

# From Government to Farmer-Managed Smallholder Rice Schemes: The Unresolved Case of the Mwea Irrigation Scheme

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## **Abstract**

For years, large-scale rice schemes the world over have experienced centralized modes of management under which farmers have been passive participants in a sector meant to benefit them. The situation has however greatly changed in the last two decades due to a global wave of economic and political changes that has increased awareness of the farmers on their rights and the need for change. The farmers have subsequently made demands for inclusion and a greater say on matters related to the overall management of such operations. The Mwea rice irrigation scheme in Kenya, which operated under this kind of system for close to 50 years, is undergoing similar changes triggered by farmer demands for a greater say on the way the scheme is managed.

The Mwea irrigation scheme (MIS) is located just over 100 kilometers to the north of Nairobi, covers about 6,000 hectares and supports about 3,200 farm families. The British Government first established the scheme in 1953 but handed it over to the Government of Kenya in 1963 when Kenya got its independence. The Ministry of Agriculture ran the scheme until 1966 when it handed over the scheme to the National Irrigation Board (NIB) provided for by the Irrigation Act passed in 1967 (chapter 347 of the Laws of Kenya). In the same year, NIB took over the running of all national irrigation schemes in Kenya.

This study traces the history of the scheme and management under the NIB, areas of conflict between the farmers and the NIB, the new management of the scheme, its strengths and weaknesses and identification of opportunities to move ahead.

## **Introduction**

Large-scale rice schemes the world over have been operated under centralized modes of management in which farmers have been passive participants in a sector meant to benefit them. The situation has however greatly changed in the last two decades during which a global wave of economic and political changes has increased awareness of the farmers of their rights

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and the need for change. The farmers have subsequently made demands for inclusion and a greater say on matters related to overall management of the enterprises. The Mwea rice irrigation scheme in Kenya, operated under this kind of system for close to 50 years, is undergoing similar changes triggered by farmer demands for a greater say on the way the scheme is managed.

This study traces the history of the scheme and management under the NIB, areas of conflict between the farmers and the NIB, the new management of the scheme, its strengths and weaknesses and identification of opportunities to forge ahead. It also addresses challenges in areas such as scientific research and infrastructural management.

## *History*

The Mwea irrigation scheme, located at the foothills of Mt. Kenya, is about 100 kilometers to the northeast of Nairobi. Although only 6,000 hectares are under irrigation, the entire scheme covers 12,000 hectares (30,000 acres<sup>3</sup>) and supports a population of over 50,000 organized in approximately 3,242 farm families living in 36 villages. The scheme is the largest rice scheme in Kenya. It is divided into five sections: Tebere and Mwea covering 3,285 and 3,110 acres, respectively, and Thiba, Wamumu and Karaba covering 3,019, 2,880 and 2,650 acres, respectively. Mwea and Tebere are the oldest and the largest while Karaba, located at the lowest end of the scheme, was the last to be developed in 1973. The scheme gets its water from two rivers, the Nyamindi and Thiba. Rice is grown as a mono-crop for only one season in a year. It uses the flooded-paddy irrigation method. The main varieties grown are Basmati 217/370, Sindano BW 196 and IR 2793.

The history of Mwea goes back to five decades, first developed in 1953 by the British colonial government. The scheme was developed using captive Mau Mau labor after the declaration of a state of emergency in October 1952 (Njihia 1984, 1, cited in Turner et al. 1997). Soon after independence, the scheme was handed over to the Ministry of Agriculture, which managed it until 1966 when the NIB was formed through an Act of Parliament (chap. 347). Because the Act vested sweeping powers on the NIB, farmers were unhappy as they lacked a say in the management of the scheme. It was this fact that, in part, led to the emergence, soon after independence, of farmers' associations to represent their interests. Unlike other Kenyan farmer associations, such as the Kenya Planters' Cooperative Union (KPCU), the Kenya Creameries Cooperative Union (KCC), etc., the rice-based associations failed to effectively influence the management of the scheme. Because of lack of an enabling environment and internal management problems, these associations were rather unstable for close to 40 years as described below.

The first association, the Mwea Irrigation License Tariff Cooperative Society, was formed in 1964 and later changed its name to Mwea-Tebere Cooperative Savings and Credit Society Limited. In 1967, a sister society was formed under the name, Mwea Farmers' Cooperative Society. The management and membership of these two associations remained the same until 1981 when the two split and each established its own management. In 1983, the two societies joined and a banking section was formed under the name Mwea Amalgamated Rice Growers'

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<sup>3</sup>1acre=0.4049 hectare and 1 hectare=2.47 acres.

Cooperative Society Limited. In 1993, the giant society split again to form what is currently known as the Mwea Rice Growers' Multipurpose Cooperative Society Limited and the Mwea Rice Growers' SACCO Society Limited. Although the two operate under two different sets of management, they work closely and may soon be amalgamated because they believe that it was the NIB that kept them apart Mwea Rice Growers' Cooperative.

There were quite a number of areas of conflict between the NIB and the farmers. The reasons for these were low producer prices, high cost of irrigation-related services, such as seeds, fertilizers and chemicals, a land tenure system that treated farmers as tenants and the absence of the voice of the farmers within the management. After a heightening of confrontations between the NIB and the farmers, the latter took over the running of the scheme in 1998. This study traces the historical events fomenting the radical changes and analyzes the current management system, and its challenges and opportunities to forge ahead.

