

Walter Huppert

**Irrigation Management
Transfer:
Changing Complex Delivery
Systems for O&M Services**

Division 45
Rural Development

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Walter Huppert

Irrigation Management Transfer: Changing Complex Delivery Systems for O&M Services

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Abbreviations

CB	Collective bargaining
E	Election
IO	Irrigation organisation
O&M	Operation and maintenance
O&MG	O&M group
PG	Primary group
PU	Public utility
S	Governmental authority
VC	Village community
WU	Water user

1. Introduction

A glance at the irrigation scene in developing countries in the 90s reveals two sharply contrasting images: on the one hand a clear recognition of and repeated emphasis on the importance of operation and maintenance issues (henceforth abbreviated to "O&M"), and on the other a broad neglect of these issues in practice. Whilst the total area under irrigation in the world has expanded substantially since 1960¹, the funds made available for O&M per ha have actually declined in real terms over the last two decades (Johnson, Vermillion and Sagardoy, 1995).

It seems something of a paradox that, even from a superficial perspective, the economic efficiency of O&M measures is not in doubt, and yet O&M issues as a rule enjoy only low priority among irrigation planners and decision-makers in the irrigation sector. A World Bank study on 48 newly-installed irrigation systems, for instance, revealed considerable O&M problems in a large proportion of these systems after only a brief period. "Clearly many were already on their way to becoming fashionable rehabilitation projects" (Carruthers, 1988).

In recent years, a response to this problematic situation has been sought increasingly in efforts to turn over full management responsibility and authority to the water users or their representatives. The Wuhan-Conference on "Irrigation Management Transfer" in 1994 produced evidence that a wide variety of approaches for transferring management to the private sector are being tested in different countries. Introducing irrigation service fees, fostering competition in service delivery, providing subsidies to O&M service providers, promoting financial autonomy of irrigation organisations, devolution of full O&M responsibilities, privatisation of assets etc. - all these are approaches and instruments currently being applied in various countries to realise this irrigation management transfer (Johnson, Vermillion and Sagardoy, 1995).

In the present paper it will be argued that these approaches can only be successful if and when they are an integral component of a process of change affecting the entire O&M service delivery system. To understand why, it will be necessary to take a fundamental look at the nature of irrigation systems in general, and the special features of O&M service delivery systems in particular.

¹ Between 1960 and 1995, the irrigated area in the world expanded by 130%, from approximately 100 million ha to 230 million ha. (Johnson, Vermillion and Sagardoy, 1995).

2. O&M as a service

First of all, it is important to see O&M problems in irrigation not only in terms of the technical infrastructure, but also in terms of the entire "socio-technical" system. In other words, not only the hydraulic infrastructure, but also a social subsystem need to be viewed as integral components of the irrigation system (Fig. 1). Taking a closer look at this social subsystem, one thing becomes clearly evident: as a rule, a large number of actors needs to be involved in order to guarantee O&M of the irrigation system. Several actors, e.g. governmental irrigation authorities, parastatal irrigation organisations, water user associations, water user communities, non-governmental organisations, private enterprises and others, may have to interact and cooperate in order to ensure effective and efficient operation, and appropriate maintenance. This means that a *network of actors* will be involved, which will be either larger or smaller, depending on the situation.

This network will include actors who provide services to the irrigating farmers directly, e.g. a maintenance group, an extension service or a supplier of inputs. In most cases, organisations or groups will also be involved who are responsible for processes of coordination and harmonisation among key actors, for the representation of interests, and for the implementation or enforcement of certain rules and agreements. In this context, federations, associations, umbrella organisations and other organisations of the "third sector" come to mind. Finally, in most cases other actors too will be involved - e.g. an agricultural and/or irrigation authority, an environmental agency, a cadastral authority, various legal bodies etc., which perform important administrative and regulatory functions.

Looking at the O&M function from a systemic and multi-organisational perspective of this kind, it is then no longer sufficient to see it merely as a technical measure to secure the operation, and maintain and restore the target status, of a system². The O&M function in irrigation is then also to be treated as a service. It is provided to certain service recipients or beneficiaries, and in the delivery of which several actors - usually several organisations or organisational units - have to interact. This "interaction" means that, within the network of actors, a number of supporting services need to be provided and exchanged. Only thus can the primary service "O&M" be generated. Supporting services of this kind might for instance include services of information gathering and transfer, planning and work preparation, intra- or inter-organisational coordination, as well as services to provide financial or material inputs for the realisation of O&M.

