fifth, in order to avoid inconsistencies and duplication of efforts INAG adopts a coordinating role, and the Ministry continues to have the final word on water management (I 1,5,6).

9 CONCLUSIONS

In this paper, we analysed re-scaling of water governance in Portugal as intentional institutional change with reliance on the Distributional Theory of Institutional Change and a heuristic to disentangle shifts in bargaining power and distributional outcomes. The case study proved the usefulness of this framework, which allows for factors such as perceptions and personal gain of actors, changes in actors' resources, and detailed implications of transaction costs for the design of the agreed institutions. The timing of the formal and substantive requirements of the WFD necessitated an urgent reformulation of the water sector in Portugal. In this context it is counter-intuitive that the decisive actors, principally the Minister, opted for a relatively radical reformulation of water governance in Portugal, involving re-scaling, shifts in competencies and transposition of requirements concerning cost recovery, monitoring and participation. This can be explained by the Minister's membership in a network of experts that had long favoured this approach. The strong mandate of the government, the expertise of the minister and his extensive competencies in relation to water users and related agencies, explains why he was able to implement the reform. Considerations of transaction and transition costs (also a main concern of the Ministry of Finance) directed certain aspects of the reform, such as the role of technological innovations, the need for registration, and the emphasis on cost recovery. Furthermore, the specific shape of the reform is not quite as revolutionary as it seems: measures such as delegation, management innovations, maintenance of existing physical infrastructure lowered transition and future transaction costs. They introduced a considerable measure of path

dependency. Transition costs were kept at relatively low level by maintaining the five administrative headquarters in the same locations as the Coordination Commissions for Regional Development. Moreover, we concluded that changes in characteristics of resources that provide water services, and of transactions or infrastructures organising them, were not significant for re-scaling of water services in Portugal.

The possibilities of new redistribution funds and water taxes helped to overcome opposition by the Ministry of Finance and poorer regions of Portugal. Depending on the way redistribution will be carried out, it may be key to implementation success. Success of the new system will depend on implementation success in relation to licenses and cost recovery, and articulation with land use plans, municipalities and agriculture. Currently, the whole sector is going through a process of significant restructuring. In addition to setting up new agencies, reorganising new and old administrations, registering and charging for water uses, nationwide river basin planning is under way. It has also been argued that a cultural change is needed at the level of technical staff, in which actors depart from the dominant engineering view of water management (THIEL, 2009).

Furthermore, integration at the level of surface waters came at the cost of potential incongruence with other environmental management activities, notably land use, as well as dividing up competencies for some significant groundwater reservoirs. Some dilemmas have been resolved through re-scaling according to "natural" river basin boundaries, but others have emerged. Several experts also highlighted that articulation with management of other resources is insufficient. This may be aggravated by the separation of water management from the Coordination Commissions for Regional Development. Thus, in relation to the interplay phenomenon, increasing transaction costs might emerge. Nevertheless, as the previous arrangement performed weakly in this respect (MINISTÉRIO DO AMBIENTE, 2008), improvements in this area are essential. Ample scope for future research is opened up regarding the performance and implications of the new water regime in Portugal.

Some actors consider there to be a link between the delimitation of boundaries for water governance and the project of regionalisation of Portugal (I 5,10,11), which is defended by certain players and is foreseen in the constitution. Water is a "limiting production factor" of great public salience and ideological value, and is likely to be an important factor in territorial politics. In neighbouring Spain, which can be considered a federal state, a similar process of re-scaling is currently under way, implying decentralisation of responsibilities for "supraregional" rivers to the level of democratically elected comunidades. Explorative work shows that in this case re-scaling has to be viewed as part of constructing regions as arenas for dispute and identification around water as a critical production factor. Decentralisation is part of a broader project pursued by the Spanish Comunidade of Andalusia, for example, in order to strengthen the role of regional government vis à vis the central state. By defining management of supraregional rivers within

the boundaries of (administrative) comunidades, the ecosystem oriented catchment approach is sidelined. Socially constructing a region around the management of its (scarce) waters seems to play an important role along with claims for material influence over resources at the level of comunidades (I 13). It seems therefore that this ideological, socially constructed dimension of re-scaling plays a specific role for re-scaling of water management on the Iberian peninsula. Previous studies by THIEL (2009) on Portugal and SWYNGEDOUW (1999 and 2007) on the history of hydropolitics in Spain confirm this perspective for the role of scaling through physical infrastructures and the provision of water services.

LIST OF INTERVIEWS/INFORMAL COMMUNICATION:

- I 1: Ministério do Ambiente, do Ordenamento do Território e do Desenvolvimento Regional – MAOTDR.
- I 2: Administração Regional Hidrográfica (ARH) ARH Lisboa e Vale do Tejo.
- I 3: Administração Regional Hidrográfica (ARH) ARH Alentejo.
- I 4: Informal communication in Ministério do Ambiente, do Ordenamento do Território e do Desenvolvimento Regional – MAOTDR, 13.5.2009.
- I 5: Ministério do Ambiente, do Ordenamento do Território e do Desenvolvimento Regional – MAOTDR, 15.5.2009.
- I 6: Águas de Portugal (AdP), 15.5.2009.
- I 7: Informal communication in Ministério do Ambiente, do Ordenamento do Território e do Desenvolvimento Regional – MAOTDR 14.5.2009.
- I 8: Direcção Geral do Ordenamento de Território e do Desenvolvimento Urbano (DGOTDU – Ministério do Ambiente, do Ordenamento do Território e do Desenvolvimento Regional – MAOTDR), 29.5.2009.
- I 9: Associação Nacional de Municípios de Portugal (ANMP) 4.6.2009.
- I 10: Administração Regional Hidrográfica (ARH) Norte 5.6.2009.
- I 11: Instituto Nacional da Água (INAG) 16.6.2009.
- I 12: Liga para a Protecção da Natureza 06.10.2008.
- I 13: Universidade de Sevilla 13.7.2009.

REFERENCES

- AGRAWAL, A. (2003): Common Resources and Institutional Sustainability, in: OSTROM, E. (eds.): *The drama of the commons*: Washington, DC, Nat. Acad. Press, pp. 41-85.
- BRENNER, N. (2004): *New State Spaces: Urban Governance and the Rescaling of Statehood*: New York, Oxford University Press.

- BRITO, A. G., COSTA S., ALMEIDA J., NOGUEIRA R., RAMOS L. (2008): A reforma institucional para a gestao da água em Portugal: as administracoes de Regiao hidrográfica. Paper presented at VI Congresso Iberico de la Nueva Cultura del Agua, Vitoria-Gasteiz, Spain, 4.-7.12.2008.
- CASH, D. W., ADGER, W. N., BERKES, F., GARDEN, P., LABEL, L., OLSSON, P., LOWELL, P., YOUNG, O. R. (2006): Scale and Cross-scale Dynamics: Governance and Information in a Multilevel World, *Ecology and Society*, Vol. 11, No. 2, pp. 8.
- CEC (COMMISSION OF THE EUROPEAN COMMUNITIES) (2000): Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 – Establishing a framework for Community action in the field of water policy, *Official Journal L 327*: Brussels, CEC.
- CEC (COMMISSION OF THE EUROPEAN COMMUNITIES) (2007): Towards Sustainable Water Management in the European Union. First stage in the implementation of the Water Framework Directive, Commission staff working paper: Brussels, CEC.
- CHALLENGER, R. (2000). Institutions, transaction costs and environmental policy: Institutional reform for water resources: Cheltenham, Elgar.
- CORREIA, F. N. (1999): International Framework for the management of Transboundary Water Resources, *Water International*, Vol. 24, No. 2, pp. 86-94.
- COSTANZA, R., LOW, B., OSTROM, E., WILSON, J. (2001): Institutions, Ecosystems, and Sustainability: New York, CRC Press.
- CUMMING, G. S., CUMMING, D. H., REDMAN, C. L. (2006): Scale mismatches in Social- ecological systems: Causes, consequences, and solutions, *Ecology and Society*, Vol. 11, No. 1, pp. 14.
- DENZAU, A. T., NORTH, D. C. (1994): Shared Mental Models: Ideologies and Institutions: Kyklos, Blackwell Publishing.
- FOLKE, C., PRITCHARD, Jr., L., BERKES, F., COLDING, J., SVEDIN, U. (2007): The Problem of Fit between Ecosystems and Institutions: Ten Years Later, *Ecology and Society*, Vol. 12, No. 1, pp. 30
- GUALINI, E. (2006): The Rescaling of Governance in Europe: New Spatial and Institutional Rationales, *European Planning Studies*, Vol. 14, No. 7, pp. 882-904.
- HAGEDORN, K. (2002): Environmental co-operation and institutional change: Cheltenham, Elgar.
- HAGEDORN, K. (2008): Particular requirements for institutional analysis in nature-related sectors, *European review of agricultural economics*, Vol. 35, No. 4, pp. 357-606.
- HOWITT, R. (2003): Scale, in: AGNEW, J., MITCHELL, L. K., GERARD, T. (eds.): A companion to political geography: Oxford, Blackwell Publishing, pp. 138-157.
- JEROEN, W., WESTER, P., BOULDING, A. (2008): Going with the flow: River basins as the natural units for water management?: *Water Policy*, Vol. 10, No. 2, pp. 121-138.
- KNIGHT, J. (1995): Models, Interpretations, and Theories: Constructing Explanations of Institutional Emergence and Change, in: KNIGHT, J., SENED, I. (eds.): Explaining Social Institutions: Michigan, University of Michigan Press, pp. 95-115.
- KNIGHT, J. (1992): Institutions and social conflict: Cambridge, Cambridge Univ. Press.

