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IRRIGATION MANAGEMENT NETWORK

PROSPECTS FOR MULTIFUNCTION ORGANISATIONS TO IMPROVE IRRIGATED AGRICULTURE
A Call for Information from Network Members

Network Paper 32

April 1994

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Comments received by the Network may be used in future Newsletters or Network papers

ISSN: 0951 189X

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PROSPECTS FOR MULTIFUNCTION ORGANISATIONS TO IMPROVE IRRIGATED AGRICULTURE

A Call for information from Network members

Local organisations are acknowledged as a critical force in supporting rural livelihoods. In irrigation development and rehabilitation there has been strong promotion of irrigation organisations whose primary functions are in operations and maintenance, either directly or through paying service fees. However, irrigated agriculture requires a number of other functions including:

- supply of agricultural inputs (such as seeds, fertilisers etc.)
- organisation of other production factors (such as labour, capital)
- marketing/ensuring contract production

Rural livelihoods require yet other functions, including:

- input supplies and marketing for other crops and livestock products
- management of domestic water and sanitation
- environmental management
- management of local affairs
- broader political representation

It is not uncommon for irrigation organisations to take on some of these other functions, either formally or informally to become 'multifunction' organisations. Equally, it is not uncommon for more general local organisations to be present, within which irrigation management is only one component. Sometimes, however, functions remain separated, with different functions coordinated by representatives of different groups within a settlement.

Multifunction organisations (MFOs) are not new in irrigated agriculture. They have always been in existence, even if not formally created or recognised as such. They are often used as a basis for NGO-initiatives, and have been promoted specifically under cooperative programmes. However, the interest in the development of such organisations has grown, as financial reforms and state disengagement have increased interest in decentralisation and privatisation.

Despite the growing interest, and a lot of historical activity, very little is documented of irrigation organisations who mesh additional functions, even though their organisation may assist production, and provide incentives for co-operation that help to reduce conflicts and disagreements over water supply. In reverse, failure of effective organisation of other functions, or interference in them, often destabilises irrigation management. Such organisations may be used or expected to take up other functions by their members.

As explained, such interests are not new. Historically, many functions were just performed as necessary within a community on the decision of representatives. It is with commercialisation, high input agriculture, bureaucratic nation-state development and state penetration that functions have been both developed and separated. In the 1960s and 1970s there were many experiments in the development of co-operative organisations in agrarian reform programmes. Many of these experiments had a chequered history. What can be learned from these experiences, and what will be different in new decentralisation land privatisation initiatives to prevent such experiences being repeated?

This short mailshot is a request for network members to send in their comments, or short papers if available. We highlight the following points to initiate discussion. However, please write in with additional points, or feel free to disagree.

- Do you know of local organisations with responsibilities for irrigation operations that also take on other functions? Why have they taken on this multiplicity of functions, and how well does it work? We have a very poor understanding of what organisations do and how users perceive their functions, as opposed to how they are legalised or described by researchers.
- To what extent can irrigation organisations be conceptualised in isolation from other local organisations/institutions? What additional resources and agencies enable this 'multiple function' approach to work? What are the special challenges for regional and national support agencies in this multifunction approach?
- Some countries have experienced a number of political administrative reforms, together with a range of special assistance programmes. What have been the experience of changes in joint performance of functions over time, as different organisations, and different political and economic pressures have been present? How often do we find organisations from historically distinct periods still playing a role?

- From MFOs known so far, what are the links with the state and the reorganisation of state agencies ? Do MFOs exist because of state initiatives (e.g. co-operatives) or in spite of the state (ie. as a response to state inadequacies or incompetence and persistence of older cultural norms). Or is it increasing links with non-government agencies, or with private companies involved in contract farming, that are a source of change?
- If there are different organisations managing two or more functions, how well do they cover these different activities? For example, is it the presence of dynamic individuals who in effect create multifunction organisations? In reverse, when settlements have different group activities serviced separately, do certain individuals end up important in all of them? In some cases, membership of irrigation organisations may be different from other local governance or agricultural formations. How is this resolved?
- Do MFOs appear when there is less of a tradition of irrigated agriculture, or mixed farming predominates? Or do they appear because of other pressures on the irrigated farming system?
- Where do MFOs originate, from the grass-roots or from above? Where they do appear, is there a history of functionally-oriented co-operation, or co-operation based upon kinship, affinity etc? In what ways do they function differently from single-purpose organisations?
- For effective action, there is a need to balance the specific focus of single function organisations with the desire to extend the scope of local organisations. To what extent are MFOs a response to the lessons learnt from local co-operation based around a specific function?

The 'community' is perhaps the word most commonly used in development policies and programmes (except, perhaps for the 'household'). The term community is a particularly malleable concept that has strong connotational meaning, and consequently political dimensions. Assumptions are often made about the nature of 'communities' that exist, as well as those that interventions wish to create. A community forms a key component in the strategies of political linkages of many nation states. Sometimes new concepts of 'community' may not be very relevant to local conditions. Conversely, people may use old and new concepts of community very effectively to obtain resources from the state.

The use of concepts of community has particular ramifications in irrigation and water management. On the one hand, the users of infrastructure are often considered to be a community, or expected to form as collective

organisation (even though there may be great differentiation within this community). On the other hand, communities may manage rights to land and water, which may or may not conform to the institutions the state may wish to be present for those land and water sources.

If you have any additional comments about how concepts of 'community' are being used (positively or negatively) by local people or agencies please send them to us.

Please circulate this to colleagues for further comment. We would appreciate replies by the end of November, but please still write to us after that date if you have comments.

