

## Social Aspects of the Irrigation District Transfer

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### ABSTRACT

WITHIN THE FRAMEWORK of the modernization policies of the Mexican Government, irrigation management transfer to the Users' Associations is of much significance. Yet they have to confront different problems for its implementation, the most important being the various perceptions of the social actors involved in the process. Since transfer policies have been defined in different political mechanisms, such as the Irrigation and Drainage Program of the *Comisión Nacional de Agua-CNA* (National Water Commission 1990c) and in the Water's National Law of the *Congreso de la Unión* (Congress of the Union 1992), yet the concrete display of it, as well as the way it crystallized, developed from the combination of different social, economical, political, and cultural factors; expressed by individual or group interests of those that participate in the process.

Therefore, this paper aims to review the social and institutional framework for the implementation of the management transfer, in the context of the economically productive transformation of the rural sector. It also analyzes how the policies of modernization and the transfer of the irrigation districts, have created lags or duplication of roles and functions in the different levels of the institutional structures of the CNA as a government agency, and in the new forms of organization of the User's Associations.

The second part of this paper discusses the participation and the institutional commitment of the CNA in the process of transfer of the irrigation districts, taking into consideration the challenge involved in learning how to understand the magnitude of the process. It discusses the social and institutional commitments that are implied in this form of participation--in the particular case of Mexico--with its traditional politics, as it presupposes a viable change in the traditional ways of delegating representation and in generating new areas to carry on that representation.

Finally, in the third section some recommendations are given, as to what should be understood as a participatory action by creating new spaces for the representation of the general interests and the need of an organized effort in the recovery of the different types of producers.

All these will allow the envisioning of technological assistance for the reproduction and development of each one of the emerging organizational forms.

### INTRODUCTION

In Mexico, there are 77 irrigation districts, that cover 60 percent of the total irrigated area of the country, while the other irrigated areas have a total of 27 thousand small units of irrigation. Thirty percent of the income from agricultural production comes from these irrigated areas, that represent the 16 percent of the total harvested area of Mexico (Table 1).

Table 1. Harvested areas of the irrigation districts.

CROPS	Harvested areas (hectares)				
	1989	1990	1991	1992	1993
Autumn-Winter	1,341,282	1,198,018	1,249,335	1,166,397	1,313,775
Spring-Summer	1,361,895	1,182,110	928,558	945,571	864,342
Second Crops		293,338	506,419	534,098	408,038
Perennial	506,423	476,796	424,237	459,525	476,543
Total	3,209,600	3,015,262	3,108,549	3,107,591	3,053,698

Source: Comisión Nacional del Agua. Informe 1989-1993, p.84.

During the last decade, the irrigation districts faced a tremendous deterioration in production and a considerable damage to their irrigation structures, creating a remarkable decrease in agricultural production, because of the reduction of the harvested areas and the decrease of the crop output. Among the reasons for this decrease in production, are the lower incomes of the farmers and the poor management of soil and water resources.

The lack of adequate funding and the deterioration of irrigation districts, is the result of the reduction of the Federal Government subsidies and the progressive shortage of financial support from the irrigation district users to cover operation, maintenance and administration costs. Therefore, it is extremely important to have increased user participation in all water management activities.

With this criteria, the *Comisión Nacional del Agua (CNA)* started different activities to increase agricultural production, taking into consideration financial possibilities and a cheaper budget to implement the following actions: the decentralization of the irrigation districts, the rehabilitation of irrigation structures and a more efficient use of water.

In view of the above and the national budgetary constraints, the government has recognized the need to clear the way for private investment and initiatives, with the required logistics for a better and efficient production and operation of the irrigation districts. Also, the government has recognized the necessity to enforce a new system in order to move into a shared responsibility scheme within a mixed economy. This new system is designed to enable the public interest entrepreneurs--organized by the users--to be in charge of the operation, maintenance and administration of the irrigation districts.

Actually, as part of the process of modernization, the *Programa Nacional de Modernización del Campo 1989-1994* (National Program of Modernization for the Rural Sector) has transferred the operation, maintenance and administration of the irrigation districts to the users, with the developments indicated elsewhere in this paper (Table 2).

Table 2. Indicators for irrigation districts' transfer program.