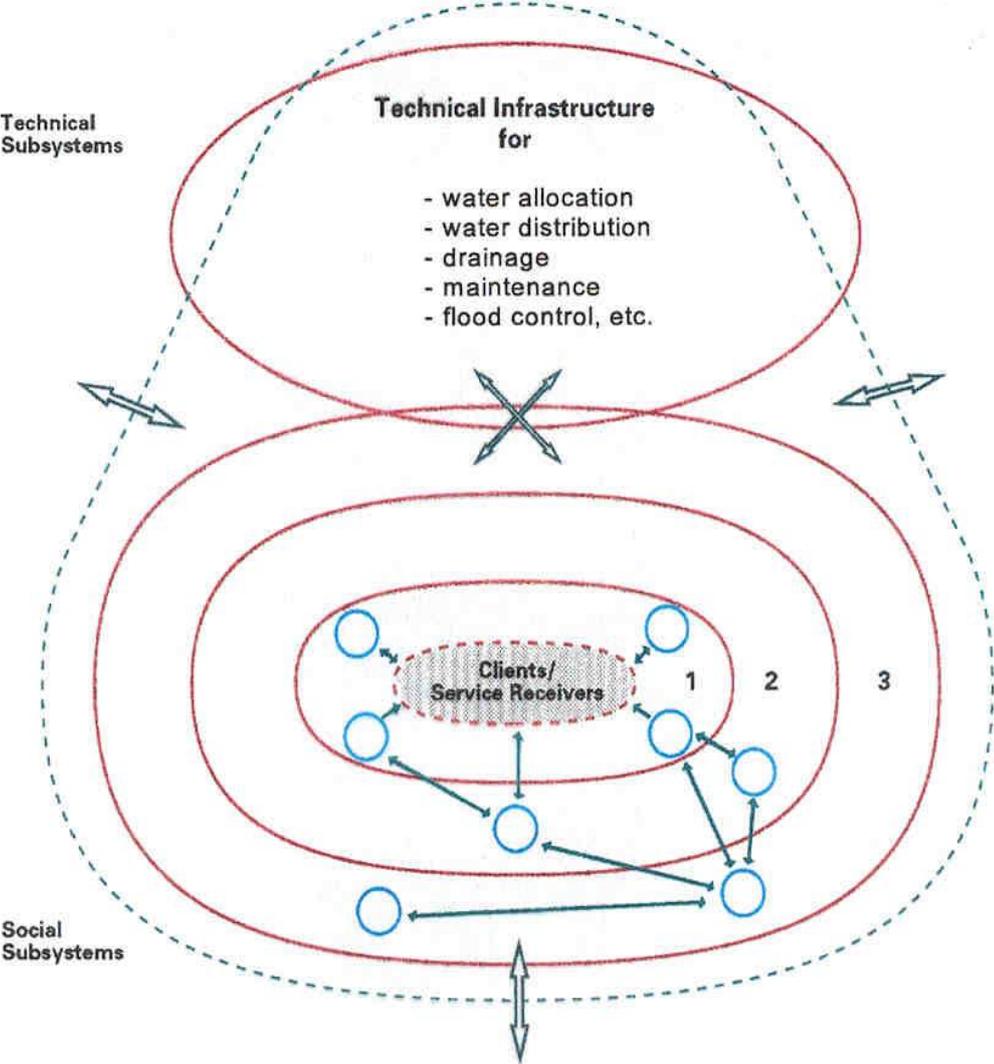
² According to the German standard DIN 31051 (January 1985 edition), "maintenance" is defined as follows: "Maintenance comprises measures to preserve and restore the target status, and identify and assess the actual status, of the technical aspects of a system. These measures include maintenance, inspection and repair measures."

3. Service delivery systems for O&M

De facto, a view of this kind means that O&M needs to be understood in the broadest sense as a service delivery system. Alongside the technical infrastructure, an "O&M system" includes all those organisations and groups involved in providing primary and supporting services, the primary and supporting services themselves, and the service interactions or relations which are needed to render the system operational. Essentially, a service delivery system of this kind can be conceived of as being structured on the basis of the elements listed below, as illustrated in Fig. 1:

- *The "client system"*, i.e. the system of the receivers or beneficiaries of the -economic criteria), their O&M services (differentiated by socio organisation(s), their needs, preferences and effective demand, their willingness and capability to perform and achieve, their status vis-à-vis rights and obligations of involvement in O&M, their economic situation and their solvency etc.
- *The "system of the service provider(s)"*, i.e. the system of suppliers providing or delivering the O&M services and related supporting services, their organisation(s), their objectives, interests, capacities, resources etc.
- *The services provided* and the supporting services delivered by the various actors.
- *The service interactions/relations*, understood as integral components of the service delivery process.
- *The service delivery infrastructure*, the technical subsystem (the hydraulic infra-structure).
- *The framework conditions* under which the O&M system operates, i.e. inter alia the technological and ecological conditions prevailing in the given region, as well as the overarching political, economic and social environment with which the participating actors are faced.

Figure 1: The O&M Service Delivery System in Irrigation



- 1 = Micro-Level: Suppliers of primary services
- 2 = Meso-Level: Suppliers of coordination, representation and negotiation services, interest groups
- 3 = Macro-Level: Suppliers of regulatory and legislative services

This understanding of O&M as a service within the context of a wider delivery system of the type described makes one thing clear: O&M problems can have very different causes. Only when the entire O&M system together with its various elements has been analyzed, and only when the interactions between the elements have become transparent, is it possible to state reliably whether and how the O&M problems in hand can be solved. However, analyses of this kind have to date only seldom been common practice, and have barely ever been requested by commissioning bodies. Under these circumstances, it can come as no surprise that O&M problems in irrigation must be numbered amongst the most critical problem areas of infrastructure development.

4. Control of Service Delivery

When trying to understand the exchange of services within a network of participating actors, as is the case with respect to O&M services, it is important to consider the existing "exchange systems" and the associated exchange mechanisms, which largely determine how such networks function. The term "exchange system" is meant here to refer to the laws, procedures and common practices that determine the ability of two exchange partners to take managerial decisions with respect to the exchange relationship.