- MINISTÉRIO DO AMBIENTE DO ORDENAMENTO DO TERRITÓRIO E DO DESENVOLVIMENTO REGIONAL (2008): *Administrações de Região Hidrográfica*: Lisbon, Ministério do Ambiente, do Ordenamento do Território e do Desenvolvimento Regional.
- MOLLE, F. (2007): Scales and power in river basin management: The Chao Phraya River in Thailand, *The Geographical Journal*, Vol. 173, No. 4, pp. 358-373.
- MOLLE, F. (2009): River-basin planning and management: The social life of a concept, *Geoforum*, Vol. 40, pp. 484-494.
- MOSS, T. (2004): The governance of land use in river basins: Prospects for overcoming problems of institutional interplay with the EU Water Framework Directive. *Land Use Policy*, Vol. 21, pp. 85-94.
- MOSTERT, E. (2009): International co-operation on Rhine water quality 1945-2008: An example to follow?, *Physics and Chemistry of the Earth*, Vol. 34, pp. 142-149.
- NORTH, D. C. (1994): Institutional Change: A Framework of Analysis, in: SJÖSTRAND, S.-E., ARMONK, N. Y. (eds.): *Institutional Change: Theory and Empirical Findings*: Armonk, N.Y., pp. 35-48.
- NORTH, D. (1988): *Theorie des institutionellen Wandels: Eine neue Sicht der Wirtschaftsgeschichte*: Tübingen, Mohr.
- NORTH, D. (1990): *Institutions, Institutional Change and Economic Performance*: Cambridge, Cambridge University Press.
- OSTROM, E., JANSSEN, M., ANDERIES, J. (2007): Going beyond panaceas, *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 104, No. 39, pp. 15176-15178.
- OSTROM, E. (2005): *Understanding institutional diversity*. NJ [u.a.], Princeton Univ. Press.
- PAAVOLA, J. (2007). Institutions and environmental governance: A reconceptualization, *Ecological Economics*, Vol. 63, No. 1, pp. 93-103.
- PINTO, A. C., MONTEIRO, N. (2004). Cultural myths and Portuguese national identity, in: PINTO, A. C. (eds.): *Contemporary Portugal: Politics, Society and Culture*: New York, Social Science Monographs-CUP.
- SAURI, D., DEL MORAL, L. (2001): Recent developments in Spanish water policy: Alternatives and conflicts at the end of the hydraulic age, *Geoforum*, Vol. 32, pp. 351-362.
- SCHLÜTER, A. (2001): *Institutioneller Wandel und Transformation: Restitution, Transformation und Privatisierung in der tschechischen Landwirtschaft*: Aachen, Shaker.
- SCHMID, A. A. (2004): *Conflict and cooperation: Institutional and behavioral economics*: Malden, Blackwell.
- SOPER, K. (1995): *What is Nature?*: Oxford, Blackwell.

- SOROMENHO-MARQUES, V., QUEIROS, M., VALE, M. (2004): National Report on Regional Sustainable Development. EU 5th Framework Programme: Regionat? Thematic Network: Strategies for Regional Sustainable Development, an integrated approach beyond best practice, Available from: www.iccr-international.org/regionet.
- SWYNGEDOUW, E. (1999): Modernity and hybridity: Nature, Regeneracionismo, and the production of the Spanish waterscape, 1890-1930. *Annals of the Association of American Geographers*, Vol. 89, No. 3, pp. 443-465.
- SWYNGEDOUW, E. (2007). Technonatural revolutions: The scalar politics of Franco's hydro-social dream for Spain, 1939-1975. *Transactions of the Institute of British Geographers*, Vol. 32, No. 1, pp. 9-28.
- THEESFELD, I. (2005): A common pool resource in transition: Determinants of institutional change for Bulgaria's postsocialist irrigation sector. Aachen, Shaker.
- THIEL, A. (2009): Europeanisation and the Rescaling of Water Services: Agency and State Spatial Strategies in the Algarve, Portugal. *Water Alternatives*, Vol. 2, No. 2, pp. 1-20.
- THIEL, A. (2009a): Environmental Policy Integration and the development of water use in the Algarve, since Portugal's accession to the EU: Aachen, Shaker.
- VATN, A. (2005): *Institutions and the Environment*: Cheltenham, Edward Elgar.
- YOUNG, O. (2002): *The institutional dimensions of environmental change*: Cambridge, MIT Press.

DECENTRALIZATION FAILURES IN POST-SOCIALIST FISHERY MANAGEMENT

*INSA THEESFELD**, *OSCAR SCHMIDT***

ABSTRACT

A recent and widespread institutional change in local natural resource governance is triggered by decentralization as a deliberate process, and within this context, a transfer of property rights from central government to local resource users. Yet, despite the successes of many decentralization policies, there are several risks for unintended outcomes. One is the phenomenon of elite capture. Our paper investigates elite capture in Albania's Lake Ohrid fishing region. We aim to contribute to the state of knowledge on decentralization failures by identifying determinants for and effects of elite capture. Our empirical case shows how blueprint approaches for decentralized management and top-down implementation led to further empowerment of privileged locals, who realize personal gains at the expense of distributional inequity within the community. Specifically original insights are derived from our analysis of implications from the post-socialist context, such as the deteriorating effect on trust, otherwise a prerequisite for collective action.

Key words: Decentralization, institutional change, local governance; elite capture, fishery, Albania.

1 INTRODUCTION

One of the most important issues in rural development and natural resource management is empowerment and entitlement of local resource users. In this context, the crucial question is how local actors can be enabled to stand up for their interests (KESBY, 2005). Decentralisation is considered an effective means to foster local participation in decision-making, or, at the very least, a better understanding of local needs and desires and the incorporation of these into government programs.

We will draw our empirical evidence from post-socialist Albania. The communist regime collapsed in 1990 and the Republic of Albania was founded in 1991.

* Leibniz Institute of Agricultural Development in Central and Eastern Europe (IAMO), Theodor-Lieser-Straße 2, 06120 Halle (Saale), Germany, Email: theesfeld@iamo.de

** Humboldt University of Berlin, Division of Resource Economics, Unter den Linden 6, 10099 Berlin, Germany, Email: oscar.schmidt@agrar.hu-berlin.de.

In 1992, the Democratic Party of Albania took control of the country through democratic elections, followed by deliberate programs of economic and democratic reforms. Yet, several political instabilities followed, such as the countrywide uprising in 1997¹. Still, since the late 1990's, Albania has followed the international policy trend of decentralization, within which at least 60 countries claim to reform the management of their natural resources (AGRAWAL, 2001). In the early 2000, the Albanian government introduced a new governance system for fishing resources – a common-property resource regime – to involve locals in fishery management. Fishing, a major source of subsistence for many poor, rural households in Albania, has been drastically affected by the experienced political insecurity and institutional vacuum to which Albania was like many other post-socialist countries exposed to (LAWSON and SALTMASHE, 2000; HASHI and XHILLARI, 1999; SCHLEYER, 2003; THEESFELD, 2008). Following this development, access to resources became unrestricted, making it impossible to overcome destructive patterns (OSTROM, 1990). At Lake Ohrid, a major watershed in the country's South-East, fish stocks accordingly became severely overexploited ever since the shortfall of political rule in 1997, because the actual institution, i.e. the effective local rule, was an open access property regime (WATZIN, 2006). The Ohrid case has recently gained international notoriety for the impending extinction of the Ohrid trout (*salmo letnica*), a rare endemic specie which is of exceptional economic and ecologic importance to the region (*ibid.*).

The decentralization reform in Albania's fishery sector represents an intended institutional change as described in the editorial of this book. Yet, elite capture, the phenomenon described in the following, is rather an unintended outcome of this institutional change (KINGSTON and CABALLERO, 2009). The aim of this study is to analyze causes and effects of elite capture by drawing onto the case of the Lake Ohrid fishery. We further aim to identify post-socialist particularities, which facilitate the occurrence of elite capture. The next section briefly explains why decentralization plays a crucial role especially in previously centralized natural resource governance systems like those to be found in post-socialist societies. Chapter 3 introduces one frequent implication of that policy choice, namely the phenomenon of elite capture. In Chapter 4, we describe previous as well as recent institutional changes within the Lake Ohrid fishing sector. Chapter 5 provides empirical evidence for the peculiarities of elite capture in the study area. Chapter 6 summarizes and discusses those findings. Chapter 7 concludes with a set of policy recommendations on how to avoid elite capture in post-socialist natural resource management.

¹ The 1997 unrest in Albania, also known as the Lottery Uprising, was an uprising sparked by Ponzi scheme failures. Albania descended into anarchy and violence in which the government was toppled and some 2,000 people were killed. The United Nations Security Council authorized a force of 7,000 on March 28 to direct relief efforts and to restore order in the country.

2 DECENTRALIZATION TO SOLVE COMMON-POOL RESOURCE DILEMMAS

Fishing represents a classical common-pool resource dilemma, which is better described as an open access property regime (MUNRO, 2008; ACHESON and KNIGHT, 2000). Previous conventional approaches to overcome such dilemmas included creating a system of private property rights or to rely on centralized government control. However, at least since the early 1980s, scholars have compiled mounting evidence of a variety of problems that may arise from these approaches (DASGUPTA, 1982; RUNGE, 1986; OSTROM, 1990; BERKES and POMEROY, 1997; AGRAWAL and GIBSON, 1999).

In fact, many voices propose local governance based on common property as a more suitable alternative (OSTROM, 1990; BROMLEY and FEENY, 1992; POMEROY, 1995). Its promoters commonly point to positive effects of including local resource users and their experiences especially during the process of institutional change (OSTROM, 2005). Studies in the related context of fishery co-management for instance argue that local knowledge derived from life-long interaction with the natural system provides the intellectual inputs that remain absent in many centralized approaches (CHUENPADGEE and JENTOFT, 2007; JENTOFT et al., 1998; WILSON et al., 2006). ANDERSSON and OSTROM (2008) argue that locals use their knowledge to craft better adapted and cheaper rules than any other governance scheme. The advantages of locally crafted rules outreach their functional suitability. Over and above, they are perceived as legitimate and will be strengthened by intrinsic motivation (FREY and OBERHOLZER-GEE, 1994; JENTOFT et al., 1998; JENTOFT, 1989). The costs of enforcing legitimate rules are lower than in the case of coercive rules that have been imposed by external forces. This is in fact exceedingly applicable within the context of institutional changes in post-socialist societies where local actors often see their preferences disregarded, and therefore contest legal acts by refraining to informal rules (SIKOR et al., 2009).

