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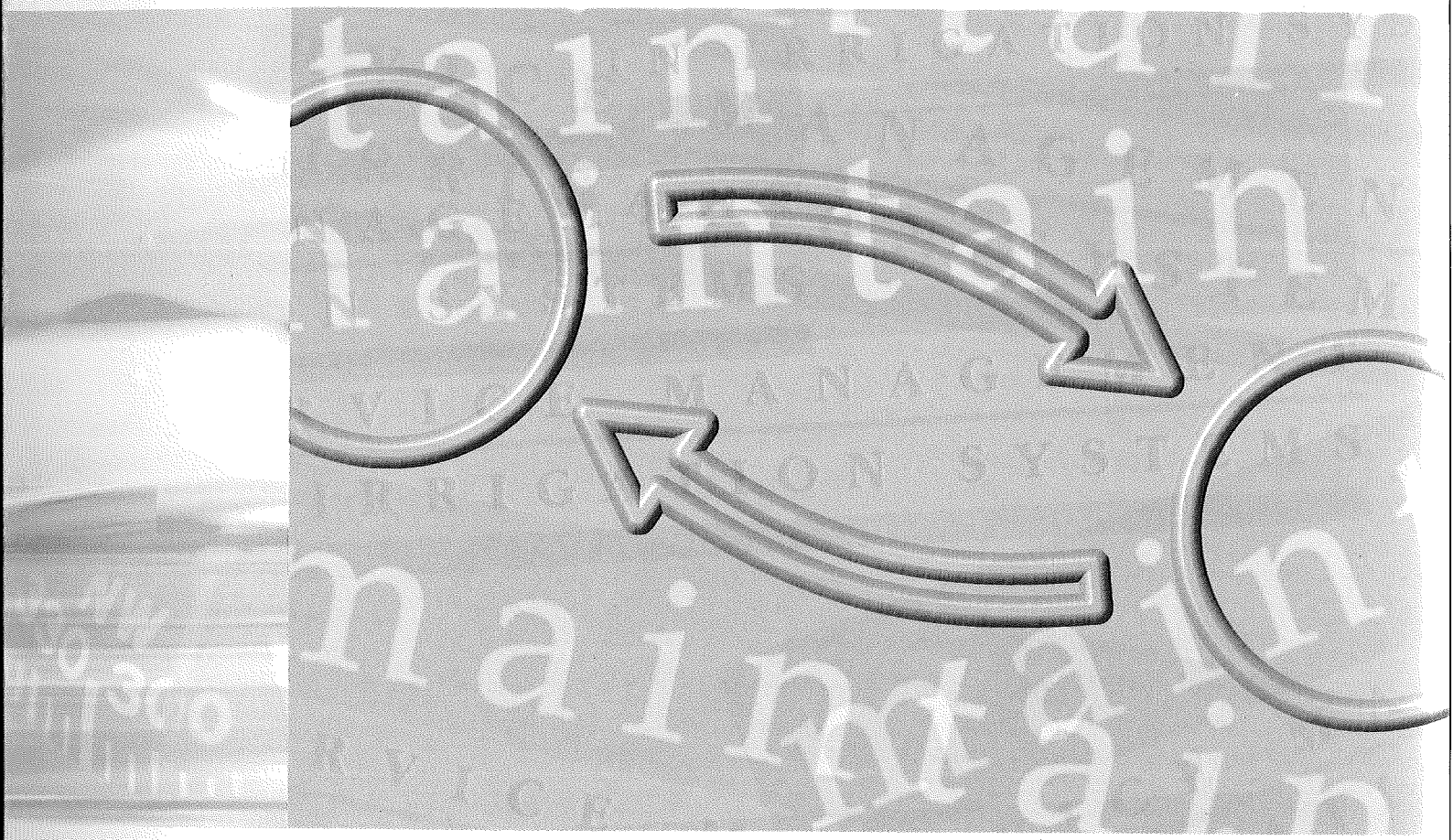

Jochen Renger, Birgitta Wolff

Rent Seeking in Irrigated Agriculture: Institutional Problem Areas in Operation and Maintenance

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1. Introduction: A new view of irrigation management

Irrigated agriculture as an area for development cooperation has acquired an unfavourable image recently. It is accused of not only being the largest consumer of water in terms of volume but also of showing a very low level of efficiency. In relation to the results of production, water consumption is too high – and conversely, in relation to the water consumption, the results of production are too meagre. In addition there are the extremely high investment, operating and maintenance costs for the irrigation systems, which constitute a substantial burden on public sector budgets. As a further consideration, the financial resources devoted to the irrigation systems do not all result in actual irrigation, but "leak" away to other points. Finally, inappropriate irrigation has led to serious environmental damage.

To document these problems areas fully and develop promising approaches to their solution, interdisciplinary dialogue is needed. Specifically, there is also a need for lines of enquiry which go beyond technical aspects of these problems to look at the political and socio-economic aspects as well. The present paper is an attempt to examine irrigated agriculture from the standpoint of the new institutional economics. The core idea of this (still relatively young) theory is to interpret and explain the behaviour of individuals and groups in terms of political and administrative systems. This does not mean that the personal characteristics of the actors would be irrelevant. However, if we take an "average" actor, there are clear relationships between the structures in the environment within which they act and their behaviour. By configuring such structures, it is possible to direct the behaviour of the people operating within them. The structures and rules of the system not only determine people's scope for action ("What can, may and should I do?") but also the relative individual benefit of the various alternative actions for the actor concerned ("What course of action is most advantageous for me personally?"). The new institutional economics pays special attention to this latter aspect. It explicitly investigates the structures of incentives within which an actor moves and which largely determine their motivations (cf. Richter/Furubotn 1996). Recommendations for improvement based on the new institutional economics accordingly do not involve identifying "bad people" or "villains", but rather "poor" organisational structures and rules – i.e. ones which do not serve the organisation's goals optimally.

The political systems in many developing countries are organised on centralised and bureaucratic lines which promote certain system-specific modes of behaviour by actors which are known as "rent seeking". As we will see, the institutional framework can have a decisive effect on irrigated agriculture. We will show how and why rent seeking can adversely affect the development of an irrigated agriculture which is aimed at economic efficiency and sustainability. Problems in operating and maintaining irrigation systems must be seen here in a broader, systemic context.

The goal of our analysis is to raise awareness of the problem of rent seeking and show ways for irrigated agriculture to meet its development policy objectives better. Chapter 2

gives a general overview of the phenomenon of rent seeking. The focus here is on the distinct functional logic of social, political and economic systems which lead to rent seeking. With this foundation chapter 3 looks for examples of rent seeking in irrigated agriculture in developing countries. The emphasis here is on the question which individual goals the various actors are pursuing through (!) rather than in irrigated agriculture. Chapter 4 then shows that many of the problems of irrigated agriculture are linked with rent seeking. Finally, chapter 5 discusses approaches for avoiding and limiting rent seeking. Chapter 6 is a summary.

2. Rent seeking: striving for profit from transfers

To help understand the phenomenon of rent seeking, here is an analogy which has become a classic example of the problems involved (cf. Schmid 1991):

> The king wishes to give a favourite the monopoly for banana production in his kingdom. The candidates begin to compete for this royal monopoly, and embark on sophisticated lobbying activities. In their struggle for the royal favour, they invest a great deal of time, energy and other resources, which they would otherwise have (had to) invest in productive enterprises under other conditions – i.e. free market laws instead of state distortion of competition. For the individual candidates, it is potentially worthwhile to invest in lobbying. If successful, the stake pays off in the form of fat monopoly profits.

