THE UTILIZATION OF LOCAL COUNCILS FOR IMPROVEMENT OF ON-FARM WATER MANAGEMENT IN PAKISTAN

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PART I

BACKGROUND OF LOCAL GOVERNMENT SYSTEM

I. PAKISTAN'S IRRIGATION SYSTEM*

BACKGROUND

Pakistan is a nation with enormous potential for food production. There are vast areas of fertile soils. The sub-tropical climate is favorable in terms of temperature and year-round crop production possibilities. The one element which prevents high production is the arid and semi-arid character of the country. Food cannot be grown without water to nourish the crop. Fortunately, Pakistan is blessed with a good supply of water for irrigation. The Indus River flow provides the basis for a network of irrigation canals (the largest in the world) that are the foundation of Pakistan's green revolution. In addition, the Indus Basin is underlaid by a vast ground water reservoir, much of which is of reasonable quality for irrigation. However, there are many problems which emerge in any major irrigation works and the Pakistan system is no exception. These problems are limiting factors in Pakistan's agricultural production potential. In the case of Pakistan two major problems arise.

(1) The construction and maintenance of the canal system itself has contributed to high levels of water

*This section draws heavily on the recently completed evaluation of A.I.D's On-Farm Water Management Project (James Painter, October 31,1981) and quotes several sections.

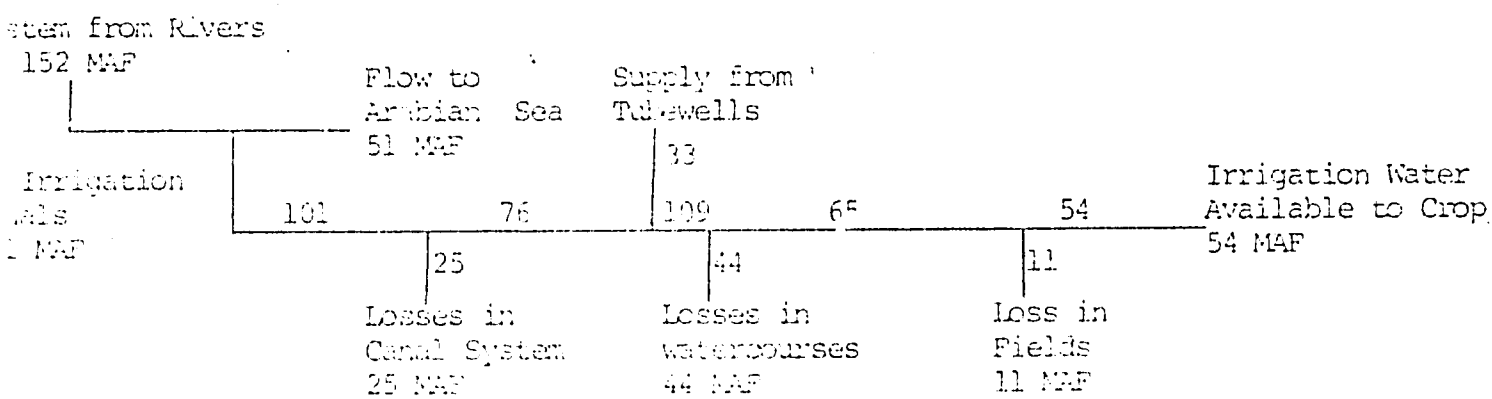
loss (approaching 50%). The constructions, operation and maintenance of the lowest level irrigation channels (within the village) are the responsibility of the farmers. In practice intermediate level channels (distributary/minor channels) are also left to local initiative. Because of poor farmer cooperation and inadequate technical assitance the watercourses have deteriorated with the resultant losses. The 1863 Canal and Drainage Act provides sanctions for the Department of Irrigation to assure adequate maintenance of the watercourses, but it has rarely been enforced.

The resulting inadequate supply has inhibited farmers' adoption of new technology and has reduced the profitability of new investments on the farm. Although extensive efforts have been made by both government and farmers (e.g., through tubewells) to increase water supplies, it is estimated that the cost per acre foot of water saved through watercourse improvement is about 25% of the cost for developing new water supplies. Seepage and production from canals in combination with inadequate supplies at the farm level have contributed to the twin problems of waterlogging and salinity which have become problems of national significance--reducing available arable land and ground water.

According to figures from the Pakistan's Water and Power Development Authority, the mean annual flow of the river in the Indus Basin is about 152 million acre feet

(MAF) per year. The amount will vary from year to year depending on precipitation. About two-thirds of this flow (101 MAF) is diverted into the major irrigation canal systems. About a fourth of the water in the canals is lost through seepage and evaporation prior to being discharged to the watercourses through the moghas. This canal water is supplemented by water from tubewells to provide about 109 million acre feet per year to the watercourses. The estimated losses in the watercourses is about 44 million acre-feet per year (approximately 40%), through seepage and evaporation. In fact, according to the figures provided, a much larger quantity of water is lost from the watercourse than from either the canal system or on the farms through inefficient irrigation practices in the farmers fields because of such factors as poorly leveled fields. The sources of water and losses in the Indus Basin irrigation system are shown below:

Indus Basin Irrigation
Millions of Acre Feet (MAF) per year



(2) The water use practices of Pakistan's farmers are in many cases economically rational and reflect generations of experience in family survival. It is nevertheless clear that these practices contribute to the long-term overall deteriation of Pakistan's agricultural land (i.e., trhough waterlogging and salinity) on the one hand and fail to make the most productive use of the extremely scarce water supply on the other. The factors which contribute to poor water utilization are the weaknesses in the design and management of the canal system, gaps in our research knowledge and weakness of the extension system, lack of appropriate incentives for better water utilization and maintenance of the canal system on the part of farmers, and difficulties encountered in organizing farmers for self-help in improving their irrigation systems.

THE ON-FARM WATER MANAGEMENT PROJECT

The On-Farm Water Management Project sponsored by A.I.D. and undertaken with technical assistance from Colorado State University has been an important contribution to Pakistan's efforts to deal with these problems. Initiated in 1977, the project has contributed substantially to our understanding of problems of canal design and improved water use practices on the farm. The proposed amendment and extension of the original project is designed to build upon the earlier research and to focus activities on the adoption/extension of knowledge generated in the

earlier stage, with particular attention to organizational and implementation problems. Of the problems encountered in the initial project, three are of particular importance here.