Richard Friend and Linden Vincent
Irrigation Management Network
October 1993

Kanda Paranakian
Faculty of Social Sciences, Kasetsart University

I know the water users organisations that take on other functions besides irrigation operations. The reason is that availability of water alone is not sufficient for farmers to increase agricultural products. They need other inputs such as credit, agricultural extension services, product incentives, transportation and marketing facilities. How well it works depends on either its leadership, or government officials' strong commitment on agricultural development projects, or both. In some irrigation projects, private companies provided seed, fertiliser, pesticide, and production incentives through the water user organisations.

From a user's perspective, the organisation should have multiple functions. Some water user groups collect membership fees for fund raising. This group fund can be used for irrigation maintenance and to provide its members with low interest rates. To the researchers, registered organisations become legitimate. However, the organisational objectives of groups are sometimes not clear. For example, the WUA aims at involving farmers in operation and maintenance activities and promoting the maximisation of water use. This second objective is broad and can be differently interpreted. Some organisations specifically indicate what kind of benefits the members should get.

Irrigation organisations can be conceptualised in isolation from other local organisations/institutions only when they are involved in irrigation project operation and maintenance. Other agencies under the Ministry of Agriculture and Agricultural cooperatives, the financial institutions and the private companies enable multiple function approaches to work.

We rarely find organisations from historically distinct periods still playing a role. With economic, political and social changes in the country, the organisations' leaders requested technical assistance that allowed members participation. For example, the People's Irrigation Organisation in Northern Thailand (where cash crops have been introduced) requested that the Royal Irrigation Department replace the bamboo irrigation structure with a concrete one, so that the members spend less time on repair and maintenance. Again, with the government intervention, the organisational leadership is important for the members' commitment and involvement in organisational activities.

Multifunction organisations (MFOs) exist because of one, or all, of the following factors:

i) members seek help or services from the government agencies in addition to that already provided;
ii) the government encourages farmers to join co-operatives;
iii) members are encouraged to join private companies' contract farming in irrigated areas;
iv) in some irrigated areas, non-government agencies also involve farmers in contract farming.

If there are different organisations managing two or more functions, whether they cover these different activities well or not depends on their links with either the government or the private companies or the non-government agencies. It seems that MFOs appear because of the pressures on the irrigated farming system.

MFOs can originate from either the grass roots or from above. If they originate from the grass roots, there is more potential for sustainable organisational development. MFOs are not necessarily based upon kinship or affinity.

MFOs are a response to lessons learnt from local co-operation based around a specific function when irrigated agriculture is strongly promoted and services are delivered to the members in time.

Phil Woodhouse
Institute for Development Policy and Management, University of Manchester

With respect to multifunction organisations I'm afraid I haven't enough time to think through properly what I wanted to say, but it appears to me that the 'groupements' about which I wrote in Senegal were moving towards this type of organisation. If so, an important characteristic is the 'nesting' of different types of function. That is, different functions are conducted most effectively on different scales. For example, field-level water management appeared to be conducted by groups of maximum 20-30 members. Many such groups would then belong to a much larger organisation responsible for commercial functions, such as negotiating credit with the bank, negotiating fertilizer purchase with traders, arranging transport of rice to mills. I could discern an intermediate level of organisation which was related to pump

ownership, or occupation of a land served by a secondary part of the irrigation infrastructure.

The essence of this type of organisation is a kind of federal relationship at all levels.

Norman **Uphoff**
Cornell University, Institute for Food, Agriculture and Development

I think that you are pursuing a very useful issue. Might I suggest you see pages 139-141 of the book *Local Organisations* that Milton Esman and I wrote (Cornell University Press, 1984) and which must be in the ODI library? In that study, we examined, quantitatively, the correlation between single vs multiple functions and overall effectiveness of local organisations. Contrary to the prevailing view in the literature, which stress the advisability of single functional organisations (e.g. WUAs), we found a positive relationship between performance and number of functions. I won't try to repeat the discussion and explanation offered. See also pages 223-224 on why it appears best to start with a single function but then to branch out when, and as, members want to achieve a wider range of goals.

The sample of 150 cases analysed in our study included a wide spectrum of local organisations. Seventeen, or a little of 10% were irrigation associations.

I wish that I had time to respond to your question in some detail with our experience in Sri Lanka. My book on the work in Gal Oya, *Learning from Gal Oya: Possibilities for Participatory Development and Post-Newtonian Social Science* (Cornell University Press, 1992), goes into some detail on this but not in a summary way. Evidence of farmer initiative to branch off into other areas (like pest control, savings and loans, bulk purchases of fertiliser, etc.) are found throughout Chapters 4-9.1 comment on some of the things done by farmer associations in irrigation schemes in Polonnaruwa district as well.

An example unique enough that I should write a bit about it for you concerns on of the farmer association in Polonnaruwa, started under USAID's Irrigation Systems Management Project.

The association at Giritale with about 2,000 members concluded that for too long, farmers have been disadvantaged by the court system. Whenever disputes over land, inheritance, loans or whatever, were taken to courts, it took years to get a decision, and only real beneficiaries were the lawyers.

By a process I know nothing about, farmers decided that all disputes among farmers should be settled by their organisations. Any dispute would initially be taken to the Farmer-Representative for the farmers' field

channel (or to the relevant FRs if the farmers involved cultivated on different field channels).

Farmer-Representatives, I should note, are chosen by consensus (unanimity) from among the farmer cultivating on a particular field channel. They are unpaid, and serve in what is called a 'honorary' capacity.

If the FR (of FRs) cannot work out a mutually agreeable solution, the dispute is to go to the Distributary Canal Organisation, which is made up of all the FRs whose field channels get water from a given distributary canal. They hear the case and make a recommendation.

If the parties cannot agree with this decision, the case goes to the Project-level Committee, made up of representatives of the various DCOs. Again the case is to be heard and decided. The purpose is to seek some reconciliation of the parties, by arriving at what others think is the fairest resolution of the conflict.

I do not know how far this has gone. It was thought this would spread to other farmer organisations initiated as part of our programme. I know there are a number of people in Sri Lanka who could furnish more information on this issue.