In Albania's political history as a post-socialist country, all natural resource management was state managed and top-down implemented and enforced. A common path for the establishment of local governance schemes in previously centralized economic sectors are participatory decentralization policies (BLAIR, 2000). According to KNOX and MEINZEN-DICK (2001), decentralization² implies an authority and management transfer to lower levels of government. Often decentralization approaches are combined with devolution, i.e. the transfer of responsibility and authority over natural resources from the state to non-governmental bodies,

² The transfer of power from central to local authorities has taken administrative and political forms. Administrative decentralization, or deconcentration, aims at helping ministries to read the preferences of local populations and to better mobilize local resources and human capital. Political or democratic decentralization integrates local populations into decision-making through better representation by creating and empowering representative local governments (LARSON and RIBOT, 2004).

particularly user groups. The latter, is commonly expressed by a formal transfer of property rights, a crucial prerequisite for the inclusion of local actors, since it can provide reliable incentives regarding the distribution of benefits from resource utilization. We assume here that decentralization is one way to facilitate local resource users to more successfully govern their natural resource. We regard it as a way to solve the social dilemma common-pool resource users, such as fisherman, are trapped in.

Yet, as will be discussed later, there are particular constraints when implementing decentralization aiming at participation and local self-governance in a post-socialist country. One is the particular interdependency between abuse of power and decrease in trust that produces a downgrading effect on collective action (THEESFELD, 2009b). Another impediment is that participation in decision-making processes may require first of all social learning, particularly in societies where such kind of participations was not welcome by the past political regime.

In a nested political system, formulating and designing decentralization policies, takes place at all government levels. Decentralization is seen as a process of transferring or devolving power and authority from large to small units of governance. Thus, the phenomenon of elite capture is not something restricted to the local level regarding actual resource transactions. Also, higher level governments are no unitary, neutral actors. Already the process of formulating a policy to benefit society is formulated by the groups in power in government according to their vision on society and their concept of benefit (MCGINN and STREET, 1986). Decentralization reforms show that policies often are subverted by divisions within the government that act in their own self-interest. Governments will try to decentralize only to the extent that the dominant group in the government believes that its interests (and those of other groups with whom it has formed an alliance) would be best served by decentralization (MCGINN and STREET, 1986). In the frame of this paper we will not deal with these higher levels of political decision making. Yet, we need to keep that in mind as it is going to give us some explanations why decentralization policies are sometimes not accompanied by additional reforms that would lead to facilitative governance structures to make decentralization more effective.

Most theorists and policy makers justify decentralization on the grounds that the increased efficiency, equity, and inclusion that should arise from the devolution of power and responsibilities result in more sustainable management (LARSON and RIBOT, 2004). However, while decentralization promises benefits to those who are empowered, it likewise threatens central authorities and elites who fear a potential loss of influence, income, or patronage resources. In this situation, the strength and manifestations – or more specifically, local power relations – of elite actors are exceedingly important in shaping the actual degree of decentralization and its outcomes (LARSON and RIBOT, 2004; LARSON, 2003).

Reviews of decentralization policies, in the following understood as including devolution approaches, and community-based development policies, in particular, indicate that many have neither been effective at targeting the poor (BARDHAN, 2002), nor have they increased the administrative efficiency or local participation (MCGINN and STREET, 1986). A major cause for this failure is the problem of elite capture (LANGE, 2010; AGARWAL, 2001; ANDERSSON and OSTROM, 2008; JOHNSON, 2001; BARDHAN, 2002; MANSURI and RAO, 2004; PLATTEAU and GASPART, 2003).

3 THE PHENOMENON OF ELITE CAPTURE

Elite capture is the tendency of local elites – that is, local individuals or groups with disproportionate access to social, political, and economic power – to dominate or capture participatory projects (BANERJEE et al., 2001; DASGUPTA and BEARD, 2007; MANSURI and RAO, 2004; BARDHAN and MOOKHERJEE, 2006; MOHAN and STOKKE, 2000; LANGE, 2010). In the context of decentralization policies and the establishment of local governance, elite capture is frequently expressed by an interference with an equitable devolution of power. This interference may proceed until the initial purpose of decentralization is in fact twisted around, leaving those who deserve empowerment with even less, and those, already in power with additional benefits (LARSON, 2003). In other words, an increase in equity within a community will often be tantamount to a loss of influence, income, or patronage resources.

Another reason lies with the fact that the devolution of power and responsibilities represents an opportunity to get hold of additional resources that suddenly become at disposal at local level. It has thus been observed that elite capture is typically expressed by a misappropriation or illegitimate re-distribution of money, positions, property rights and other resources (ANDERSSON and VAN LAERHOVEN, 2007; D'EXELLE and RIEDL, 2008; PLATTEAU, 2004). ANDERSSON and OSTROM (2008: 75) who term such settings "local tyrannies", stress that misappropriation is often based on a change of rules by the powerful and that local resource governance is then organized anything but democratically (ANDERSSON and OSTROM, 2008).

We need to qualify the elite capture phenomenon at least once, in relation to the context of a weak state such as in post-socialist Albania. Patronage systems have a long tradition in Balkan states and from that respect they also have some positive aspects to be considered. The described phenomenon of elite capture in the fishery sector is just one element of a patronage system. It is a way societies deal with the absence of formal rules and governance structures. In that respect, it provides some stability through secure expectations on how transactions are going to happen. Yet, we focus in this paper implicitly on evaluation criteria of decentralization, such as ecological sustainability of the resource systems (overfishing), participation in economic development of all social groups, participation in rule making. Therefore, we judge the outcomes of elite capture as rather problematic.

3.1 Facilitative conditions

Conditions that facilitate elite capture are manifold and related to exogenous nuisances and endogenous imperfections within the community (BERKES and POMEROY, 1997; PLATTEAU and ABRAHAM, 2002). Exogenous nuisances comprise failures by the government or other external actors in charge of the planning and implementation of decentralization and local resource governance (PLATTEAU, 2004). The question arises whether elite capture occurs because a decentralization reform has not been backed up by appropriate institutions and governance structures that would allow for genuine participation. Governance structures are understood as the organizational solutions, necessary for making the new rules of the decentralized resource management system effective and guaranteeing rights and duties and their use in coordinating transactions (OSTROM, 1990).

The creation of adapted rules and also the establishment of appropriate governance structures, like for instance participatory decision making arenas with local actors, are tasks which require time and resources. Government actors are frequently overburdened by these requirements, especially if the initiation of the envisioned institutional changes is not supported or demanded for by the local recipients. Although contradictory to the policy's purpose, the external initiators may therefore be tempted to refrain from blue-print thinking and to skip the participatory process. To do so, however, entails a heightened risk for remaining ignorant of the community's peculiarities including sources of inequality and foreseeable cases of domination and capture.

Other exogenous conditions which again facilitate elite capture can occur during and after the phase of policy implementation. The actual transfer of property rights and often also of physical investments is usually channelled through a small number of community representatives and local elites will almost naturally be among this group (PLATTEAU, 2004). Opportunities for fraud arise whenever the external initiators lose track of what happens within the community (PLATTEAU and ABRAHAM, 2002). This is predominantly the case when the community representatives are the only actors the initiators have made contacts with. The community representatives will then use their position to filter inquiries regarding the whereabouts and use of the contributions (*ibid.*) – this argument is clearly connected to the earlier argument that insufficient participation can foster elite domination. In other cases, the external initiator may even lack the resources or the tenacity to follow up on the long term effects of the local re-distribution of power and resources. Here, there is undoubtedly even more freedom to dominate community-level planning and corrupt the use of assets. Weaker community members who are excluded from communication with the external initiators often simply do not know that they are being cheated on.

Endogenous imperfections are strongly determined by implications of heterogeneity within the local community and its effects on leadership and the willingness to

participate in collective action. Heterogeneity and leadership can result in capture when the powerful cannot be held accountable for their actions. Yet, some degree of elite domination may be inevitable in a community participation project, particularly in rural areas where the elites are often leaders who embody moral and political authority. However, due to the elites' ability to communicate with outsiders, read project documents, keep accounts and records, and write proposals they are often the ones crafting the project rules. The process of rule making is in this context merely an opportunity for a powerful few to meet their preferences (SAVOIA et al., 2010; THEESFELD, 2008). This in turn may discourage other community actors from participation. In that respect, decentralization can even aggravate the elite capture problem. The elite capture problem leads to the question: When is heterogeneity of actors good for collective action and when does it constrain true participation?

3.2 The role of heterogeneity

Heterogeneity and leadership may in turn be facilitative to a community participation project, particularly in rural areas where the elites comprises leaders who embody moral and political authority. In such cases elite capture is transparent to everybody, tolerated and even supported because the powerful are recognized as the only actors able to acquire external funding. The relationship between the powerful and the weak is here clientelistic, which implies that abuses are tolerated as long as the patron meets the client's demands (PLATTEAU, 2004).

The transition from positive to destructive leadership is, however, blurred (THEESFELD, 2009a). When scrutinizing the influence of participant' heterogeneity, it is therefore sensible to differentiate the early stage in the collective action process from its later stages (OSTROM, 2007b). To facilitate initiatives, there must be some inequality of resource endowments; this enables actors to bear the cost of taking a leadership role (BALAND and PLATTEAU, 1995). Those with greater endowments are often willing to bear a disproportionate share of the costs of organizing institutional arrangements to stimulate movement. VEDEL (2000) concludes that collective action is often enhanced by political elites and leaders, who are better endowed and wealthier than the average community members. The early participation of wealthy and knowledgeable participants may thus encourage trust.