- Deterioration of improved watercourses due to inadequate maintenance by farmers
- Shortage of trained extension workers capable of extending assistance to farmers and of supervising construction work
- Inadequate funds for procurement of required materials.

As part of this project extension it has been proposed to experiment with alternative implementation mechanisms. As a consequence of the first phase of the On-Farm Water Management Project, On-Farm Water Management Directorates have been established in each province, within the provincial Departments of Agriculture. These Directorates provide an institutional focus for research, training, extension, and technical design on both the physical system of canals and farmer water use practices. The location within the Department of Agriculture facilitates the interaction between agricultural extension, improved water practice, and irrigation system design and management. The evaluation of the Project's first phase revealed two sets of problems with the Directorates as implementing agents--as opposed to centers of research and technical support--for the on-farm water management program.

First, the improvement and maintenance of thousands of distribution canals at the District level is a task well beyond the present capacity of the Directorates. The task involves the regular inspection of the existing works, contracting for improvements, supervision of performance, and the management of the system of financing improvements. Although the Directorates have been undertaking these tasks as part of the overall pilot effort it seems unlikely and undersirable that they will attempt to expand activities sufficiently to accept these responsibilities on a nation-wide basis. Other mechanisms need to be explored.

Second, the evaluation report indicated that, of the several project activities, the extension component was the least effective. On the other hand, the project has clearly demonstrated the importance of the development of water users associations for accomplishing these extension goals. The organizing of farmers on a water course for self-help can make several important contributions to improved water management.

. Water User Associations provide an organization of farmers with whom extension workers can work to improve water management practices and to experiment with new approaches--far more efficient than "one-on-one" techniques.

. The water users associations encourage joint action for the maintenance and financing of the canals. This, in

turn, improves both the regularity and amount of water supply. This is particularly beneficial for those at the tail of the canals, who cannot improve their water supply except through joint effort with those at the head.

The water users association, in combination with other institutional reforms, can contribute substantially to improved incentives for rational water use. For example, as individuals, those at the head of the canals have little incentive either for conserving water or for canal maintenance. Similarly, there appears at present to be no direct relationship between the benefits received from improvements in the canal system and contributions to the cost of improvements. Thus, the farmer's decisions on water use are unrelated to the real cost of supplying him with an extremely scarce and valuable input. Without water users associations it is also difficult for farmers to initiate improvements in the system that would improve cultivation. In consequence, the incentives are to "cope" within existing constraints rather than to remove them. Thus, farmers invest in expensive tubewells, bribe officials charged with supervising water distribution, or adopt sub-optimal cropping patterns. Collective action permits substantial improvements in water supply.

Although the On-Farm Water Management Project did demonstrate the utility of water users associations and encouraged

the passage of laws in each of the provinces establishing the legal foundation of such associations, the project did not solve the problem of providing the extension work necessary to encourage the establishment of these associations on a a national scale in the canal irrigated areas. Neither has the project solved the problem of filling the gap between the farmer association, once established, and the On-Farm Water Management Directorate at the provincial level. In other words, it is essential to find some institutional mechanism at an intermediate level which can undertake the dual task of encouraging the development of water users associations and of providing technical supervision of improvements in the irrigation system which may be undertaken at their initiative.

It is important to stress the considerable evidence, both from research in Pakistan and elsewhere, which supports the desirability of encouraging local initiative, responsibility, and mobilization of resources (both labor and financing) for the design, construction, maintenance, and management of the irrigation system.

. Farmers often have valuable inputs to make to the design and layout of the irrigation system which need to be taken into account along with technical and administrative considerations.

. There is ample evidence that farmers will make more rational and economic use of the water and provide better

maintenance if they contribute to the cost of the system.

In the management of the system--i.e., the allocation and timing of water supply--there is really no substitute for local cooperation and group decision making. The same might be said for the allocation of costs (e.g., of maintenance and construction). Although the farmer associations may require assistance from the outside in collection of contributions or the adjudication of disputes, there is clearly no more efficient mechanism than self-management.

THE INVOLVEMENT OF THE LOCAL COUNCILS

With these considerations in mind, it is proposed that a three year pilot project be undertaken to utilize the capabilities of the local councils to undertake both the work improvement and maintenance of the irrigation system on behalf of the Water Users Associations and the extension work of building up a system of Water Users Associations. The logic behind this selection of the councils as the appropriate institution may be stated briefly.

- The councils represent an already existing capacity, nationwide, to undertake the design, financing, supervision, and contracting of public works. If they can be utilized for the additional purpose of irrigation works the requirement of creating a parallel administrative structure will be avoided.

- As participatory bodies, the councils have a demonstrated capacity for encouraging local initiative and the

mobilization of local resources. As such it is reasonable to expect that they may be effective in encouraging the development of Water Users Associations and in responding to their needs.

. The councils offer a "non-bureaucratic" alternative for providing technical support to the water users associations and for organizing and disciplining maintenance operations. They are, therefore, consistent with the self-help orientation of the current On-Farm Water Management Project and associated provincial initiatives. In addition, the councils may prove more adaptive to local conditions, needs, and financial capacities than normal administrative procedures.

. The councils also have established links to the line development departments and, through the mechanism of project committees, regularly coordinate activities with those Departments and call on them for technical support. This is particularly important because a successful implementation system wil require technical support from the Agriculture Department and the Irrigation Department. Financing the system will require coordination with the Revenue Department (i.e., the most probable system of financing would be a surcharge on the land revenue). The most radily available source of extension staff to assist the water users associations is either the Rural Development Department or the Agricultural Extension Service. In

Pakistan the local councils have provided a highly useful institutional innovation for accomplishing this inter-departmental collaboration in the past.

II. LOCAL GOVERNMENT SYSTEM IN PAKISTAN:HISTORY BACKGROUND

Local Government System in Pakistan is ancient. The excavations at Mohenjodaro, Harappa, Talumba, Taxila and elsewhere serve as pointers. In the written history of Pakistan, we find that the olden system of 'Panchayats' was analogous to Local Government institutions of to-day. 'Panchayats' ensured social cohesion among communities despite frequent invasions and changes in Central authority. Moghuls for the first time focused attention on the development of urban areas and urban local government institutions. Promotion of works of public utility, construction of monuments and founding of new cities in the Moghul period gave definite impetus to urbanization. However, the management of urban Local Government system was largely authoritative, by compulsion, during the Moghul period. In the wake of disintegration of the Moghula Empire, there was disarray in the socio-economic and political patterns, culminating in the War of Independence, 1857. The colonial rulers became aware of political aspirations of the heterogeneous population of the Sub-Continent and took steps to allow a certain measure of Local Self-Government.