Donald E Campbell
FAO, Rome

Regarding multifunction organisations, which include irrigation, Indian experience is very limited. The principle examples I am aware of are in association with a cooperative sugar factory, where the cooperative supplies all inputs and markets the product. It also buys water wholesale (at the head of a distributary) and distributes it to members. This has worked well, the communally-owned factory being the pole around which the enterprise revolves. There have also been a few pumped-lift group co-operatives, lifting water from a major canal and distributing it to members. One notable case (in Maharashtra) sponsored by a dynamic community leader went as far as pooling holdings to facilitate water distribution. It was a complete service cooperative and even had its own extension service. I believe members eventually had problems obtaining credit for communal land development works — a consequence of pooling their titles. It was set up in the early 1970s and I am not sure whether it still functions.

From limited conversations I have had, it seems that multifunction organisations which include irrigation distribution have not caught on in India. They have had enough difficulties with service cooperatives without

adding the problems of water distributions, unless, as discussed above, there is a strong common element such as sugar processing.

About twenty years ago, in West Bengal, there was a major venture into cooperative irrigation, primarily from tubewells, I believe. Sponsored by the then Chief Minister, it set out to be an answer to the problem of fractionation of holdings and the unwillingness of Bengali farmers to undergo land consolidation. The landholders became, in effect, shareholders in the enterprise, in return for submerging their titles into the common pool. The enterprise, call CAD, in this case Community Area Development, undertook all activities associated with irrigated agriculture in the area and the initiative had high-level sponsorship. Some of your Bengali readers may have more information.

Bryan Randolph Bruns
Independent Consultant Sociologist, Thailand

I will be interested to see what results you get from the mailshot on multifunction organisations. In Indonesia there is interest in this issue. I think it will be valuable if we recognise that irrigation management may be a sideline task of other organisations and does not always have to stand on its own. This can reduce the institutional overhead required for management activities.

However, I am concerned that we still lack good methods and indicators for facilitating the development of sustainable organisations in irrigation. Concern with multipurpose organisations could distract from promoting better irrigation performance. It would be much too easy to repeat the 'checkered' and disappointing experiences of government driven co-operatives, while neglecting the core irrigation tasks.

A related concern is how to enable irrigation organisations to take on additional tasks without imposing them as a universal requirement. To the extent that there are efforts to facilitate organisations working on additional tasks, are there ways to offer a menu of choices to farmers to consider? How can assistance respond to locally identified needs rater than imposing a single package.

In relation to co-operative experiences generally, and experiments in the Philippines more specifically, I think we need to be very aware of the dangers of developing organisations which are dependent on cheap credit or other subsidies which are unlikely to be available in to long run.

I would be particularly interested in information you receive regarding irrigation organisation activities in contract farming. This seems to be a

potentially important area for improving farmer incomes, but raises crucial questions of how to balance the interests of farmers and external organisations.

Dr S G **Bhogle and** Dr R B Bharaswadkap
Faculty of Social Sciences, WALMI

Maharashtra State, in India, is one of the pioneer states in using the co-operative sector on a large scale in various facets of development activities, such as agriculture, irrigation, sugar factories, dairy, industry and housing. The co-operative movement in Maharashtra is found to be most successful in its achievements.

The farmers' organisations in irrigation water management for strengthening the 'farmer-government partnership' is a present accelerated due to government initiative. These organisations are single purpose co-operative water users' societies in the Command Areas of Maharashtra state, formed for flow-irrigation systems. Distribution of water to the farmers as per a pre-determined and pre-intimated schedule and collection of water charges from farmers is the major function of these organisations. At present there is moderate financial support by the Government to these organisations by way of management subsidy and maintenance grants. Though these organisations are formed as single purpose societies, it is argued that these organisations should have multiple functions in irrigation-related activities.

The concept of multifunction organisations in irrigation water management is based on inputs involved in irrigated agriculture such as labour, seeds, fertiliser, insecticides and pesticides, water and credit. At present these inputs are provided to the farmers through different organisations in the rural areas. The present approach of multifunction organisations will be just like an 'umbrella approach' wherein it is expected to provide all the directly related inputs for irrigated agriculture by the cooperative water users' societies. This will result in both savings to the costs incurred by the farmers as well as the services being available at their fields.

It is necessary to undertake research studies for identification of gap and lacunae in the present functioning of these organisations and then, slowly, various other functions can be entrusted to these organisations.

There are two very old organisations functioning in the Maharashtra state since 1935-36 in the field of irrigated agriculture. The long experience — of about 57 years — of these two prominent organisations, serve as cases

supporting the statement of multifunction concept of farmers' organisations. These two organisations are:

i) The Sanvatsar Vibhag big — Bagayatdar Credit Cooperative Society, at Lonkar Vasti; Sanvatsar, Kopargaon, Ahmednagar, Maharashtra India. On Godavari Left Bank Canal.
ii) The Saswan Mali Society on Nira Right Bank Canal at Malinagar, Malshiras, Solapur, Maharashtra, India.

The Savatssar Society

The Sanvatssar Society is a successful and ideal example of multifunction organisation in irrigation water management which was established in 1935. This organisation has various departments such as Foodgrains Department, Oil Department, Irrigation Water Distribution, Credit Department and Implements and Equipment Department. The Society earns profit from these various functions and thereby has a solid economic footing. An example can be quoted: the Society maintains and repairs the 'field channels' of farmers at the Society's cost and no charges are recovered from farmers for this activity. (Here, it is necessary to note that other societies do not have such free service to members of organisations as the Sanvatsar Society.) The well-being of farmers is the main object of the Society and the profit from multiple activities is used for the benefits of farmers. The other features of this Society are that the majority of the members (nearly all) belong to only one caste, i.e. Mali caste (gardener) with a high range of homogeneity amongst them. The CCA of the Society is about 400 acres with 127 members. The major crops grown are sugarcane, horticulture crops and foodgrains. The Irrigation Department has fixed the blocks for these crops and water is supplied by the Irrigation Department (Government) on volumetric basis to the Society. The water charges on volumetric basis levied by the government are comparatively less than water charges on usual crop-area basis. The Society distributes water to each member and therefore there is surety of water to every member.