	1990	1991	1992	1993	TOTAL
Surface (ha)	130,564	425,158	945,076	726,090	2,226,888
Modules	19	53	114	97	63
Users	14,128	43,520	128,246	105,301	291,195

Source: Comisión Nacional del Agua. Informe 1989-1993, p.82.

For this reason, the present study aims to review the social and institutional framework for the implementation of the transfer, in the context of the economically productive transformation of the rural sector. It will also try to analyze how the policies of modernization and the transfer of the irrigation districts, have created lags or duplication of the roles and functions in the different levels of the institutional structures of the CNA as a government agency and in the new forms of organization of the Users' Associations.

## SOCIAL CONTEXT OF THE TRANSFER

Within the framework of the modernization policies of the Mexican Government, the transfer of irrigation districts to the Users' Associations is of great importance (1). Yet, one of the basic problems preventing its achievement is the various perceptions of the actors involved in the process. Since transfer policies have been defined in different political mechanisms, such as the Irrigation and Drainage Program of the *Comisión Nacional de Agua-CNA* and in the Water's National Law of the *Congreso de la Unión*, yet the concrete display of it, as well as the way it crystallized, comes from the combination of different social, economical, political, and cultural factors expressed by individual or group interests from among those that participate in the process.

Therefore, in the process of implementing the modernization policies, as well as in the transfer, not only do local and national interests play a role, but the ways in which these interests are intertwined and strengthened by its environment and the world markets also make their contributions (Gordillo 1990; Hewitt 1978; Sanderson 1981, 1983, 1986, Yúnez 1988).

In the particular case of the agricultural production of irrigation districts, the potential to participate and compete in the international markets is greater than that of other less favored agricultural sectors in Mexico. This has deepened the already existing tension between a production geared to satisfy national food needs, and the strengthening of national producers as well as international suppliers who compete in the international market. This situation has

become more acute since the Mexican market was opened to the import of basic grains, and there have been changes in the relationship between the government and the agricultural sector (2).

This greater market penetration has led to a particular type of production which focuses on modern production systems, on the one hand the strong, agricultural middle class which is conscious of its production goals, and on the other the deeply rooted regional farm workers who demand their part in the process. There has been a long history of competition for land ownership.

Once resolved, the struggle reappears as a self-productive project expressed in different ways and at different times during which the relationships between the *ejido* (3) and government departments (Agricultural Reform, the Department of Agriculture and Water Resources, Banrural, ANAGSA, etc.) have been remodelled. In the last decade, the *ejido* has begun to take shape and is gradually being modernized through proposals concerning farm organization and production. These programs developed in response to the local social climate, were instituted as government policy, with greater or lesser success, on a nationwide basis (Gordillo 1988; Oswald et al. 1986; Torregosa 1980, 1984).

Furthermore, with the commercial opening and the disappearance of the main agricultural production state regulating mechanisms (FAO/CNA 1993), the sector's decapitalization has greatly accelerated since 1989, mainly with respect to grains and oleaginous crops, affecting most of the nation's producers.

Transfer of irrigation districts, fundamentally in the northwestern valleys, presupposes the recognition of heterogeneous points of view, as well as of their strengths and weaknesses. It requires the consensus of producers and other interested parties, organized to carry out production programs, within the context of the decapitalization and pauperization of Mexican farmers which have resulted in the massive absorption of small farm holdings and the expulsion of these landholders, who are in turn being absorbed into the agricultural labor markets in Mexico, the United States and Canada.

Within this framework, the first questions to be answered were: who would be the recipients of the irrigation zones? who were the users? what socioproductive conditions existed? and what was the extent of the funds available to adequately manage, maintain and operate the transferred irrigation zones? (4). The present economic modernization process of the farm sector, its effects on production and the elimination of traditional bargaining mechanisms in the sector (FAO/CNA 1993), the user modules at the first level, and limited liability associations at the second, must be reorganized into entities for negotiation, providing their own resources and representing the general interest (5). In this regard, limited partnership associations and societies should be thought of as new organizations representing the collective interests of the sector and as a platform of consensus for the proper use of water as a public resource.