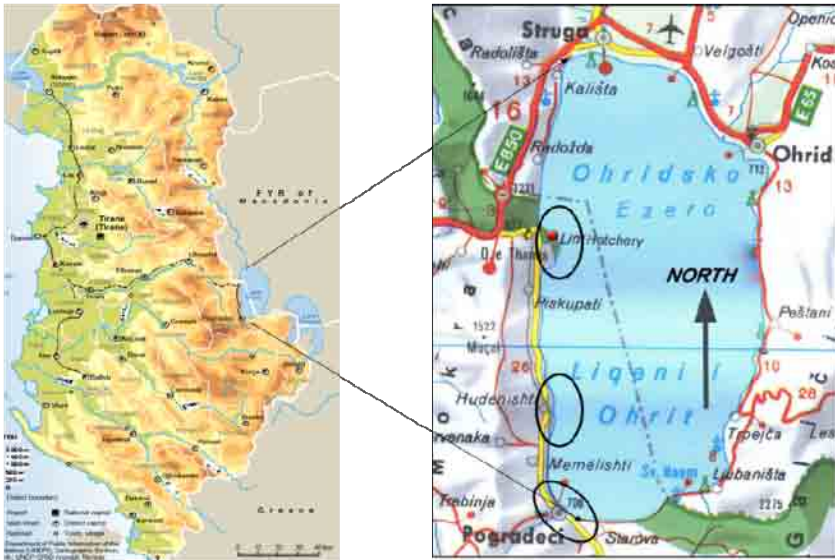
Manifold studies represent a continuum of opinions on the causality between heterogeneity and collective action (SAVOIA et al., 2010; THEESFELD, 2009a), including OLSON (1973), who argues that certain types of inequality will favour the provision of public goods. Likewise, WADE (1987) stresses the necessity to organize around existing structures of authority, with a major role played by elites. In fact, many cases indicate the positive effects of skilled and influential leaders in the course of self-organizing processes in ecosystem management (FOLKE et al., 2005; OLSSON et al., 2007; MEINZEN-DICK et al., 2002; JOHNSON, 2001; CALVERT, 1992; and OLSSON et al., 2007). HURRELMANN et al. (2006) stress the role of appropriate mediating agencies, finding that particularly in post-socialist

countries with low social capital, well-educated and well-connected local leaders can initiate and maintain cooperation. Other authors qualify this viewpoint by arguing that the polarizing effect of heterogeneity depends on how collective action is organized (HECKATHORN, 1993). DAYTON-JOHNSON and BARDHAN (2002), for instance, show that the relationship between inequality and levels of collective action in conservation can be U-shaped in the fishery sector. Fishers who have outside earnings opportunities may believe that increased inequality has a negative effect on conservation. Again others have argued that distributional inequality especially in the later stages of cooperation may reduce trust and reputation and constrain the emergence of cooperation and, thus, imperil the success of decentralization efforts (BARDHAN, 2000; BLOMQUIST et al., 2005; OSTROM, 2007b). LUTHANS et al. (1998) particularly ask why post-communist countries like Albania are susceptible to destructive leaders, even after the demise of communism. They conclude that the historical and cultural foundations are decisive when combined with current social and political crisis. Destructive leaders in these countries frequently use the persisting power of the former Communist party to manifest their own political survival. Although it is a group's responsibility to solve its coordination problems, changing leaders is difficult and costly, thus, leaders always have some leeway for side payments and other private benefits (CALVERT, 1992).

4 NATURAL RESOURCE GOVERNANCE BEFORE AND AFTER DECENTRALIZATION ATTEMPTS

In the following, we explore and explain the implication of decentralization policies on the social and ecological systems of fish resources at Lake Ohrid. Our study is based on an analysis of primary data from a two-month field visit in 2008. The data was collected in three littoral communities in the Albanian County of Korçë: namely the villages of Hudenisht and Lin and the town of Pogradec. The two villages and the town of Pogradec were selected based on a prior explorative inquiry which indicated a range of advantages, including (1) the comparatively large size of their fishing communities and the diversified composition of their members, (2) their prominent role within the formal administrative framework and (3) their accessibility. The sites were repeatedly visited to meet interviewees and make on-site observations. A total sample of 25 semi-structured, open-ended interviews was conducted. Besides fishermen (18 interviews), representatives of associated economic sectors were interviewed (three interviews). Further interviews were conducted with fishing experts including staff members from the fishery administration and the World Bank (four interviews). Additional primary data were collected through informal conversation³ and passive participant observation.

³ The technique of informal conversation resembles unstructured, open interviews. It evolves exclusively by chance and without a strict assignment of the interviewee and interviewer role (YIN, 1994).

Figure 2: Case study region, Lake Ohrid in Albania

Source: Adapted from UNEP (2000) and DIRECTORATE OF WATER AND FISHERIES RESOURCES (2005).

4.1 Fishery management before the decentralization reform

The Lake Ohrid fishery has seen various periods of fundamental institutional change. During Communist reign, from 1947 to 1991, fishing was the exclusive domain of the state. Private fishing was prohibited and decisions on withdrawal rates and maintenance were exclusively planned and organized by the central authorities. Those decisions were passed to local state enterprises for execution. At Lake Ohrid, the Pogradec Fishery Enterprise, a cooperative which comprised 40 fishermen, was assigned with these obligations. Harvest rates during this period were sufficiently low and stable to sustain the existing population. Any profits from selling the fish flowed back to the state budget and the cooperatives' employees received fixed monthly salaries. Poaching – at least by external actors – was nonexistent because the lake was considered a top-security military zone wherein trespassers were immediately detected.

This setting changed radically in the course of political transition. In 1992, state-imposed restrictions quickly became ineffective. The state cooperative at Lake Ohrid was dissolved, and resource use was opened to private actors. Three years later, in 1995, Albania adopted its National Law on Fishing and Aquaculture, introducing a licensing system that allowed private entities to acquire formal property rights on the harvest of fish. Associated administrative responsibilities, like the issuing

of licenses and the surveillance and execution of regulations, were assigned to the new Directorate of Fisheries Policies (DoF) and its 14 regional divisions. The execution of fishery management at Lake Ohrid was consequently entrusted to the DoF's divisional office at the city of Korçë. With the new management system in place a total of 120 fishermen were officially entitled to fish. Due to weak law enforcement, however, also an unknown number of poachers remained in business.

Changes in the Lake Ohrid fishing sector happened not only due to a change in the composition of actors. Instead, raising income opportunities and rivalry in harvesting fishing stocks lead to an intensification of fishing patterns and harvest rates. In order to achieve higher revenues, fishermen started to adjust their fishing gear and to increase the number of workdays. This critical situation was further aggravated during the countrywide uprisings in 1997. As a consequence about 350 additional illegal boats entered Lake Ohrid, severely increasing the number of actors exploiting the lake. Poaching and the disrespect of gear restrictions became daily routines and fish stocks declined even quicker, including the internationally known Ohrid trout (WATZIN, 2006).

4.2 Fishery management after decentralization reform in 2002

In the early 2000's international donors began to push for nationwide measures against poaching and an improvement of the sector's economic performance. The World Bank introduced a decentralization and devolution project – the Pilot Fishery Development Project (PFDP) – with the primary goal of introducing local governance for the country's fishing grounds; Lake Ohrid was one of 14 target areas for implementation (WORLD BANK, 2000). In 2002, the measures the PFDP had proposed received formal recognition by an amendment of the fishery legislation. Policy makers accordingly followed the Bank's pledge for a legally binding recognition of local governance. However, this policy reform was based on coercive measures. To retain their fishing rights, local fishermen were obliged to organize in local Fishery Management Organisations (FMO). Fourteen local organizations were established at various sites in the country, including Lake Ohrid. Each FMO was entrusted with management duties and exclusive fishing rights for a defined territory. All 14 organizations were created under the same statute, regardless of whether they were set up to deal with the high seas, the coast, or inland watersheds. The statute spelled out the FMOs' organizational structure, defining membership rules, positions, and responsibilities; decision-making and conflict resolution procedures; and the distribution of contributions and pay-offs. The interviews indicate that this statute had been solely designed by an international consultancy firm. There was little if any participation by local stakeholders and local knowledge was disregarded in the final document.

At Lake Ohrid, the Pogradec FMO was assigned as the sole entity holding fishing rights and management duties. The project chose a group of fishers as leaders in

an effort to include locals in the implementation process. It was hoped that those leaders would promote local governance within the community and serve as counterparts to the project. They were also appointed to leading positions on the organization's Administrative Council, which gave them exclusive rights to elect a chairman; to call meetings; and to determine the use of member's fees. Furthermore, they were made responsible for all communications and other interactions with the fishery administration, market actors, or the PFDP. A project representative justified this procedure by stating that the chosen were both "skilled and influential" and "the only ones willing and prepared to take responsibilities". That the new leaders simultaneously belonged to the few fishermen who can afford the costly yet productive net fishing – the local administration estimates that this technique skims up to 80 % of the lake's total production – was declared a "not intended coincidence" which "did not meet any local opposition". This "coincidence" however indicates a biased selection.

The interviewee confirmed that the maximum number of ordinary members allowed to join the FMO was determined by the DoF and initially set at 140. These 140 included a large share of the 120 fishermen who had held licenses since the mid 1990s. The remaining licenses were distributed to newcomers. Strikingly, not only were these 140 ordinary FMO members appointed to lower positions within the organization; they were also economically less successful than those installed as leaders.

We found that after the implementation of the decentralization reform, a large number of poachers had again remained in business and that the administration, like those of the past, declined to enforce penalties. In contrast to the aim of the intended institutional change, poaching was not eradicated – the local fishery inspector even described the situation as having "gotten worse" – and the FMO was by no means vested with the exclusive rights promised by the legislation.

5 ELITE CAPTURE AT LAKE OHRID

Seven years after the establishment of the Pogradec FMO at Lake Ohrid, the arbitrary condition characterized by licensed resource use, poaching, and insufficient law enforcement is aggravated. Overfishing has remained unchanged, a fact confirmed by stakeholders who frequently complain about the severe decline of productivity. Local governance is absent and fishery legislation non-compliance continues to be widespread. Poachers are truly an unchanged problem and many stakeholders blame this group for having caused the resource's state. However, we provide evidence that the most severe problems are caused by the few influential actors who were initially chosen as FMO representatives. The privileged positions are a source to further reinforce their already disproportionate degree of economic and political power. This power is used for a well organized system of capture.

Our data indicate that elite capture mainly takes the form of a misuse of information and the redistribution of external funding. More concisely, elite actors abuse their authority to avoid sanctions, illegally support their kin, and construe the legal framework. The system of capture permits some to be beneficiaries while others suffer a considerable loss of utility and an interference with their rights. The demarcation between winners and losers does not follow the simple pattern of the wealthy and powerful characterized as winners and the poor and disempowered deemed losers. In contrast, we found that patronage allowed some actors who belong to the latter group to benefit as well. Participant observations accordingly showed that both FMO members and poachers are frequently supported by the elite. The beneficiaries are predominantly the elite's family or clan members, close neighbours, and business partners. Actors who in contrast remain without any such support complained that their exclusion resulted from missing social ties. Thus, the determination of beneficiaries and losers is by social affiliation rather than legal entitlement or economic status.

