

## Farmers' Participation and Empowerment in Pakistan's Institutional Reform of the Irrigation Sector: The Farmers' View of the Process

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### Abstract

The salient features of the Indus Basin Irrigation System and of the institutional reform of the irrigation sector in Pakistan are introduced. The results of a farmers' perception survey (n=128) on their experience with the reform process, based on a structured, open-ended questionnaire, are discussed. While the mobilization of farmer organizations in the South-eastern Punjab has produced an active and competent leadership, the grassroots membership has remained apathetic and uninformed. Substantive farmers' participation and empowerment is yet to be achieved. Skepticism among irrigation personnel and the lack of a comprehensive legal framework have delayed irrigation management transfer. The legitimacy of the reform process among farmers is jeopardized.

**Keywords:** Organization development, irrigation management, farmers' participation, empowerment, institutional reform

### The Indus Basin Irrigation System

The Indus Basin Irrigation System (IBIS) constitutes one contiguous and interdependent system within a single river basin. It serves a command area of about 16 million hectares. To cope with relative water scarcity, its colonial builders conceived the system to provide 'protective irrigation' at designed cropping intensities of 80 percent, i.e. approximately 50 percent during the *kharif*/summer season and 30 percent during the *rabi*/winter season. Today's cropping intensities are varied and may reach up to 200 percent, due to increased water availability on account of three storage reservoirs built in the post-colonial period, greater water availability in some recently build subsystems and widely prevalent inequity in the distribution of water resources.

The three main reservoirs, Tarbela, Mangala and Chashma, afford a storage capacity of 15 MAF, which are ensuring irrigation capacity during the sowing period of the *kharif* season before the onset of the summer rains. The IBIS comprises 19 barrages and headworks, abstracting irrigation water from the rivers of the Indus basin, 15 link canals, and 45 canal commands at the primary level. The secondary level of the system hierarchy consists of about 4000 distributaries with a channel length of ca. 61,000 km. At the tertiary level 107,000 watercourses with a total channel length of 1,6 million km take off from the distributaries through so-called *moghas* (fixed outlets).

The total river flow of the Indus basin is about 142 MAF, of which 106 MAF are diverted into the irrigation system. Rainfall at on average 200 mm per annum contributes about 13 MAF. Channel losses at all system levels including the agricultural fields are ca. 50 MAF. These are to some extent recovered through groundwater pumping which provides 42 MAF. These water resources supply a crop consumptive use of approximately 69 MAF.

Provincial Irrigation Departments manage the operation and maintenance (O&M) of the primary and secondary levels of the system, while the farmers are responsible for the O&M of

the watercourses. At the national level, the Water and Power Development Authority (WAPDA) manages the operation of storage facilities and the construction of new infrastructure. The Indus River System Authority (IRSA), as mandated by the 1991 Water Accord allocates water to the provincial irrigation departments.

### **The crisis of the irrigation sector**

During the 1990s, the donor community, with the World Bank in the lead, observed a state of worsening crisis in Pakistan's irrigation sector. This crisis is first a financial issue. The gap between O&M expenditures and recoveries through irrigation fees (*abiana*) from irrigators was 74 and 88 percent during the middle of the decade for the Punjab and Sindh, respectively (The World Bank, 1997). Meanwhile, the heavily subsidized sector is still short of needed funds by about 25 percent (The World Bank, 1994). Consequently, the system is deteriorating on account of deferred maintenance and mismanagement of funds and operations.

In addition, the widespread lack of discipline among water users and irrigation managers is evidenced by the prevalence of irrigation offenses (water theft and rent seeking) in all provinces. As a result, the distribution of water is highly inequitable and water users in the tail-reaches of each system level are not guaranteed their legal entitlements. The system is water-short relative to the irrigators' demands and conflict over water resources is rampant.

### **Institutional reform and empowerment of farmers**

To reverse the adverse trends in the irrigation sector, key donors, such as the World Bank, the Asian Development Bank and the Governments of Japan, are promoting and financing a comprehensive institutional reform. The transformation of state-sector management organizations into autonomous authorities and farmer organizations (FO) with considerable empowerment of farmers in relation to irrigation personnel, are expected to increase accountability and efficacy of system management, and thereby financial viability in the long run. To motivate the governmental and private stakeholders in Pakistan's irrigation sector, the disbursement of new loans for physical system rehabilitation is tied to the establishment of FOs and the participation of farmers in the implementation of rehabilitation measures.