In 1861, the Finance Member of the Governor-General's Executive Council suggested financial decentralization and proposed to transfer responsibilities for roads and public works to the Local Bodies. In his budget speech he said:

> "It is of the first importance to break through the habit of keeping everything in dependence on Calcutta and to teach the people not to look to Government for things which they can do far better themselves."

In 1864, Lord Rippon issued a Regulation which declared, inter-alia, that "The people of this country are perfectly capable of administering their own local affairs". Accordingly, the first Punjab Municipal Act was passed in 1867 under which Committees comprising officials and nominated non-officials were set up for two year terms.

In 1882, Lord Rippon introduced his famous Resolution on Local Self-Government. Paragraph 5 of this Resolution read:

> "It is not primarily with a view to improvment in administration that this measure is put forward and supported. It is chiefly designed as an instrument of political and popular education".

Lord Rippon also advocated elected Chairman of the District Boards and Municipal Committees. He also recommended that 2/3 of the members should be non-official. In fact the Punjab District Board Act, 1883 was a direct outcome of the thinking of Lord Rippon as aforesaid. The

Act provided for representation of the people through restricted franchise and enabled the incipient rural local governments to take shape in the Punjab.

The Royal Commission on decentralization (1907-1909) remarked that the Local Government was "still in many ways a democratic facade to an autocratic structure," the Commission advocated formation of rural 'Panchayats' and the appointment of non-official Chairman on urban bodies. In the wake of such recommendations and thinking, the Punjab Municipal Act of 1911 was enacted which was no doubt an excellent piece of legislation on Local Government in as far as its comprehensiveness was concerned.

In 1915, Lord Hardings advocated experimentation with non-official Chairmen in selected District Boards. The Montaugu-Chalmsford Report (1918) advocated that the number of non-officials in Local Bodies should be increased to 3/4. It also suggested that Panchayats should not be integrated with the District Boards. The Report ushered in a system of diarchy in Government, whereby subjects like Local Government, Education, Health, etc., were transferred to the British Indian Ministers.

Upto independence the District Boards had retained a substantial official membership and about one-third of the non-official members were in fact nominated by the Government. The Deputy Commissioner had typically been the Chairman of the District Board. After 1918, with the

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ever, the dominant theme of Government control has been one of "administrative tutelege." That is, Government has been anxious to assure that local civil servants were adequately trained, that the standard of performance was satisfactory, that fiscal responsibility was enforced, and that elections were properly conducted. Thus, if administrative involvement in local government affairs is somewhat heavy-handed by American standards and traditions, in Pakistan it has helped to contribute to the standards of efficiency and honesty which currently prevail.

. . The present system of local government also reflects the concentration of administrative power and responsibility at the district level which emerged in the pre-independence period. For most Government Departments the major sub-provincial unit of administration remains the District. The District Officer remains the keystone of the Pakistan administration with a significant level of responsibility and discretion for both traditional law and order functions and development functions. One effect of this tradition is of particular interest, however. The authority of the District Officer has always provided substantial flexibility to Pakistani administration to respond and adapt to local conditions. It is natural, therefore, that the major unit of local government today should be established at the District level and that it be taken for granted that administration at the District level should respond to vari-

ations in local needs and conditions. It should be noted that as a consequence of these administrative traditions, there exists at the District level a substantial cadre of administrative and technical talent on which the councils can draw in the execution of their expanding responsibilities.

THE BASIC DEMOCRACIES 1959-1971*

The establishment of the Basic Democracy system of local government by Ayub Khan in 1959 combined important innovations in local government with some dramatic changes in economic policy on the one hand and in the balance of political power within Pakistan on the other. The new policy directions constituted a major drive for increased agricultural production and rural development. The political changes have been interpret-ed as an attempt by Ayub Khan to mobilize a new political constituency consisting of the middle farmer to offset the power of traditional urban and landed interests. This political initiative was embodied in the land reform legislation of 1959 and the new local government system-- Basic Democracies.

The significance of the local government reforms was not only that they created, for the first time, a nation-wide system of rural local councils, based on adult franchise, and oriented toward development; but the elected members of these councils (Basic Democrats) also consti-

*Material in this section is drawn from Norman N. Nicholson and Dilawar Ali Khan "Basic Democracies and Rural Development in Pakistan" and Shahid Javed Burki" Agricultural Growth & Local Government in Punjab (Ithaca, N.Y.,Rural Development Committee, Cornell University, RLG #11,16, 1974).

tuted the electoral college for Pakistan's President. Thus, at one and the same time the middle farmer became a significant factor in both national and local politics. The mobilization of the farmer for rural development and the structural innovations in the local government system itself proved to be valuable and provided a laboratory out of which the present system emerged.

Briefly, the system established local councils at four levels--division, district, tehsil, and community. Only the councils at the district (Zilla Council) and at the community level (Union Council) had any real significance, however. Consistent with Pakistani administrative traditions, the power and resources within the system were concentrated in the District Council so far as developmental functions were concerned. The Union Councils added an entirely new dimension, however.

The typical Union Council had a population of from 8-14 thousand and was comprised of about eleven villages. It was the only level in the system of rural government (union and town committees in urban areas were also directly elected) at which direct election took place, but those elected also served as Presidential electors at the national level. Their potential political influence was, in consequence, substantial. The Union Councils performed the normal civil functions such as keeping the streets clean and establishing markets, etc. They also had minor

judifical functions. Most significant, however, was their ability to initiate development projects. Although the scope of development activity was potentially broad, in fact, the bulk of their activity was in the area of minor public works. The reason for this was that although they had some small taxing authority, the bulk of their revenue, and hence their activity, was received as project grants from the Rural Works Program established in 1963.