It is important to remain aware that exchange processes, and hence also service relationships, can occur within different kinds of exchange systems. In other words, there are different systems designed to control and regulate interactions between the exchange parties. The importance of these differences is frequently overlooked. This is because the exchange system we have become used to when we buy goods or services is assumed to be simple and essentially uniform: here the exchange relationship itself consists in exchanging a benefit (i.e. goods, services) in return for money. The overarching exchange system within which this relationship takes place is the *market*, and the main mechanism shaping this relationship is the (market or monopoly) *price*.

The opposite pole to control of service provision by the market is centralised control by the state, or by a directive authority, or in more general terms the exchange system of *hierarchy*. The exchange mechanisms here are plans, directives and other elements, by means of which a management level with directive management authority ensures that preset goals are achieved.

It is interesting to note that, for a long time, the debate on alternative exchange systems retained its exclusive focus on the two systems "market" and "state", and that the current privatisation debate is also frequently simplified in that it refers only to these two alternatives.

However, one basic characteristic of service delivery by non-profit organisations is the fact that, as a rule, several exchange systems and exchange mechanisms are involved simultaneously, and there is a greater variety of such systems than in the business sector, where the market mechanisms described clearly predominate.

It is to the credit of the disciplines of "service economics" and "new institutional economics" and their scholars that the diversity of possible exchange systems has been given due attention. In the authors' opinion, Herder-Dorneich is of special significance here, and the ideas developed in this chapter refer explicitly to his work (Herder-Dorneich 1986) and also use his way of illustrating exchange relationships in

diagrammatic form. A number of important exchange systems, their respective exchange mechanisms, and critical aspects associated with a specific system are summarised in Tab. 1.

Table 1: Major Exchange Systems and their Characteristics

Exchange system	Exchange mechanism	Potential problems
<ul style="list-style-type: none"> • Market 	<ul style="list-style-type: none"> – variable (market/monopoly) prices 	<ul style="list-style-type: none"> – hardly suitable in situations lacking transparency and where dependencies are strong
<ul style="list-style-type: none"> • Collective bargaining 	<ul style="list-style-type: none"> – negotiations, agreements 	<ul style="list-style-type: none"> – prone to political influence
<ul style="list-style-type: none"> • Quasimarket 	<ul style="list-style-type: none"> – fixed prices (but free choice of producer) 	<ul style="list-style-type: none"> – consumer unable to control essential aspects of the exchange relationship (type, extent and price of the service)
<ul style="list-style-type: none"> • Hierarchy / central administration / bureaucracy 	<ul style="list-style-type: none"> – plan, directive – control – application and authorisation / licensing procedures 	<ul style="list-style-type: none"> – not possible to cater for individual cases and personal needs
<ul style="list-style-type: none"> • Election system 	<ul style="list-style-type: none"> – voting in/ out – nomination – accession, opposition, protest, – contribution mechanisms – solidarity mechanisms 	<ul style="list-style-type: none"> – hardly suitable for the provision of interactive services, since voting produces majority decisions leaving little room for consideration of individual interests
<ul style="list-style-type: none"> • Non-market exchange systems 	<ul style="list-style-type: none"> – exchange – (re)allotment – queues – charges – solidarity mechanisms ('moral persuasion') 	<ul style="list-style-type: none"> – confidence / trust
<ul style="list-style-type: none"> • charity systems 	<ul style="list-style-type: none"> – donations – (re)allotment 	<ul style="list-style-type: none"> – problem of 'inconclusive' service relationships

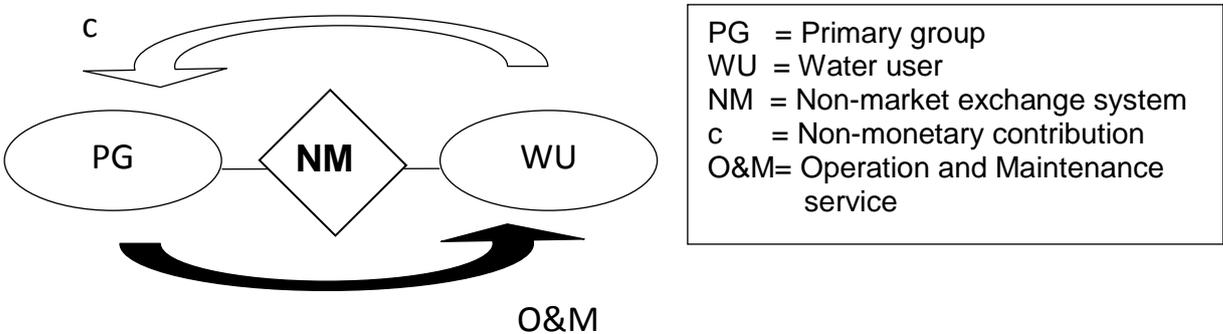
5. Control of Service Provision: Typical Basic Situations

In order to explain the principle of service delivery for O&M in irrigation in the context of different exchange systems, we will initially ignore the fact that this service is made up de facto of several sub-services such as water procurement, water distribution, maintenance etc. In order to make the basic principles easier to understand, we present in a highly simplified form a number of idealised types of basic situations, which attempt to cover at least approximately the broad spectrum of situations encountered in the real world of irrigation.