The Provincial Irrigation and Drainage Authority Acts of 1997 provide a legal basis for reform in all four provinces of Pakistan. Accordingly, provincial level O&M will be taken over by Provincial Irrigation and Drainage Authorities (PIDA). These authorize main canal management by Area Water Boards (AWB), which in turn are to transfer distributary level management to FOs.

The empowerment and participation of farmers is mandated at all three tiers of the reformed institutional structure. Farmer representatives to PIDAs and AWBs will participate in negotiations and decision-making at the provincial and canal command levels. In FOs and watercourse associations (WCA), farmers will be empowered to manage distributaries and watercourses after the implementation of irrigation management transfer (IMT).

The flow of water and financial resources will be organized within this new institutional structure as follows. The PIDAs will receive irrigation water at the barrages according to IRSA allocations. These will be distributed to AWBs according to entitlements proportional to the size of the command area under their jurisdiction. The AWBs, in turn, will distribute proportional allocations to each FO. Thereafter, the FOs have a legal mandate to equitably distribute water among watercourses and their irrigators (Government of Sindh, 1997; Government of Punjab, 1997; PIDA, 1999). The FOs in turn will be responsible for the assessment and collection of *abiana*, a proportion of which would be retained by the FOs to

**Deutscher Tropentag 1999 in Berlin**  
**Session: Institutions and Organizations in Rural Development**

cover their management costs, while the remainder will be paid as an irrigation fee to the higher level authorities.

The details of these management functions have yet to be operationalized, as the PIDA Acts of 1997 fail to make specific provisions. Currently, the reluctance of the governmental irrigation bureaucracies and the lack of clear legal frameworks are holding up the reform process, and IMT has not been achieved at a single distributary.

The objectives of reformed governance and management are financial sustainability, effective O&M and equity in the distribution of irrigation supplies. The reformers expect to achieve these objectives through a number of accountability mechanisms built into the new organizations. Within FOs a democratic representative structure would hold farmer leaders accountable to their grassroots membership. The emerging legal framework stipulates that the irrigators at each watercourse elect a representative to the general body or assembly of the FO. They may also form a WCA with its own management committee and office bearers. In any case, the FO's general body will elect a management committee at the distributary level with a varying number of office bearers. In addition, water courts would be established within FOs to deliberate and settle disputes among irrigators. The FO management committee would have the authority of a divisional canal officer according to the Canal and Drainage Act of 1873 (Elahi, no date) and be entitled to inquire into irrigation offenses and negatively sanction deviance.

Between FOs and AWBs/PIDAs service agreements in the form of transfer schemes, memoranda of understanding or joint management agreements, would form the contractual basis for exchanges of water and fees. These service agreements would clearly define rights, powers and responsibilities of the parties involved. Violations and disputes could be brought before irrigation tribunals at an AWB and appellate irrigation tribunals before a PIDA.

A hierarchy of regulatory functions has been built into the structure to ensure the lawfulness of financial and other managerial transactions of lower level bodies. The AWBs constitute the regulatory agency for FOs, the PIDAs regulate AWBs, and the provincial governments regulate the PIDAs.

Financial autonomy of the three tiers of the reform structure would ensure that these are responsible for the assessment and collection of appropriate fees and payments for services delivered. Furthermore, employment relations between the authorities / FOs and their respective staff would make the latter accountable to their employers, and thereby for the first time also to the end-users of services. If these new contract and labor relations can establish a performance oriented organizational culture, as envisioned in the change management policy of the reformers, all the key actors could be subject to sanctions in the form of rewards and punishments in response to their performance. Of course, this new organizational culture requires transparency, i.e. the free and unimpeded flow of information, which enables all stakeholders to assess the performance of others and respond accordingly. Farmers' participation provides the structural basis for transparency at all three tiers. The practice of transacting business in these bodies will show whether transparency can become a routine feature of the new organizational culture.

The mechanisms cited would fulfill the requirement for mutual accountability among stakeholders as postulated by Merrey (1996). They constitute controls and procedures which ensure that stakeholders can hold each other liable (Hofwegen, 1996) and impose sanctions, rewards and corrective actions (Abernethy, 1998). However, Mollinga (1998) has pointed out

that accountability not only depends on legal provisions, but also requires a normative commitment from stakeholders to rationality, i.e. an insight into the functional and normative superiority of rule-bound behavior. As Max Weber has pointed out, laws need to be rooted in a belief in their validity. The legal stipulation of accountability may brake down in an institutional context, which provides stakeholders with significant incentives to violate the rules.