The important historical reference for the formation of Sanvatsar Society is that, during the period of 1935-36 a well known economist of national repute, vis the late Dr Dhananjayrao Gadgil, provided guidance to this Society at the time of formation during British Rule.

The Saswad Mali Society

The total area under the Saswad Mali Society is about 5000 acres and the Society was registered on 17th November 1932 as a joint stock company with the British Government in India. This Society, at present, is successful, with a sound economic footing. The Society takes water on a volumetric basis from the Irrigation Department and distributes to each member on a volumetric basis.

Recently, the Society executed an agreement with the Government for supply of water for a period of 18 years. The blocks are fixed by the Irrigation Department for the crops of the members of the Society. The Society is directly working under the Saswad Mali Sugar Factory Limited at Malinagar. The Society has developed very good infrastructure to facilitate its work which includes residential quarters for the staff at the location of concerned distributary head.

There is a marked difference between the two old Societies mentioned above and the recently formed co-operative water users' societies. The difference is that the two old co-operative societies are registered as Credit Co-operative societies whereas the recently formed 40-50 co-operative water users' societies are registered as Non-credit Service Co-operative Societies, under the Co-operative Act (1960).

There is a need to have an integrated and consistent policy by different government departments, viz. Irrigation, Cooperation, Agriculture etc. as well as in the concerned acts (Co-operative Act, I960 and Irrigation Act, 1976) so as to develop the recently formed Non-credit Service Co-operation water users' societies as 'multifunction' organisations to achieve the overall development and well-being of rural people.

Note: the views expressed above are the personal views of the authors.

A B Chaudhry
Agronomist, Soil and Water Conservation and Agroforestry Programme, Ministry of Agriculture, Marketing and Co-operatives

Prospects for Multifunction Organisations to Improve Irrigated Agriculture in Lesotho

Historical Perspective of Irrigated Agriculture in Africa

Small scale irrigation has been a common phenomenon in Africa. However, despite huge investments, the establishment of large scale irrigation projects/settlements/schemes has not yielded good results. As a consequence, a major reappraisal was undertaken of the tens of billions of dollars spent on irrigation schemes in the Third World during over three decades (Pearce, 1987). There have been engineering as well as the organisational failures. the engineering failures of big irrigation schemes led farmers to distrust the reliability of the water on offer. However, the major cause of that has also been the management. In effect pre-independence colonial style management destroyed the viability of indigenous institutions, and replaced it by a cluster of western, centralised and hierarchical institutions. In the post-independence period, rather than reverting back and restoring the local institutions, the new rulers were not prepared to relinquish power (Horst, 1983). Moreover, an element of non-accountability, and availability of generous aid packages and loans, in a way insured the continuity of the pre-independence colonial system even during the post-independence era.

The colonial powers developed their irrigation technology (Horst, 1983) to address their own objectives. However, free people have questioned colonial approaches (Horst, 1990). In the meantime, the sophistication of technology increased, while an improvement in the management level lagged behind. As a consequence, today a big gap lies between the level of technology and the level of management. Other events, notably piling-up debt, and donor insistence on structural adjustments came into effect, has forced governments in many developing countries to:

i) transfer certain parastatal functions to producers linked to the reorganisation of co-operatives and farmer groups;
ii) shift agricultural input supply and sale to the private sector;
iii) reduce funding of parastatal development agencies; and
iv) remove subsidies on agricultural inputs, and review pricing policies.

Under the prevailing circumstances it is helpful to look into the prospects for multifunction organisations to fill the vacuum and improve irrigated agriculture management.

Experiences in Lesotho

Local organisations with responsibilities for irrigation operations that also take on other functions Co-operative societies generally operate various irrigation schemes. The societies collectively receive pumps, irrigation equipment, loans for seasonal inputs, and market their produce at the farm gate as well as in the urban centres. The size of the societies ranges from a very few to around 300 members. At the moment most of the big societies have already collapsed, whereas the small ones are still surviving. The major reasons for the demise of large co-operative societies have been:

- fighting over sharing of the profits;
- members unwilling to share work equally;
- societies were too big to be without problems;
- co-operative societies emerged in response to foreign donor assistance; and
- apart from the timely financial gains there were no solid objectives to keep the members together.

To offset the above experience, the surviving co-operative societies have evolved a new system of land allocation to the individuals, periodical collection of funds and bulk purchase of seasonal inputs, and collective hiring of transport for external marketing of individual produce. These approaches are informing new government initiatives to make co-operative societies more sustainable.

Linkage between irrigation organisations, other local organisations /institutions and government
In almost every case each irrigation scheme is linked to the government for technical and financial assistance, advice and training.

Links between multi function organisations and the government
Most co-operative societies are multi function organisations, and all of them are directly or indirectly supported and sustained by the government. In the truest sense many only exist due to government support. The government constituted a high power task force (Anon., 1992) towards the end of 1992 to:

- establish causes of the failure of irrigation schemes;
- suggest the ways and means to revive the defunct schemes and strengthen the functional ones; and
- develop a training programme to strengthen the groups.

Performance of multifunction organisations
Some co-operative societies are primarily meant to serve irrigation farmers and dryland farming at the same time. As mentioned earlier, almost all multifunction organisations are marred by innumerable problems. Poor management has been the serious constraint.