### ***Study Objectives***

The overall objective of this study was to document the management change that had occurred in the Mwea irrigation scheme, moving from government management to producer management. The study further explored potential implications of this change for continued productivity of the scheme.

## **Study Methodology**

### ***The Process and Content***

The study methodology was both participatory and consultative. The choice of this approach was based on the conviction that local people and relevant stakeholders knew best about their own situation, needs, priorities and opportunities. The study specifically traced the history of the scheme, management under the NIB, the relationship between the NIB and the farmers, the factors that triggered the break and the new management.

### ***Stakeholders and Information Sources***

The main sources of information for this study included:

- a. Existing literature on the scheme (surveys, reports, media)
- b. Key stakeholders:
  - the NIB management and the field managers
  - the Central Committee of the MRGM and the technical staff
  - rice farmers from three sections, Mwea, Karaba and Thiba, including women, men and young people, particularly young men
  - rice millers: male and female
  - rice merchants

The selection criteria for the sections to be consulted within the scheme took into account diversity and unique differences within the irrigation scheme. The age of the scheme and access to irrigation-related services, such as water, were key considerations. It was on this basis that Mwea, Thiba and Karaba were selected. Both Mwea and Thiba are well watered while Mwea is one of the oldest sections. Karaba is the most disadvantaged in terms of access to irrigation water but it was the last to be established.

Within the sections, discussions were held with mixed groups of men, women and young men. This was contrary to the original design that envisaged separate group discussions with men, women and young people. The rice farmers rejected this format because all information relating to this change was public information, and all individuals, irrespective of age and gender had a voice in this matter. Perhaps not so explicitly stated was the fact that they were suspicious of outsiders and the suggestion of working with different groups was seen as “divisive.” To the satisfaction of everybody, the suggested system worked out well.

Institutional-level consultations were held with the management teams within stakeholder organizations. The stakeholders included the Mwea Rice Multipurpose Cooperative Society, the Mwea Irrigation Agricultural Development and the Mwea Irrigation Scheme and the rice mill.

Each of the above sources provided information on the history of the scheme, the management, the relationship between the NIB and the farmers, areas of conflict, management by the rice producers, challenges faced by the new organization and the way forward.

## **Management of the Mwea Irrigation Scheme by NIB**

### ***The Irrigation Act and Regulations***

The NIB, established in 1967 through an Act of Parliament, chapter 347 of Laws of Kenya (GoK 1967), managed the Mwea Irrigation Settlement Scheme up to the end of 1998 when the rice farmers took over its management. During the previous three decades, the NIB had used powers vested on it by the Act guided by regulations developed in 1977 (GoK 1977). Through the Act, the NIB was supposed to do the following:

- Conduct research and investigate into the establishment of national irrigation schemes.
- In conjunction with the Water Resources Authority, established under the Water Act, formulate, and be responsible for, the execution of policy in relation to national irrigation schemes.
- In consultation with the pro-tem Minister of Finance, raise funds for the development of national irrigation schemes.
- Coordinate and plan settlement on irrigation schemes.
- Design, construct, supervise and administer national irrigation schemes.

- Determine the number of settlers to be accommodated in a national irrigation scheme.
- Provide land in national irrigation schemes for public purposes.
- Promote marketing of crops and produce grown or produced on national irrigation schemes and liaise with organizations responsible for the marketing of agricultural produce.
- Provide, either by itself or by agreement with other persons, for processing of agricultural produce grown or produced in national irrigation schemes.
- Award scholarships or bursaries for the study of irrigation (in Kenya and elsewhere) or any other subject that the NIB considers to be of benefit to the NIB.

In addition, the NIB was mandated to impose a:

- cess on all or any agricultural produce grown in a national irrigation scheme
- cess on all or any agricultural produce processed in a national irrigation scheme

There was however a condition attached to this cess. *The cess shall only be levied for the purpose of meeting the cost of services provided in the relevant scheme and for which services no other direct charges are available or payable.* The cess levied in Mwea was in some cases used to subsidize other national irrigation schemes in the country, mainly Ahero and Perkerra. This transfer of rice profits from Mwea to other schemes was among the main sources of conflict that led eventually to the rift between the farmers and the government.

To support the NIB in the implementation of this Act, the Parliament developed regulations now contained in Legal Notice 68<sup>3</sup> of a Kenyan Legislation of 1977. These regulations are legally binding, and almost nonnegotiable. They were needed to help sustain the NIB that, as a parastatal, had to be financially self-sustaining and had to do this through recouping its overhead costs from the farmers. Some examples include the following:

- A licensee shall cultivate his holding to the satisfaction of the manager, and in accordance with the crop rotation laid down by the manager and shall comply with all instructions given by the manager relating to the cultivation and irrigation of his holding.
- As soon as each crop, other than paddy, has been harvested, the licensee shall deliver it, other than such portion as he may wish to retain for his consumption and that of his authorized dependants living with him, to the manager at a collecting station to be appointed by the manager, or shall otherwise dispose of it in accordance with the instructions of the manager.
- A licensee shall comply with all instructions given by the manager with regard to good husbandry, the branding, dipping, inoculating, herding, grazing or watering of stock, the production and use of manure and compost, the preservation of the

fertility of the soil, prevention of soil erosion, the planting, felling, stumping and clearing of trees and vegetation and the production of silage and hay.