### **Social Mobilization of Farmer Organizations**

To promote and test the viability of the proposed farmer organizations within the emerging reformed irrigation management structure, farmers have been mobilized at various pilot sites in the Punjab and Sindh to form FOs and prepare for IMT since the mid-1990s. The International Irrigation Management Institute (IIMI) and the On-Farm Water Management Directorate (OFWM) of the Punjab Department of Agriculture have implemented such pilot projects at three distributaries within the area under the Fordwah Eastern Sadiqia South (FESS) Irrigation and Drainage Project in the South-eastern Punjab.

Social mobilization involved a participatory organization building process in which trained social organizers with the support of social organizing volunteers from the targeted communities facilitated the formation of FOs in a gradual process of awareness raising, problem analysis, collective action and formalization. Eventually, an organizational structure was built according to three levels of hydraulic units within the irrigation subsystems concerned. At the watercourse level water user associations (WUA) were formed, which send representatives to water user organizations. These WUOs were formed at the head, middle and tail reaches, as well as at the minors of the distributaries. The management committees of the WUOs again sent representatives to water user federations (WUF) which cover the entire distributary.

After organization establishment the FOs underwent capacity building activities. Training on organizational and financial management, operation and maintenance tasks, and on-farm irrigation practices was provided. Selected representatives were instructed in flow measurement techniques, in order to develop an understanding of the actual conditions of water distribution within the distributary and among watercourses, and to address equity considerations. The FOs carried out some maintenance activities, to test and demonstrate their capacity for collective action. They communicated with the Punjab Irrigation Department and emerging PIDA to prepare drafts for a service agreement and negotiate IMT.

### **The farmers' perceptions survey**

Given the progress with the social mobilization of farmers and the simultaneous delay in reform implementation, IIMI was interested in knowing how farmers viewed their experience with the reform process so far. It wanted to assess the impact of the institutional measures carried out, as perceived by the participating farmers. In particular, the degree of real opportunities for participation and empowerment was to be assessed and mobilization strategies were to be aligned according to the research findings.

Interviews among 128 respondents based on a structured, open-ended questionnaire, probing qualitative as well as quantitative information, were carried out at the three IIMI/OFWM project sites. IIMI had organized a FO at the large Hakra 4-R distributary (123 watercourses), and OFWM at the Sirajwah (110 watercourses) and Bhukan (8 watercourses) distributaries. The respondents were selected through a quota sampling procedure, which ensures the representation of relevant social characteristics in relatively small samples. Predetermined quota of respondents were selected from among the following categories: the three

distributaries; all levels of the representative structures (WUA, WUO, and WUF); from among the general membership of irrigators (grassroots) as well as the WUO/WUF office bearers (leadership); from the head, middle and tail reaches of both, watercourses and distributaries; and farmers with small, mid-size and large holdings. Random selections were made within each category. This paper highlights the most significant findings of the survey. A more detailed breakdown and analysis, including an extensive annex of tables, may be found in Starkloff and Zaman (1999).

### **Key findings**

The survey showed that, according to the farmers' perceptions, an internal FO governance structure with an active, informed, trained, self-confident and representative leadership has evolved. However, the grassroots membership, including WUA office bearers, has remained inactive, uninformed and largely disinterested in farmers' participation. In particular, the information flow between the leadership and the grassroots has been insufficiently organized.

Only participation in maintenance activities has by now become a well-entrenched feature of FO activities. Furthermore, a slight majority of respondents seeks to assume the responsibility for the assessment and collection of irrigation service fees (*abiana*). The majority of respondents considered the current state of water supply unsatisfactory on account of the rotation of water supplies within the Hakra Branch Canal and/or inadequate channel rehabilitation measures (channel lining and outlet restructuring), which were carried out without farmers' participation.

Finally, the survey results indicate that an equitable, reliable and adequate distribution of irrigation water, as well as the control of irrigation offenses cannot be implemented and enforced due to the persistent delay of IMT. The interest of the respondents in IMT was uneven, as many remained skeptical about the honesty and credibility of their leaders. Delayed IMT threatens to deprive the FOs of a real purpose and thereby undermines their continued functional capacity.