5.1 Type 1: Control of O&M service provision in primary groups

The first simplified type of service system for operation and maintenance in irrigation is the basic model of exchange relationships in primary groups. Here one could, for example, imagine small-scale irrigation systems of a few hectares in size in the Andes, run by a small group of people - in the Andes often an extended family. This is a case of service interactions in groups so small that the individual actors can easily communicate and consult with each other face-to-face. In this way mechanisms of solidarity and social pressure can take effect. This basic type of exchange system is illustrated in Fig. 2.

Figure 2: Primary Group: Non-market Exchange System



A primary group as described above (PG) provides the service "operation and maintenance" (O&M) to the individual irrigation farmer and water user (WU). The farmer as the recipient of the service provides a return (c), which could be either monetary or non-monetary. How is it possible in this case to control the service exchange, i.e. how

can it be ensured that service and the return are rendered in the interests of both actors and can continue to be so in the future?

If we assume that there are two actors interacting here, neither of whom is subordinated to the other, and each of whom can therefore make decisions completely independently of the other, then control cannot take place by one side issuing instructions to the other. Control in fact takes the form of action and reaction by the two parties within a non-market framework of behavioural rules, of the kind found in traditional neighbourhood help systems. One side performs a service for the other side, and the traditional norms and values specify precisely how a quid pro quo is to be rendered. Were the recipients of the service to infringe these rules, they would incur social sanctions. This fact they would have to take into account in a cost-benefit calculation in case they were considering not rendering the quid pro quo.

On the other hand, it is relatively easy for service recipients to exert influence if the service performed does not meet their expectations. Their direct say in decisions on service delivery ensures that they are able to react if the service is performed inappropriately.

In this way a closed feed back loop is formed to control service delivery. The balance between service and quid pro quo is maintained in a process of action and reaction.

Functional control systems of this kind in irrigation are still to be found in many communities (*"comunidades"*) in the Bolivian Andes, for instance. Traditional principles for organising community work apply here, and these are so clear to and binding on the individual that the "non-market" control system functions smoothly, without any need for additional regulatory mechanisms, even for operation and maintenance of village irrigation systems.

5.2 Type 2: Control of O&M services in larger community systems

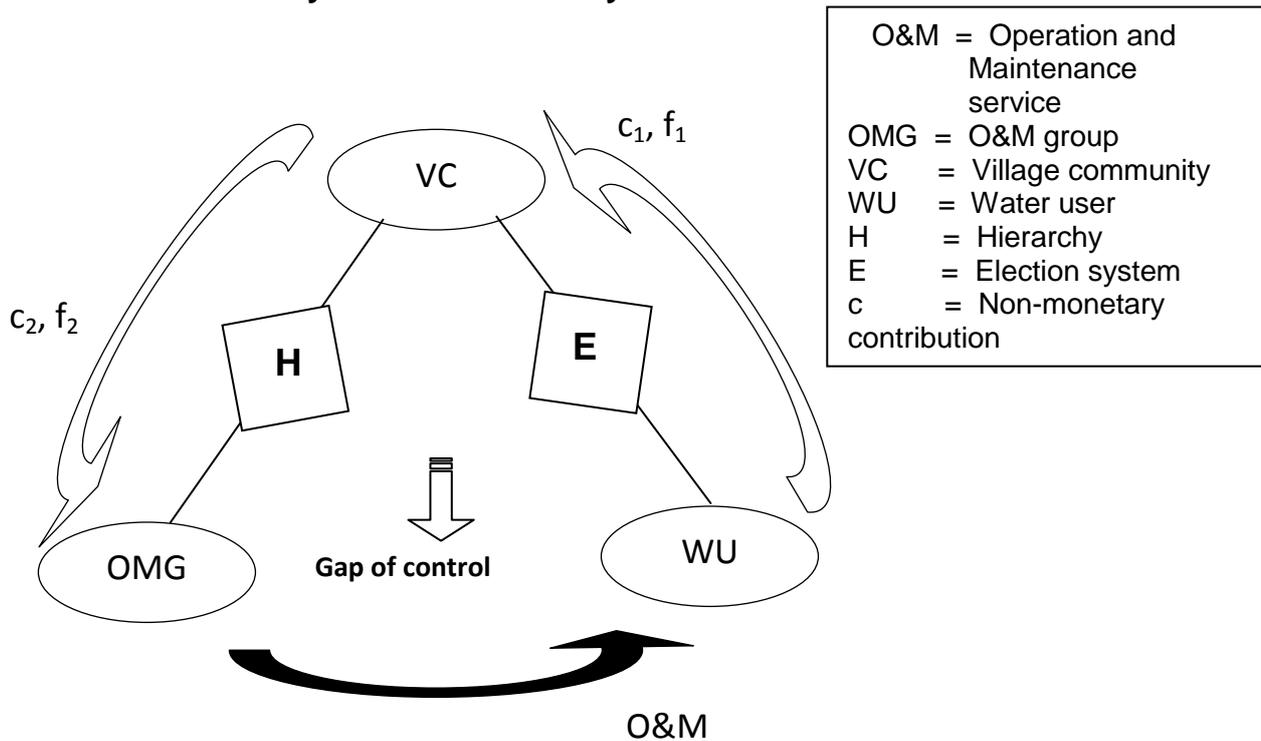
Control of service delivery in the operation and maintenance of irrigation systems as described above becomes considerably more complicated in groups that are too large for all members to know each other personally. Here, the individual cannot monitor the actions and reactions of each individual as they relate to O&M. Cases such as these are the rule in larger irrigation systems, where responsibility for operation and maintenance is borne by the water users. Since decision-making processes involving all actors are possible only in exceptional cases in such large ("secondary") groups, a single water user normally cannot exert any direct influence on the nature and scope of service provision. Thus a system of direct action and reaction between service providers and individual service recipients described under Type 1 no longer exists. A *gap in service delivery control* is created between the service providers and the single water user.