Elite members continuously misuse information. Notes on upcoming inspections or other measures are given to the FMO's Administrative Council prior to their execution. This procedure is meant to foster participation and assistance, but is in fact used as an opportunity to cover up wrongdoings. Illegal nets are hauled in and hidden and unlicensed companions are informed to leave on time. Yet, even these measures of avoidance are unnecessary for the elite. For instance, in early 2006 the DoF detected various cases of poaching by FMO members. Allowable mesh sizes and other gear restrictions had been ignored and undersized fish had been caught and sold en masse. Yet, while ordinary FMO members received fines and lost their licenses, no such sanctions were placed on the FMO leaders. These examples likewise show insufficient information spreading mechanisms, unreliable implementation of legislation and nonexistence of conflict resolution mechanisms. Such shortcomings in governance structures are often in line with the phenomenon of elite capture.

Table 1, below, illustrates a striking incongruity between formal rules after the formal institutional change in 2002, i.e. the establishment of FMOs, and informal rules on various transactions in fishery. This incongruity indicates power abuse and elite capture. The informal rules that in fact organize the transactions and relationships in the fishery sector offer a variety of comparative advantages to the local elite and their kin. Instead of supporting the formal rules, these fishers therefore reinforce the informal set of rules and thereby their dominant position and profits.

Table 1: Incongruent formal and informal rules

Kind of rule	Formal rules ^x	Informal rules enforced through power abuse
1) Access to fishing spots and withdrawal rights	FMO members have the right to fish within all waters of the co-management area.	Fishing spots and coastal territories are distributed internally and in accordance with the power of each claimant. Those with the greatest influence also control the most productive spots.
	No person may undertake any fishing activities within the co-management area unless he is an FMO member.	Powerful actors allow accomplices without FMO membership to fish in the territories they control.
2) Property rights assigned to licenses	A single license holds validity for a captain, his boat and gear, and one assistant.	Wealthy fishermen, like the FMO chairpersons, illegally employ groups of up to ten assistants to increase their revenues.
3) Restrictions on species and sizes	Catches must not include fish below a clearly defined minimum body size and age.	Undersized fish are commonly caught and openly marketed.
4) Gear restriction	There are clearly defined gear restrictions.	Gear restrictions are systematically disrespected.
5) Banning periods	There are clearly defined banning periods to secure fish reproduction.	Banning periods are regularly disrespected.
6) Monitoring and sanctioning	The local DoF must perform regular monitoring rounds and sanction non-compliance by issuing fines and withdrawing licenses.	Monitoring rounds occur irregularly due to limited financial and technical capacities.
	The FMO is given advance notice and is obliged to support the local DoF on monitoring rounds.	FMO leaders use their information advantage to notify their kin whenever monitoring is about to happen. Fishermen who do not belong to this network do not receive notice and remain at risk. Sanctions are not enforced due to exceptions, infringement, and privileges for actors who network with the local administration.
6) Distribution of licenses and fees	The FMO is assigned to annually issue licenses and collect and administer membership fees.	The DoF retained the determination of the licensing process. The FMO only distributes licenses.
7) Establishment of a binding co-management plan	The FMO prepares and implements the co-management plan.	The existing management plan has been drafted by international consultants without any participation by locals.
8) Catch statistics/reports to the DoF	The FMO is obliged to collect catch statistics on a daily basis and to submit them to the DoF.	Fishers do not reveal their productivity and the record remains incomplete.

Note: ^x According to the National Law on Fishing and Aquaculture No. 7908 (1995); Amendment No. 8870 (2002); Regulation No.1, (1997) and Regulation No. 2, (2005) and FMO Statutes.

Table 1 indicates that those who are disadvantaged within the present system are not only excluded from the additional benefits that the elites capture by avoiding sanctions. In fact, a considerable number of benefits are captured at the expense of the disadvantaged actors' property rights (see rule on "Access to fishing spots and withdrawal rights"). Another example is the fact that ordinary FMO members are frequently kept in the dark regarding the use of the organization's budget. Fishers provided statements like, "What budget? I don't know anything about money?" or "I just pay my fee, what they do with it I don't know," obviously underscoring this finding.

6 DISCUSSION

Elite capture at Lake Ohrid leads to a range of consequences that affect collective action, and thus, the prospects for local governance.

The Fishery Management Organisation (FMO) represents a "pseudo-association", existing only as a state imposed formal creation⁴. Interview statements like, "In the future FMO members will be the first in line to receive money" indicate that licenses and membership are rather used as investments, which may become valuable with future engagement by international donors or an increased exertion of power by the government. PLATTEAU and GASPART (2003: 1688) argue likewise that many local leaders have "understood that the creation of a local NGO has become one of the best means of procuring funds from the international community". The pseudo-establishment leads to an even further reduction in the willingness to cooperate. This is partly due to comparative advantages that arise from lax law enforcement and the freedom to construe fishery rules. FMO members who are not affiliated with the leader's network are equally reluctant to cooperate, but for different reasons. For those who have had negative experiences with the FMO leaders, collective action could cause them to be deprived of their property rights, to remain unheard, and to receive disproportionate benefits. Interviewees from this group frequently gave statements like, "I don't trust the FMO"; "The big guys occupy all the good fishing spots and I am left with nothing"; or "They promised us so many things, but nothing was provided".

There is an aggravating process between abuse of power, on the one side, and the empirically shown decreased trust and reputation, on the other, that constrains the development of collective action. Powerful actors, the FMO leaders misuse their positions and resource endowments for personal benefits. This, in turn, further reduces the level of trust, a prerequisite for cooperation, contributing to its further deterioration. These interdependencies are symptomatic for post-socialist countries (THEESFELD, 2009b).

⁴ THEESFELD (2008) describes such kind of pseudo-associations for Bulgaria's irrigation sector.

The way how the PFDP was initiated and implemented, including insufficient follow-up measures by authorities and inappropriate governance structures resulted in a further collapse of fish stocks. The introduction of local governance has been coercive and was never requested by locals. Therefore, it is not presumptuous to say that the PFDP was itself as much of a top-down measure as the purely state managed regime during socialism whose imperfections local resource governance is ideally meant to offset. The choice of a "once size fits all" statute for all 14 organizations is only one out of a number of remarkable examples to support this argument. OSTROM (2007a) likewise expresses her concern against "one size fits all" approaches within the scope of managing very diversified and complex social-ecological systems, such as fishery.

The PFDP solely established contacts with already advantaged actors, therefore excluding a large share of weaker members of the community. The fact that these very actors are today abusing their positions indicates that the PFDP simply skipped a genuine opportunity to empower weaker fishers. The project planners thus either overlooked the initial distribution of power and resources or ignored its potential consequences. Actual participation opportunities were missed during the phases of rule-making. This was the result of the PFDP choosing to use external consultants to create both the FMO's statute and the co-management plan. Local knowledge and local needs were largely ignored, an assessment which is obvious when reading through the FMO's present co-management plan.

Albania's disintegration of the old regime took place over a much longer period than in other Central and East European Countries, resulting in chaos and a political vacuum in which no systematic or effective policy could be formulated (HASHI and XHILLARI, 1999). First, the new government, committed to fundamental reforms necessary for a market economy, did not take power until after the second general election in March 1992 and second a political crisis resulting from the collapse of informal financial schemes brought the whole reform process, including the privatisation programme, to a halt in early 1997. Several political instabilities marked the further path of Albania towards democratisation, including decentralization attempts (LAWSON and SALTMASHE, 2000). Typical side-effects of such post-socialist instabilities are shortcomings in follow-up measures and accountability, a lack of sufficient back-up institutions at higher levels of social organization and prevailing governance structures that cannot guarantee the implementation of new formal rules. Local administrations are accordingly found to be remiss in fulfilling its responsibilities due a combination of apathy, pessimism, inconsistent behaviour, insufficient capacities, and even infringement. The same applies to the case study area, exemplified with statements such as, "This is Albania, there is no state!" or "The DOF's inspector can't do anything about poaching". To date there is no evidence for a stronger engagement by superior administrative organs at the national level. In other words, there is no higher level of power to hold accountable actors who do not fulfil their duties or who actively counteract

the law. Therefore, weaker locals cannot call on higher jurisdictional bodies to protect their property rights. This option is, however, essential for sustainable resource management and is part of a "facilitative political regime" (OSTROM, 1990: 137; BLOMQUIST, 1992).

7 RECOMMENDATION FOR DECENTRALIZATION IN POST-SOCIALIST NATURAL RESOURCE GOVERNANCE

Although local governance can help overcome social dilemmas in natural resource management, there may also be severe drawbacks with decentralization policies, including capture by disproportionately influential actors.

Of course decentralization and elite capture effects are interwoven and thus elite capture might occur because of the fact that the decentralisation is not properly implemented. Decentralization, comprising devolution approaches, has to go hand in hand with the establishment of a proper institutional environment, which means the provision of governance structures to make local natural resource governance effective.

Without a facilitative political, administrative, jurisdictional and advisory system, the decentralization reform is exposed to the risk of elite capture. In Albania, provision of security was absent during the post-socialist period. Since the demise of communism, Albania is considered a weak state in which formal institutions have functioned poorly (LAWSON and SALTMASHE, 2000). A weak state is also often not able to provide the public goods, such as reliable jurisdictions, accessible conflict resolution mechanisms, locally adapted monitoring and sanctioning mechanisms, extension services and information spreading mechanisms. Also, due to the context of a weak state, there is low tax compliance, which in turn counteracts the ability of the state to provide public goods (LAWSON and SALTMASHE, 2000) including the provision of governance structures such as those mentioned above.

The Albanian fishery case has shown that elite capture can evolve to become a problem with negative consequences as it simultaneously drives social inequality among local resource users and worsens environmental destruction. Sufficient strategies are needed to avoid this phenomenon. In line with MANSURI and RAO (2004), we therefore suggest introducing local governance in a context-specific manner with a long time horizon and careful, well-designed monitoring and evaluation systems. This contextual sensitivity is particularly important in post-socialist societies because there is a need to account for lost trust in collective-action-based governance resulting from communist experiences and the ensuing transition (SCHLEYER, 2009; THEESFELD, 2009b). Furthermore, awareness is needed that due to chaotic rules and a consequential need for security, societies in transition are exceedingly susceptible to destructive leadership (LUTHANS et al., 1998). The goal must be genuine empowerment that allows for a repetitive inclusion of all stakeholders within a community. This pledge implies more careful selection

of leaders in community based natural resource management. Selecting leaders who are well respected within the village community and have a good reputation may facilitate the establishment of norms of reciprocity that foster cooperation.