### **Leadership level responses**

At the leadership level, 87 to 93 percent of the respondents at the three sites reported that regular meetings were held. However, in many cases these meetings were organized by social organizers, rather than the FO members themselves. 75 to 100 percent of these respondents at all sites claimed that they attended most or all meetings. At Hakra 4-R and Sirajwah between 60 and 100 percent of the WUO and WUF level respondents indicated that organizational and financial records were maintained. At Bhukan record keeping was unsatisfactory according to the majority of interviewees. A majority at all three sites and leadership levels stated that the office bearers presented the financial records of the FOs to the relevant executive bodies. According to 73 to 100 percent of the respondents, at all three sites and leadership levels, formal rules in the form of bylaws had been developed and enacted by the FOs. Yet, at Hakra 4-R and Sirajwah the response was split evenly when asked about the observance of rules among the membership. At Bhukan widespread disregard for the rules was reported. The most frequent rule violations cited were a lack of attendance at meetings and tampering with the outlets of watercourses.

The majority of FO leaders preferred and followed the consensus modus of decision making, as it facilitated compromises between prevailing power blocks within the communities of irrigators. They characterized the atmosphere of meetings as generally friendly and cooperative, although tensions and vigorous debate often ensued, but tended to be resolved through consensus based agreements.

The leadership reported that conflict had decreased with the formation of FOs or was absent. Cases of conflict were generally resolved by the FO leadership or through traditional means, such as *panchayats* (council of elders) or the government authorities. Many leaders and grassroots members reported an absence of conflict, which is surprising given the reported and observed (researchers' field experience) persistence of irrigation offenses.

The FO leaders reported that at the various sites and levels about 25 to 50 percent of the representatives had received training in organizational and financial management as well as O&M functions.

The majority of leaders (67 to 80 percent) reported that they were optimistic about the sustainability of organizational activities after the closure of the pilot projects and the withdrawal of social organizers. Particularly significant is the reported increase in the sense of confidence among 70 to 100 percent of the leadership at all sites. Before FO establishment, most farmers found it difficult to communicate with irrigation engineers who assume a higher status in relation to farmers, with the exception of a few powerful and influential landlords. Being elected as leaders of an organized group, has increased their status, self-respect and their *izzat* (honor) in relation to both fellow farmers and irrigation staff. Earlier it was difficult for me to talk in gatherings. Now I can speak in meetings and with the higher-ups in government agencies.

At Hakra 4-R and Sirajwah the leadership reported that they had persistently participated in the formulation and negotiation of a service agreement (MOU) with the irrigation authorities, while at Bhukan they stated that they were merely 'informed by the higher authorities'. Regardless, a great majority (72 to 81 percent) considered IMT as an indispensable step towards the FOs' capacity for rule enforcement in irrigation management.

### **Grassroots level response**

The response at the grassroots level contrasts markedly with the leadership level. The majority of respondents stated that no regular meetings were held at the WUA level, and many did not know whether FO activities took place at all. They lacked knowledge of organizational record keeping and the existence of formal rules (58 to 86 percent at the three sites). Accordingly, rule observation was a non-issue. Office bearers at the WUA level had been selected on the basis of consensus, but other decisions were not taken due to the paucity of meetings. With the exception of Sirajwah (28 percent), the majority of grassroots members also reported an absence of conflict (62 and 71 percent at Hakra 4-R and Bhukan, respectively). They preferred *panchayats* and informal means of conflict resolution. A strong minority stated that due the absence of conflict there was no need for resolution.

At Bhukan and Sirajwah a strong majority (78 and 97 percent, respectively) and at Hakra 4-R 50 percent of respondents stated that they had not experienced any increase in confidence and self-respect. At Hakra 4-R only a minority, but at the other two sites the vast majority indicated that they had no knowledge of and involvement in the negotiation of IMT for their FO.

These responses betray a clearly evident lack of involvement among the vast majority of the grassroots membership of the three FOs in their organizations' activities and a lack of legitimacy of the FOs. This may be expected to impair its functional capacity in managing the multiple tasks which would be devolved with IMT.