Here, control of service delivery has to be mediated by a third party. In systems of this kind, decisions on the provision of services are usually taken by representatives of the water users, i.e. by group members who have been appointed through election procedures. This "election system" is thus a system by means of which the individual member can attempt indirectly to close the control gap and exert influence to cause the service - in this case the O&M service - to be performed in his or her interests.

By means of the "election system" representatives are chosen - for a delegate assembly, an executive committee etc. - to whom decision-making powers are delegated. Such decision-making bodies can then issue instructions to implementing bodies to perform certain operational tasks or services.

A control system of this kind, involving several individual exchange systems for O&M services, is shown in simplified form in Fig. 3.

**Figure 3: Village Community System / Farmer Managed Irrigation System:
Election System and Hierarchy**



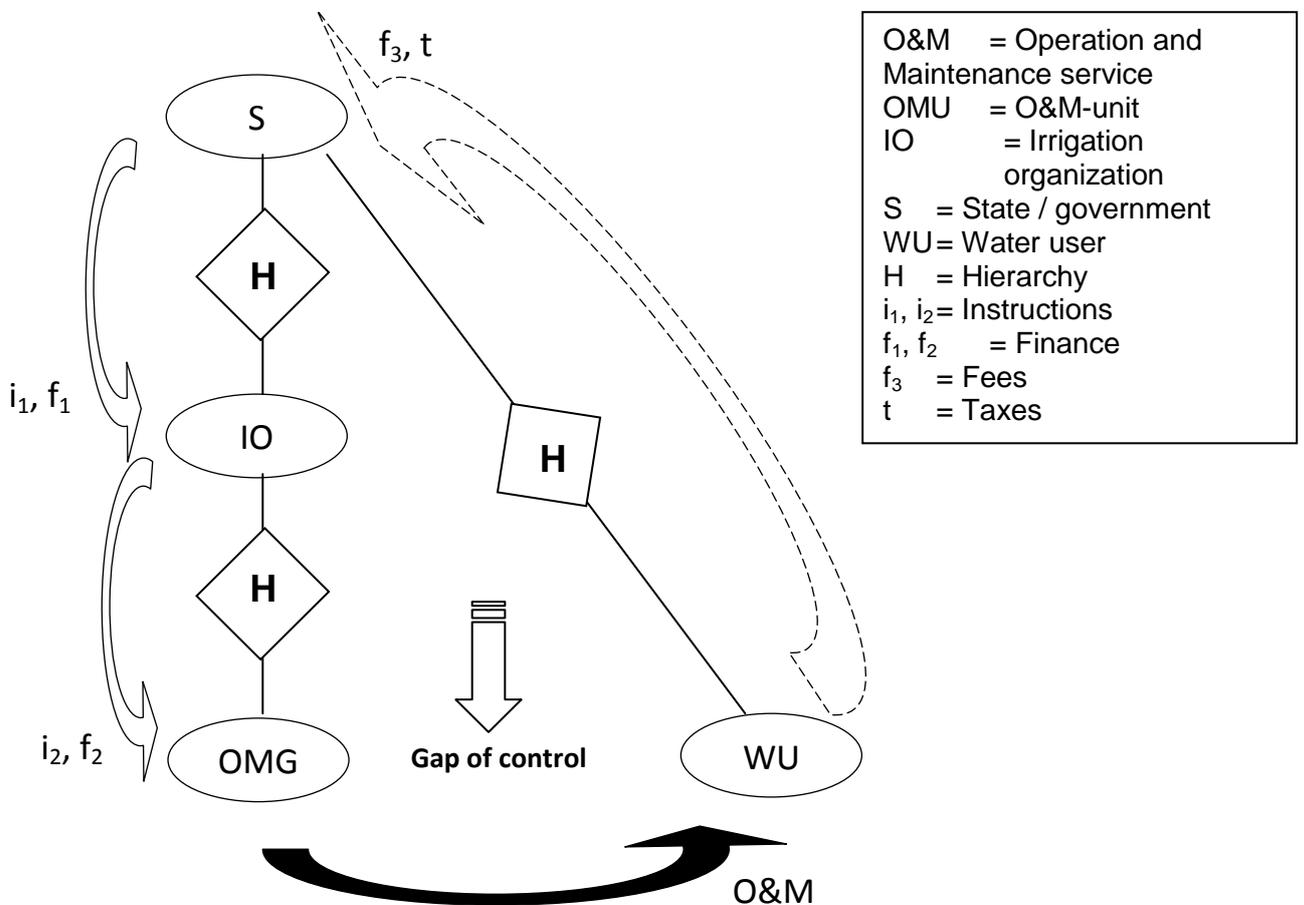
The authorised decision-making representatives of a village community (VC) give an O&M-group (OMG) assigned by them instructions to perform certain O&M services (control subsystem "hierarchy"). To this end they provide them with the necessary monetary and non-monetary resources (c₂, f₂). The irrigation farmers and water users (WU), who are ultimately the beneficiaries and hence "recipients" of these services, are members of the village community with voting rights (exchange system "election" E). They pay their "membership contributions" or dues (c₁, f₁) to the community.