The chances of finding such leaders are better if information asymmetry is reduced and if training is provided (NATH and INOUE, 2008). Sufficient monitoring and sanctioning rules are, however, required to hold these leaders accountable. Finally, LARSON and RIBOT (2004) point to the importance of a more sensible and equitable mode of devolution by proposing a public dialogue on public versus private powers and central versus local control. This is, in fact, exceedingly relevant in post-socialist societies that often lack a tradition of public discourse, particularly regarding methods of splitting property rights.

REFERENCES

- ACHESON, J., KNIGHT, J. (2000): Distribution Fights, Coordination Games, and Lobster Management, *Comparative Studies in Society and History*, Vol. 42, No. 1, pp. 209-238.
- AGARWAL, B. (2001): Participatory Exclusions, Community Forestry and Gender: An Analysis for South Asia and a Conceptual Framework, *World Development*, Vol. 29, No. 10, pp. 1623-1648.
- AGRAWAL, A. (2001): The Regulatory Community: Decentralization and the Environment in the Van Panchayats (Forest Councils) of Kumaon, India, *Mountain Research Development*, Vol. 21, No. 3, pp. 208-211.
- AGRAWAL, A., GIBSON, C. C. (1999): Enchantment and Disenchantment: The Role of Community in Natural Resource Conservation, *World Development*, Vol. 27, No. 4, pp. 629-649.
- ANDERSSON, K. P., OSTROM, E. (2008): Analyzing Decentralized Resource Regimes from a Polycentric Perspective, *Policy Sciences*, Vol. 41, No. 1, pp. 71-93.
- ANDERSSON, K. P., VAN LAERHOVEN, F. (2007): From Local Strongman to Facilitator: Institutional Incentives for Participatory Municipal Governance in Latin America, *Comparative Political Studies*, Vol. 40, No. 9, pp. 1085-1111.
- BALAND, J.M., PLATTEAU, J. P. (1995): Does Heterogeneity Hinder Collective Action?, *Cahiers de la Faculte des Sciences Economiques Sociales 142*: Namur, Belgium, Facultes des Sciences Economiques et Sociales, Facultes Universitaires, Notre-Dame de la Paix.
- BARDHAN, P. (2002): Decentralization of Governance and Development, *Journal of Economic Perspectives*, Vol. 16, No. 4, pp. 185-206.
- BARDHAN, P. (2000): Irrigation and Cooperation: An Empirical Analysis of 48 Irrigation Communities in South India, *Economic Development and Cultural Change*, Vol. 48, No. 4, pp. 847-865.
- BARDHAN, P., MOOKHERJEE D. (2006): Decentralisation in West Bengal: Origins, functioning, and impact, in: BARDHAN, P., MOOKHERJEE, D. (eds.): Decentralisation and local governance in developing countries – A comparative perspective: Cambridge, USA, MIT Press, pp. 203-222.
- BANERJEE, A., MOOKHERJEE, D., MUNSHI, K., RAY, D. (2001): Inequality, Control Rights, and Rent Seeking: Sugar Cooperatives in Maharashtra, *Journal of Political Economy*, Vol. 109, No. 1, pp. 138-190.

- BERKES, F., POMEROY, R. S. (1997): Two to Tango: The Role of Government in Fisheries Co-management, *Marine Policy*, Vol. 21, No. 5, pp. 465-480.
- BLAIR, H. (2000): Participation and Accountability at the Periphery. Democratic Local Governance in Six Countries, *World Development*, Vol. 28, No. 1, pp. 21-39.
- BLOMQUIST, W., DINAR, A., KEMPER, K. (2005): Comparison of Institutional Arrangements for River Basin Management in Eight Basins, *World Bank Policy Research Working Paper 3636*: Washington, DC, The World Bank.
- BLOMQUIST, W. (1992): Dividing the waters: Governing ground water in Southern California, San Francisco, ICS Press.
- BROMLEY, D. W., FEENY, D.(eds.) (1992): Making the Commons Work: Theory, Practice, and Policy, San Francisco, ICS Press.
- CALVERT, R. (1992): Leadership and Its Basis in Problem of Social Coordination, *International Political Science Review*, Vol. 13, No. 1, pp. 7-24.
- CHUENPADGEE, R., JENTOFT, S. (2007): Step zero for fisheries co-management: What precedes implementation, *Marine Policy*, Vol. 31, No. 6, pp. 657-668.
- DASGUPTA, A., BEARD, V. A. (2007): Community Driven Development, Collective Action and Elite Capture in Indonesia, *Development and Change*, Vol. 38, No. 2, pp. 229-249.
- DASGUPTA, P. (1982): The Control of Resources: Cambridge, Harvard University Press.
- DAYTON-JOHNSON, J., BARDHAN, P. (2002): Inequality and Conservation on the Local Commons: A Theoretical Exercise, *Economic Journal*, Vol. 112, No. 481, pp. 577-602.
- D'EXELLE, B., RIEDL, A. (2008): Elite Capture, Political Voice and Exclusion from Aid: An Experimental Study, *Research Memoranda 24*, Maastricht, METEOR, Maastricht Research School of Economics of Technology and Organization.
- DIRECTORATE OF WATER AND FISHERIES RESOURCES (2005): Fisheries Management Plan Lake Ohrid. Albanian Pilot Fisheries Development Project 2005. Online at: <http://www.dfishery.gov.al/EN/html/Publications.html>.
- FOLKE, C., HAHN, T., OLSSON, P., NORBERG, J. (2005): Adaptive Governance of Social-Ecological Systems, *Annual Review of Environment and Resources*, Vol. 30, pp. 441-473.
- FREY, B., OBERHOLZER-GEE, F. (1994): The Cost of Price Incentives: An Empirical Analysis of Motivation Crowding-Out, *The American Economic Review*, Vol. 87, No. 4, pp. 746-755.
- HASHI, I., XHILLARI, L. (1999): Privatisation and Transition in Albania. *Post-Communist Economies*, Vol. 11, No. 1, pp. 99-125.
- HECKATHORN, D. (1993): Collective Action and Group Heterogeneity: Voluntary Provision versus Selective Incentives, *American Sociological Review*, Vol. 58, No. 3, pp. 329-350.
- HURRELMANN, A., MURRAY, C., BECKMANN, V. (2006): Social Capital and Leadership: Rural Cooperation in Central and Eastern Europe, *Society and Economy*, Vol. 28, No. 3, pp. 219-243.
- JENTOFT, S., McCAY, B. J., WILSON, D. C. (1998): Social Theory and Fisheries Co-management, *Marine Policy*, Vol. 22, No. 4-5, pp. 423-436.
- JENTOFT, S. (1989): Fisheries Co-management. Delegating Government Responsibility to Fishermen's Organisations, *Marine Policy*, Vol. 13, No. 2, pp. 137-154.
- JOHNSON, C. (2001): Community Formation and Fisheries Conservation in Southern Thailand, *Development and Change*, Vol. 32, No. 5, pp. 951-974.

- KESBY, M. (2005): Reth theorizing empowerment through participation as a performance in space: Beyond tyranny to transformation, *Journal of Women in Culture and Society*, Vol. 30, No. 4, pp. 2037-2067.
- KINGSTON, C., CABALLERO, G. (2009): Comparing theories of institutional change, *Journal of Institutional Economics*, Vol. 5, No. 2, pp. 151-180.
- KNOX, A., MEINZEN-DICK, R. (2001): Workshop summary, in: MEINZEN-DICK, R., KNOX, A., DI GREGORIO, M. (eds.): Collective action, property rights and devolution of natural resource management: Exchange of knowledge and implications for policy: Feldafing, Germany, Zentralstelle für Ernährung und Landwirtschaft, pp. 41-73
- LANGE, A. (2010): Elites in Local Development in the Philippines, *Development and Change*, Vol. 41, No. 1, pp. 53-76.
- LAWSON, C., SALTMARSH, D. (2000): Security and Economic Transition: Evidence from North Albania, *Europe-Asia Studies*, Vol. 52, No. 1, pp. 133-148.
- LARSON, A. (2003): Decentralization and Forest Management in Latin America: Toward a Working Model, *Public Administration and Development*, Vol. 23, No. 2, pp. 211-226.
- LARSON, A., RIBOT, J. (2004): Democratic Decentralisation through a Natural Resource Lens: An Introduction, *European Journal of Development Research*, Vol. 16, No. 1, pp. 1-25.
- LUTHANS, F., PETERSON, S. J., IBRAYEVA, E. (1998): The potential for the "dark side" of leadership in post-communist countries, *Journal of World Business*, Vol. 33, No. 2, pp. 185-201.
- MANSURI, G., RAO, V. (2004): Community-Based and -Driven Development: A Critical Review, *The World Bank Research Observer*, Vol. 19, No. 1, pp. 1-39.
- MCGINN, N., STREET, S. (1986): Educational Decentralization: Weak State or Strong State? *Comparative Education Review*, Vol. 30, No. 4, pp. 471-490.
- MEINZEN-DICK, R., RAJU, K.V., GULATI, A. (2002): What Affects Organization and Collective Action for Managing Resources? Evidence from Canal Irrigation Systems in India, *World Development*, Vol. 30, No. 4, pp. 649-666.
- MOHAN, G., STOKKE, K. (2000): Participatory development and empowerment: The dangers of localism. *Third World Quarterly*, Vol. 21, No. 2, pp. 247-268.
- MUNRO, G. R. (2008): Game theory and the development of resource management policy: The case of international fisheries, *Environment and Development Economics*, Vol. 14, (Special Issue 1), pp. 7-27.
- NATH, T. K., INOUE, M. (2008): How does local governance affect project outcomes? Experience from a Participatory Forestry (PF) project in Bangladesh, *International Journal of Agricultural Resources, Governance and Ecology*, Vol. 7, No. 6, pp. 491-506.
- NATIONAL FISHERY LAW OF ALBANIA No. 7908 "On Fishing and Aquaculture" (1995): In: Compendium of Environmental Legislation of Albania. Published by the Republic of Albania, 2004.
- NATIONAL FISHERY LAW OF ALBANIA No. 8870. Amendment to the Law No. 7908 "On Fishing and Aquaculture." Year of enactment (2002): In: Compendium of Environmental Legislation of Albania. Published by the Republic of Albania, 2004.
- NATIONAL REGULATION No. 1, Regulations for implementation of Law No. 7908 "For fishing and aquaculture." Year of enactment 1997: In: Compendium of Environmental Legislation of Albania. Published by the Republic of Albania, 2004.