*Comisión Nacional del Agua (CNA)*, as a government agency is promoting as one of its main goals, a new culture with respect to water usage, in which the active participation of the society as a whole is a key factor for the achievement of this goal (CNA 1989; Mexican Congress 1992). At the same time the CNA is confronted with the challenge of having to update its organizational capacity with the water users as a collective, in order to consolidate this new organizational spheres and other broader spheres geared towards the increase of agricultural production. In this sense, the organizational function of the CNA has to take into consideration each one of the users in a district as well as the society as a whole. This aspect is extremely important, because it must be implemented with creativity in such a way, that the users should obtain a positive response to the new socioproductive conditions, and at the same time, fulfil the demands to which the Mexican society is subject to, as a whole, where the water resource plays an active role as one of the main elements for the agricultural production and the fulfillment of the most basic needs of society.

With regard to this government initiative, an aspect that the CNA authorities, have to bear in mind is the new socioproductive situation in the rural sector, which has changed tremendously from its previous conditions, and act as an "unfolding agent" for the creation and development of a new technical-productive culture, with the capacity to respond appropriately to the most immediate challenges which the district water users are confronted with.

The main challenge the institution faces is how to move from the rules and regulations stated in the new law, to the management, construction and development of those capable of a transformation of the general, socio-productive conditions desired by the Mexican society.

From this perspective, the transfer of irrigation zones signify an enormous, socially demanding and complex process, in view of the fact that in implementing this policy, the institutional and regulative demands on users will quantitatively increase. This is not simply a question of existing relationships increasing in intensity or number, but rather it means that we are confronting new situations and other relationships which are arising between producers' organizations and government institutions (Torregosa 1990, 1993).

Now we are facing an unknown situation where the institution is not only restructuring its functions, but is also trying to create the conditions so that the changes will affect the social patterns and organization of the users, allowing the growth of the original social relations, and not merely re-enforcing the pre-existing social relations.

The social change which requires establishing a hydraulic policy with the participation of all concerned, the transfer of irrigation zones, the creation of hydraulic committees, the establishment of a watershed advisory board, etc.,

(Mexican Congress 1992), are based primarily on wishes and decisions regarding the direction to be taken in internal reorganization and relationships with users in particular and society at large.

Until a short time ago, the Mexican Government regulated agriculture and, in particular, water distribution, by means of development policies in which the producers of the irrigation zones participated in a specific way. (Mexican Congress 1956, 1974).

The economic modernization policy of the country altered this situation, since it is characterized by the transformation and constant decrease of government measures to regulate agriculture. In other words, the public institutions which controlled the prices of agricultural produce or goods, credits, marketing, distribution and sale of water, legislation on land ownership, etc., are being eliminated or are adjusting their policies.

This new situation affects the irrigation district users' social characteristics as follows:

1. There has been a significant change in the way in which the interests of *ejidatarios* are represented, their present conditions for owning property and producing crops now being their personal responsibility, and not the result of collective bargaining with the government institutions which previously regulated the agricultural sector (6).
2. Due to low market competitiveness, specially in international markets, a wide sector of small and medium size producers, both of private and ejido land, are at an unproportional disadvantage when compared to big agricultural entrepreneurs and multinational companies.
3. The producers' social characteristics are modified as well. If in the past, disparities between small and medium size producers, *ejidatarios* and private property owners were clear, these now tend to disappear. So, as not to be left out from production, small and medium size farmers and part of the ejido sector are reorganizing, thus generating a new social identity as producers. On the other hand, the differences between this sector that is being homogenized and the agribusinesses are growing (7).
4. Transformations in the water resource policy imply changes in character and content of the state institutions' duties, hence in the role of public officials involved in the process.

The modernization of the sector will bring about the reorganization of irrigation zone producers so that they will be held accountable for management, distribution, conservation of water resources, and for the corresponding infrastructure.

This shifts the tasks and duties that were previously carried out by state officials towards User Associations generating new institutional demands and requirements that need autonomy in their decision making processes. For example, in contracting and carrying out rehabilitation and modernizing work in the irrigation modules and in the district, or in decisions related to the quotas that either party control, etc. In other words, a transfer presupposes the redistribution of power quotas between the parties involved, as it does with the redistribution of duties and responsibilities.