In effect, therefore, the Union Council became a specialized agent of the Government for initiating (Planning) and executing rural works. In the sixties the bulk of the construction was directed to roads and to schools, in the construction of which (including contracting) the Councils gained considerable experience. Even at that stage, however, there was some expenditure in irrigation works and the Agricultural Development Corporation in many cases depended on the Councils for the construction of storage facilities and to supplement the meagre extension staff in promoting agricultural modernization.

If political initiative had been moved down to the villages, effective control over the implementation of the development program remained, as always, at the District level. The District Council reviewed the project proposals of the Union Councils and allocated the Rural Works Program Funds. Furthermore, unlike the smaller Union Councils, many of the District Councils had a

substantial tax base from which to undertake projects on their own. Lyallpur District Council, for example, had an income in 1970-71 of nearly Rs.12 million. Of this, only 2% came from external sources. In a typical year at least half of this, in addition to Rural Works Program funds, would have been spent on public works.

In order to assure the technical quality of the development program, the District Council was established with an official membership (not to exceed 50%) and the Deputy Commissioner served as the Council Chairman. There was no direct election to the District Council--the elected Union Council Chairmen serving as the "democratic" element at the district level. Thus, although local initiative was being expanded and encouraged, government took great pains, as in the past, to assure fiscal responsibility, technical quality, and the consistency of local projects with overall development goals.

For the purposes of the On-Farm Water Management Project several aspects of the Basic Democracy experience are significant.

(1) Without question, the District Councils and Union Councils became experienced in the planning and executing of rural works projects. The District Councils had their own engineering staffs and became adept at drawing on the services of the Government Departments with appropriate technical staff at the District level. They became

familiar with contracting procedures and the supervision of contractors. At both District and Union Council level, they were exposed to the financing and budgeting problems associated with works programs--the Union Councils dealt essentially with individual projects and their activities were intermittent.

(2) The local councils also proved valuable in mobilizing local resources in support of development projects. As was indicated above, the revenue raising efforts of the District Councils, if not the Union Councils, was in many instances significant. Over the years the revenue base has expanded steadily. More important, however, the Union Councils, through the device of local "project committees," were able to mobilize voluntary contributions of land, labor, materials, and money for specific projects. It is important to recognize the significance of this accomplishment.

Most public works have both a "public" and a "private" component to the stream of benefits they generate. In effect, the Pakistani tradition has been one of utilizing voluntary contributions to charge beneficiaries for that "private" component. Because under normal circumstances one cannot expect farmers to contribute voluntarily unless they perceive some benefit from the project, this also provides some additional element of popular control.

The weakness of the system was that the funding for the "public" component of the projects was generally not

raised locally--the bulk of the funding being from Provincial programs such as the Rural Works Programs. This "dependence" on higher authority for funds plus the continuing element of Official paternalism explicit in the Official membership on the District Councils struck some observers, both Pakistani and foreign, as factors which inhibited local initiative and responsibility. The rural democratization experiment was real, but cautious.

(3) The establishment of the local councils also had an important impact on the locus of power within the system. Increased development efforts in the rural areas tended to centralize authority at the provincial as technical standards and considerations took precedence over local concerns. At the same time the steady decline of the local councils during the fifties had eliminated any elected counterweight to administrative power at the District level. The new Basic Democracies had the dual effect of permitting elected council-ors to "pound on the desk" of administrators to get things done and to re-establish a balance between centralizing and local perspectives. The Chairman of the Council emerged as a key figure in mediating between these two perspectives.

(4) During the sixties the Basic Democracies played an important role in closing the "gap" between Provincial administration and the villages which was characteristic of rural development efforts in this period. Rural Development

efforts were not new. Like many other countries in the 1950's Pakistan had experimented with Community Development in its "Village Aid" program. In the face of expanding rural programs, earlier efforts notwithstanding the technical departments were hamstrung by limited funds, inadequate extension staff, lack of facilities in the rural areas, etc. Technicians were also overwhelmed by the impossibility of the task of dealing with rural development on a "one-on-one" basis. The numbers were simply too great. As numerous administrators noted during this era, there was "no one there to talk to;" i.e., the development administration needed an organized clientele to facilitate communication and to undertake many of the development functions which the administration was unable to shoulder. The Councils began to perform that role (at least in public works).

(5) The elected Councilors soon began to make their presence felt, to varying degrees in different areas, in articulating local priorities, in criticising administrative inefficiency, and in scrutinizing contractor performance. If the stimulus to administrative performance was not always benign, it was nevertheless real.

III. LOCAL GOVERNMENT TODAY IN PAKISTAN

The current local government system in Pakistan was established in September 1979. It is clearly too soon to conduct an evaluation of their performance but it is appropriate to indicate the philosophy behind the new system,

the structure of councils, and to make some judgement concerning their capabilities and potential. It should be kept in mind that the professional and administrative staff of the Councils remains essentially as it was in the past. The structure of the Councils has been altered somewhat, building on the lessons of the Basic Democracies, but there is considerable continuity. The capabilities of the Councils in managing public works is well established.

Thus, although the proposed work under the On-Farm Water Management Project is described as a pilot effort, it is an experiment in which the parameters are fairly well known. What appears to be at issue is (a) whether the local councils can expand their capabilities in the area of irrigation and water management faster and more effectively than can the Ministry of Agriculture and whether the original pilot project had not overlooked a more appropriate institutional focus for project implementation in the field than the Provincial bureaucracy; (b) whether USAID/Islamabad can effectively deal "directly" with local authorities in order to increase the impact of its assistance, increase absorbtive capacity, and to strengthen local self-help capabilities. It should be noted that analogous projects involving direct technical assistance and project assistance to local authorities have been implemented by A.I.D. in the Philippines (PDAP) & Indonesia (PDP), and two are under

design in Thailand and Bangladesh. To my knowledge, however, this model has never been attempted heretofore in Pakistan by A.I.D.

The basic strcuture of local councils is a District Council at the District level and Union Council at the community level (8,000-15,000). Baluchistan and Sind have retained the Tehsil/Talnka Councils and Punjab has established a (non-statutory) Council at the level of the Markaz (the administrative unit of the former Integrated Rural Development Program) but the most significant levels, as before, are the District and Union Councils.

Election to Councils is by adult franchise and direct. Special provisions have been made for the representation of peasants, workers, women, and minorities. Under the law, no one may stand as the candidate of a political party in a council election. All members are elected (i.e., there are no official or nominated members) and the Chairman of a council is elected from among its membership. There is provision for a vote of "no-confidence" against the Chairman.