The analogy is about rents, in this case monopoly and monopoly profits, and rent seeking – which in this case is lobbying.

2.1 Rent

First, a brief definition of "rent". To avoid misunderstandings, "rent" in this context has nothing to do with "rent" in the sense of rent for land or property. In the modern context of "rent seeking", rent strictly speaking means financial income which is not matched by corresponding labour or investment in the market sense, but by a high level of organisational input. Rent in this sense arises from manipulation of the economic environment (e.g. monopolies, import and trading restrictions, subsidies) and describes that part of income deriving from price and market distortions and not from actual production in response to market demand.

In the extended sense used here, "rent" covers all types of welfare transfer unmatched by any corresponding entrepreneurial or productive labour and investment inputs. As resources are consumed in rent seeking which are then no longer available for productive activities, rent seeking involves heavy social costs (cf. Tullock 1967, Tollison 1993). Rent seeking requires that it be possible and advantageous for the relevant actor to do something which is not advantageous for the system as a whole.

As a rule of thumb, this requirement is more likely to be met under bureaucracies remote from the market than in competitive systems of organisation, as under the latter unproductive behaviour is automatically penalised. This form of pressure from efficiency does not exist in bureaucracies. This does not, however, mean that every bureaucracy is automatically burdened by rent seeking and that every company is automatically efficient. Hierarchical forms of organisation are thoroughly appropriate for specific functions, in parallel to market forms of organisation for other functions (cf. Wolff 1995, pp. 30 et seq.). Ultimately, it is not possible for every socially-required service to be provided through markets alone. It should also be noted that rent seeking arises not only in the interaction between state and society, companies and politics, or within public administration, but also within companies in the private sector (cf. for example Milgrom/Roberts 1990 and 1992, pp. 193 et seq., 271 et seq., Picot/Dietl/Frank 1999, pp. 391 et seq., and Wolff 1999, p. 33). The structural organisational problem is always the same: how to design the organisational structures and procedural rules so that the opportunities for misusing resources are limited. This is done through incentive and control mechanisms.

Although rent is an economic category, macroeconomic research has not yet succeeded in developing a generally valid procedure for identifying rent or rent elements in income in quantitative terms. However, fairly good estimates can often be made of rent seeking activities and their consequences – particularly by the actors involved themselves, i.e. the beneficiaries, and those in their immediate environment, including victims. Experienced observers of organisations also are quick to identify typical rent seeking constellations.

2.2 Two approaches to rent seeking behaviour and process

Rent seeking as political behaviour

Rent seeking constitutes a form of political behaviour which can be described as *lobbying superior regulatory bodies to garner rent*. Characteristics of lobbying behaviour for the purpose of gaining rent are: submitting, following, serving, profiling, making important and indispensable, soliciting, networking, passing on incorrect or distorted information, suppressing information and frequently also bribing decision-makers (cf. for example Dietz 1998).

Rent seeking as economic behaviour

Rent seeking is also an *economic* ***form of behaviour which aims at avoiding competitive or market pressure in order to bring about price distortions in one's own interest in the political sphere for the purpose of earning rent.*** One example of such an activity is forming cartels. This also illustrates the difference from profit seeking, the prototypical economic form of behaviour in a market economy. In contrast to rent, profit arises in a competitive, market-oriented process whose goal is to invest resources in productive activity (in the Schumpeterian sense) as a way of earning an economic

surplus – or profit. Rent seeking on the other hand is manipulative behaviour which aims to avoid market or competitive pressure for productivity. In short:

Profit seeking is striving for productive profit, rent seeking is striving for transfer profits.

Rent seeking as a process

Rent seeking also designates a process, describing the variety of ***interactions between rent seekers and rent providers.*** For example, individuals, social groups or interest groups exert influence on politicians and bureaucrats at all political and administrative levels regarding the allocation of resources and changes in economically relevant rights of disposal and use. State bodies have the sovereign power and discretionary and decision-making scope to create just these rights, and so assign resources. Rent seekers lobby and compete for government (transfer) funds. The following examples will help illustrate the interaction.

> **Example: an Egyptian government office**
> From our western perspective we would describe the scene in a rural Egyptian government office as follows: a lot of people sit around for hours, drink tea, talk, and basically do nothing. Seen from another perspective, the same scene would be described as the farmers present showing their respect for the official through their presence. Courtesies are exchanged endlessly. People strike up conversations, praise the government, exchange information and ideas and casually mention problems. Naturally, something has to be done about the problem, and people look for ways to do something. The official promises to approach his superiors about a solution. The satisfied farmer thanks him and promises his continued support. A typical interaction indicating rent seeking.

In this context it is important to note that the solution to the rent seeking problem cannot lie in preventing all contact between farmers and bureaucrats or citizens and politicians. Politicians and administrators do, after all, rely on information from the grass roots to carry out their functions optimally. The question is much more how to ensure that adequately complete and relevant information is provided in the most cost-effective way possible while blocking "side payments", i.e. payments not officially part of the system. The reason for this is that distorted information and falsified incentives lead to suboptimal decisions for the system as a whole.

2.3 The effects of rent seeking: welfare losses and social costs

The social and economic effects of rent seeking take many forms. In the long term the result is total distortion of the structure of social and economic incentives and misallocation of resources, leading to heavy welfare losses and social cost (cf. Pritzl 1997). Rent seeking hinders economic growth and social development. Weede (Weede

1985) goes as far as stating that rent seeking is one of the main causes of underdevelopment and poverty in numerous developing countries.
Among rent seekers, lobbying and distributional struggles absorb enormous social resources which are not invested in productive activity. However, most of the population in the developing countries have no opportunity to engage in rent seeking, as they do not have the necessary resources (first and foremost influence, time, finance, education). The only part of society which will be able to assert its claims are those with the corresponding capacity and channels of influence for rent seeking – generally the upper class and the bureaucratic middle management (government service officials and clerks). There is accordingly great danger that the gap between the poor and the wealthy will widen. The rent providers follow a redistribution policy which leads to (a) major inequality arising in the distribution of income and wealth, (b) entrepreneurial activities being relocated to the informal sector, (c) encouraging capital flight, and (d) higher inflation occurring (Pritzl 1997).

However, it also appears that rent seeking systems can lead to favourable social policy and economic effects, particularly in the short term. In individual instances, government distribution policy may very well benefit poorer population groups, for example through subsidies for food or fuels. Market restrictions, such as high import duties, can help protect emerging domestic agriculture or industry from overwhelming international competition. In the long term, however, the defects outlined above set in.

2.4 Institutional environments for rent seeking in developing countries

Rent seeking is a phenomenon which is present in principle in all political systems, although in different forms and intensities. In centralised and bureaucratic political systems, rent seeking is much more widespread than in democratic and free market systems. This is because institutional conditions develop in non-democratic systems which reward rent seeking behaviour and make it attractive for many actors (Pritzl 1997). From the point of view of the new institutional economics, institutions are standards and rules which have a decisive effect on individual behaviour because they can change the relative advantage of various individual options (Richter, Furubotn 1996). In this sense, institutions cover both organisations (e.g. official agencies, interest groups) and codes (e.g. written and unwritten laws). From the point of view of institutional economics it is accordingly important that laws and regulations should not only be promulgated but also enforced. Enforcement mechanisms are integral elements in every institutional environment. Centralised and bureaucratic systems are controlled primarily through a hierarchical command and administrative apparatus. The bureaucracy as a control instrument, following the Prussian ideas of Max Weber, only functions if the institutional environment is configured so that behaviour which benefits the system is more advantageous to the individual actor than behaviour which damages it. If behaviour benefiting the system is not profitable in this way for the individual decision-maker, actors will start pursuing their own interests within the scope available to them – at the expense of the system's goal. Bureaucracy as a control system will then quickly become dysfunctional. Rent seeking is one of these functional defects. It tends

to be favoured in developing countries by the following institutional conditions (cf. Pawelka 1985 and Pritzl 1997).