### **Selection of the leadership**

The selection of the leadership by the FO constituency may be considered as one of the few processes, which worked rather well across all levels of membership and at all three sites. The membership indicated considerable rationality in their consideration of criteria for leadership selection. Honesty, level of education, established community leadership capacity, ability to spend time, and the location within the irrigation system (head/middle/tail), were among the most frequent.

The FO members also selected leaders more or less evenly from all landholding size classes. At Hakra 4-R 35 percent of the leadership own less than 10 acres, and 21.3 percent of the leaders fall into each of the 11 to 20, 21 to 50 and 51 to 100 acres categories. While at the other two sites the small landowners are underrepresented or omitted, the majority of leaders fall within the mid-size landholding categories. The leadership selected is also relatively well educated. 51 percent of all office bearers attained the matric or a higher level of education. Only 8.5 percent of office bearers are illiterate, as against 43 percent of the grassroots members.

### **Participation in maintenance activities**

According to the respondents, the overall participation of the FO constituency and leadership in maintenance activities at the water course and distributary levels is high, although there are variations among sites and membership levels. At the watercourse level, participation has been and remained high before and after FO establishment, with the exception of the Sirajwah WUF representatives, of whom only 50 percent participated. At the distributary level, Bhukan and Hakra 4-R showed a marked increase in membership participation across the board, from 87.5 to 91 percent at the former and from 26.5 to 73 percent at the latter. Participation at Sirajwah was reported to have declined from 89 to 49 percent. Among the participants in maintenance activities the rate of labor contributions was high (85 to 91 percent), while contributions in cash and kind remained generally negligible. However, the use of farmers' tractors was significant at Hakra 4-R during the annual distributary maintenance campaigns of 1997/98 and 1998/99, when 120 and 75 tractors were mobilized, respectively.

### **Irrigation service fees**

During 1998 and 99, the question whether FOs and WCAs should assume the responsibility for the assessment and collection of *abiana* fees, was a hotly debated topic among farmers and irrigation personnel. The opinions remained divided, although a majority of 50 to 80 percent (all levels and sites) favored taking on those responsibilities.

Proponents argued that it would lead to improved accuracy of assessment and a higher rate of recovery, if farmers were to assess and control their peers. Furthermore, they pointed out the advantage of not being subjected to requests for bribes from revenue officials. They also indicated that they considered the introduction of a flat rate of irrigation service fees per acre cultivated preferable, as opposed to the current crop-based assessment, since the former would be more efficient and transparent. The respondents stressed the need for financial autonomy of FOs and their direct control of a portion of the *abiana*.

Opponents doubted the farmers' capacity to carry out the task on account of widespread illiteracy, presumed lack of honesty of the leadership and the danger of favoritism, the problem of timeliness of collection, as well as potential conflict with the current collectors, the *lambadars* (headmen of the communities).

### **The state of water supply**

A majority of interviewees at Hakra 4-R and Sirajwah (69 and 57.5 percent, respectively) stated that they considered the current state of water supply unsatisfactory. The causes identified were the lining of the distributary and minor channels and the resizing of outlets to watercourses, all of which had taken place without the consultation of farmers. As a consequence habitual, though often inequitable, irrigation supplies had been reduced for many farmers, while, in the case of Hakra 4-R, some received up to 200 percent more than before the rehabilitation measures. At Bhukan, 66 percent characterized the situation as satisfactory, arguing that they had accepted the reduction of supplies to design discharges. They reported a decline of cropping intensities. Field observations by IIMI staff at Hakra 4-R and the reports of irrigation personnel and farmers at the other sites indicate an increase in irrigation offenses as a result of the physical modifications carried out.

The majority of respondents at all sites assumed a decline or no improvement in the quantity, reliability and equity of irrigation supplies since FO establishment while a considerable minority dissented. Among the reasons given were the rotation of supplies among distributaries at Hakra 4-R, the current design of the subsystems' physical infrastructure and the inability of FOs to control distribution patterns, physical designs and sanctions for irrigation offenses, due to the delay of IMT.

### **Preparedness for IMT**

The farmers' willingness to assume full powers and responsibilities for distributary management was rather uneven. Due to skepticism or a lack of knowledge about the IMT negotiation process, only 26 percent of respondents at Sirajwah and 43 percent at Bhukan explicitly stated that they supported the transfer of powers and responsibilities. At Hakra 4-R, 51 percent supported IMT.

Skeptics professed worries about the honesty of their leaders.