- NATIONAL REGULATION No. 2 "For application of the legislation on fishery and aquaculture."
Year of enactment 2005: Online at: <http://www.dfishery.gov.al/EN/html/Publications.html>, accessed 25. October 2010.
- OLSSON, P., FOLKE, C., BERKES, F. (2007): Adaptive Co-management for Building Resilience in Social-Ecological Systems, *Environmental Management*, Vol. 34, No. 1, pp. 75-90.
- OLSON, M. (1973): The Logic of Collective Action: Public Goods and the Theory of Groups: Cambridge, Harvard University Press.
- OSTROM, E. (1990): Governing the Commons. The Evolution of Institutions for Collective Action: Cambridge, New York, Cambridge University Press.
- OSTROM, E. (2005): Understanding Institutional Diversity: Princeton, New Jersey, Princeton University Press (Princeton paperbacks).
- OSTROM, E. (2007a): A Diagnostic Approach for Going Beyond Panaceas, *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 104, No. 39, pp. 15181-15187.
- OSTROM, E. (2007b): Collective Action Theory, in: BOIX, C., STOKES, S. C. (eds.): The Oxford Handbook of Comparative Politics: Oxford, Oxford University Press, pp. 186-208.
- PLATTEAU, J. P., ABRAHAM, A. (2002): Participatory development in the presence of endogenous community imperfections, *Journal of Development Studies*, Vol. 39, No. 2, pp. 104-136.
- PLATTEAU, J. P., GASPART, F. (2003): The Risk of Resource Misappropriation in Community-driven Development, *World Development*, Vol. 31, No. 10, pp. 1687-1703.
- PLATTEAU, J. P. (2004): Monitoring Elite Capture in Community-driven Development, *Development and Change*, Vol. 35, pp. 223-246.
- POMEROY, R. S. (1995): Community-based and Co-management Institutions for Sustainable Coastal Fisheries Management in Southeast Asia, *Ocean and Coastal Management*, Vol. 27, No. 3, pp. 143-162.
- RUNGE, C. F. (1986): Common Property and Collective Action in Economic Development, *World Development*, Vol. 14, No. 5, pp. 623-635.
- SAVOIA, A., EASAW, J., MCKAY, A. (2010): Inequality, Democracy, and Institutions: A Critical Review of Recent Research, *World Development*, Vol. 38, No. 2, pp. 142-154.
- SCHLEYER, C. (2009): Revalorisation of property objects and collective action: The case of reclamation systems in northwest Poland, *International Journal of Agricultural Resources, Governance and Ecology*, Vol. 8, No. 1, pp. 74-89.
- SCHLEYER, C. (2003): Economic and Ecological Transformation Processes in East German Water Management Regimes: The Role of Property Rights and Governance Structure, *Environmental Management*, Vol. 34, No. 2, pp. 281-290.
- SIKOR, T., STAHL, J., DORONDEL, S. (2009): The institutionalisation of property rights in Albanian and Romanian biodiversity conservation, *International Journal of Agricultural Resources, Governance and Ecology*, Vol. 8, No. 1, pp. 57-73.
- THEESFELD, I. (2009a): From Power Misuse to Leadership in Bulgaria's Irrigation Sector, Paper presented at the Workshop on the Workshop 4, panel on "New Challenges for the Management of Shared Water Resources", Bloomington, USA, Indiana University, June 3-6, 2009.

- THEESFELD, I. (2009b): The Downgrading Effect of Abuse of Power on Trust and Collective Action in Bulgaria's Irrigation Sector, in: BECKMANN, V., PADMANABHAN, M. (eds.): *Institutions and Sustainability: Political Economy of Agriculture and the Environment – Essays in Honour of Konrad Hagedorn*: Heidelberg, Springer, pp. 223-242.
- THEESFELD, I. (2008): Irrigation sector in Bulgaria: Impact of post-socialist policy reforms, *Water Policy*, Vol. 10, No. 4, pp. 375-389.
- UNEP (2000): Post-Conflict Environmental Assessment – Albania. Final report. First published in Switzerland. United Nations Environment Programme. Nairobi, Kenya. Online at: <http://postconflict.unep.ch/publications/albaniafinalasses.pdf>.
- VEDELD, T. (2000): Village Politics: Heterogeneity, Leadership and Collective Action', Paper presented at "Constituting the Commons: Crafting Sustainable Commons in the New Millennium", Eighth Conference of the International Association for the Study of Common Property, Bloomington, USA, May 31-June 4, 2000.
- WADE, R. (1987): The Management of Common Property Resources: Finding of Cooperative Solution, *World Bank Observer*, Vol. 2, No. 3, pp. 219-234.
- WATZIN, M. C. (2006): Lake Ohrid. Experience and Lessons Learned Brief, Document of the World Bank Lake Ohrid Conservation Project (LOCP). Online at: http://www.ilec.or.jp/eg/lbmi/pdf/19_Lake_Ohrid_27February2006.pdf, accessed 25 October 2010.
- WILSON, D.C., RAAKJAER, J., DEGNBOL, P. (2006): Local knowledge and practical fisheries management in the tropics: A policy brief, *Marine Policy*, Vol. 30, No. 6, pp. 794-801.
- WORLD BANK (2000): World Bank Financing to Albania. Pilot Fishery Development Project. Procurement Portfolio. Online at: <http://web.worldbank.org/external/projects/>, accessed 25 October 2010.
- YIN, R. K. (1994): Case study research: Design and methods Applied social research methods series: Beverly Hills, California, Sage Publications.

- Vol. 1 **The importance of institutions for the transition in Central and Eastern Europe with emphasis on agricultural and food industry**
ed. by Klaus Froberg and Witold-Roger Pogonietz
1998, 137 pages, ISBN 3-8175-0258-3
- Vol. 2 **The significance of politics and institutions for the design and formation of agricultural Policies**
ed. by Klaus Froberg and Peter Weingarten
1999, 254 pages, ISBN 3-8175-0289-3
- Vol. 3 **Food processing and distribution in transition countries. Problems and perspectives**
ed. by Monika Hartmann and Jürgen Wandel
1999, 349 pages, ISBN 3-8175-0293-1
- Vol. 4 **Die private Nachfrage nach Nahrungsmitteln im Transformationsprozeß Tschechiens und Polens**
Stephan Brosig (PhD)
2000, 171 Seiten, ISBN 3-8175-0319-9
- Vol. 5 **Integrating Estonia into the EU: Quantitative analysis of the agricultural and food sector**
Achim Fock (PhD)
2000, 286 pages, ISBN 3-8175-0320-2
- Vol. 6 **Competitiveness of agricultural enterprises and farm activities in transition countries**
ed. by Peter Tillack and Frauke Pirscher
2000, 216 pages, ISBN 3-8175-0322-9
- Vol. 7 **Конкурентоспособность сельскохозяйственных предприятий и фермерской деятельности в странах переходного периода**
под редакцией Петера Тиллака и Фрауке Пиршер
2000, 253 страницы, ISBN 3-8175-0324-5
- Vol. 8 **Perspectives on agriculture in transition: Analytical issues, modelling approaches, and case study results**
ed. by Witold-Roger Pogonietz, Alberto Zezza, Klaus Froberg and Kostas G. Stamoulis
2000, 433 pages, ISBN 3-8175-0323-7

- Vol. 9 **Land ownership, land markets and their influence on the efficiency of agricultural production in Central and Eastern Europe**
ed. by Peter Tillack and Eberhard Schulze
2000, 485 pages, ISBN 3-8175-0325-3
- Vol. 10 **Landwirtschaft und Industrie in Russland – Der Transformationsprozeß in der Ernährungsindustrie**
Jürgen Wandel (PhD)
2000, 361 Seiten, ISBN 3-8175-0334-2
- Vol. 11 **Food consumption in Russia. An econometric analysis based on household data**
Karin Elsner (PhD)
2001, 256 pages, ISBN 3-8175-0335-0
- Vol. 12 **Alexander Wasiljewitsch Tschajanow – Die Tragödie eines großen Agrarökonomen**
hrsg. u. übers. von Eberhard Schulze
2001, 192 Seiten, ISBN 3-8175-0342-3
- Vol. 13 **Analysis of food consumption in Central and Eastern Europe: Relevance and empirical methods**
ed. by Stephan Brosig and Monika Hartmann
2001, 253 pages, ISBN 3-8175-0349-0
- Vol. 14 **Wettbewerbsprozesse und Firmenwachstum in der Transformation am Beispiel der polnischen Fleischindustrie**
Agata Pieniadz (PhD)
2002, 291 Seiten, ISBN 3-8175-0360-1
- Vol. 15 **Agricultural enterprises in transition: Parallels and divergences in Eastern Germany, Poland and Hungary**
ed. by Ludger Hinners-Tobrägel and Jürgen Heinrich
2002, 455 pages, ISBN 3-8175-0366-0
- Vol. 16 **Agricultural technology and economic development of Central and Eastern Europe. Results of the workshop in Halle, 2nd-3rd July 2001**
ed. by Peter Tillack and Ulrich Fiege
2002, 160 pages, ISBN 3-86037-199-1
- Vol. 17 **Региональные аспекты аграрных преобразований: Политика, реструктуризация, рыночная адаптация**
под редакцией Петера Тиллака и Виталия Зиновчука
2003, 236 страницы, ISBN 3-928466-55-0