- hierarchical management with murky decision-making processes
- highly bureaucratic, partly personalised administrative apparatus
- lack of (adequate) controlling bodies
- minimal separation of powers between legislative, executive and judiciary
- unclear legislative environment, high degree of legal uncertainty
- little democratic tradition, dubious elections
- wide educational and information gap between actors

Political systems with these characteristics evolve their own functional logic. Political leaders are generally not democratically-based in the western sense of the term. They and their appointed and dependent bureaucrats (primarily government service officials and clerks) have to focus consistently on their political survival and ensure adequate political support from social groups. The dominance strategy they use is a simple trade: material advancement in turn for political loyalty and support. This has serious implications for the bureaucratic ideal as a management instrument. It is overlaid by other functional relationships and exchange mechanisms, takes on autonomy and is no longer able to meet its originally intended management function. State actors – i.e. politicians and bureaucrats – operate a deliberate redistribution policy to provide their political support, resulting in an economic policy which is primarily redistributive in emphasis. To enable them to pursue this policy, they need to retail all options for action in terms of assigning rights of use or disposal or transfer payments, and to make a personal matter of all the related decisions. Principles of the rule of law, such as the division of state authority, legal security or responsibility in office are difficult to reconcile with this. Politicians and bureaucrats turn the institutional arrangement into an instrument for their own purposes. This also explains why they generally oppose changes in the institutional status quo.

2.5 Social conditions for rent seeking

In principle, any individual can seek to modify market conditions in their favour and profit from rents. Even societies which are described as democratic but still badly organised can structurally promote rent seeking. Germany and the European Union offer plenty of examples of this, for example in agricultural and coal policy, or nepotism within the EU bureaucracy. We see in many societies that rent seeking under the institutional conditions described above is favoured and even encouraged by specific organisational constellations.

Segmented societies with strictly separated and internally highly structured organisational units – e.g. ethnic, religious and regional groups, family associations or guild-like occupational groups – are more prone to rent seeking.

Under such social conditions, the political leadership finds it easy to exploit these groups in their competition with each other for rents. In the long term, no group will be able to avoid rent seeking, as they otherwise risk economic and political oblivion. Once established, rent seeking systems tend to become autonomous and intensify.

Segmented population groups are by no means always the starting point for the formation of systems which promote rent seeking. Anderer (1991) has shown that the causal relationship can run the other way, using Jordan as an example. Under the institutional conditions above, societies inevitably segment and organise themselves into "distributional coalitions". In Jordan, e.g. the decades of distributional policy of the Hashemite royal family led to the emergence of successive coherent, closed and competing social groups, such as trans-Jordanian major landowners, Palestinian wholesalers or Bedouin military (Renger 1996). Once these groups are organised, the structure of the system promoting rent seeking is finally stabilised. Ultimately, they benefit the rulers most able to change them.

Another characteristic of rent seeking systems is that social groups or specific social interest groups establish ***"bridgeheads" in the bureaucracy***. This enables them to pursue rent seeking particularly effectively. Frequently, parts of the government are identical with individual interest groups. A regular characteristic, for example, is the major landowners with corresponding interests are represented in government or the top level of bureaucracy and pursue a policy of distribution for themselves and their fellows. Limits are rarely set to self-assigned privileges. It is accordingly not surprising that in such systems land reform programmes (for example) almost always run contrary to the interests of small and medium-sized farmers or that entire industrial sectors are dominated by a few families.

2.6 Rent donors and their resources

As already noted, the grant of rents involves successive redistribution of social resources. Successful rent seekers not only collect monopoly profits which others have to pay, they also benefit from direct transfers of income. The question that accordingly arises is where the rent donors acquire their resources, particularly where they involve direct transfer payments, e.g. in the form of subsidies.

Political research into developing countries shows that political rent donors themselves can appear as rent seekers at a higher decision-making level (Pawelka 1993). There are accordingly ***rent-seeking hierarchies***. Individuals and groups display rent seeking behaviour with respect to local authorities, which in turn display it with respect to those at regional level until the national level is reached. Here, the chain frequently continues at the international level. All national governments pursue rent seeking at the level of the international community. Such governments are known as rentier states, defined as governments obtaining a considerable proportion (at least 40%) of their budget in the form of rent from outside sources (Luciani 1987). Rents in this context can have economic origin (e.g. income and investment from petroleum) or political origin (e.g.

development aid). This external rent puts politicians and bureaucrats in rentier states in a unique position. They can largely do without taxes for the national budget, depriving the call for democracy based on the slogan "no taxation without representation" of any basis from the start. Instead they act as socially elevated and benevolent rent donors, buying political loyalty and support from strategically important groups.

2.7 Rent seeking and corruption

Rent seeking is extensively linked with corruption. How far rent seeking constitutes or involves corrupt behaviour is ultimately a matter of definition. The range of possible definitions of corruption extends from bribery through to abuse of an official position for private purposes (cf. For example Dietz 1998 and Pritzl 1997). Rent seeking can hardly be described as corruption if it operates within the existing legal framework and legally permissible scope of action and decision-making. Politicians' favours to clients or lobbying by interest groups are not in themselves corrupt behaviour. Ultimately, a certain exchange of information between politicians and the population is essential for the functioning of the system. According to Pritzl (1997), rent seeking can be described as corruption at the point where politicians and bureaucrats specifically exploit their current opportunities to manipulate the existing institutional framework so that in future it serves their own private interests. This includes specifically material advantages and financial benefits. Corruption is also present if illegal financial benefits – e.g. bribes – are used for rent seeking. Here again, members of "developed" nations should not be too quick to point the finger at developing nations. Certain western democracies display exactly the same problems, as shown by the unresolved problem of donations to political parties. There are at least corrective mechanisms here.

3. Rent seeking in irrigated agriculture:

The results of scientific research into rent seeking have only been applied on an isolated basis to development cooperation. Repetto (1986) with his "Skimming the water: rent seeking in the performance of public irrigation schemes" was the first to introduce a new perspective into the debate over problems of irrigated agriculture and ways of overcoming these, at least in the short term. Rent seeking is widespread in irrigated agriculture. However, the extent of it, and hence its impact, varies substantially from country to country, region to region or project to project. The issue of rent seeking has been considered in Germany since the end-80s in political research (Schmid 1991) and in corporate theory (Erlei 1996, Kräkel 1997 and Wolff 1999). The topic has acquired new importance in international development cooperation with the publication of the world development report "The state in a changing world" (World Bank 1997), focusing on the central role of the state in the development process in the Third World. In this connection the chief criticism is directed at the misallocation of state resources and the overblown bureaucracy.

With regard to the debate on managing complex systems of exchange, the institutional economic view of the bureaucracy as a management system is a highly promising approach to identifying rent seeking in irrigated agriculture. Consideration of rent seeking in terms of actors and institutions makes it possible to reinterpret problems of irrigated agriculture (e.g. questions of economic efficiency, demand management, operation or maintenance) and to develop new concepts.