Multifunction organisations and tradition of low key irrigated agriculture There are many multifunction organisations in the form of co-operative societies. Locally, these are called the 'multipurpose co-operative societies for dryland farming. They operate jointly on the following lines:

- bulk purchase of inputs to client demand;
- marketing of each individual's produce through collective hiring of transport;
- share liabilities; and
- normally all the problems and conflicts solved by the Registrar, co-operatives under the country's cooperatives law.

Origin of multifunction organisations
Cooperative societies originated at the village level as democratic bodies. The force behind this movement has been Lesotho's highest literacy rate in Africa. Moreover, most households in rural areas are *de facto* female headed because a substantial number of male family members have been working in the mines of the Republic of South Africa. So the women played a crucial role in this movement. Through the formation of co-operative societies people came together to achieve what they might not have achieved individually.

Lessons learnt from the co-operative movement in the rural area
Obviously well-managed and successful co-operative societies had a multiplication effect on the movement, and badly run cooperatives scared people away from the idea. As pointed out above some cooperative societies are genuine, grass root institutions while others are opportunistic groupings to lay their hands on assistance either from the government or the foreign donors.

Unfortunately, the rural disadvantaged are normally left out because to be a member one has to pay an admission fee, and then buy the shares ranging from M 5.00 to 100.00 each.

Discussion

The management problems faced by government managed irrigation schemes in the Third World are much bigger than one could imagine. At the same time there are examples of irrigation systems well managed by the farmers. This has prompted interest in the emergence of multifunction organisations to fill the management vacuum created by the respective governments' disinterest in the running of the irrigation schemes; and to comply with structural adjustment schemes to the farming community. However, if multifunction organisations are allowed to emerge from the grass roots, and operate independently, they may prove to be a very dependable option.

Co-operatives are almost everywhere in a state of crisis. Either they have just been probed or are being probed for mismanagement and corruption. There seems to be some light at the end of the tunnel because very independent cooperative societies such as reported in Lesotho may be an answer for the future. Smaller units (co-operative societies) are manageable. This is because the size of the capital being handled is relatively tiny; discrepancies are liable to come to light quickly individuals have an option to market their produce at will; business at small scale reduces the extent of financial risk; and back-up from the Ministry of Agriculture, Cooperatives and Marketing in the form of training proves more effective for the smaller units. There is a likelihood that honeycomb-structured cooperative societies might be relevant to the management of large irrigation schemes, whereby the water supply and levying of water rates would rest with some sort of central body.

Professor P R Maurya
Consultant: Irrigation Development and Management, World Bankassisted Fadama Development Project, Nigeria

Existing Farmer Organisation

Farmer organisations in Nigerian irrigation projects are not fully developed. The existing organisations such as cooperative societies, self-help groups, community development associations and other associations are limited to a handful of villages and some are actually family groupings. The societies are normally involved in input (mainly fertilizer), distribution and some

maintenance at field channel levels. Survey indicated that 46% of the farmers interviewed were members of one of the co-operative and self help groups in KRP to procure farm input other than water. Village heads, village religious leaders (Imam) and a few rich, influential farmers are the main driving forces of a village community. Therefore, farmers grouping could be worthwhile based on the water boundary (Water Users Association/Co-operative), providing some active role to existing village leaders and attaching some of the incentive to the water users group members such as farm input procurement and distribution.

Farmer Constraints in System Management

Constraints to farmer participation in the operation and maintenance of large scale irrigation projects in Nigeria include: lack of appropriate institutional framework for participation; the advance and inappropriate technology involved; and the poor performance of the project (as discussed before). Large scale irrigation projects in Nigeria have been imposed and followed a 'revolutionary path' which is aptly described as a 'development without human face of the type "dam the river, damn the peasants"' (Ogunwale and Maurya, 1990; Kolawale, 1989). Large scale irrigation projects were simply imposed and conceived essentially on the basis of civil engineering criteria, and without adequate knowledge of all other relevant agricultural production and socio-economic parameters (Maurya et al., 1989). Omo-lokun (1978) described this approach to development as technocratic, economic and authoritarian based on several assumptions that technological innovations per se would sufficiently be attractive enough to automatically stimulate effective farmer participation. Based on this assumption, farmers were simply left out of the plan conception, planning and design stages. They were not sufficiently informed as to why their land was exploited, and what their future role was expected to be in the operation and maintenance of the project. Consultants' reports merely pushed the issue of farmers' involvement aside, and consequently, have not designed a suitable institutional framework for their anticipation (Adams, 1983).

Farmers' Perceptions of System Management Roles

Field observations have indicated that farmers (except tail end of water conveyance) perceived availability of other agricultural inputs and services (especially fertilizers, tractors and harvesters) as more important to them than irrigation water or irrigation systems' effectiveness. Also, the farmers in general have no interest in participating in system maintenance or accepting responsibilities in system management because they pay their irrigation water charges. The water charges of 1,000 Naira/ha/year were

normally considered too expensive especially when tail end water supply is erratic and agricultural production support services under-perform.

Farmers perceive that the job that has been most effectively done by the authorities is the collection of water charges. On the other hand, the most neglected roles were the procurement of fertilisers, provision of adequate tractor-hiring services and supervision of water allocation and distribution within the sector[1]. The utility of water is less well understood by farmers compared to the value of other crop production inputs.

Farmers' perceptions have been affected by the benevolent patron-client relationships that have been built up by the governments in most irrigation systems. This resulted in over-dependence of farmers on government agencies for their farming operations. The extent of dependence on the government could be illustrated with Kano River Project farmers' perceptions that the project authority should even maintain the structures adjacent to farmers' plots, distributary canals (DCs) and their field channels (FCs). 47 (15%) of the respondents felt that the authority should maintain the DCs and FCs, respectively, and charge the farmers for this later. Over 30% felt that each of these should even be done on a charge basis by the authority. Farmers' groups were perceived to have a maintenance role only at FCs level. However, upstream users felt that they themselves (or in a group) could maintain the DCs and FCs.