The above-mentioned mediation of control by a third actor is performed here through the village community as such or by the body it authorises to take O&M decisions. The system through which service delivery control takes place in the sense of a closed feed back loop thus in fact *embraces two different exchange systems*. Only when these exchange systems are functioning and harmonised can they be expected to ensure effective O&M service delivery.

5.3 Type 3: Control of O&M services in a centrally administered system

Where services are provided in a system of central administration, closing the gap in service delivery control is more difficult than in the preceding example. This is the case with large irrigation systems operated by governmental or parastatal irrigation organisations. The large-scale irrigation systems in the former Soviet Union or systems such as the Muda irrigation system in Malaysia may be referred to as examples of this type of control of service delivery. Fig. 4 attempts in a simplified form to illustrate the basic pattern that control follows in such situations:

Figure 4: Parastatal / Centrally Controlled Irrigation Organization:



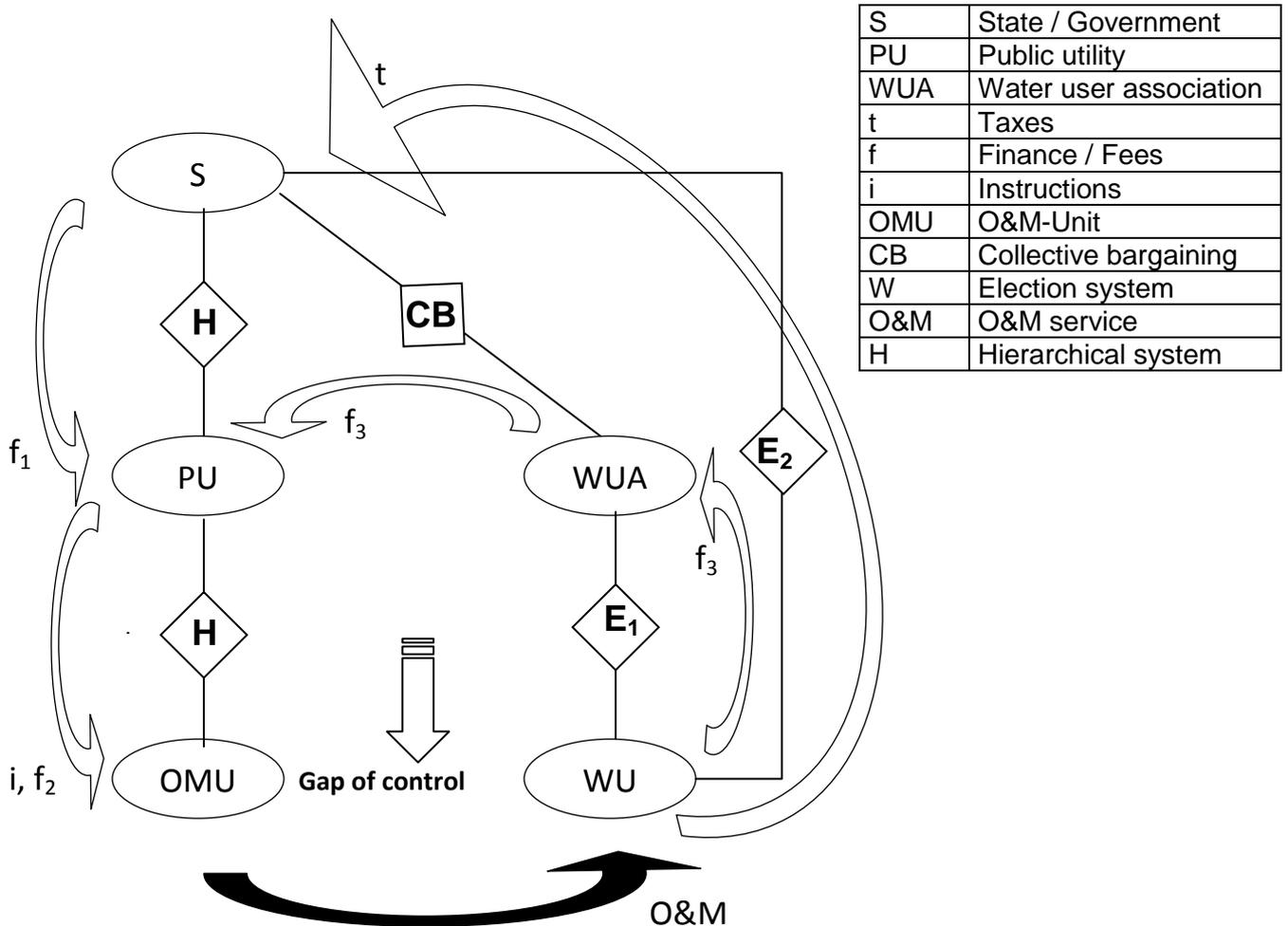
A governmental authority (S) charges a statal or parastatal irrigation organisation (IO) by means of plans and directives (exchange system "hierarchy") to perform O&M services. To this end it allocates the necessary budget (f1) and gives certain instructions (i1). This state organisation in turn assigns an O&M unit to perform the relevant services (OMU). It gives it the necessary instructions (i2) (control system "hierarchy") and makes the necessary resources available (f2). This unit now performs the O&M tasks, without the individual farmers as beneficiaries having any significant opportunity to influence service delivery. These farmers are bound by state decree ("hierarchy") to pay certain fees or dues (f3) as well as taxes (t).