3.1 Ideal institutional conditions for rent seekers

According to World Bank estimates, some USD 600 billion will have to be invested in the world's water supply in the next decade. The sheer volume of resources alone makes rent seeking behaviour appealing in this area. Another factor is the institutional structures typical of many projects. Large public irrigation projects in particular are in danger of being overlaid by rent seeking. First, they are almost entirely subject to the bureaucracy as a management system, because the government bureaucracy is also the central decision-making, operating and controlling body. Here, the institutional environment acts as an incubator and ideal feeding ground for rent seekers. Second, irrigated agriculture is a goldmine for rent seekers and rent donors, because it is the object of huge government investment and payments, frequently made possible with external financial or technical assistance. There are simply countless rents available from government bodies (e.g. agricultural ministry, water authorities) for social interest groups (e.g. large-scale farmers) or individuals (e.g. old established families) to collect. The resources allocated by the state include for example water quotas, land, monopolies of cultivation, sale and marketing, payments for operation and maintenance and – above all – the wide range of direct transfer payments, e.g. in the form of free or cheap supply of water. Rent appears by definition as profit when agricultural products are sold. It is then that part of income which can only arise from state-imposed distortion in prices and markets. Rent seekers who have for example succeeded in obtaining water virtually free benefit in the form of rent from the water tariff which they would otherwise have had to pay for the supply.

Rent can also be collected in other ways, i.e. directly. Development cooperation practice has frequently shown how government officials and employees of government agencies can use projects to provide further sources of income for themselves. For example, project-related commissions, committees or working parties are set up, creating additional paid positions. Another known phenomenon is the "per diem gatherer". Participants in workshops often have the primary aim of collecting daily allowances and travel expenses. Where the issue of water is controlled by water management officers and "ditch riders", there is the danger that they may demand a gratuity from farmers for opening farm sluices. Particularly in view of the difficult financial situation of many civil servants and employees in the lower and middle levels of official agencies, it is not surprising if additional sources of income are sought, created and exploited. This becomes a particular problem if significant sums vanish into the bureaucracy and the financial resources allocated by the state no longer suffice for the intended purpose.

3.2 Ideal social conditions: strong interest groups

In considering irrigated agriculture it is also necessary to take into account the problem of rent seeking because agrarian interest groups – primarily large landowners – traditionally constitute strong pressure groups which no political leadership can ignore. Generally, in fact, these interest groups occupy parts of the top level of the national bureaucracy. This means that politics and the agricultural sector are directly interrelated, leading to a situation where major agricultural interests are reflected to a disproportionate extent in concrete political decisions.

Individual rationality and the functioning of rent seeking were outlined in general terms at the start of this paper. As irrigated agriculture is frequently affected by rent seeking, major public irrigation projects will be used as an example for exploring what preferences and priorities determine the actions of the actors (i.e. rent seekers and rent donors). This question is crucial in analysing not only central and bureaucratic control systems but control systems generally, because the actors and their interests and motives are decisive determinants of all organisational systems.

3.3 Water user preferences which determine action

For farmers, the top priority is the availability of water and other production resources. For the farmer or landowner the central questions relating to water in large public irrigation systems are: how do I get water for irrigation? How do I ensure that I keep a certain quota? How can I reduce the costs to my advantage? As the large public irrigation systems are operated by government agencies, water is seldom available for purchase on the market, and there is often no enforceable legal claim for water allocation, farmers accordingly mostly depend on the bureaucratic rent seeking system to achieve their goals. Without the "favour" obtained from the agencies – in this case the fact and amount of water distributed by the agencies – farmers are unable to farm (and hence make an income) at all: Farmers will have to invest a great deal of time, energy and creativity to gain entrance to all possible agencies and lobby them. This is not just a matter of making a brief application. Relationships have to be made and gradually cemented in order to get on the "distribution list" As a result, activities aiming at overall economic efficiency and ecological sustainability of water use suffer. The reason is that these are less profitable for the individual than rent seeking activities

> **Example: Jordan**
> Studies by USAID in Jordan show that farmers spend a disproportionately large amount of time on contacts with government agencies. Even small farmers make laborious trips from the Jordan valley to Amman to visit the Ministry of Agriculture and Irrigation. The agencies recall an oriental bazaar, with crowds of people and wheeling and dealing (cf. PRIDE 1992).

Rent seekers in irrigated agriculture are broken down by their available means (influence, time, money) and what they want to achieve where. Large landowners, for example, will start at a high level in the administration to get exclusive cultivation rights

for profitable products. Small farmers will apply to state agricultural extension services for agricultural supplies Dealers will approach the relevant agencies to acquire marketing rights.

> **Example: Jordan**
> The major landholdings are almost entirely in the hands of traditional trans-Jordanian families, some of which hold top positions in the government, e.g. the office of minister president). They are the key figures in the extremely lucrative cultivation of export products. The central national Jordanian market for agricultural products in Amman is dominated by some 20 dealers, who are regarded as having great political influence (cf. Renger 1996).

3.4 Resource distributor preferences which determine action

Government and ministries

The government and ministries are the topmost national resource distributors, and primarily follow the ***goal of retaining power***. For this, they pursue a policy of distribution and favour aimed at initiating a stream of new, large-scale government irrigation projects instead of operating existing irrigation systems in a way which is economically efficient and sustainable in terms of development policy. Irrigation projects are very attractive to the government for a number of reasons. They increase the scope for distribution in order to serve old and new clients, e.g. through land allocation, water supply and licensing. As parts of the government are often recruited from agrarian interest groups, self-serving has priority. In decisions on land reform (e.g. exceptions to the upper limit on ownership) or infrastructure (e.g. routing of canal systems) it is clear that high-ranking officials and traditionally influential landowners are frequently favoured. Large-scale and (particularly) new irrigation systems are very prestigious and are eagerly exploited by politicians and high-ranking officials to improve their own images. Due to the long time horizon of irrigation projects, implementing the conditions imposed by international donors (e.g. the introduction of water tariffs) can easily be delayed. The complexity of major state irrigation projects makes it easier for those who have power over resources to distribute these on a politically motivated basis. Existing and deliberately encouraged asymmetries in information make it difficult even for appropriately motivated international controllers to push through improvements in efficiency against the interests of the national political leadership. Ultimately, given adequately long-term and complex projects the political leadership will always find an argument supporting its position which is impossible to test directly, so that it does not even have to reach the point of an open conflict of interests.

> **Example: Uzhbekistan**
> In the Soviet period, a gigantic system of irrigated agriculture was created in Uzhbekistan for cotton growing on the steppe and desert. The Aral Sea

disaster is one of the tragic consequences of this economic policy. Despite corrections to the political system in the course of independence in 1991, parts of the old *nomenklatura* have seized the cotton industry. Unfair economic advantage, political self-serving and nepotism are the core problems in the irrigation sector. Structural reforms urgently needed for an irrigated agricultural system which is macroeconomically desirable and ecologically appropriate are still outstanding despite international pressure (cf. Renger 1998).