- A licensee shall not hire, cause to be hired, or employ stock or machinery for cultural operations, other than stock and machinery owned by the manager, without prior written approval of the manager.
- The manager may allocate to a licensee a house to be occupied by him within the scheme or may permit a licensee to erect his own house.
- Any licensee who fails to comply with these regulations shall be guilty of an offence and could be liable to have his license terminated by the Minister on the recommendation of the manager (after confirmation by the committee) and the Minister's decision will be final.

To enforce these rules, the NIB has put in place the necessary structures. For example, it maintained guards at strategic points within the scheme to screen the farmers to ensure that no rice was smuggled out of the scheme (farmers were officially allowed 12 bags of 75 kg per year for home consumption). These rules and regulations generated resentment and hostility between the NIB and the farmers.

### ***NIB Membership and Exclusion of Farmers***

The Irrigation Act treated farmers as passive recipients of strict instructions from the NIB. This is clearly reflected in the membership of the NIB that completely marginalized the real rice farmers as reflected below:

- The Director of Agriculture.
- One representative from each province in which a national irrigation scheme exists, appointed by the Minister and names suggested by the Provincial Agricultural Board.
- The Director of Water Development.
- Chairman of Water Resources Authority.
- Permanent Secretary to the Ministry of Finance.
- Permanent Secretary, Treasury.
- Permanent Secretary, Economic Planning.
- No more than three persons, appointed by the Minister who, in his opinion, have qualities of benefit to the NIB.

In practice, the NIB managed the scheme as reflected in its absolute role in the following:

- flooding the paddy fields

- rotavation (land preparation) of the fields using MIS tractors
- provision of seeds
- supervision of production of seeds by selected farmers
- provision of fertilizers and determining the amount and timing of application
- direct application of chemicals on the crop
- clearing of canals
- collection of rice after harvest and milling it
- marketing of the crop and determining the price and the dues for the farmers

The management of the scheme by the NIB was considered harsh by the farmers on account of the following reasons among others:

- *Confiscation of land from the “tenants.”* Once taken away, the land is said to have been corruptly given out to people external to the scheme.
- *Harassment of farmers.* Farmers reported various forms of harassment from the NIB. For example, farmers were required to spend 12 hours on their farms; for failure to do so, penalties were meted. After harvest, the NIB could take more than 10 days before collecting the paddy. During this period, the farmers would spend nights out providing security to the paddy. Any attempts by the farmers to retain more rice than was allowed by the NIB were harshly dealt with. There was the case of this female farmer who is said to have “hidden” 4 kilograms of paddy. Although she had a young baby, she is said to have spent days between police cells and the courts. The guards who undertook the unpleasant task of screening gum boots and thermos flasks for hidden paddy are said to have been, not just hostile, but also corrupt.
- *Total disregard and disrespect from the field managers.* The farmers described occasions when they would go to the NIB offices for official purposes but would be turned away in ways that were humiliating and embarrassing.
- *The services provided by the NIB.* These are said to have been unduly expensive and on many occasions inefficient. Information gleaned from NIB reports indicate that just about half the value of the rice crop went into the payment of these services. This is well illustrated in a 1995 socioeconomic survey<sup>4</sup> carried out by NIB and JICA. The results of the survey indicated that, an average farmer obtained a total yield of 83.5 bags per 4-acre plot. Of these, 10.5 bags were consumed by the family and the remaining 73 sold to the NIB. From the expected income of KSh

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<sup>4</sup>Tsuruuchi and Waiyaki 1995.

75,150, the farmer finally received KSh 39,921 after deductions of KSh 31,420 (cost of materials) and KSh 8,501 for wage of hired labor.

The management of the scheme by NIB was considered not transparent. According to the farmers, it was not clear how deductions were determined, a situation that created suspicion between the parties.

### ***The Scheme and the Socioeconomic Situation of the Rice Producers***

The socioeconomic situation of the Mwea farmers did not improve during the entire period when the NIB managed the scheme. This is what the farmers said, was observed and also confirmed from a 1995 NIB/JICA socioeconomic survey that revealed that farmers never managed to meet their basic household needs from the rice proceeds.

### ***The NIB and the Scheme: Current Position***

The study team held discussions with NIB field managers on a variety of issues. At the time of the survey, there was little activity within the field-level organs of the NIB. These include MIS, the MIAD and the rice mill. This was, however, not unexpected since the farmers had assumed many of the roles previously held by the NIB. A meeting with the rice mill manager on 30 August 2000 confirmed the changed circumstances of the NIB in Mwea. He referred to the rice-mill-related activities as being dead at the time. Of the 120 workers 75 percent were being sent home on unpaid leave until further notice. Before the change, the rice mill had these 120 regular staff and a similar number of casual workers.

Discussing the history of Mwea and the events that had led to the takeover of the management of the scheme, the managers acknowledged the undemocratic mode of management that, although perhaps viewed as necessary at the beginning, failed to change with the times. A senior manager did however indicate that discussions on possible changes had been on within the NIB for quite sometime. For example, the NIB had considered, as early as the 1980s, a review of the Act to increase the role of the farmers in the management of the scheme. In support of this process, workshops had been held with stakeholders but no concrete actions had been taken.