In addition, farmers were asked to select which group from members of cooperative societies, individual farmers, groups of farmers and the projects staff, would be most effective and efficient in performing irrigation activities. They mainly thought the project staff should perform these activities now and in future. Farmers also perceived that most of the activities could be effectively performed by the cooperative society if the authority withdraws from its maintenance (Table 1).

Implications of Fanners' Perceptions on Systems' Management

Farmers perceive the relative advantage of irrigation water to be less than that from agricultural production inputs, especially, fertilizers and tractor hiring services. As a result, generating improved farmers' participation in systems' operation and maintenance will be more effective if the perceived irrigated agricultural production tasks with high relative advantage are considered as the felt, or real, needs of the farmers. Mobilisation of farmers for active participation will be easier when it centres on their own expressed felt or real needs. In all, some basic social, cultural and design changes would be needed in order to ensure successful management of the nation's

[1] The area covered by a lateral canal, which carries water from the main canal.

Table 1: Farmer perception of the possibilities of management of irrigation activities by various organisations

Activity		*Total No.*	*Farmer himself %*	*Farmer Group %*	*Co-op Society %*
a.	Service/access road maintenance	140	5	11	84
b.	Dam maintenance	124	4	6	90
c.	Main canal maintenance	134	6	16	78
d.	Maintaining farm ditches/canals	173	25	35	40
e.	Deciding on water use in the plot	159	35	18	47
f.	Operating water control devices	148	10	12	78
g.	Maintaining water control devices	147	7	13	80
h.	Water scheduling in plots	173	36	21	42
i.	Draining farmers' plots	175	57	12	31
j.	Deciding on water fees	159	8	19	73
k.	Water fees collection	143	6	10	84
l.	Land preparation before planting	182	43	9	48
m.	Tractor acquisition for use	182	30	7	63
n.	Deciding on type of crop	187	52	12	36

irrigation schemes and it is recommended that there should be:

i) maximum use of existing social and administrative structures in an adaptive manner by creating a cadre of village or community irrigation workers as an arm of the Community Development Associations presently active in most communities (Ogunwalo and Maurya, 1990);
ii) choice of community focal points within the sectors or villages in the schemes so that each sector or village will be allocated irrigation system personnel or operators to provide contact points between the authorities and the community water users;
iii) re-orientation and re-activation of existing governmental services to provide direction, training and contact with the community while encouraging and emphasising water users' group information and initiatives in system management;
iv) identification of farmers' needs from time to time, 'choosing the sequence of improvement and deciding how they will be implemented' (Donaldson, 1988);
v) responsiveness to local initiatives and delegation of some irrigation water management responsibilities to the water users; and
vi) rehabilitation and design modification to meet the farmers needs (Maurya et al., 1989).

The more the involvement and participation of water users in system management, the cheaper and the more effective the operations and maintenance of irrigation schemes (Lowdermilk, 1985; Vermillion, 1987). Project authorities have to encourage groups to provide complementary services to the supply of irrigation water. The allocation of such roles and provision of services to the farmers would provide an entry point for sustained interest in participation in system management. Coupled with education and training in basic system's tasks and operation this will reduce and eventually eliminate the prevailing dependency of farmers on the government for irrigation system management and irrigated agricultural production. With the elimination of dependency, role expectations in irrigation systems will be appropriately perceived. This will improve and increase the readiness of the irrigation authorities to share operational responsibilities and enhance water users capabilities.

Proposed Joint Management Structure

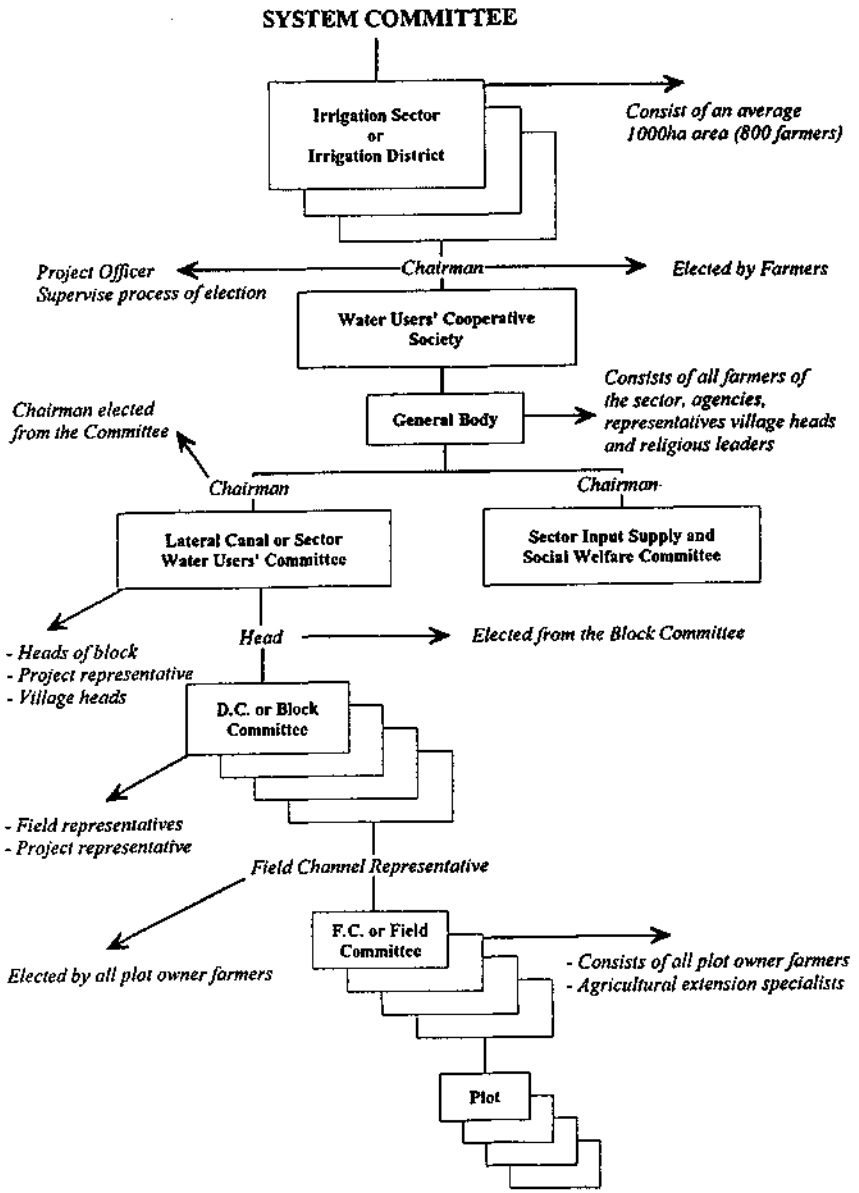
A large scale irrigation project is divided into several zones each of which is further divided into sectors (or irrigation districts), which is served by lateral canals fed by the main canal.