Statal and parastatal organisations

Statal and parastatal organisations play a key role in irrigated agriculture. They are generally the long arm of the ministries, or (frequently) pursue an autonomous distribution policy. They allocate the actual resources for distribution, i.e. land, canal systems, water, agricultural supplies, services (e.g. O&M) and agricultural credits. These organisations have their own view of themselves, not as a development agency or even a service company, but rather as an exalted distributive institution which is above the issues. ***The focus of their activities is not optimal management of the irrigation systems in economic and development policy terms, but rather management for political advantage.*** This involves first carrying out the instructions of the ministries, which the subordinate agencies depend on not only for their funding but for their very existence. Second, the officials and employees in the rent donor agencies follow concrete personal interests, such as maintaining the status quo, retaining resources and creating its own structure of dependencies dominated by patronage. To ensure the maintenance of the status quo, each agency must establish a political profile with the superior agencies and appear important in the struggle for power. This also means that it must compete with other agencies for state resources (primarily funding), thus itself taking on the role of a rent seeker. Frequently – and particularly in the water sector – agricultural agencies compete with urban water suppliers for scarce water resources. Another widespread phenomenon is for agencies to establish systems of patronage for offices and bureaucratic simony. Often, organisational units are occupied by a relatively closed social group (e.g. people from a given region, ethnic group or family). Friends, acquaintances and relatives form virtually closed communities, developing a distributive coalition and benefiting reciprocally from the rents made available. It is no coincidence that many agencies are accordingly totally overstaffed. Above all, resources disappear somewhere within the apparatus. It is important for the agencies to make their policy as obscure as possible, to make full use of their discretion and decision-making authority and thus strengthening their position in the rent seeking systems. The retention or distortion of information – for example relating to the availability of water – makes it possible to play rent seekers off against each other.

Example: Kenya

In the Ewaso Ngiro region, numerous bureaucratic agencies have emerged at various levels in the course of administrative decentralisation. Whether intentional or not, confusion about competency has emerged on a previously unknown scale in the agricultural sector as a result of unclear assignment and definition of responsibilities between ministries, water distribution

agencies at province and district level, and sectoral institutions (e.g. regional development, agriculture etc). At the same time, competition has risen sharply between groups of actors (including cattle breeders on large farms, land purchase companies, European farmers, immigrant clearance farmers, pastoral nomads and tourism companies) for land, water and government assistance. Due to the high level of organisation and optimal contacts with the political leadership, European large scale farmers have been particularly successful in asserting their interests in irrigated agriculture (cf. Sottas 1996).

International financial donors

Under development cooperation, the international donors supply financial and technical aid for large-scale state irrigation projects. As the grant of development aid also pursues *the donor's own geopolitical regional and global goals and economic interests*, attempts to implement important conditions to prevent rent seeking are frequently little more than token efforts. As a result, crucial economic, institutional and (above all) political structural reforms are still outstanding in irrigated agriculture in many developing countries.

4. The impact of rent-seeking on irrigated agriculture

The actor-based study of rent seeking has already outlined examples of the impact on irrigated agriculture. The following sections systematically examine individual problems of irrigated agriculture from the new institutional economic perspective of rent seeking.

4.1 Economic inefficiency and water waste

Economically efficient use of water resources is not a priority for actors. For the government, ministries and subordinate agencies, "politically efficient" water use is the decisive consideration. Water use, i.e. water supply and distribution here, is based on considerations of dominance. Once water has been deeded, promised or actually distributed to strategically important groups or individuals, the goal has been reached of binding these politically through material benefits. The farmers have to work on two fronts – first, in the fields, and then at the agencies. Time and energy are absorbed in rent seeking. As water distribution is subject to a process of negotiation within an uncertain and barely defined systems of laws and norms, all attempts to achieve efficient water use are incalculable in their consequences and accordingly of subordinate importance. Private investment in irrigation technology to increase productivity involves enormous risk. Profit is first realised in the political sphere, and then only in the market. The issue of economically efficient water use shows particularly how rent seeking distorts the overall system of economic incentives and evokes different economic behaviour which is thoroughly rational within the constraints of the system.

4.2 Encouragement of obscurity and deficient control mechanisms

Irrigation systems often fall short of their development policy and economic goals because lack of transparency prevents effective management and control. The agencies frequently have inadequate financial accounts, controlling, logistics and statistics. Monitoring and evaluation by the agencies leave a great deal to be desired. An additional consideration is the reticence on the part of agencies to make laws, regulations and rules or water management and agricultural data available to the public. For government agencies and organisations, any form of transparence is a direct threat to their comfortable position as the allocative institutions. Lack of transparency is a crucial condition for creating scope for action and decision-making in assigning rights of use and disposal or transfer payments. It is accordingly not surprising that all activities aiming at accountability, data collection and control encounter resistance. This applies for example to the introduction of water meters to record water consumption. Rent seekers – both large-scale farmers and small farmers – also have reason to fear transparence. This is because transparence involves the risk that other social groups and sectors (e.g. town dwellers, industry) and international donors will demand correction to hard-won privileges.

4.3 Suppression of the control effect of water prices

International donors require water tariffs to cover the costs of operating and maintaining irrigation systems. The introduction of water tariffs which even approximately cover costs is an illusory goal in systems characterised by rent seeking. None of the actors has any interest in this. Rent seekers will do everything possible to prevent the introduction and collection of water tariffs. They succeed in this not because they pursue particularly subtle strategies, but because they are in alliance with all the government institutions. For political decision-makers, considerations of power politics make water tariffs inappropriate. Water tariffs arouse demands and cause unrest. Ultimately, someone who pays has an entirely different sense of their rights. The water authorities are also not committed to water tariffs, because they generally flow directly to higher-ranking institutions. The decisive factor is that realistic water tariffs would deprive them of their role as distributive agency, so that they would have to provide the corresponding services. Frequently, water tariffs are introduced de jure in order to satisfy international donors, but are not collected de facto. The efficiency in collection of state water agencies is accordingly extremely small for the most part.

4.4 Deficiencies in operation and maintenance (OM)

In predominantly rent seeking systems, almost all state services in operating and maintaining large public irrigation projects have the nature of rent. Operation and maintenance do not function in their own right, but because they are created, allocated and possibly withdrawn by state agencies as assets for distribution. The actual recipients, e.g. farmers, have to engage in rent seeking for this purpose. Mostly, operation and maintenance are heavily subsidised by the state. Only minimal financial

demands are made of farmers for the purpose of covering operation and maintenance costs. They benefit from the resulting savings in the form of rent.

The ***water agencies*** responsible for operation and maintenance have primarily to ensure that the irrigation system functions in accordance with the state of negotiations in the distributive game with water users. Economic operation of the systems is not the objective here. Questions of maintenance also play a subordinate role. The state agencies are much more concerned with implementing a steady stream of new projects and systems, to give themselves more political scope for manoeuvre. New systems mean new assets for distribution and – naturally – enhanced political prestige. The temptation to have international donors finance and install new systems is another motivation. Why maintain existing systems if new ones are more politically opportune, and are even financed into the bargain? "The faster it crumbles, the faster we get brand new" (Ostrom et al. 1993).

It is even possible to argue that the agencies have an interest in the systems not operating. Disfunctionality of systems is one of the structural foundations of rent seeking. Everything has to be negotiated, even things which would seem to be automatic, like cleaning canals or opening farm sluices. This gives the agencies the opportunity to consolidate their position of power as the allocative institution, because rent seekers are forced to step up their lobbying and compete with each other. At the lower and middle bureaucratic levels in particular, there is a wide range of opportunities for direct corruption in the form of collecting payments for "additional services".

> **Example: India**
> In south India, a comprehensive system of corruption has been uncovered in irrigated agriculture. Government officials and employees, and particularly the engineers at the lower level, made money by keeping government funds for operation and maintenance, and by taking bribes to place orders for construction and from farmers for supplying water. These activities were covered and promoted at a high political level by the sale of lucrative positions in the irrigation agency (cf. Wade 1982).