If the FO leaders want to accept these management responsibilities, they need to make sure that they can maintain justice in irrigation management. I fear that after taking on the responsibilities and powers, the FO leaders will become greedy like some sub-engineers of the Irrigation Department. If they cannot accept the burdens of honesty, they should not accept these responsibilities, because they will fail.

Proponents, on the other hand, stressed the need for sanctioning power in order to generate user-discipline.

The MOU will be effective once the FO assumes the power to apply sanctions against irrigation offenders.

### **Discussion**

Social mobilization at the three pilot sites discussed had concentrated on leadership development to accelerate organization establishment. After all, the mobilization of water users on large distributaries is difficult and time-consuming. Hakra 4-R, for example, has 123 watercourses and 4500 registered irrigators, and covers a command area of 43,801 acres. The strategy paid off to the extent that a well-organized leadership has been established, which is able to negotiate with other stakeholder groups and has been trained for relevant management tasks. However, this mobilization strategy has caused apathy at the grassroots level, which will have problematic implications for the FOs' functional capacity once IMT is achieved. The implementation of equity, adequate fees assessment and collection, local conflict resolution and accountability of the leadership are not feasible without active participation and discipline among the WUAs. Active participation will depend to a large extent on



transparent and continuous information flow and an ongoing debate about the reform process between the grassroots and the leadership.

However, all of this requires a real sense of purpose and substantive, rather than mere symbolic, empowerment of farmer organizations. The delayed transfer of rights and responsibilities threatens to erode water users' confidence in social mobilization, their leadership and the reform process. Thereby, the capacity of FOs to establish equity and user-discipline would be eroded. As the present situation indicates, delayed IMT, lack of sanctioning power and grassroots apathy motivate farmers to seek individual advantages at the expense of others, especially downstream users, because collective solutions are, as yet, not viable. In an environment of chronic relative water scarcity and low cropping intensities, resource competition induces persistent conflict among water users and strains the viability of the reform process. Therefore, collective action as an alternative to individualized survival strategies is in dire need of formalization through a reliable legal framework. It also requires cultural change of a value system, which so far has preferred deviant resolutions of resource conflict to a rational-legal approach.

### **Learning from research**

At Hakra 4-R, the FO leadership and IIMI's social mobilization staff have sought to address some of the problems pointed out in this study. OFWM has closed down its operations at Sirajwah and Bhukan, so that this research can not have an immediate feedback effect there.

The FO leadership is making an effort to take full responsibility for the organization of meetings and to activate the interface between the grassroots and the leadership. The WUF and WUO management committees have agreed to hold meetings according to a regular schedule designed by the office bearers themselves. They also devised a schedule for successive meetings with the WUAs to remobilize these and keep them informed about developments in the reform process. At the WUA level a formal registration drive and various fundraising efforts have been carried out.

A farmer-run FO newsletter will be published from winter 1999 with the private sponsorship of an agro-chemical corporation active in the FESS region. The newsletter will provide farmers, irrigation personnel and others an opportunity to communicate relevant information and to participate in a debate on still controversial issues in the reform.

The FO has been actively involved in the review of the draft legal framework of provincial rules and bylaws for FOs in the Punjab and has submitted its proposals for a service agreement with PIDA, in order to promote irrigation management transfer at the Hakra 4-R distributary.

A new campaign for equity in the distribution of irrigation water has been waged within the FO. The office bearers of two WUOs at the tail reach are challenging the WUF leadership in view of anticipated FO elections, which would be held as soon as the delayed official bylaws for FOs are enacted by the government. They demand that the FO actively promote a resolution of the adverse impact of the channel lining debacle and of outlet tampering in the head and mid reaches. Consequently, negotiations with irrigation staff about the resolution of these issues have been intensified. This effort is a clear indicator that the democratic governance structures of FOs can promote accountability. In addition, the FO has already informally implemented the water courts mandated by the rules for FOs.

Despite these FO internal developments, procedural delays keep on preventing the implementation of IMT. While the province has by now enacted the FO rules, PIDA managers continue to debate the operationalization of service agreements and fail to enact the provincial bylaws for FOs. There remains considerable disagreement about the financial autonomy of FOs and the modus of proportional distribution of *abiana*. If this delay continues indefinitely, the FOs patience may run out and the reform process would suffer a serious legitimacy crisis among organized farmers.

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