The philosphy behind the new structure is captured in the introduction to the N.W.F.P's Handbook of Instructions, Laws, By-Laws, and Rules for the Local Government Department:

> With more powers and more authority, the need for more control and supervision could not apparently be gainsaid but the Government with full confidence in the elected institutions has thought it perforable (sic) and advisable to allow them a free hand in exercising full powers in the transferred sectors. The Government has retained only a remote and dis-

> tant control and supervision and that too for intervention only in the event of violation of the spirit of the Local Government System or likelihood of a threat to public interest. Government is, at the same time, fully alive to the need for proper assistance and guidance to the newly created local councils in the discharge of their day-to-day functions and obligations....

Consistent with this philosophy, the Government may, for cause, suspend any council Chairman, member, or even supersede a council. The Government establishes the qualifications of council staff and the more important of them are part of a Provincial cadre whose conditions of service are established Province-wide and assignments made by the Government and, in turn, Government may step in to manage council budgets if they fail to repay. Government may require councils to levy certain taxes and may establish tax rates-- to the point of denying a tax to the council if it wishes. The councils have a broad and permissive set of functions, but Government may if it chooses specify and require the performance of certain functions and may also delegate certain functions to the councils.

Thus, although the new laws clearly established local "democracy" in conformity with a tradition which has been slowly asserting itself in Pakistan, they clearly do not establish local "autonomy" It would be unthinkable for a local body in Pakistan (New York City as it were) to go bankrupt. The powers of Government remain great. What matters is how they are exercised and whether the spirit

with which they are exercised is such as to encourage local initiative. A variety of mechanisms have been worked out in individual provinces for establishing coordination between Government and Council activities.

In Punjab there is a District Technical Review Committee, headed by the Deputy Commissioner, which is a non-statutory body intended to provide coordination.

In Sind there is statutory body called the District Coordinating Committee, Chaired by the Chairman (elected) of the District Council for coordination purposes.

In NWFP there is a statutory body, the District Coordination Committee, Chaired by the Chairman of the District Council (elected) and charged with government-council coordination.

In Baluchistan, although there is provision for a District Coordination Committee, they have yet to be established. Coordination is currently achieved by representation of the D.C. and Government Officers as non-voting members of the District Council.

In effect, therefore, the District Councail today is fully indpendent from District administration in its proceedings, save that the Secretary of the Council is an Official of the Local Government Department. The Council is charged with aggregating, coordinating, and planning all activities in the District and, as we have seen, mechanisms of coordination are provided for this purpose.

Finances

The revenues of Pakistan's District Councils have averaged about Rs.4.71 million a year over the past three years. Over this three year period (1978-81) revenue has increased by about 35% a year. The bulk of this increase in Council budgets is in taxes levied. The most important sources of tax revenue are the local rate (a surcharge on land revneue), a tax on the transfer of immovable property (which may be receiving some boost from increasing land sales), professional tax, market fees, and vehicle license fees.

For our purpose the most significant tax powers of the rural local councils are their capacity to establish special tax districts (i.e., a specific tax or rate to pay for strictly localized benefits). However, councils may also use general revenue for this purpose if they choose.

The use of a "special tax district" has been somewhat inhibited until recently by a ruling that because the local rates were a surcharge on the land revenue, collected by the Revenue Department, they could not be collected on lands on which no revenue was imposed. With land reform, which removed many small holdings from the revenue roles, the tax base of the local rates was seriously eroded. Recent rulings have established that the rates need not be linked to land revenue so that this source has been re-established.

Local Councils also have the power to borrow for development purposes, with approval of the Provincial Government. The provision also exists for the establishment of Development Loan Fund (similar to the Municipal Development Banks found in Latin America). Such a fund has already been set up in Punjab with an initial capital of Rs.50 million. When these funds are fully operational they will make it easier for Councils to initiate local works, such as irrigation improvements, and to repay the loans out of the proceeds of tax suracharges on the users.

Finally, the councils have the power to form "Joint Committees" with any other local council or local authority (e.g., a legally established cooperative or water users' association) and to delegate to that Joint Committee any powers which may be exercised by the Council. Clearly, Council funds may be used to support those joint activities.

To sumarize, Local Government Ordinances establish that the Councils may undertake works jointly with duly constituted bodies of private citizens (e.g. farmers on a watercourse) and to expend public funds in support of that activity. In such joint activities the Councils may enforce the obligations of the participants and charge such fees and/or taxes as have been agreed upon to meet the expenses. There appears to be no legal inhibition on an active involvement in watercourse improvement either on a self-financed basis or with such public contribution as the Government or

the Council may feel is appropriate. So far as I am aware, however, this mode of financing has not been extensively used for irrigation works to date, although it is not uncommon in other areas. For example, the construction of "pucca naccas" on water courses in irrigated areas has been undertaken by rural local councils regularly over the past twenty years.

Council Staffing Patterns

District Councils differ in the staff which might be available to execute a project in on-farm water management but a District in Punjab, for example, might have the following staff.

- Secretary--an officer of the Local Government Department
- Executive Engineer--roads and buildings
- Sub-divisional Officers (2) --technically trained
- Sub-engineers (8)
- Draftsman (1)
- Tracers (?)

The District Council traditionally has been able to call on assistance from the full range of Government technical staff located at the District in support of Council activities. In particular the Department of Local Government and Rural Development would have at the District level a number of staff to support Council work; i.e., Council

Secretary, 20 Project Managers, 10 Project Assistants, and 1 Account Clerk. In addition 1 Officer is stationed in each Union Council who is trained as a Rural Development worker and serves as Secretary to the Union Council.

The functions of the local councils are broad and permissive. Together with functions which may be delegated to them by Government it is difficult to imagine that there is any developmental activity in which they may not engage. In practice, however, their expenditure patterns remain heavily dominated by public works.

The most general power entrusted to the Council of interest here is its responsibility for the planning, coordination, and preparation of a District Development Program (i.e., plan). Thus, in the unending search by development practitioners for means of effecting "integration of development efforts" Pakistan has placed this responsibility with the District Council.