The official agencies will have little chance of providing adequate management of irrigation systems in a rent seeking environment. The classic management functions – planning, organisation, control and management – take on their own meaning within the system in this case. Planning aims at acquiring resources from higher state institutions. Organisation, control and management cover essentially the direction of the bureaucracy and the social environment for power political purposes. Operational and strategic management is focused on questions of "politically efficient" allocation of resources.

Officials in rent seeking systems are mostly extremely sceptical about reform efforts aimed at decentralisation and (in particular) delegation of authority. This applies not only to the decision-making level, but also to the levels involved in operation and

maintenance. Under considerable political pressure, certain functions are often transferred to water user cooperatives. This means, however, considerable weakening in the agencies' position as allocative institutions, and hence their power – quite apart from the opportunities for acquiring improper privileges. Officials accordingly generally do everything in their power to oppose their loss of influence, specifically on the operation of systems.

Example: Indonesia
As a result of a crisis in public finances, the Indonesian government was forced to introduce economy measures in the agricultural sector as well at the start of the 90s. One strategy has since been to transfer the operation and maintenance of irrigation systems to water user cooperatives, not least in order to enable streamlining of the totally overblown bureaucracy. These are, however, proving very resistant to reform efforts. First, reforms are delayed by the irrigation agencies, so that the formation of water user cooperatives and the transfer of functions has been held up in many areas. Second, the water agencies have actually succeeded in exerting concrete influence on central government decisions, e.g. so that reforms have been limited to small-scale irrigation instead of covering the large public irrigation systems as well, as originally planned (cf Bruns, Amato 1995).

The ***farmer*** is confronted by rent seeking in all areas of the irrigation system. He has to ensure that the water reaches his fields through the primary and secondary systems. Operation and maintenance of these systems are generally the responsibility of official agencies, i.e. if there is no water user cooperative with the relevant authority. The farmer must frequently "organise" operation and maintenance , i.e. meet with the agencies and negotiate accordingly. For this it is crucial to have established stable relations with the agencies and their operating units, as this is the only way to keep the investment in rent seeking within reasonable bounds. Repetto (1986) argued in this connection that demand for all possible services connected with operation and maintenance will rise excessively. The more is asked for in rent seeking, the greater the probability of actually getting something. This is particularly true for irrigation systems in the farmer's fields. As will be seen in detail, private investment for maintenance in particular is highly risky, and is accordingly made with great hesitation. Instead, it is much more profitable to acquire new systems and equipment through the agencies. This is also linked with the hope of earning more through modern equipment. As in rent seeking systems the institutional context – here, for example, land use rights, water allocation or sales guaranties – are subject to constant change, and are accordingly unpredictable in the medium and long term, questions of maintenance take on subordinate importance from the start. The farmer's focus is on the present, i.e. engaging in rent seeking and farming. Farmers, like officials, accordingly have only marginal interest in maintenance. In contrast to this, farmers have great interest in the

functioning of the irrigation systems, as their agricultural production and hence their livelihood depend on this.

4.5 Deterring private investment

As already briefly outlined, private investment in a rent-seeking environment represents an incalculable risk. As farmers in many developing countries frequently have no long-term use rights or even property rights in irrigation systems, private investment by water users can hardly be expected. Nevertheless, many international donors call for financial participation by water users in the form of contributions to an investment fund. The goal here is to encourage water users to make responsible use of the systems. In open and unstable institutional environments like rent seeking systems, this goal is unattainable. The financial contributions will most likely not be associated with rights and security, and will probably vanish somewhere in the bureaucratic apparatus. As long as the institutional uncertainties persist, any financial contribution by the farmers themselves is merely an additional burden.

4.6 Blockading organisational improvements

Rent seeking is an extensive barrier to modernisation in irrigated agriculture. This relates less to the technical state of the systems than to the knowhow in managing irrigation systems. In this context, the knowhow relates to organisation and management. For the state agencies as operators, technical and organisational improvements are entirely welcome, but only in the sense of new assets for distribution. The possible favourable economic and development policy effects of new technology or organisation are secondary considerations as far as they are concerned. However, improved technology in particular is extremely welcome as additional assets for distribution. There is correspondingly great interest in acquiring a great deal of modern technology through international donors. Farmers generally rely on the agencies or even monopoly distributors in purchasing new technical equipment. There is rarely a free market in this, as the distribution of agricultural supplies and capital goods is largely subject to state regulation. Breaking this up, however, brings us back to questions of organisational improvement. As already noted, if organisational improvement does not feed into the power of decision-makers, there is no interest in this.

5. Institutional constraints on rent seeking in irrigated agriculture

Rent seeking is a phenomenon to be taken seriously, with the ability to undermine the development policy and economic goals of irrigation projects. As we have seen, rent seeking is one reason why many public irrigation systems display serious deficiencies, for example in terms of operation and maintenance, productivity, economic efficiency or sustainability.

5.1 Requirement: analysis and disclosure of actors' interests

Recognising that institutional environments can have a decisive influence on the behaviour of the range of actors in irrigated agriculture is of decisive importance in managing complex irrigation systems. This is because actors do not behave in a way that we would expect e.g. from the perspective of economically optimal operation of the irrigation systems. All experience shows that most people are not altruistically following any official organisational targets, but rather pursuing their own goals, which may conflict with the organisational objectives. To this extent there is an entirely separate functional logic which has to be understood before the interaction between actors in the operation of irrigation systems can be improved.

As the large public irrigation projects are organised as state bureaucracies, the focus shifts to the analysis of the bureaucracy as a management system. With the help of the results from the new institutional economics, the manifold forms of rent seeking in irrigated agriculture can be identified. This is no academic exercise, but a matter of extreme importance for the practical implementation of projects in development cooperation. The undoubtedly discomfiting disclosure of the interests of the actors and their modes of behaviour provides information for example about who is bringing what motivations to a project, and who supports it more or less enthusiastically. An associated consideration is that the causes of problems cannot be found solely in the traditional framework of irrigated agriculture itself. In numerous cases, for example, solutions based on irrigation technology will be predictably insufficient to counter identified problems appropriately. Instead, organisational concepts are needed to configure the institutional framework so that key problems in irrigated agriculture can be avoided in advance. To give an illustration, a clogged irrigation canal is generally not a technical problem but the result of an organisational mistake – specifically, that nobody has any incentive to unblock the canal as quickly as possible, or perhaps to ensure that blockages are avoided as far as possible in operation. Instead, it may be advantageous for the "responsible" actor to wait until the desperate farmer offers a "gratuity".

5.2 Goal: to make rent seeking less attractive than productive activities

The goal of all measures directed against rent seeking is to modify the institutional environment in such a way that rent seeking is no longer profitable, and productive activities (profit seeking) become attractive instead. This means reorganising social and economic systems of incentives.

For this purpose, fundamental ***reforms in the political system*** of the developing countries concerned are needed, such as the introduction of separation of powers and the principles of the rule of law, creating transparency, democratisation and political participation for all citizens, as well as promoting the free market economy and private sector. ***Internal bureaucratic reforms*** are also needed on the lines of private sector service providers, for example the introduction of an accounting system coupled with

performance-related systems of compensation and promotion (cf. for example Picot, Wolff 1994). Such reforms demand above all a clear commitment and determination by the political leaders of the states involved and the international donor community to press on in the face of the resistance to be expected.