The issue of assets, particularly the rice mill with a capacity of 15 tons per hour (4,000 bags per day) is still a thorny issue between the two groups.<sup>5</sup> The rice mill was registered in 1967 as a private company. Currently, NIB holds 55 percent of the shares against 45 percent owned by the farmers. At this point in time, the farmer association is attempting to gain control of the rice mill. Their argument goes as follows. The NIB has managed this mill since 1967 and it is time to hand it over to the farmers. The farmers also argue that the NIB has not paid out dividends to them for a long time, thus making their cases stronger (the NIB admits that payment of dividends has not been regular). There is a clear stalemate on this issue since the NIB has no plans to just hand over this rice mill to the farmers. The NIB sees the following as the minimum conditions to be satisfied by the farmer group for the mill to be transferred:

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<sup>5</sup>The farmer group, currently using many small-capacity privately owned mills, is in dire need of a large mill with sorting and grading capacity. High-quality rice has a high market value.



- That the farmers pay off the 55 percent government shares.<sup>6</sup> This is equivalent to KSh 500 million (\$6.25 million). According to the NIB, the failure of the farmers to deliver the 1998 rice crop has resulted in a debt of KSh 300 million (\$3.75 million). The NIB would therefore expect a total of KSh 800 million (\$10 million) from the farmers.
- Alternatively, both the government and the farmers work out a framework that will allow the farmers to use the mill at commercial rates. The profits will then be proportionately shared between the NIB and the farmers

In all these discussions, the managers gave no indication that the NIB was about to leave the scheme to the farmers. In fact, they saw as their core responsibility, continued provision of technical support in critical areas such as research, provision of certified seeds and water management and distribution, among others. These are areas they consider too specialized for the farmers to adequately manage. This is corroborated by the fact that the Ministry of Agriculture, according to the Daily Nation, 14 August 2000, was in the process of constituting a new NIB. This move was however suspended by a court of law because of a pending case filed by the farmers against the NIB and the Minister of Agriculture.

## **Issues of Conflict between the NIB and the Farmers**

As indicated elsewhere, the relationship between the NIB and the farmers had a rough start and never really warmed up. The following are examples of areas of contention arising from NIB regulations governing rice production at Mwea.

### ***Land Tenure and Land Pressure***

Forty years since the settlement in Mwea, farmers are still tenants. The farmers argue against this status on two grounds. One, the farmers have been in the scheme long enough to graduate from tenants to landowners and two, this land was never government land. According to the early settlers, this land originally belonged to the nine clans of the Agikuyu people who live on the foothills of Mt. Kenya. The farmers therefore consider the move by the government illegal and with no basis. The lack of individual land title deeds for farmers' plots has been among the most contentious issues in Mwea and was, to a large extent, the reason for some of the more violent riots between 1996 and 2000.

This whole issue was described in a media article<sup>7</sup> in which the farmers sent an open letter to the Attorney General over what they perceived as the inhuman Irrigation Act. The farmers have strong views on the land issue; under the Act, the farmers remain settlers and have no estate under the Law of Succession Act through which their dependants can inherit (The People, Sunday, 24, September 2000). Past suggestions by the government to renew the current Land Leases in place of Title Deeds have met with resistance.

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<sup>6</sup>Because of difficulties in the relationship, joint ownership of the mill, with farmers owning more shares than the government, has not been considered.

Another land-related complaint was the practice of unilateral withdrawal of land leases by the NIB. The NIB withdrew such leases on the grounds of poor management of the land by the licensee. Such land was quickly given out to other people, not necessarily from Mwea. The farmers view such transfers with hostility. These actions were, however, covered by the Act and the Regulations and there was little the farmers could have done in the circumstances. In further discussions with the farmers on the matter of suboptimal husbandry, the farmers accepted that there were a few cases of this nature, but they explained that proceeds from rice were never enough to sustain families and farmers needed to engage in other activities to fill this gap.

Although against the regulations, the growing pressure on the land has forced farmers to open up new land bordering the Mwea scheme for rice production, and using the water system servicing the current scheme. The land pressure is explained by the fact that the four acres allocated to families at Mwea were at the time of inception of the scheme adequate because the families were small. The situation has however changed considerably over a span of 40 years. The family sizes have more than trebled, thus, overstretching the farm sizes. It is against this background that the farmers have established new rice fields, popularly known as *jua kali*. This name literally means “hot sun” and applies to local informal industries in which many Kenyans engage. What the farmers have done is illegal according to the regulations of the scheme. Expanding rice production is motivated by the high demand of rice in Kenya (Kenya is a net importer of rice).

As regards the above, it is worth noting that, Mwea, like much of the central province has, since the advent of multiparty politics, identified itself more with the opposition than with the ruling party. Opposition members of parliament have, therefore, supported farmers fully and used this opportunity to discredit the government.

### ***Small, Poor and High-Priced Housing***

According to the regulations, no farmers were allowed to build their own houses without prior authority of the NIB. The regulation was very explicit on this matter; farmers were prohibited from constructing buildings or other works of any kind on the holding or elsewhere in the scheme without prior written consent. Therefore, the NIB assumed the responsibility for providing housing. The farmers have been unhappy on the scheme because the houses are too small and are of poor quality in addition to being overpriced. The houses have mud walls and tin roofs. On size, the NIB perhaps did not anticipate such an increase in family sizes since sons who reached 18 years were supposed to leave the scheme. The cost of each of these houses comes to KSh 12, 972 (\$160). This money was paid to the NIB by farmers in installments of KSh 432.40 per year for a period of 30 years.