A sector (average 1000 ha irrigated area) is divided into blocks, which are served by the distributary canal fed by the lateral canal. A block (about 100 ha) is divided into fields (6 ha irrigated area) and fields into units or farmer plots. Farmer plot size varies from 0.3-10 ha. The majority of farmers of a sector live mainly in one or two nearby villages, and at least one of them hosts a cooperative society.

Based on the study farmers could be grouped in existing extended village co-operative society (to cover a sector or irrigation district) on water boundary basis (sector or lateral canal water users' must be members) to shoulder operation and maintenance responsibility at sector level (see Figure 1).

Farmers experiencing water shortages (mostly of tail ends) would like water users' associations to be formed for equity in water distribution. However, the co-operative societies preferred by the farmers are in short supply of other farm inputs. Considering all the above, a model is proposed for testing that incorporates the RBDA (River Basin Development Authority), existing co-operative, farmer water user groups and other agencies involved in irrigated agriculture (Figure 1).

The proposed management turnover model from the basis for incorporating existing RBDA's limited staff, village leaders and the village cooperative society and provide additional responsibility of water users associations. The proposed group may require to change the name from



cooperative society to Sector Water Users' Co-operative Society (SWUCS). Apart from the general body which consists of all sector farmers as members, SWUCS will have two main functionary committees, namely input procurement, distribution and social welfare committee, and water users' committee. Water users' committees will have block and field committees to manage at various levels. The functions of various committees and groups; responsibilities of chairmen, heads and leaders; and the process of organising the farmers have bee worked out.

Conclusion

Farmers and irrigation project authorities have realised the need to reorganise the management structure of Nigerian medium-large scale irrigation projects. To this effect government has already taken action to encourage farmers to organise themselves and has approve rehabilitation of some of the projects to increase efficiency and easy to manage by the farmer. However, some aspects (such as lack of well defined irrigation policy, and testing some of the management turnover modalities at pilot levels) remain unattended to.

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Have local organisations with responsibilities in irrigation operations also taken other junctions?

We find that many organisations have taken on additional responsibilities. These responsibilities include:

- cooperative marketing for horticultural produce;
- soliciting for funds for irrigation infrastructure improvements;
- soliciting for funds for seasonal crop production input loans.

They have taken on these responsibilities in order to serve their members better and raise additional income to cover operation and maintenance costs. These organisations have not performed very well as a result of increased workload and their involvement in activities that require skills and knowledge that most organisations do not have.

To what extent can irrigation organisations be conceptualised in isolation from other organisations?

Irrigation organisations can be conceptualised in isolation because irrigation services are provided to a part of the community whose land is under command. Although irrigation farmers may have other things in common with non-irrigation farmers, e.g. the desire to improve roads or health services, irrigation services only benefit irrigators directly and hence an irrigation organisation does not endeavour to provide services which would benefit non-irrigators.

The additional resources required to enable multiple function approach to work include trained community leaders and organisation staff.

Challenges for regional and national support agencies lie in the identification of additional functions that are relevant and desirable, creating awareness of the benefits of such functions and training leaders and irrigators on how to take advantage of the new structures.

Experience of changes in joint performance over time

Although there has been major political changes in the country, the impact has not been felt at irrigation scheme level. National Irrigation Board continues with its tenancy farmer system and dictates the changes for irrigation support services despite the tenants desire to have a say in the operation and management of the National Irrigation Board.

The economic pinch being experienced by tenant-farmers is providing additional impetus for changes in policy rules and regulations of the National Irrigation Board.

Links with the state and the reorganisation of state agencies

Most of the multi function organisations are closely associated with the co-operative movement. In the past the co-operative movement was controlled and regulated by the government but with liberalisation government control on cooperatives is reduced.

The link with NGOs and private companies especially those which purchase farm produce on contract are increasing for the benefits of both.

Different organisations managing two or more functions

It is dynamic individuals who create multi function organisations to cater for their interests as well as those of other irrigators. Dynamic individuals may end up being in a number of different organisations so long as they have interest in the activities of these organisations.

Why do MFOs appear?

MFOs predominate where mixed farming demands the services of different functions and where marketing and availability of inputs constrains the performance of irrigated agriculture.

The origin of MFOs

MFOs can originate from the grass-root or from above depending on the forces behind additional functions. When the need for additional organisations is identified by outsiders willing to help the group solve their problems they may initiate the process of creating MFOs.

Summary

Some Network members sent in papers and reports that are already published.