Another consideration is the permanent threat posed by the fact that traditionally ineffectual political groups will look upon any new entities as potential areas to reestablish a foothold through the administration, distribution and control of the water used for crop irrigation. Associations are visualized as entities with access to and control of a resource which will serve to recuperate the clients and income lost as a result of the reorganization and modernization of the sector. In creating these entities, the interests, limitations, functions and responsibilities established throughout an extensive period in a particular relationship with the state will necessarily be affected. (Aguilar et al. 1989; Bartra 1975, 1978; Reyes et al. 1975).

In this regard, the policy of modernization and the transfer of irrigation zones have generated positions at different levels of the institutional organization and the new organizations that are unfilled or superimposed, which results in conflicts of interest between the new associations and the officials previously in charge of those functions and responsibilities.

From this point of view, we would have to consider the transfer of the irrigation districts and the programming of the corresponding policies in three terms: short, medium and long. It would allow us to consider and provide a context for specific actions in the two environments impacted upon: the one that emerges and the one that is being destroyed.

These two environments need to be considered in their social and public institutional aspects. The transfer process is oriented towards creating a new institution with a different public and social content. Its creation will necessarily affect public officials' interests, environments, duties and responsibilities. Such officials when faced with the changes, will have to set in motion the new public and social, institutional mind.

The social and historical time needed to break apart the structure and shapes of the social and public institutional mind greatly surpasses short-term political decision. Generally, this hinders clarifying the course that wants to be set for the process; where do we want to go and how do we want to get there?

Another great institutional challenge that is foreseen with the transfer of irrigation districts, is that of steering the construction of social, economic, technical, organizational and regulatory conditions so that User Associations turn into new spaces for complete water management in the districts. In other words, that the districts really turn into autonomously managed places that represent and join all of the interests so as to achieve a viable hydro-agricultural development. The challenge is also found in outlining and developing human resources and institutional capacities for the performance of new duties that, on the one hand, will allow the fulfillment of their role as regulator and guarantor of the resource, and on the other, to answer openly and creatively to the new institutional demands that Associations may generate.

It is important to see that updating and transferring of the districts are happening at a time when there is a profound crisis throughout the sector, affecting the financial and organizational capacity of the users as well as government's credibility.

This is why the renovation of agriculture, within the context of a transition, requires the generation of instances and institutional spaces that will allow for and facilitate the consensus of the parties involved in the process and provide an access to mechanisms and information sources about prices, trading, markets, adequate crops for the region that have an international demand, technical consultant offices, technological innovations, etc. The new market and production conditions need answers at this level.

Let us think about the User Associations as spaces that not only will manage water in its totality, but as areas for the complete management of hydro-productives which might begin to fulfil the institutional social sphere required in the farm production during the transition to modernization. To consolidate the Associations as effective consensus spheres can be a good alternative in the transition for the producers. It would also be possible to reinstate, and not disassociate, the management of water and production (8).

## **PARTICIPATION IN THE TRANSFER AS AN INSTITUTIONAL COMMITMENT**

One of CNA's principal commitments with respect to the transfer is the participation and joint responsibility of the users involved in the process. In this sense, another challenge has been to fully understand the institutional and social commitment, which implies the commitment to participate. In the Mexican political tradition, calling users to participate is very important, because it represents a significant change in the traditional way of delegating representation and establishing new entities to handle representation (9).

This fact is by no means trivial because public participation in a society with a strong corporate cultural policy allows us to introduce a new element which under the present circumstances, at the same time, not only constitutes a change, but may better correspond to the real social conditions and demands than the current traditional use of corporate and client notifications.

We have indicated that participation, as a social process, is an action taking place within society and requires the opening of new government areas providing space for its expression and energy. The opening of such areas involved with the water resource policies are in response to the demand for water demands, and to the institutional need of having a representative, active, committed and jointly responsible counterpart in the administration, as well as conservation and distribution of a vital resource which is scarce, and publicly owned (CNA 1990a, CNA 1990b).

When we speak of participation within the institution, we are not at all speaking of the same thing: the end significance depends on a number of historical/social factors which are embodied in each individual. There is a simultaneous interaction of numerous images, including those defining, implementing and appraising policies and their depositaries.