### ***Water Use Restricted to Rice Production***

Irrigation water was restricted to rice production during the NIB regime even though rice is not a high-valued crop when compared to horticultural crops, such as tomato. The manager of the scheme had powers to destroy other crops if grown with water from the scheme. The regulation stated that the manager shall have the power to order the destruction of any crops planted in contravention of his instructions or of the provisions of these regulations. All costs incurred during the destruction would be recovered from the rice delivered by the respective farmer. In the latest petition to the Attorney General for repeal of the Act, this issue is highlighted.

The complaint is that the farmers are chained and tied up to rice farming all their lives as they devote their full personal time and attention in the cultivation of the crop ordered by the NIB.

Yet the manager of NIB at Mwea was well aware that horticultural production was taking place upstream of Mwea and was, in fact, collecting fees from those farmers who were pumping water from the NIB canals. Also, on a pilot-trial basis, the NIB had introduced a second crop of soybean, grown in the off-season and at one point it had expanded this program to 500 acres.

### ***Farmers' Lack of Control over Their Product—Rice***

According to the regulation, families could only retain 12 bags of 75 kg of unprocessed paddy after harvest. This amount was expected to feed the family for a whole year. To ensure that the regulation was adhered to, the NIB engaged guards to screen the farmers as they left the fields. Contravention of this regulation saw many farmers in police cells. One woman from the Mwea section graphically narrated her ordeal in police cells for allegedly “smuggling” 4 kilograms of rice. As an illustration of farmers’ desperation, it can be stated that they smuggled rice for home consumption in gum boots and tea flasks on their way home from the farms.

### ***Regulation against Livestock Rearing***

Rearing of livestock in the rice scheme was prohibited. The regulation on this stated that a licensee shall not keep on his holding any stock other than those specified in his license; otherwise, the manager had authority to confiscate and sell such additional stock. This regulation was however not very aggressively pursued and herds of cattle and other small stock are a common sight in the area. This was also confirmed by a study carried out by Tsuruuchi and Waiyaki (1995), which established that more than half of the farmers kept cows, goats and chicken.

### ***Undermining the Family Unit—Boys over 18 to Leave the Scheme***

Although this regulation was never implemented, the farmers are still very incensed by the inclusion of this clause in the Act. They saw it as a way of undermining the culture and the family unit. In their culture, men are supposed to give their sons land and animals to help them start off their own families. Traditionally, these sons would inherit the family assets. This is however threatened by the current “tenant” status, which is not recognized by the Succession Act.

### ***Low Prices and Subsequent Poverty***

At the time of the radical takeover of the management of the scheme by the farmers, the price paid out to farmers for paddy stood at KSh 17.50 per kilogram. In 1998 (at the height of the conflict), the farmers had demanded an increase to KSh 20.00 per kilogram. Even as the NIB declined, there was one thing that the farmers knew. Their rice was worth more than what they were requesting and the real problem lay in paying the cost of a bloated NIB and subsidizing the running of two other national irrigation schemes, namely, Ahero and the Perkerra.

### ***Farmers' Takeover and the Situation at NIB***

The Mwea Rice Growers' Multipurpose Cooperative Society took over the management of the scheme in 1998 after many years of a strained relationship. This takeover was precipitated by many grievances as indicated above. However, at the core were the low price of rice and what farmers perceived as a high level of insensitivity by the NIB. The farmers reported that they were after an amicable solution to this stalemate. This was however not to be. A meeting held between the Ministry and the farmers in 1998 failed to resolve the issues. This final meeting is said to have been the 28 consultative meetings between the two parties on the subject.

Failure to reach a compromise provided the central province opposition parliamentarians an opportunity to castigate the government on insensitivity to the needs and suffering of the farmers. Acts of defiance that followed the stalemate between the government and the farmers therefore had the full backing of the local Member of Parliament and the central province opposition parties.

Consequent to this deadlock, the farmers refused to deliver the 1998 paddy crop to the collection centers traditionally used for that purpose (each section has a collection center). In addition, the farmers started destroying some of the infrastructure, such as the collection centers. During these scuffles, the police were called in, thus fuelling an already volatile situation. It was during one of these riots that two men from the scheme were shot dead by the police. The media covered these events comprehensively.

One question that lingers on is "why this pitch of 'disobedience' from farmers who had all these years lived with the NIB and the regulations?" To some degree, the environment was conducive. The decade had seen the introduction of multiparty politics and liberalization of many sectors including agriculture. Dissent was tolerated and for once, Kenyans could speak openly without fear of detention and harassment. This too was a period of free information flow and interaction. For example, through the joint GoK/JICA research project in Mwea, farmers were trained on how to experiment with new crops such as soybean. They also acquired skills on pricing systems and alternative market outlets. Those who produced soybean and sold the crop directly to buyers (not through NIB) made KSh 270 per kilogram against KSh 27 per kilogram when sold through the NIB.

Young people, born and bred in Mwea were a major source of change. Unlike the original settlers, the children had gone to school, acquired good education and some even had good jobs. For these young people, it was time for change in Mwea. They had lived in poverty and misery, and they wanted to bring an end to this.

In retrospect, young people tend to view the past as a bad dream. A young man of 23 years from Thiba proudly showed us new houses built by young men from the proceeds of the "jua kali" rice (building of houses and opening new land for rice was illegal during the tenure of the NIB). This young man narrated to us how, in 1998, he mobilized youth groups, personally commandeered an NIB lorry full of paddy and shared it out to Mwea residents. According to him, the days of slavery are over.