- Vol. 18 **Alexander Vasilievich Chayanov – The tragedy of an outstanding agricultural economist**
ed. by Eberhard Schulze
2003, 188 pages, ISBN 3-86037-201-7
- Vol. 19 **Development of agricultural market and trade policies in the CEE Candidate Countries**
by the Network of Independent Agricultural Experts in the CEE Candidate Countries
2003, 72 pages, ISBN 3-86037-212-2
- Vol. 20 **Large farm management**
ed. by Alfons Balmann and Alexej Lissitsa
2003, 396 pages, ISBN 3-86037-213-0
- Vol. 21 **Success and failures of transition – The Russian agriculture between fall and resurrection**
ed. by Eberhard Schulze, Elke Knappe, Eugenia Serova, Peter Wehrheim
2003, 521 pages, ISBN 3-9809270-1-6
- Vol. 22 **Subsistence agriculture in Central and Eastern Europe: How to break the vicious circle?**
ed. by Steffen Abele and Klaus Froberg
2003, 233 pages, ISBN 3-9809270-2-4
- Vol. 23 **Pfadabhängigkeiten und Effizienz der Betriebsstrukturen in der ukrainischen Landwirtschaft – Eine theoretische und empirische Analyse**
Andriy Nedoborovskyy (PhD)
2004, 197 Seiten, ISBN 3-86037-216-5
- Vol. 24 **Nichtmonetäre Transaktionen in der ukrainischen Landwirtschaft: Determinanten, Spezifika und Folgen**
Olena Dolud (PhD)
2004, 190 Seiten, ISBN 3-9809270-3-2
- Vol. 25 **The role of agriculture in Central and Eastern European rural development: Engine of change or social buffer?**
ed. by Martin Petrick and Peter Weingarten
2004, 426 pages, ISBN 3-9809270-4-0
- Vol. 26 **Credit rationing of Polish farm households – A theoretical and empirical analysis**
Martin Petrick (PhD)
2004, 254 pages, ISBN 3-9809270-6-7

- Vol. 27 **Drei Jahrhunderte Agrarwissenschaft in Russland: Von 1700 bis zur Gegenwart**
Alexander Alexandrowitsch Nikonow und Eberhard Schulze
2004, 232 Seiten, ISBN 3-9809270-8-3
- Vol. 28 **Russlands Weg vom Plan zum Markt: Sektorale Trends und regionale Spezifika**
Peter Voigt (PhD)
2004, 270 Seiten, ISBN 3-9809270-9-1
- Vol. 29 **Auswirkungen des Transformationsprozesses auf die sozio-ökonomischen Funktionen ukrainischer Landwirtschaftsunternehmen**
Helga Biesold (PhD)
2004 182 Seiten, ISBN 3-938584-00-9
- Vol. 30 **Agricultural policies and farm structures – Agent-based modelling and application to EU-policy reform**
Kathrin Happe (PhD)
2004, 291 pages, ISBN 3-938584-01-7
- Vol. 31 **How effective is the invisible hand? Agricultural and food markets in Central and Eastern Europe**
ed. by Stephan Brosig and Heinrich Hockmann
2005, 361 pages, ISBN 3-938584-03-3
- Vol. 32 **Erfolgsfaktoren von landwirtschaftlichen Unternehmen mit Marktfruchtanbau in Sachsen-Anhalt**
Kirsti Dautzenberg (PhD)
2005, 161 Seiten, ISBN 3-938584-06-8
- Vol. 33 **Agriculture in the face of changing markets, institutions and policies: Challenges and strategies**
ed. by Jarmila Curtiss, Alfons Balmann, Kirsti Dautzenberg,
Kathrin Happe
2006, 544 pages, ISBN 3-938584-10-6
- Vol. 34 **Making rural households' livelihoods more resilient – The importance of social capital and the underlying social networks**
ed. by Gertrud Buchenrieder and Thomas Dufhues
2006, 106 pages, ISBN 3-938584-13-0
- Vol. 35 **Außerlandwirtschaftliche Diversifikation im Transformationsprozess. Diversifikationsentscheidungen und -strategien ländlicher Haushalte in Slowenien und Mazedonien**
Judith Möllers (PhD)
2006, 323 Seiten, ISBN 3-938584-14-9

- Vol. 36 **Accessing rural finance – The rural financial market in Northern Vietnam**
Thomas Dufhues (PhD)
2007, 166 Seiten, ISBN 3-938584-16-5
- Vol. 37 **Страхование посевов в Казахстане: Анализ возможностей эффективного управления рисками**
Раушан Бокушева, Олаф Хайдельбах, Талгат Кусайынов
2007, 82 Seiten, ISBN 3-938584-17-3
- Vol. 38 **Rethinking agricultural reform in Ukraine**
Zvi Lerman, David Sedik, Nikolai Pugachov, Aleksandr Goncharuk
2007, 167 Seiten, ISBN 3-938584-18-1
- Vol. 39 **Sustainable rural development: What is the role of the agri-food sector?**
ed. by Martin Petrick, Gertrud Buchenrieder
2007, 293 pages, ISBN 3-938584-22-X
- Vol. 40 **Efficiency of selected risk management instruments – An empirical analysis of risk reduction in Kazakhstani crop production**
Olaf Heidelberg (PhD)
2007, 223 Seiten, ISBN 3-938584-19-X
- Vol. 41 **Marktstruktur und Preisbildung auf dem ukrainischen Markt für Rohmilch**
Oleksandr Perekhozhuk (PhD)
2007, 274 Seiten, ISBN 978-3-938584-24-8
- Vol. 42 **Labor market behavior of Chinese rural households during transition**
Xiaobing Wang (PhD)
2007, 140 Seiten, ISBN 978-3-938584-25-5
- Vol. 43 **Continuity and change: Land and water use reforms in rural Uzbekistan. Socio-economic and legal analyses for the region Khorezm**
ed. by Peter Wehrheim, Anja Schoeller-Schletter, Christopher Martius
2008, 211 Seiten, ISBN 978-3-938584-27-9
- Vol. 44 **Agricultural economics and transition: What was expected, what we observed, the lessons learned (Vol I and II)**
ed. by Csaba Csáki, Csaba Forgács
2008, 634 Seiten, ISBN 978-3-938584-31-6

- Vol. 45 **Theoretical and methodological topics in the institutional economics of European agriculture. With applications to farm organisation and rural credit arrangement**
Martin Petrick
2008, 223 Seiten, ISBN 978-3-938584-31-6
- Vol. 46 **Agri-food business: Global challenges – Innovative solutions**
ed. by Thomas Glauben, Jon H. Hanf, Michael Kopsidis, Agata Pieniadz, Klaus Reinsberg
2008, 152 pages, ISBN 978-3-938584-33-0
- Vol. 47 **Eine Analyse der Transformationsberatung für die "kollektive Landwirtschaft" während der ersten Transformationsphase (1989-1991) am Beispiel Ostdeutschlands: Lehren für Korea**
Jeong Nam Choi (PhD)
2009, 225 Seiten, ISBN 978-3-938584-36-1
- Vol. 48 **Croatia's EU accession. Socio-economic assessment of farm households and policy recommendations**
Judith Möllers, Patrick Zier, Klaus Frohberg, Gertrud Buchenrieder and Štefan Bojnec
2009, 196 Seiten, ISBN 978-3-938584-35-4
- Vol. 49 **Structural change in Europe's rural regions. Farm livelihoods between subsistence orientation, modernisation and non-farm diversification**
ed. by Gertrud Buchenrieder Judith Möllers
2009, 166 Seiten, ISBN 978-3-938584-39-2
- Vol. 50 **Motive beim Weinkonsum – Unterschiede zwischen deutschen und ukrainischen Konsumenten**
Astrid Lucie Rewerts (PhD)
2009, 267 Seiten, ISBN 978-3-938584-40-8
- Vol. 51 **Rural development as provision of local public goods: Theory and evidence from Poland**
Andreas Gramzow (PhD)
2009, 203 Seiten, ISBN 978-3-938584-41-5
- Vol. 52 **Multi-level Processes of Integration and Disintegration. Proceedings of the Third Green Week Scientific Conference**
ed. by Franziska Schaft, Alfons Balmann
2009, 216 Seiten, ISBN 978-3-938584-42-2

- Vol. 53 **Zur Bestimmung der Wettbewerbsfähigkeit des weißrussischen Milchsektors: Aussagefähigkeit von Wettbewerbsindikatoren und Entwicklung eines kohärenten Messungskonzepts**
Mikhail Ramanovich (PhD)
2010, 202 Seiten, ISBN 978-3-938584-44-6
- Vol. 54 **Die Internationalisierung landwirtschaftlicher Unternehmen. Das Beispiel deutscher, dänischer und niederländischer Direktinvestitionen in den ukrainischen Agrarsektor**
Henriette Stange (PhD)
2010, 296 Seiten, ISBN 978-3-938584-45-3
- Vol. 55 **Verhandlungsverhalten und Anpassung im internationalen Verhandlungsprozess: Die WTO-Agrarverhandlungen zum Abbau exportwettbewerbsfördernder Maßnahmen**
Ildiko Lajtos (PhD)
2010, 195 Seiten, ISBN 978-3-938584-48-4
- Vol. 56 **Challenges of education and innovation. Proceedings of the Fourth Green Week Scientific Conference**
ed. by Kelly Labar, Martin Petrick, Gertrud Buchenrieder
2010, 155 Seiten, ISBN 978-3-938584-49-1
- Vol. 57 **Agriculture in the Western Balkan Countries**
ed. by Tina Volk
2010, 249 Seiten, ISBN 978-3-938584-51-4
- Vol. 58 **Perspectives on Institutional Change – Water Management in Europe**
ed. by Insa Theesfeld, Frauke Pirscher
2011, 127 Seiten, ISBN 978-3-938584-52-1

In der Schriftenreihe *Studies on the Agricultural and Food Sector in Central and Eastern Europe* werden durch das IAMO Monographien und Tagungsberichte herausgegeben, die sich mit agrarökonomischen Fragestellungen zu Mittel- und Osteuropa beschäftigen. Wissenschaftlern, die in diesem Bereich forschen, steht die Schriftenreihe als Diskussionsforum offen.

In its series *Studies on the Agricultural and Food Sector in Central and Eastern Europe* IAMO publishes monographs and proceedings focusing on agricultural economic issues specific to Central and Eastern Europe. This series offers a forum to researchers studying this area.