This type of control in O&M service delivery in irrigation shows the fundamental dilemma of centrally administered control: the customers/recipients of the service - in this case the farmers - have virtually no chance of having their wishes and preferences directly taken into account. This is why the arrow from WU to S in Fig. 4 is shown in broken line. This means that there is no properly closed feed back loop and no genuine self-regulating system here. Service delivery is one-sided, there is little or no opportunity for harmonisation between service provider and service recipient. The control system does not allow the customer any service control function at all. The consequences are well known: under such conditions it will be difficult to provide a service that is geared to people's needs.

5.4 Type 4: Control of O&M services by a public utility

An idea of the diversity and complexity of a control system for O&M service delivery in irrigation can be obtained by considering such a system in another still highly simplified - situation. Fig. 5 illustrates the control of O&M services by a public utility within a pluralistic state where formation of genuine interest groups (associations, federations etc.) is possible. One example of this type of control are the irrigation systems in the Murray Valley in South Australia, where a semi-governmental organisation makes irrigation water available "on demand" to independent water users, who themselves have strong lobbies representing their interests.

Figure 5: Public Utility in a Pluralistic Society: Hierarchy, Election and Collective Bargaining



In this case the state (S) has established a public utility (PU) for the irrigation sector that is responsible for the operation and maintenance of the system in a region. For the tasks assigned by the state (control system "hierarchy")³ certain resources will be allocated (f₁) to supplement the fees charged for the service. The public utility itself sets up an O&M unit (OMU), which receives certain directives (i) (exchange system "hierarchy") and is provided with the necessary resources (f₂). Here too there is no opportunity for the farmers and water users (WU) as the recipients of the service to exert a direct influence on the service provided by this O&M unit, should the service fail to meet their expectations. Here too we therefore have to speak of a gap in service delivery control. The service recipients nevertheless do have "mediate" access to

³ To speak here of a hierarchical system is of course a gross over-simplification which fails to do justice to the service relationships between the state and a public utility. As in the case of the other simplified control systems mentioned here, it would be necessary to take a closer look at this control system and the contractual arrangements it implies.

specific control options. For one thing they belong to a water users' association (WUA) whose delegates and committee members were elected with their participation (exchange system "elections" E1) and to which they pay contributions (f3). This association or the relevant umbrella organisation (which is not shown in Fig. 4) represents a strong lobby that can negotiate important questions with the competent state authorities (S) or with the public utility and settle them in the interests of the farmers (exchange system "collective bargaining" CB). Farmers who believe their interests are not being properly represented will of course try in future to elect other representatives to the bodies of the association. If this still does not result in an O&M service that is satisfactory for the farmers, they still have as a further control instrument the option of trying at the next local or regional elections to bring about a different constellation of political parties in the state decision-making organs (exchange system "elections", E2) in order to improve representation of their interests.

Fig. 5 shows how complex control of O&M services or other non-commercial services can be. It also shows how many different exchange systems can be involved, and thus how diverse the causes of O&M problems are in reality likely to be.

5.5 Type 5: Control of O&M services in the market system

How simple the control of commercial services can be in ideal cases as compared with service delivery as described in Type 4, can be seen from Fig. 6. Here individual farmers are able to choose between several O&M services offered for their irrigation system on a commercial basis. Thus they actually "buy" such a service and will choose the best and most attractively priced offer from among various suppliers (exchange system "market") and pay for it accordingly (exchange mechanism "price").

6. Complex Service Delivery Systems in Irrigation:

The Consequences

Tab. 2 once again provides a summary overview of the various aspects of the types of service delivery system described above. This overview, together with the above comments on the idealised types of delivery system, makes the following points clear:

- O&M services are provided within the framework of complex service delivery systems. Problems in O&M can therefore be caused by different elements within the O&M service delivery system. Consequently, it is necessary to view the service delivery system as a whole and within this wider context to identify the binding constraints. Narrowing the perspective to several selected elements - e.g. the technical infrastructure and the issue of financing - will as a rule fail to address the real causes of O&M problems.
- It becomes clear from Tab. 2 that an "irrigation management transfer", e.g. devolution of O&M control to the water users, needs to be understood as a comprehensive system change. It is not sufficient to turn over full management responsibility and authority to the water users and demand that they finance O&M themselves. The issue at stake is rather the achievement of the transition from one service delivery system to another. This means that a transition also needs to be made to other actors, other exchange systems, other supporting services, other control mechanisms, and another conception of self on the part of the water users.
- One key integral component of service delivery systems are the exchange systems. Exchange systems can be seen as the "life lines" of a service system. They facilitate or hinder the flow of services and quid pro quos within the service system. It is important that a closed system of service and financing flows is established, if service delivery is to be sustainable. This means that the operability of exchange systems must be a central point of focus in the analysis of and efforts to improve service systems.