A second element to be considered is the nature and social diversity of those taking part. It is difficult to achieve an exact image of users in the different districts in such an intense context of change. Available criteria are scarce and very general in nature, including, for example, those concerning the atmosphere of user environment (urban or rural); those concerning the type of infrastructure; users in gravity districts, users in well districts, etc., or by sector: *ejido* farmers-small landowners-tenant farmers, etc. In the case of the transfer, for example, the call to participate covers an agricultural population which is widely varied, not only in socio-economic aspects but in technological and cultural contexts as well.

A recurring preoccupation of CNA in the transfer has been how to familiarize itself with the social, cultural and economic aspects of the subject population, and how to achieve overall participation and representation in the leadership of users associations (10), within the context of time pressures fixed by the goals of the transfer, and in the face of institutional and social inertia, considering that all actions taken produce a profound transformation in the institutional and social environment.

A key to understanding the importance of the role to be played by the National Water Commission in forming a common water resource policy, is to define the relational framework within which social identities are established in Mexico.

For example, the forms of ejido and small landholding in the irrigated land sector as a whole, with which we are familiar, have been carefully constructed in a relationship with the state over the last forty years, and in accordance with a specific form of economic development. Here, the present crisis applies not only to the agricultural sector, but also to the public sector, giving it a strongly corporate and vertical nature. These sectors were also shaped and reproduced under the same rules of the game, and it is now they, with their acquired knowledge, who must shape and enforce the new rules.

This new policy of participation is part of the economic and political restructuring and modernization of the country, and must meet the challenge of opening areas for decision and a position consensus of great institutional complexity. That is, the institution itself must change and transform its own structure, since, with the opening, it transfers part of its traditional functions, while at the same time defining new functions within a standardized framework, both internally and with regard to society. The conditions for new executive and technician profiles must be established, not only for high levels of training but also to convey a new political culture in which all may participate. Also, and no less complicated, the new policy forms part of the country's economic and political restructuring and modernization, and confronts the challenge by opening channels, at a local level, for decision and consensus in an environment of centralized economic forces.

It is from this viewpoint, then, that we regard participation within a socio-institutional framework, since its purpose is to create new identities of a public and business nature which affect government and socio-economic factors alike.

We have mentioned that old identities are disappearing and new ones are emerging and are being built. The call to participate in hydro-agricultural modernization is part of this process; that the basic role of the institutions in this context, is to create the conditions for shaping these identities, thus accelerating the desired changes.

One of the main problems encountered throughout the country is the difficulty of institutions in applying the policy and in visualizing, combining and agreeing on those who are to implement it. We have already mentioned the perception of participation in the case of a transfer, and the need to recognize the diversification prevailing in the idea of the policy and the nature of the new entities. The CNA has demonstrated great good sense in this connection (11). However, the task has only just begun, since the transformations in process are so profound that the production and socio-institutional construction of human and technological resources at very different levels are required--something which is only possible in the medium and long term.

#### **CLOSURE: HOW DOES ONE PARTICIPATE IN THE CONSTRUCTION OF NEW GENERAL REPRESENTATIVE OFFICES?**

A first challenge for participation in hydro-agricultural policies is the institutional capacity to implement such a policy, as well as to distinguish socio-productive differences and the conflicting interests of the producers and users involved, in order to identify and foster the most suitable aspects of a consensus. Sensitivity is needed on the part of the institutions in order to understand user diversity, to recognize the difference in their demands and needs, and to incorporate these when defining and applying the policy (12).

The construction of an integral consensus and negotiating entity (User Associations) continues to call for a change in traditional Mexican cultural policy, which in turn calls for an updating of institutional capacity as a collective organizer, and as a means to achieve a creative and positive response to new socio-productive conditions, and to the demands of Mexican society as a whole, and of farmers in particular.

We realize that the first stage of the transfer took place with users who were willing to participate, and where administrative representation could be questioned once the process had become general and the real nature of the transfer had become clear. It is important from this viewpoint to foster the creation of more specialized organizations; for example, at section or outlet level, which would permit direct action in collaboration with the users as a whole, and one much closer to their direct and specific problems. We should think of the associations not only with regard to growth and movement at interdistrict level (the National Association of User Associations), but also with regard to convocation and organization forms at basic level; to identify and incorporate these where they exist and foster their emergence where they do not. Here, the representative demands and needs of people living and working in irrigation districts will have a more immediate, suitable and representative channel of expression.