## **Management of the Scheme by the Mwea Rice Multipurpose Cooperative Society**

### ***About the Cooperative Society***

The Mwea Rice Multipurpose Cooperative Society is a farmer association currently managing the irrigation scheme with, and on behalf of, the farmers. Its history goes back to 1964 when farmer associations started emerging. The associations had a difficult time holding their own as reflected in successive splits and mergers. Although the farmers we talked to attributed this instability to interference by the NIB and had high hopes of greater stability, there was evidence of other challenges in the form of poor management, accountability, etc.

The first association, registered in 1964, was the Mwea Irrigation License Tariff Cooperative Society. It changed its name to Mwea-Tebere Cooperative Savings and Credit Society Limited. In 1967, a sister society was formed under the name Mwea Farmers' Cooperative Society. The management and membership of these two associations remained the same until 1981 when the two split and each established its own management. In 1983, the two societies amalgamated and a banking section was formed under the name Mwea Amalgamated Rice Growers' Cooperative Society Limited. In 1993, the giant society split again to form what is currently the Mwea Rice Growers' Multipurpose Cooperative Society Limited and the Mwea Rice Growers' SACCO Society Limited. Although the two operate under two different sets of management, they work closely and may soon be amalgamated because they believe that it was the NIB that kept them fighting.

### ***New Management of the Scheme***

The current management of the Mwea Rice Growers' Multipurpose Cooperative Society Limited has been in office 2 two years now. Its objective is to improve the economic, social and political welfare of the farmers. It considers as exemplary its performance during this 2-year period. According to the 1999/2000 Progress Report, the society highlights some of its successes during the 2 years it has been in office. For example, it states that between December and February 1999, the MRGM transported all the paddy from the fields to Mwariko in record time and at minimal cost, and land preparation, which started in March, was completed by August 1999, a feat the NIB never achieved during its lifetime in Mwea.

During this period, the society made efforts to keep afloat amid daunting technical, financial and infrastructural challenges. Its management appears a lot more democratic, the price of rice has moved to KSh 30 per kilogram and farmers have the freedom to sell their rice to the highest bidder (except a minimum of 40 bags that must be delivered to the society to meet the cost of services provided by the society).

### ***Governance***

The management consists of a central committee of nine members democratically elected by the farmers, staff members and unit leaders. These nine members represent the five sections of the scheme, i.e., Tebere, Mwea, Thiba, Wamumu and Karaba. To maintain an odd number of members for voting purposes, each of the four sections is represented by two members while one section is represented by one member (the section with one representative will, in the next round, have two members). The committee has however only one female member.

Reporting to the nine section leaders are 68 unit leaders distributed through the five sections. In terms of numbers, Tebere has 17 unit leaders, Mwea 17, Thiba 12, Wamumu 10 and Karaba 10. Out of these 68 unit leaders only 3 are women.

The unit leader is the frontline worker who links the farmers with both the management committee and the technical teams. They monitor views, needs and constraints for onward transmission to the section leader and finally to the society. As a backup, each section has a technical officer, employed by the society. It is important to note that a few of the technical staff are “defectors” from the NIB who have had years of experience in operating the canal system.

An Agricultural Subcommittee coordinated by the Scheme Manager handles technical issues. This subcommittee consists of Agricultural Officers and Irrigation Engineers.

According to the farmers interviewed, what they see as very different from the time of NIB is transparency in running the society. The farmers see this as central to the survival of the society. To ensure this transparency, farmers have put in place appropriate mechanisms. One such mechanism is a *shadow management committee* in each of the five sections that checks and evaluates the work of the official central committee. To demonstrate how seriously they view this matter, the farmers have, in the last 2 years, dismissed one committee for nonperformance.

On taking over, the society moved fast on relaxation of the regulations applied during the NIB tenure. For example, farmers, after delivering a minimum of 40 bags of paddy to the cooperative to meet the cost of services rendered by the society, can freely sell the rest directly to the millers for quick cash. The many barriers and policing of movement of rice are things of the past. A few farmers have also experimented with two crops a year although the results have not been encouraging. A new weed, similar to the water hyacinth has taken root in some canals within the Mwea section. Members of the technical staff attribute this to double cropping.

### ***Farmers’ Voice within the Society***

The farmers own the society and this is confirmed by the freedom with which they make demands on the technical teams at the society level. They also engage and fire members of the central committee if they fail to meet their own expectations. They are well informed and speak about the society with confidence. For example, they know about their assets such as the 20 tractors acquired by the society, have details on a new rice mill recently acquired and awaiting installation, know the cost of services provided to them by the society and are able to explain the financial difficulties of the society. The fact that the farmers have contributed to the acquisition of these assets confirms that they were not against deductions made by the NIB per se, but were against the lack of transparency in the entire process.

### ***Increased Incomes and Changing Lifestyles***

In 1998, when the Cooperative Society took over the running of the scheme, farmers were being paid KSh 17.50 per kilogram of paddy. Today, they get KSh 30 per kilogram. Other indirect gains are from the reduced cost of services provided by the cooperative. The aggregate result of these processes is increased incomes for the farmers. From discussions held with the farmers in three sections of the scheme (Mwea, Karaba and Wamumu) and with the millers in the Wang’uru town, the farmers have much higher incomes than earlier. This is said to have translated into a number of things. The farmers are now cleaner, better dressed, are able to

send their children to school and have embarked on improving their houses. One man from the Mwea section showed off a suit he had on and which he said was his first since settling in Mwea over three decades ago. He attributed his ability to buy such a suit to the change of management. For the women, they can now buy good clothes and shoes to prevent the cracking of their feet. Young men from the Wamumu section of the scheme who fully participated in the riots, showed us their new houses, which they had never dreamt of for two reasons; one, it was against the NIB regulations to build such houses and two, under NIB they would never have got enough money for such structures.