- This paper has presented several key exchange systems in highly simplified form (Tab. 1). In reality, exchange systems of this kind are highly complex, and are shaped by local social, political and cultural conditions. Furthermore, more complex service systems, such as those which as a rule exist in conjunction with O&M services in irrigation, incorporate several, usually different exchange systems. It needs to be borne in mind that exchange systems cannot be "installed" on a short-term basis, but must emerge in harmony with existing socio-economic and socio-cultural conditions.

In summary, it can be argued that efforts to achieve irrigation management transfer, and thus decentralisation and privatisation in the irrigation sector, will only stand a good chance of success if and when a holistic view is taken of the respective service delivery system.

Table 2: Ideal Types of Service Delivery Systems in Irrigation

Type of service delivery system	"Community Allocation"		"Administrative Allocation"		"Market Allocation"
	Type 1 Primary Group	Type 2 Community System	Type 3 Central Administration	Type 4 Public Utility	Type 5 Market System
System elements	<ul style="list-style-type: none"> Responsible member of group and participant in decision making 	<ul style="list-style-type: none"> Active member with ultimate responsibility and delegation of decision making to "representatives" 	<ul style="list-style-type: none"> "Closely supervised worker" Taxpayer Beneficiary 	<ul style="list-style-type: none"> Customer, consumer Taxpayer Member of association 	<ul style="list-style-type: none"> 'Customer' (demander / payer / user of services)
CLIENT SYSTEM	<ul style="list-style-type: none"> Water user group 	<ul style="list-style-type: none"> User group, village community 	<ul style="list-style-type: none"> Government, statal irrigation organisation, maintenance unit 	<ul style="list-style-type: none"> Government, public enterprise, user association, maintenance unit 	<ul style="list-style-type: none"> Private irrigation farmer, maintenance provider
PROVIDER SYSTEM	<ul style="list-style-type: none"> Water user group 	<ul style="list-style-type: none"> User group, village community 	<ul style="list-style-type: none"> Government, statal irrigation organisation, maintenance unit 	<ul style="list-style-type: none"> Government, public enterprise, user association, maintenance unit 	<ul style="list-style-type: none"> Private irrigation farmer, maintenance provider
MAIN PARTIES INVOLVED	<ul style="list-style-type: none"> Water user group 	<ul style="list-style-type: none"> User group, village community 	<ul style="list-style-type: none"> Government, statal irrigation organisation, maintenance unit 	<ul style="list-style-type: none"> Government, public enterprise, user association, maintenance unit 	<ul style="list-style-type: none"> Private irrigation farmer, maintenance provider
SERVICE INTER-ACTIONS	<ul style="list-style-type: none"> Non-market (informal) system 	<ul style="list-style-type: none"> Hierarchy Election system 	<ul style="list-style-type: none"> Mainly hierarchy 	<ul style="list-style-type: none"> Hierarchy Election systems Collective bargaining 	<ul style="list-style-type: none"> Market
MAJOR EXCHANGE SYSTEMS	<ul style="list-style-type: none"> charges/(re) allotments Exchange Reciprocity 	<ul style="list-style-type: none"> Contributions/ membership-fees Elections Solidary mechanisms 	<ul style="list-style-type: none"> Fees Taxes Subsidies Directives Application and licensing procedure 	<ul style="list-style-type: none"> Fees Taxes Subsidies Directives Elections Agreements, bargaining 	<ul style="list-style-type: none"> Marketprices/ monopoly prices
DOMINANT EXCHANGE MECHANISMS:	<ul style="list-style-type: none"> charges/(re) allotments Exchange Reciprocity 	<ul style="list-style-type: none"> Contributions/ membership-fees Elections Solidary mechanisms 	<ul style="list-style-type: none"> Fees Taxes Subsidies Directives Application and licensing procedure 	<ul style="list-style-type: none"> Fees Taxes Subsidies Directives Elections Agreements, bargaining 	<ul style="list-style-type: none"> Marketprices/ monopoly prices
TYPE OF FINANCING	<ul style="list-style-type: none"> charges/(re) allotments Exchange Reciprocity 	<ul style="list-style-type: none"> Contributions/ membership-fees Elections Solidary mechanisms 	<ul style="list-style-type: none"> Fees Taxes Subsidies Directives Application and licensing procedure 	<ul style="list-style-type: none"> Fees Taxes Subsidies Directives Elections Agreements, bargaining 	<ul style="list-style-type: none"> Marketprices/ monopoly prices
SECONDARY CONTROL MECHANISMS	<ul style="list-style-type: none"> charges/(re) allotments Exchange Reciprocity 	<ul style="list-style-type: none"> Contributions/ membership-fees Elections Solidary mechanisms 	<ul style="list-style-type: none"> Fees Taxes Subsidies Directives Application and licensing procedure 	<ul style="list-style-type: none"> Fees Taxes Subsidies Directives Elections Agreements, bargaining 	<ul style="list-style-type: none"> Marketprices/ monopoly prices

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