These organizations are fundamental at basic levels within a context of organization crisis and institutional rebuilding, such as that existing in Mexican rural areas. They would participate in resolving common problems concerning a resource vital for their biological-economic-social reproduction, and could lead to the establishment of concentrated production expansions for new projects, or to achieve better conditions for the leasing or sale of land. These entities

would embody the most direct method for obtaining centralized user information, as feedback to the system for adoption of decisions.

However, any attempt at modernization, regardless of its source, is unworkable unless there is a policy of goodwill responsible for fostering the institutional, business and social methods for managing the resources and the supplies, so that construction and consolidation of the new, emerging identities can be achieved.

Participation promotion represents an organizational force based on the needs of the different types of farmers for the purpose of spurring modernization, and devising supplies, technological and productive support too allows the emerging forms of organization to be reproduced and developed.

## Notes

- (1) At the end of the last presidential term, the decision was made to transfer the administration, distribution and conservation of irrigation districts to the users. This policy was fully developed in the course of the present presidential term.
- (2) The current policy for the country's economic development, which includes the modernization and transfer of irrigation districts and agriculture, signifies decreasing state intervention and fewer regulations, together with greater participation and sharing of responsibilities by the country's farmers.
- (3) The ejido is a legal entity established in the Mexican Constitution of 1917 in which land use is assigned to a requesting group. This assignment is invariably to a group; however, the land use may be on an individual plot basis or as a community effort. There are ejidos that are subdivided into plots and others operating as cooperative or collective organizations. When Constitutional Article 27 was modified in 1992, the possibility of ownership, and not just land use, was given to the ejido, if the members of the assembly so authorized. This action dissolves the traditional relationship between the ejido and the government.
- (4) The CNA developed a group of technical, socio-productive, financial, etc., recommendations in reply to these questions, and designed a strategy to select the first districts to be transferred to the users.
- (5) Although users' associations are designed to function as efficient organizations in the management, conservation and distribution of water, they would have to account for the administration of a public asset as provided under the Mexican Constitution.
- (6) The constitutional amendments to Article 27 and its regulatory law provide for ejido land as common property, leaving the holders free to rent, sell, enter into association or bequeath the land, should the holder so elect. Also, the land will be subject to the same rights and obligations as private property with regard to applying for credit, etc.
- (7) In studies carried out by the *Instituto Mexicano de Tecnología del Agua-IMTA* (Mexican Institute of Water Technology) on behalf of the CNA, both the results of the socio-productive studies and a poll taken among 6,000 users in ten irrigation districts clearly demonstrate a tendency toward polarization and concentration of the productive and surface area in the irrigation zones. These studies have shown that 10 percent of all farmers work 80 percent of the surface area, and the remaining 90 percent cultivate the other 20 percent.
- (8) This requirement was previously complied with by the Directive Committees of the irrigation districts, consisting of representatives of the government institutions in charge of regulating agricultural production, and representatives of the more important sector organizations in each district. With the trade opening and the policies for liberalizing agriculture, a vacuum has arisen with regard to production: what to produce, to whom to sell, who will finance production, how to enter other markets, etc.
- (9) For further information on the corporate forms of political representation in Mexico, see Cosío Villegas (1972); Córdova (1975); Camacho (1977); Camp R. et al. (1982); Reyna (1976).
- (10) The attachments to the concession rights of Users' Associations provide that the administrators of these associations should represent all existing sectors in the irrigation districts. The districts contain ejido farmers, small landholders and tenant farmers, who should all be represented in the association (Presidency, Secretariat, Treasury), these positions being rotated periodically.

- (11) Here, the CNA has been well aware of the importance of personnel recruitment and training for state managers' offices and irrigation districts (the institution's areas of greater activity), with personnel capable of identifying these needs and demands and of promoting conditions for consensus. However, this has been insufficient for the task.
- (12) An effort has been made in this direction by the CNA's Parcel Development Program with credit from the World Bank, aimed at more efficient water use in parcels in order to increase production and improve the standard of living of the farmers. This program contemplates an overall support for production, and provides an important element for training, communication and participation.

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