For the millers, this new change has transformed their livelihoods. In Wang'uru alone, there are more than 100 mills operating either independently or leased by the MRGM. The millers charge KSh 1 per kilogram of paddy milled and also retain the bran from the paddy. This bran is used in the manufacturing of animal feeds and fetches a good price for the millers. The millers admit that life has changed in Mwea and Wang'uru. According to the farmers who were interviewed in late 2000, virtually everybody is now able to generate some income for themselves, an aspect said to have reduced thuggery and insecurity to a minimum. However, by May 2001, there was less optimism in the new management by the MRGM as some farmers had not had their rice deliveries paid for two seasons.

### ***Challenges and Opportunities***

While certain things have worked well, the society knows that there are daunting technical and financial challenges ahead of them. The human capacity is overstretched and they have limited equipment and machinery, and virtually no capital for operations. Banks are also unwilling to advance the MRGM loans in view of uncertainties of the future of the scheme

*Human capacity.* The Cooperative Society has an extremely small workforce. According to one of the technical officers, the current team is a drop in the ocean when compared to the numbers during the NIB tenure. Each irrigation block/section has only one official and none of them has an office.

Certain key functions, such as water management and research, have not been established. The absence of systematic research, which is necessary to ensure regular supply of good seed, threatens the very foundation of the scheme. Plans for water distribution, particularly during water-shortage periods and plans for maintenance to allow equitable water distribution are necessary and need to be prepared by well-qualified staff members.

*Equipment.* During the time of the NIB, the scheme had enough machinery and equipment to handle the operations. After the takeover by the farmers, movable machinery, such as tractors and excavators, were transferred by the NIB to other national schemes. Research equipment is still at MIAD but out of reach of the society. These difficulties notwithstanding, it is encouraging to note what the society has been able to do on its own through the use of nontraditional approaches as discussed below.

### ***Subcontracting Services***

*Tractors.* The society has only 20 tractors of its own. Because these are clearly inadequate to rotavate (prepare the land) the 6,000 hectares, the society has contracted the services of independent contractors. The society pays for the services but deducts the cost from the

farmers' proceeds. In the process of this struggle, the society has learned that it is cheaper and more efficient to farm out this service.

*Rice mills.* At the time of this survey (August 2000), the society had no functional rice mills of its own. For it to mill the rice delivered by the farmers, it leased rice mills from independent contractors. At peak time, it leased over 100 rice mills. This was, however, seen as a temporary measure while awaiting the installation of a 3-ton per hour rice mill it had just acquired. The society also revealed its plans to acquire more if the stalemate over the jointly owned rice mill was not quickly resolved. The society acknowledged that this was one service it was going to manage to maintain the high quality of rice. The current quality of rice is much lower than what the NIB produced. This automatically creates a marketing problem, particularly since imported rice of good quality is freely available at competitive prices in the local market.

### ***Production of Seeds***

This area is highly specialized. During the NIB tenure, a number of farmers were contracted to multiply seed for distribution to the rest of the farmers during the planting season. This ensured an uninterrupted supply of good-quality seed. When the society took over the running of the scheme, it employed the same seed-bulking farmers for the 1999 crop. These farmers opted to deliver their paddy seed to the MRGM due to the higher price offered. Now, however, the farmers are no longer producing seed leading to the nonavailability of good seed and lower-quality rice.

### ***Research***

This emerged as one of the weak areas. The society fully recognized this fact and was making efforts to address the matter. The acquisition of 20 acres, made freely available by farmers for field trials, is a demonstration of this commitment (the facilities at MIAD are however still held by NIB).

### ***Rice Milling***

The society has acquired a small mill with a capacity of 3 tons per hour although the minimum capacity needed is 15 tons per hour. The new mill was in the process of being installed during our interviews. At this time, the society was leasing rice mills from contractors. However, these mills had no capability to grade the rice, thus making it difficult to compete with imported rice in the local market.

### ***Working Capital***

Running the irrigation scheme is an expensive undertaking. The cooperative requires a minimum of KSh 300 million upfront to run the scheme. These funds are needed to meet the cost of fertilizer (KSh 70 million), land preparation (KSh 30 million), pest control and gunny bags (KSh 20 million) and payment to farmers close to KSh 150 million. In many ways, the new management is providing the services using a model close to that used by the NIB. What distinguishes it from the NIB management is its degree of transparency and the role of the farmers in the management of the operations.

The efforts by the society to get credit from commercial banks have not been successful and the society attributes this to interference by the government. They quote situations where



negotiations were almost concluded only to learn at the last moment that the deals had been terminated. In the midst of these financial difficulties, the society also has found some workable solutions. In 1999, it identified a rice buyer who paid KSh 200 million upfront, thus assisting the society to meet some of its financial needs.

### ***Human Health***

Malaria and intestinal schistosomiasis (bilharzia) (see paper by Mutero on health impact assessment) are common in the Mwea irrigation scheme. The NIB used to have a surveillance team to monitor and ensure that the two diseases did not attain epidemic proportions. This was partly achieved through the treatment of irrigation canals with molluscicides to kill carrier snails of bilharzia, and the provision of health credit facilities. Currently, there is no organized treatment of canals with anti-snail chemicals. Transmission of bilharzias might, therefore, rise again to the high levels common before the NIB instituted regular control measures.