The District Councils also have responsitility for supporting agricultural development and are specifically empowered to undertake the "construction and repair of embankments, supply storage and control of water for agricultural purposes." (NWFP Ordinance) In the NWFP, for example, the Department of Irrigation has specifically delegated to the District Councils certain responsibilities

for civil canals--i.e., the regulation of canal maintenance, and direct administrative control over local irrigation officials (e.g., guage readers, canal inspectors, etc.).

The councils also have the power to assist the formation of local associations. Citing agin the NWFP Ordinance:

> to facilitate the formation of associations for the performance of tasks that can be done only collectively or can better be performed collectively, for example, consumer association for distribution of electricity, farmers association for water course management, associations for distribution of agricultural inputs, cooperative marketing associations, etc;

There can be little doubt that the conception of the new Councils included their role in the development of water users associations and the maintenance of irrigation systems. The long list of council functions is, however, merely a "shopping list". The Council may easily be pre-empted from entering a given sector by Departmental action or opposition. Council revenue sources are limited and are not progressive generally. The broad authority of the Councisl is not matched with either the funds or staff to perform the tasks. In reality, it requires a positive decision by Government to move any particular function to place of priority on the Council agenda and to provide the resources to undertake it.

PART II

PROJECT PROPOSAL

I. SUMMARY

$1,000,000 in FY 82 for the period of 3 years to the Ministry of Local Government and Rural Development, GOP. This will be funded as a component of the extension/ amendment of the existing On-Farm Water Management Project (#391-0413).

This sub-project will fund pilot efforts in one District in each of Pakistan's four Provinces to experiment in using the Local Councils as implementing agencies for the OFWM program of establishing Water Users Associations and improving the construction and maintenance of canal irrigation systems. Although the models developed by the original OFWM Project appear to be sound, both the USAID Evaluation and the World Bank proposal for a follow-on project indicated that implementation problems in three areas were serious defects in the original project.

- deterioration of improved watercourses due to lack of farmer maintenance.
- shortage of skilled extension workers (both in area of engineering and on-farm water use)
- inadequate funds for procurement of materials, etc.

The local councils already have established capability in mobilizing farmers for self-help and collective action and their legal authority for assisting the formation of Water User Associations is clear. The Councils also have in place both the District Council engineering staff and the extension staff of the Rural Development Department. In addition, the Councils have over the years had considerable experience in planning, executing, contracting, and financing local public works.

If this pilot effort is successful we will have identified an institutional mechanism which will speed up the implementation of the OFWM program, will mobilize local resources in support of that effort, will improve local participation, and will build on existing institutional capacity rather than creating new bureaucratic structures.

The amendment to the OFWM project will provide for:

- Short-term technical assistance to support both the engineering component of the project and the program of farmer organization.
- Training for District and Union Council staff to familiarize them with the OFWM methodology.
- Funding of a percentage of the construction and maintenance costs on a cost sharing basis with the Local Council/WUA.

. Research and Evaluation to establish the basis for a possible expansion and follow on to the current pilot project. This will include an examination of (a) financing mechanisms with particular attention to the possible utilization of special tax districts and the establishment and financing of a Development Loan Fund for Local Councils, (b) staff capabilities and needs of the Councils for expanding work in this area, (c) training needs and appropriate mechanisms for expanding the training program, (d) evaluation of the actual performance of the pilot councils and water user associations after the first full fiscal year operation of the program.

II. GENERAL PROJECT DESCRIPTION

The GOAL of this project is to increase income through improved delivery and utilization of irrigation water. This includes:

(a) The improved construction, maintenance, management, and utilization of the canal system at the local level, and

(b) more effective understanding by the farmer of his role in accomplishing this goal, including the mobilization of local resources, better water management, maintenance, and conservation.

The On-farm Water Management Project has developed models of canal construction and maintenance on the one hand and of farmer organization (Water User Associations) on the other. It has demonstrated their utility and practicality. It now remains to find an appropriate implementation mechanism for promoting the model on a national scale.

The appropriate criteria in selecting the appropriate institutional mechanism will include:

- maximum speed in disseminating the model consistent with adequate technical quality requirements
- maximum farmer participation and linkages to technical and administrative support
- mobilization of local resources to the extent of possible self-financing
- reduction of administrative costs and most efficient use of scarce technical staff
- maximize institutional learning capacity and adaptiveness to farmer needs and local conditions
- sustainability after the withdrawal of donor funding

The PURPOSE of the project is to establish an institutional mechanism to deliver water management services. Four pilot efforts will be conducted-- one in each Province-- so that we may within 24 months after the start of the pilot effort be in a position to design an expanded follow-on project utilizing the Local Councils as the OFWM implementating agency for canal construction and maintenance and for the promotion of Water User Associations. This will permit us to (a) document training requirements, technical assistance requirements, financing arrangements, etc., but also (b) evaluate the Councils' ability to adapt their existing engineering and administrative capacity to this purpose and to expand their existing capacity for the mobilization of local resources and support to accomplish this purpose.

To accomplish this purpose, the collaborating Councils will undertake to:

- assist the establishment of Water User Associations (WUA) on the selected watercourses and to provide extension support to those associations in construction, maintenance, on-farm water management, and organizational matters for three years.
- develop a financing mechanism by which improvement of watercourses, according to the models developed in the OFWM Project, can be undertaken jointly by the Council and the WUAs. The effort should be to find mechanisms which are user-financed rather

than funded from general revenue and to move toward a system which could become increasingly self-financing.

develop the technical capability to supervise the construction and maintenance of improved watercourses according to the OFWM model.

The basic agreement between A.I.D. and the Council will be a "package" which includes the improvement of the entire watercourse (including straightening, reconstruction of the earthen embankments if required, etc.) and the lining of a portion of the head of the canal. The A.I.D. project agrees to substantially subsidize (a) lining of the head of the watercourse (about the first 10%), which is required as part of the "package", (b) the installation of "pacca naccas", and (c) the lining of portions of the watercourse which receive heavy use (eg. that portion passing through villages). The WUA would be responsible for and finance the agreed upon improvements in the "kacha" portions of the watercourse. Should the WUA decide it wishes to line additional portions of the watercourse, A.I.D. would agree to subsidize at a reduced rate additional portions of the canal, but only within the first 50% of its length. A.I.D. would not entertain any financial support for lining the lower half of a watercourse. It is understood that the WUAs

would provide all labor for watercourse improvement and that the OFWM Project would provide technical support for all activities associated with the project--including construction and lining, farmer-financed kacha improvements, maintenance, and on-farm land leveling and related improvements. All improvements must be to the specifications of the OFWM Program field manuals.