Concrete steps can be taken against rent seeking in ***irrigated agriculture***. There are a range of possibilities for this in the institutional sphere aiming at restructuring the organisation of irrigation systems and the relationships between the various actors. Development cooperation can make a decisive contribution here, drawing on long years of experience in structuring institutional environments under technical cooperation. For this, however, a political understanding is needed of development cooperation, together with a corresponding mandate.

5.3 Securing and promoting private sector commitment

A key element in constraining rent seeking is promoting private sector commitment. Even in societies in which rent seeking is a widespread phenomenon, there are actors interested in changes in the system which promote efficiency. These frequently include the craft trade, commercial and industrial sectors, and social groups such as the urban middle classes and small farmers. It is important to promote these, in order to increase their political weight. We see how entrepreneurs invest, both inside and outside state-dominated irrigated agriculture, in profitable areas such as the manufacture of export products, distribution of agricultural supplies, marketing and transport. The structural modification programmes initiated years ago in many countries (e.g. Peru, Jordan) are showing their first fruits here. Compared with the state sector, the private sector is able to show considerable success in irrigated agriculture, as the competition here systematically penalises inefficiency. The actors are aware of this, and accordingly behave in an efficient manner from the start. The international donor community should accordingly ***promote investment where it helps limit opportunities for bureaucratic influence***. For example, collective and private storage and pumping installations reduce dependence on state water agencies.

5.4 Creating transparent financial responsibility in irrigation systems

Financial reforms should aim at creating direct and transparent financial relationships between all the actors. ***Decision-makers must also bear full financial responsibility for the results of their decisions***, right down to the level of the individual.

Agricultural agencies for example could be given a ***published budget*** for which they are responsible to their customers and to the agencies at higher levels. Official services going beyond basic state functions can be at least partly financed through fees. ***Water fees should be paid directly to the water agencies*** and used by them for the operation and maintenance of installations. Funds provided by higher-level agencies for investment, operation and maintenance should be recovered and repaid. A ***repayment system*** of this kind can not only counter the disappearance of funds but also encourage economic commitment.

Individual actors who fail to discharge their responsibilities should themselves be discharged. Successful performers or applicants must be promoted accordingly or rewarded or compensated in other ways. ***Public disclosure*** must be made of these measures and for successes and failures in irrigation. Ultimately, public pressure from local and global public opinion in the media age is the most promising way of eliminating undesirable situations at the various decision-making levels. In many cases, tax money is (also) involved. As a result, publicity leads to pressure on decision-makers to pursue efficiency. This applies at least to the extent that decision-makers wish to preserve an appearance of democratic legitimacy, to avoid other adverse consequences.

5.5 Utilising the management effect of prices and competition

While the market is not a panacea, economic incentives operating through market and competitive structures are still an appropriate means of constraining rent seeking. ***Exchange relationships which are as clear as possible*** should be established between the various actors in irrigated agriculture, i.e. clearly defined performance in exchange for clearly defined contributions. Water users, for example, should participate in the investment costs of installations, if this is combined with ownership or long-term user rights. Fees for water, operation and maintenance of installations should be collected, provided that the service in return for these is clearly specified. The fees must go to the agencies providing the service to be paid for, and those creating the demand for the service must have alternatives available, at least over time. Otherwise, economic incentives cannot have their effect.

Competitive alternatives can be created by ***auctioning adequately defined service packages for limited periods among various service providers***. The latent threat of losing the order after the end of the contract promotes – self-interested – restriction on the waste of resources (Wolff, Huppert 2000).

5.6 Goal oriented use of the influence of international donors

The international donor community has a central role in constraining rent seeking, as it is a key source of joint finance for the irrigation systems and can accordingly ***exercise great political influence on the governments of other nations***. Development cooperation should aim to leave no scope for rent seeking. At the level of development cooperation, projects can be designed so that they do not allow the conditions for rent seeking to arise at all. Transparency of decisions and allocation of funds, and the participation of autonomous target groups are promising approaches for this purpose. Otherwise development cooperation runs the risk of promoting rent seeking, as has happened frequently in the past decades.
It is also necessary to engage in political dialogue with the partner nations to promote systematically political reforms favouring civilian, democratic and free market structures.

5.7 Coherence: the link with GTZ policy of capacity development

It is explicit GTZ policy to promote human resources and better institutional and organisational structures in development cooperation. This is known as ***capacity building*** and occurs at various levels:

- individuals and groups
- institutions and organisations
- overall system of statutory, political, economic and administrative environments.

Our proposals are aimed primarily at the institutional and organisational level.

To limit the scope for negotiation in rent seeking, transparent and binding norms and rules are needed. In the long term the ***agencies*** must develop a new view of themselves away from that of an allocative institution. The core element of the new view should be service orientation in terms of the general welfare defined politically by the national population. Such a view does not emerge as a result of moralising and preaching, but through organisational changes.

1. For example, the responsibilities and authority of the agencies must be clearly defined and publicly stated.
2. The ability to reward good performance and penalise any violations of duties is also important.
3. For this purpose, performance must be capable of measurement, which is only possible on the basis of clearly defined target criteria and observable and measurable performance parameters.
4. Managing agencies also implies better monitoring of the work of the agencies, either through internal controlling or external review.
5. Transparency of costs and benefits is the basis for holding agencies to their duties, for example through legal, appeal or arbitration bodies, which also need to be created.
6. At the same time, new and formal channels of communication must be created between the agencies and their customers as a means of promoting the exchange of information. A useful element here is to have water users actually pay for services used. They will then act as more demanding customers, and so force the service providers to be more efficient.
7. If water users had a choice between different providers – at least over time – productive competition in service can emerge through the replacement of poor operators by better ones.
8. Other important elements are developing a body of qualified staff and strengthening the existing technical knowhow within the agencies. Training can contribute to this, as can public announcement of vacancies and transparent selection processes. These last measures also have the effect of countering nepotism and overblown bureaucracies.
9. Another important organisational reform strategy is to limit the responsibilities government bureaucracies in principle to the politically essential minimum and

transferring as many responsibilities as possible either to market providers or to the water users themselves.

The practice of development cooperation has shown that the formation of ***water user associations, communities or groups*** is a successful strategy for more efficient and sustainable irrigated agriculture. Democratically structured water user organisations can not only act as effective representatives of farmers' interests but also take over operational responsibilities from the government agencies. Practical experience in projects has shown that water users can make an autonomous contribution towards the operation and maintenance of irrigation systems. For this, individual models of incentive systems are required, so that agencies and water users can develop a mutual interest in the smooth operation of the systems and (particularly) their maintenance. According to Repetto (1986) it is particularly worth considering transferring parts of the irrigation systems to water user organisations by way of sale or assigning them for long-term (!) use.

One thing which the measures proposed here show clearly is that rent seeking cannot be combated through one measure alone. Instead, institutional reforms to the system are required simultaneously at a number of points, if sustainable success is to be achieved in the reorganisation process.

6. Summary

The present contribution analyses irrigated agriculture from a perspective of new institutional economics which has previously received too little attention, namely in terms of rent seeking. The individual behaviour of the actors (here primarily the irrigation agencies and farmers) is decisively affected by the institutional environments in the countries concerned. Institutions are both organisations and sets of rules and norms. Central and bureaucratically organised systems in particular display structural features which favour rent seeking. Rent seeking is the process of seeking income and advantages which are not matched by labour or investment in the productive sense. Rent seeking can be described as lobbying aiming at creating market and price distortions through higher-level regulatory bodies and obtaining transfer payments. Distributors of rents – mostly politicians and bureaucrats – base their policy primarily on considerations of dominance. They allocate resources (e.g. monopoly rights and subsidies) to social groups and individuals, receiving in return political loyalty and support. Rent seeking diverts resources from productive activities and leads to a redistributive policy which causes heavy welfare losses and social costs. It damages the economic and social capability of the affected system.