### **Discussions**

A change has occurred at the Mwea irrigation scheme. The NIB at Mwea is currently almost nonfunctional despite the capacity it commands in terms of technical expertise, facilities and political support. However, all signs indicate that the NIB has no plans to leave the scheme. For example, the Ministry is in the process of reconstituting a new NIB, but due to a pending suit between the Ministry and the farmers' cooperative the court has temporarily halted this. Alongside the NIB is the farmer association, determined to make it despite many odds. The challenges are real. At the society level, the technical, financial and infrastructural challenges are daunting. There is a dire need for operating capital and the canals are in need of excavation, yet there is no equipment while a large-capacity rice mill is needed to produce quality rice.

This analysis clearly underlines the unfinished business at Mwea. There are issues to be resolved between the government and the farmers but, as it happens, the farmer cooperative urgently needs injection of capital to successfully keep the scheme functional.

### **Conclusions and Recommendations**

#### ***Conclusion***

After close to 40 years of a highly structured top-down management, radical changes have occurred at the Mwea rice irrigation scheme. The farmers took over the running of the scheme at the end of 1998 and have been running it since, albeit with difficulties. The management of the scheme is now by the Mwea Rice Growers' Multipurpose Cooperative Society Limited through an elected management system. The Savings and Credit Cooperative (SACCO) has been integrated into the management and is currently responsible for sale of rice and payment of farmers' dues. This new role was decided on by farmers when the MRGM had difficulties in timely payment of farmers' dues.

There are divided assessments on the nature of this change. According to the farmers, this change is final and there is no going back. The use of the term "divorce" to illustrate this change is enough to conclude the position of the farmers. The government, while

acknowledging this change, still sees its role in the scheme and considers itself the de jure manager. In some ways, the government is right since it still controls assets essential to the operations of the scheme, e.g., the rice mill, the research facilities at MIAD and the paddy collection centers but, in fact, literally the keys to the main control structures of the system were handed over to the farmers' group. A central issue is the Irrigation Act. This Act and the status of landownership are central to the meaningful takeover by the farmers and the government is aware that the farmers cannot change the Act on their own. The fact that the Ministry of Agriculture is in the process of reconstituting a new NIB for the scheme reinforces this position. Therefore, it is clear that while the farmers are functionally in charge of the scheme, the government still has a strong hold on the critical elements of the scheme.

Despite the challenges faced by the MRGM, some substantial positive changes have taken place. The management system is apparently more democratic and sensitive to the plight of farmers; prices paid to farmers have almost doubled; and opportunities for farmers and the people of Mwea have increased (farmers can sell the bulk of their paddy to independent rice millers, thus creating a new category of beneficiaries within the scheme). In addition, farmers have opened up new land for rice on their own initiative. The farmers interviewed have reported that, on the whole, the socioeconomic status of the entire area has improved.

While performance in certain areas is commendable, the cooperative society also faces some major challenges. Its technical team is inadequate, it badly needs operational capital and facilities for research and seed multiplication for research, it has limited milling capacity and it lacks critical machinery and equipment, such as excavators meant to keep the canals free of weed and silt. Innovation and flexibility have, however, helped the society in the face of these constraints. For example, the society has leased small rice mills from independent contractors and has contracted out services, such as rotavation, to supplement its 20-tractor capacity.

The split between the NIB and the farmers is far from complete and there is clearly unfinished business between the two parties. The farmers are still pressuring the Attorney General to review the Irrigation Act and there is the unresolved issue of the jointly owned rice mill and the idle infrastructure at the scheme (paddy collection centers, the MIAD research capacity). The society sees a clear link between this stalemate and its inability to get loans from banks. In the society's view, the government is interfering with its operations.

In conclusion, it is apparent that dialogue and consultation between the government and the farmers are urgently required.

### ***Recommendations***

- Both the MRGM and the Ministry of Agriculture need to initiate meaningful dialogue to resolve pending issues, such as the review of the Irrigation Act. At the functional level, matters relating to joint assets, such as the rice mill and the paddy collection centers, among others, should be resolved.
- Review and appropriately strengthen the current capacity of the farmer cooperative society. While this should be preceded by a clear analysis of core functions and capacity requirements, visible gaps include equipment and machinery, operational capital and staffing.

- The society needs to develop a strong operational system to improve the efficiency of the farmer cooperative. The society has embarked on certain aspects of this, such as computerization, but more needs to be done.
- Strengthen the already initiated democratic process to ensure effective farmer representation and equity in terms of gender and other social characteristics.

## **Researchable Areas**

### ***Technical***

A new weed that resembles the water hyacinth has taken root in some water canals in Thiba. Although not currently a threat, as a preventive measure, it is important to establish its nature and implications.

### ***Socioeconomic Changes***

Establish the level of socioeconomic change and subsequent changes at the household level. This will be in response to reports from farmers, rice merchants and millers that there has been an increase in disposable income for most people in the scheme.

### ***Organizational Systems***

Establish effective management systems within the society. Such systems should include computerization of their operations (the society is in the process of doing this), management capacity of the Central Management Committee and training needs of the technical staff, among others.

Research in this area should document the current systems and the basic minimum requirement to assist the society to embark on relevant developments.

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