Inga Jungeling sent her paper 'Improving Management of Small-scale Irrigation Schemes', IIMI Sri Lanka Country paper No.5 (1989). This paper examined the role NGOs had played in communities with tank irrigation in Hambankota district, Sri Lanka. NGOs had become involved in tank rehabilitation, together with a range of other activities in communities. However, they often had not taken systematic improvements in irrigation management or the outputs from irrigated agriculture as a systematic objective in their programmes. The paper documents the decision-making process of an NGO. It also looks at the context in which decision-making takes place, especially both government and NGO policies to assist the rural population in general and the performance of small-scale irrigation systems **in** particular.

Kerry J. Byrnes of LAC-Tech, US Department of Agriculture, sent his paper'Water Users Associations in World Bank Assisted Irrigation Projects in Pakistan', World Bank Technical Paper 173 (1992). This report reviews the experience of Pakistan's On-farm Water Management Programme in working with and through World Bank-assisted projects. The study shows how the organisation of farmers had had a significant effect on achieving and maintaining local improvements. However, there were still significant variations in the persistence and dynamism of organisations. The objectives of WUAs were focused strongly in resource mobilisation for improvements and maintenance. If WUAs are to become sustainable catalysts for agricultural and rural development, and not temporary project implementation vehicles, then many changes in approach and support will be necessary.The report includes a section discussing options for 'multi function organisations', but stresses the need for flexibility of approach. While demands for greater range of actions should come from the WUAs it might be helpful to have a 'special projects' programme that examined proposals, assessed their viability and ensured assistance went to well-established WUAs.

Some conclusions on prospects for MFO development and dynamic local **institutions**

There is a great diversity in organisational forms for water management, and how arrangements for irrigation operations overlap with organisation of other activities.

Irrigation needs collective action and organisation in ways that many other activities do not. However, people of authority may be common across activities.

Collective action depends on perceived advantages. Traditions in the scope of group action in different activities influence persistence of collective action, and also responses to change in requirements for collective action.

MFO's have developed both for service provision and for the planned control of production; the former have been much more successful than the latter.

Local land development and general village empowerment is a third area of work for MFO's, although irrigation may remain managed by a specific sub-committee .This is a prominent area of work by NGO's. They have often promoted a range of functions in village programmes, with a view to more control and integration in livelihood strategies and developing institutional capacity. However, idealised notions about how communities should function and what features groups should integrate may be as problematic for local people as weak or highly atomised single-purpose organisations (see contributions from network members).

The optimal approach in organisational development is to build on a single need which is identified and work from that (see contributions from network members).

Single purpose organisations are more likely because of the division of labour between tasks, and variable access to natural resources by people in a particular territory. They are also encouraged by the sectoral approach of the government agencies liaising with them.

The need for services under new commercial opportunities can promote membership in regional-level organisations which play multiple roles in livelihood support.

The evolution of dynamic MFO's has emerged in conditions of freedom in association, in affiliation between groups and in deployment of finance. Equally withdrawal from MFO's is highly likely if their requirements interfere with livelihood options. This freedom of action is more important than availability of financial/managerial resources, although the latter are important in the speed and direction of evolution.

The competence of MFO's in planning, finance and liaison is a critical factor in their acceptance.

It is unrealistic to expect multiple functions to be organised entirely in one settlement. Freedom to decide wider spatial associations in organisation of services will encourage more evolution of MFO's.

Participation in organisations improves when people have a clear sense of their rights, benefits and responsibilities, and a sense that irrigation infrastructure belongs to them in reality: also that they do really belong to the group managing the infrastructure. It also improves where people obtain more representative performance from associated agencies. Sometimes it may also be improved when the organisation supplies other personal needs such as status, identity and broader political representation.

The dynamism of organisations, and dynamics of organisational change (in functions and structure) depends on the actions of the body vested with general authority, although dynamic individuals may have temporary influence on the scope of activities integrated together in a settlement.

Irrigation groups may manage the natural resources of their catchments as well as their production. However, just as they need external assistance in new livelihood strategies, they also need advice on land management problems triggered by forces beyond local control. This has to be seen as advice, sensitively evolved, not as instruction.

Conceptual models to study local-centre relations in water management

The accompanying work has illustrated three key themes:

a) the scope and nature of local resource management organisations may have originated from both the range of tasks necessary to get rewards from collective action, and also from the variable basis to group relations underpinning collective action, and their need to gain entitlements to use land and water resources. However, increasingly they also reflect and legitimise the power relations that the contemporary leadership has established within the broader sphere of state intervention.

b) Irrigation can be considered a form of 'landesque' capital where investments generate more benefits from the land. At issue, who determines rights to access benefits from this 'landesque capital', as well as who has rights to obtain these benefits. Local institutions can differ in whether they have 'clan- or territory-based' rights operating to maintain the welfare of a group and its descendants, or individual rights accruing to particular membership households. Collective action occurs not only in engineering-

based tasks in construction, operation and maintenance but also in rule - conformance and conflict resolution. The nature of management arrangements may reflect needs and roles in conflict resolution and general management, not only in providing resources for maintenance.

Tension between community and state emerges because the state alters arrangements, either by granting new rights or by failing to uphold older right which allow new elites privileged access. The state can also fail to allow new arrangements wanted by groups. While the state may take up a role in managing resources between communities, its real interest may be to manage water to encompass new demands elsewhere, leaving discontent between and within organisations.

[Editor's note - some of the comments in this summary arise from two pieces of work prepared as working papers for planning future IMN activities:

Working Paper No. 7: Diversity and change in local water management institutions.
Paper 1. What's in a name? Organisations and Institutions involved in the management of irrigation - Richard Friend and Linden Vincent
Paper 2. Irrigation Organisations in Thailand - Richard Friend
Paper 3. Village and State in Rural Water Management in Tanzania - Christopher Southgate]

The ODI Irrigation Management Network is sponsored by:

The Ford Foundation
320 East 43rd Street
New York
NY 10017
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ISSN: 0951 1881

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