Large government irrigation projects are a goldmine for rent donors and rent seekers. Administration and operation are generally subject to a highly bureaucratic apparatus allocating a wide range of rents, e.g. land, water or services. This is largely made possible by international development cooperation. Agricultural interest groups, large

landowners and farmers strive through lobbying to obtain access to state-allocated resources and services. In this way, irrigated agriculture becomes overlaid by an unintended functional logic based on rational behaviour of individual actors aimed at individual goals. As a result, the focus of these activities is not on economic and development policy goals but on "political efficiency" in terms of specific interests. Irrigated agriculture acts as a platform for retaining and expanding power for politicians and bureaucrats. For the farmers too the issue is not primarily economically effective and sustainable agriculture, but rather the power of disposal over state-allocated resources, including water.

Rent seeking can accordingly be interpreted as a key reason for the diversity of problems in irrigated agriculture. These include minimal economic efficiency, exorbitant costs, deficiencies in operation and maintenance of systems, and the failure of control mechanisms. To enable irrigated agriculture to fulfil its development policy goals, it seems essential to combat rent seeking. There are numerous institutional approaches for structuring the organisation of irrigation systems and the relationships between actors in such a way that rent seeking no longer pays. First, it is important to promote private sector involvement and help competitive incentive structures. Second, it is necessary to regulate financial responsibility in particular so that resources are used for their original purpose. The logic here is for people who make good decisions to share in the profit from these and for those who make bad decisions to share in the consequences. Nobody should be able to derive advantages at the expense of others. Within government bureaucracies it is important to establish transparent and binding norms and rules aimed at defining clearly the responsibilities and authority of the agencies, and to give these legal force and make them transparent. The international donor community has a particularly important role in this. If it continues to reward and promote systems favouring rent seeking, no institutional improvement can be expected at government level. Development cooperation must give greater attention to the problem of rent seeking in order to meet its objectives sustainably.

References

Anderer, Gilbert (1991): Die politische Ökonomie eines Allokationssystems. Jordanien und die internationale Arbeitsmigration seit 1973 (= European University Papers, Series 31, vol.169) Frankfurt a.M./Bern.

Bruns, Bryan, Atmanto, Sudar (1995): How to Turn over Irrigation Systems to Farmers? Questions and Decisions in Indonesia, in: Johnson, S.H., Vermillion, D. L., Sagardoy, J. A. (eds.): Irrigation Management Transfer (= Water Reports No.5), Rome, pp.267-284.

Dietz, Markus (1998): Korruption – Eine Institutionenökonomische Analyse, Berlin.

Erlei, Mathias (1996): Beeinflussungskosten, Reorganisation und Pfadabhängigkeit der Organisation, in: ifo Studies 42, pp. 17-45.

Kräkel, Matthias (1997): Rent-seeking in Organisationen – eine ökonomische Analyse sozial schädlichen Verhaltens, in: Zeitschrift für betriebswirtschaftliche Forschung (ZfbF) 49, pp. 535-555.

Luciani, Giacomo (1987): Allocation Versus Production States. A Theoretical Framework, in: Beblawi, H., Luciani, G.(eds.): The Rentier State. Nation, State and Integration in the Arab World, Sydney / London, pp.63-82.

Milgrom, Paul, Roberts, John (1990): Bargaining Costs, Influence Costs, and the Organization of Economic Activity, in: Alt, James E., Shepsle, Kenneth A. (eds.): Perspectives on Positive Political Economy, Cambridge etc., p. 5789.

Ostrom, Elinor, Schroeder, Larry, Wynne, Susan (1993): Institutional Incentives and Sustainable Development. Infrastructure Policies in Perspective, Boulder/San Francisco.

Pawelka, Peter (1985): Politische Herrschaft im islamischen Orient. Zum Charakter und Funktionieren politischer Systeme im Mittleren Osten, in: Zeitschrift für Kulturaustausch, vol. 35, no. 4, pp. 459-468.

Pawelka, Peter (1993): Der Vordere Orient und die internationale Politik, Stuttgart/Berlin.

Picot, Arnold, Dietl, Helmut, Franck, Egon (1999): Organisation. Eine ökonomische Perspektive, 2nd ed., Stuttgart.

Picot, Arnold, Wolff, Birgitta (1994): Institutional Economics of Public Firms and Administrations: Some Guidelines for Efficiency Oriented Design, in: Journal of Institutional and Theoretical Economics (JITE) 150, pp. 211-232.

PRIDE (1992): A Water Management Study for Jordan (= PRIDE Technical Report No.4), Washington D.C.

Pritzl, Rupert F.J. (1997): Korruption und Rent-Seeking in Lateinamerika. Zur politischen Ökonomie autoritärer politischer Systeme, Baden Baden.

Renger, Jochen (1996): Wasserkrise und politische Herrschaft. Ein politikwissenschaftlicher Beitrag zur Erklärung der Wasserkrise am Beispiel der Bewässerungslandwirtschaft in Jordanien, Tübingen (unpublished manuscript).

Renger, Jochen (1998): The Institutional Framework of Water Management in Central Asia and Uzbekistan. Report for the Project „Water Resources Management and Agricultural Production in the Central Asian Republics (WARMAP), Tashkent.

Repetto, Robert (1986): Skimming the Water. Rent-Seeking in the Performance of Public Irrigation Systems (= World Resources Institute Research Report No.4), Washington, D.C.

Richter, Rudolf, Furubotn, Eirik (1996): Neue Institutionenökonomik. Eine Einführung und kritische Würdigung, Tübingen.

Schmid, Claudia (1991): Das Konzept des Rentier-Staates. Ein sozialwissenschaftliches Paradigma zur Analyse von Entwicklungsgesellschaften und seine Bedeutung für den Vorderen Orient (= Demokratie und Entwicklung), Hamburg.

Sottas, Beat (1996): Die Ewaso-Ngiro-Arena. Legitimation und Diskurse bei der Nutzung knapper Ressourcen nördlich des Mount Kenya, in: Müller, H.-P. (ed.): Weltsystem und kulturelles Erbe. Gliederung und Dynamik der Entwicklungsländer aus ethnologischer und soziologischer Sicht, Berlin, pp. 249-269.

The World Bank (1997): The State in a Changing World, World Development Report 1997, Washington D.C.

Tollison, R. D. (1993): Rent Seeking, Unpublished Survey, Center for Public Choice, George Mason University.

Tullock, Gordon (1967): The Welfare Costs of Tariffs, Monopolies, and Theft, in: Western Economic Journal 5, pp. 224-232.

Wade, Robert (1982): The System of Administrative and Political Corruption. Canal Irrigation in South India, in: Journal of Development Studies, Vol.18, No.3, pp.287-328.

Weede, Erich (1985): Warum bleiben arme Leute arm?, in: Politische Vierteljahresschrift, vol.26, no.3, pp.270-186.

Wolff, Birgitta (1995): Organisation durch Verträge, Wiesbaden.

Wolff, Birgitta (1999): Anreizkompatible Reorganisation von Unternehmen, Stuttgart.

Wolff, Birgitta, Huppert, Walter (2000): Governance by Contractual Rules – Improving Service Relations in Irrigation, MAINTAIN Thematic Paper No. 10, GTZ, Eschborn.