The question for this effort is a modest one--can the local councils implement the engineering portion, assist the establishment of the WUAs, and mobilize resources. Major funding for TA and for institutional development will arise if the performance of the four select districts is satisfactory. At that point it will be necessary to build substantial support facilities at the national and provincial level and to undertake large scale training of council staff. It may also be desirable to assist the establishment of some sort of local government development loan institution to assist the funding of local works such as irrigation.

III. PROJECT COMPONENTS

TRAINING

The OFWM Project assisted the devlopment of training institutes within the OFWM Directorates in Punjab, Sind, and NWFP. A major training facility was established in

Lahore. There is also an established Water Management Extension training course at the University of Agriculture Faisalabad. Although any nation-wide effort in on-farm water management will require further strengthening of these training facilities, this sub-project will assume that the existing capabilities are adequate to service the needs of Councils for the pilot effort. For each of the four pilot Districts the following training needs are anticipated.

Training for District engineering staff (10-12 per District) in each of four districts in Water Course Design and Improvement. (6 week course)

District level Rural development staff would participate in a Water Management Extension training course and a course in assisting the organization of Water User Associations (about 3 weeks each)

(This would involve training about 5 staff per district.)

It is possible that a training session may have to be developed for Council management staff in handling the special problems of contracting for irrigation work, fiscal problems associated with Fixed Amount Reimbursement(FAR) financing, and together with District Revenue Department staff arrangements for collecting local tax contributions.

It is probably desirable that one or two members of each participating Council (presumably the Secretary and Chairman) and each new Water User Association should participate in a suitable course-- probably including an introduction to the technical model and problems, administrative aspects, and organizational problems of Water User Associations. (80 persons per district) It might be necessary to do this training within the District, rather than at Lahore.

It is probably desirable that at least one officer from the Provincial Rural Development Department participate in this training program so that he is in a position to supervise and backstop the pilot effort.

The LGRD Ministry proposes to recruit a 3-5 person technical support team at the MS level in engineering, extension, agronomics, and rural sociology and to locate the team at the NCRD. Training in the construction techniques and extension techniques for irrigation would be provided.

Prior to the finalization of this sub-project proposal it will be necessary for A.I.D., Provincial and National LGRD Department Staff and Provincial OFWM Directorate staff to consult to assure the availability of trainers and

training facilities, costs, scheduling to assure a fast start, and to cooperate in the development of appropriate courses. This is particularly important in veiw of the potential heavy demands which will be placed on the existing facilities by the large new World Bank project and by the A.I.D. extension of the existing OFWM Project.

It is understood that the Ministry of Local Government and Rural Development has training facilities which might provide physical facilities for such training, but it is assumed that it would neither be appropriate nor possible to gear those programs up for assisting the OFWM training needs within the time-frame of this pilot project. Obviously they offer potential in the longer term.

TECHNICAL ASSISTANCE

It is assumed that the Councils have an adequate staff in place to undertake the contracting and administrative tasks, a competent engineering staff-- assuming some additional training, and that the Rural Development staff and Council members can handle the problems of formation of Water User Associations.

Once the training has been completed and the appropriate manuals and extension materials created and disseminated, it is assumed that the construction and

maintenance work will be fairly autonomous. However, should this not be the case, the LGRD staff anticipated no difficulties in having District Council staff call upon Irrigation Department or Agriculture Department engineers for technical support. The District Coordinating Committees (or their equivalent), in which these Departments participate, are adequate for this task.

In addition, the central LGRD Ministry proposes to recruit a technical support staff on temporary contract adequate to provide technical support to have District staff over the project period. A staff of two agricultural engineers, two extension specialists (agronomists), and one rural sociologist is proposed. LGRD Ministry and A.I.D. would jointly define qualifications and jointly screen candidates. Salaries and field costs would be met from project funds.

The following technical assistance may be required for the project.

- Agricultural Engineer(specializing in irrigation): At least half time of a senior agricultural engineer will be provided to assist this pilot project from resources available in the OFWM Project. In addition, a full time junior agricultural engineer will be provided to the pilot project from the resources of the OFWM Project.

A full time rural sociologist (PHD level) will be provided for life of project under this pilot project funding. It is assumed that this individual will be recruited locally. Technical Assistance in the development of training materials and mechanisms will be provided as required from the OFWM Project.

Local Finance and Recurrent costs:

As it is expected that USAID/Islamabad will be funding an analysis of recurrent cost problems in four of its new projects (including the OFWM Project Amendment) this winter, this requirement can initially be met in that way and follow-on technical assistance will probably be provided centrally to deal with recurrent costs issues.

CRITERIA FOR SELECTION OF PILOT DISTRICTS

This should be worked out collaboratively with the Provincial LGRD and Agriculture Departments. Some suggestions are indicated below.

Extensive canal irrigation (do we wish to specify minimum # of acres, or miles of canals, or some other criteria?)

Functioning District and Union Councils.

Characteristics of the District Council--ie. engineering staff, Rural Development staff, record of revenue generation, etc.

. level of local contribution agreed to.

CRITERIA FOR SELECTION OF WATERCOURSES TO BE IMPROVED

Existence of a Water User Association

Farmer willingness to undertake labor, cost sharing of cash costs, and commitment to maintenance and cooperation with extension workers in improved on-farm water management.

. efforts should be made to maximize the number of beneficiaries.

. effort should be made to select water courses where landholdings are equitably distributed because unequal holdings normally inhibit effective functioning of water user associations. A good rule might be that no more than 25% of the operational holdings on the selected watercourse should exceed the average for the District.

FINANCING MODES

It is desirable to establish the principle of local funding of improvements. Indeed this would be one of the more important aspects of this pilot project--ie. to demonstrate that local councils can encourage such resource generation.

(a) Local Councils should be permitted to meet the local contribution either out of their development budget or through the levy of a tax for this specific purpose (ie. a tax on works of public utility).

As in the case under the current OFWM Project the WUAs would be expected to contribute the labor to the project.

(b) Under the existing OFWM Project A.I.D. has employed the Fixed Amount Reimbursement (FAR) mode of financing the watercourse improvements. The essence of this system is that a design is specificed for various types of contruction and repairs under the project. The cost for each work is then estimated and the local council agrees to undertake the work in question at that cost. Normally, an advance is made and a working balance maintained. Upon the completion of the construction A.I.D., or its representative, inspects the work and certifies that it has been constructed according to specifications. Payment is then made. If construction is not made according to specifications, payment is not made. If there is a cost overrun the Council must pay the balance. In the case of a savings on cost, the Council may retain the balance.

It does not appear to be required that A.I.D. employ the FAR method in this pilot project, so an alternative is suggested below.

(c) An alternative method of financing watercourse construction would be that employed normally in Government

programs implemented by the Councils. The Ministry of LGRD is preparing a detailed description of this method which will be added to this report as an appendix, when completed.

In effect funds would be advanced through Government to the Councils. These funds would enter the budgets of the Councils as non-lapsable funds and would be identified as a special account for watercourse development. The District Engineer would be responsible for certifying that the construction work was according to specifications agreed to.

If it is required that an A.I.D. inspection (by an A.I.D. contractor) take place, the appropriate method would be to specify that the "final payment" (about the last 25%) to the Council will not take place until this inspection has taken place. This is not an unusual procedure for government grants. What is at risk for the Council in this case is not the entire amount, as under FAR, but only the last 25%. It is felt that this is sufficient incentive for performance and does not introduce new systems into Government- Council financial relationships.

It must be established, if a contractor is used for inspections, that any Council has the right to appeal

for a direct A.I.D. inspection if it is not satisfied with the Contractor inspection. Furthermore, it is understood that A.I.D. will inspect in any case on a sample basis as part of the monitoring and evaluation for the project.

(d) A.I.D.'s contribution to the construction and maintenance of canals will probably be graduated. The logic of this is explained below and should be discussed and considered by the LGRD Ministry with the Provinces.

In any given irrigation system the most water flows through the head of the system and the least at the tail of the system. In consequence assuming a constant percentage of seepage the water loss is, in quantity, greatest at the head. This is also so because there will be water in the canal at the head most of the time, whereas the lower canals will have water only in turns. In the interest of maximizing water supplies and minimizing seepage, therefore, it is much more advantageous to line the head of the canal than the tails, if resources are short.

Thus the logic of the situation is that A.I.D. and the GOP have an interest in having the canal heads lined in as <u>many</u> watercourses as possible. The optimum would be to have the canal heads (eg. the top 10% of length)

completely lined and, for the time being, leave the remaining 90% to earthen (kacha) improvements. On the other hand, it would be desirable to provide some encouragement for the Water User Association to go ahead and line the remainder should they so desire. Thus, A.I.D. has agreed to consider some sort of graduated financing for lining up to 50% of the length of the canal (including areas of heavy use). Thus, for example, A.I.D. might agree to finance the first 10% at 100% of cash costs (as in the current OFWM Project) and then additional lengths at a gradually reduced rate. The financing mode requires futher discussions between LGRD Ministry and A.I.D.

It is understood, however, that all labor will be provided by the WUA and that any construction beyond the initial 10% segment would require a substantial WUA cash contribution. It is also understood that the improvement of the watercourse along its entire length according to specifications must be completed by the WUA before A.I.D financed lining can commence.

Although the principle of WUA contributions is sound one, it must be recognized that it presents some practical difficulties. Foremost among these is the fact that although the cash contribution must be provided "up front" when construction is done,

the benefits, hence income, will accure only over the course of several years. Thus, if the system is to be effective on a large scale, it will be necessary to provide loans from the new Development Loan Fund (or other source) so that Councils can borrow for watercourse improvement (or the WUA). Without this innovation, Council budgets will be undeuly mortagaged to watercourse improvements to the neglect of other obligations. It might be possible during this pilot effort to experiment with such loan funding.

WATER USERS ASSOCIATIONS

The key to the whole pilot effort is the capacity of the local councils, with extension support from the Rural Development Department, to encourage the formation of Water User Associations and to assist them in establishing themselves as a permanent maintenance and management institution for each watercourse.

It is essential that to achieve more accountability, the farmers themselves should be involved in design, project estimates, procurement of materials, cost and quality control, and the actual organization and participation of the work.

The Project Committees through which the local councils normally manage local works provide for this type of participation. Typically, the Councils do not contract for local works. Rather the Council establishes a Project Committee for Departmental Works. This might be composed of a Council member and members of the Water User Associations and, although composed of "private"citizens, it has a legal status which permits it to construct works of public utility for the Council, in support of which special taxes/fees may be levied.

The only difficulty which the Councils may encounter is that the Project Committees are ad hoc bodies for the specific construction at hand. The task here, however, is to institutionalize the Water User Association. This will require an extension effort. The existing World Bank project estimates that it will require one extension worker for each 20 improved water courses-- ie. visiting each at least once a fortnite to supervise maintenance, assist the Association in its development, and to provide extension in on-farm water management techniques. They assume that this level of support would be required for at least five years. In the case of this Pilot Effort, the Rural Development Department would have to provide 1-2 such extension workers in each District for the period of the project.(assuming 30-50

watercourses per District).

MONITORING AND EVALUATION

It is important that this pilot effort be carefully monitored so that the potential for an expanded follow-on project can be ascertained. For this purpose the following is suggested.

- The LGRD Department in each Province will assign an officer to supervise the pilot effort to assure regular inspection and monitoring, and reporting.

  The technical support cell in the NCRD may also provide supporting analysis and research to support the monitoring.

  About $100,000 will be provided for outside monitoring of the pilot effort. It is suggested that this be done on the basis of an agreement between the Ministry and the Cornell University Natural Resource Management Project (Cooperative Agreement with ST/RAD). This might be combined with some technical assistance from Cornell as well and it is possible that some Asia Bureau funds might be included from the new regional Water Management Project.

MANAGEMENT REQUIREMENTS

- The central LGRD Ministry will assign one Officer full time for the project period to provide central management of the project and supervise the monitoring. The cost will be met from the Department budget.
- Each LGRD Department in the four Provinces will assign one officer to provide monitoring and management for the project at the Provincial level. He will be expected to receive appropriate training in construction and extension, land leveling, and related aspects of the project.
- The project will be monitored on A.I.D.'s part by the OFWM Project Officer of USAID, as in the portion with the Ministry of Agriculture.