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AN IMPACT EVALUATION STUDY

62

OF

TWO SRI LANKAN RURAL DEVELOPMENT PROJECTS

MANAGED BY THE

CEYLON TOBACCO COMPANY, LTD.

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GLOSSARY AND ACRONYMS

BAT	British-American Tobacco Group
<u>chena</u>	Shifting slash-and-burn cultivation
CTC	Ceylon Tobacco Company, Ltd.
GOSL	Government of Sri Lanka
H-9	The block in MASL's System H where CTC worked.
<u>maha</u>	Northeast monsoon season (October-January/ February))
MASL	Mahaweli Authority of Sri Lanka
MCS	Mahiyangana Colonization Scheme
MPCS	Navaajeewana ("New Life") Multi-purpose Cooperative Society
<u>puranagana</u> or <u>purana</u> village	Those that predate modern settlement schemes
<u>shramadana</u>	"Gift of labor" (cooperative community work project)
SLFP	Sri Lanka Freedom Party
tank	Irrigation reservoir
UNP	United National Party
<u>yala</u>	Southwest monsoon season (April/May - August/ September))
YFC	Young Farmers' Club

SUMMARY AND COMPARISON

The Sri Lankan rural development projects evaluated here are dry zone settlements or resettlements in which the Ceylon Tobacco Company (CTC) held the sole or leading role. In each, the settlers depended heavily on CTC and now look to the Mahaweli Authority of Sri Lanka (MASL) for their support. (Both settlements today are regular elements of the MASL development program.) Farmers in the schemes look back to the CTC days as a time of excellence in agricultural advice and input delivery.

In other ways the projects differed widely.

At Mahiyangana, CTC as sole donor, manager and protector guided the destinies of 59 colonists farming 177 acres in a project that lasted from 1966 to 1980 and cost about \$1.4 million. Motivated by a desire for good public relations and the wish to contribute to national development, the company tried to establish a self-reliant model settlement. Its generous endowments transformed the colonists' lives while creating strong physical and psychological dependency; its close, effective management left little room or encouragement for the colony to develop its own institutions. The net result was an enormous economic and social impact on a small number of people but not a model settlement.

In the Mahaweli System H, Block 9 (H-9), CTC starting in 1979 took over management of agricultural inputs, extension services and marketing by virtue of an informal understanding with MASL. MASL wished to experiment with private sector management; CTC was willing but wanted at least to meet its costs, which the marketing margin was supposed to cover. At full size, the project served 2,122 families working, in maha, as much as 7,507 acres. MASL retained responsibility for water management and non-agricultural functions, leading to misunderstandings and some competition between the organizations. CTC found itself losing money, negotiated a fee from MASL but still did not break even. The farmers enjoyed services and support common to large-scale settlement schemes in Sri Lanka. CTC's work in agricultural aspects is recognized as having been unusually effective. In 1983, MASL decided for various reasons to take over all H-9 functions itself. CTC, discontent with its continuing costs, willingly withdrew. Since then, CTC has only offered certain marketing services in H-9, as do other private parties, and ground the chillies it purchases.

The Mahiyangana Colonization Scheme (MCS) concentrated high intensity physical inputs and supervision on the few over a considerable period. No ambiguity existed as to source of authority or funds: CTC was all powerful at all times. In H-9 more than 35 times as many families were affected less intensively: MASL leveled the land and built the irrigation structures, then CTC appeared for four years as MASL's agent for

agricultural development (turning into an inadvertent donor along the way), and finally MASL assumed responsibility for it all. Management was at once more distant, less personal and distinctly divided. The impact of CTC alone or of both organizations on the typical H-9 settler family during 1979-1983 surely never rivaled CTC's impact on the MCS colonist. In fact it is likely that the effect of CTC in H-9, though advantageous in the short run, will prove slight over the long haul.

Neither project achieved the AID-style purpose that we have attributed to it (see Annex D for partial ex post facto logical frameworks). MCS, with its strong psychological and physical dependency that MASL can meet only in part, is not a development model that others would reasonably wish to follow. Nor did H-9 yield a private sector management model for MASL; it was not, in fact, a good test of the proposition that private sector management might have something to offer. From CTC's standpoint, H-9 was a partial public relations success that demonstrated its capacity to manage certain development functions. But H-9 cost money CTC did not wish to spend and inadvertently drew the company into an awkward relationship with MASL that only termination could settle.

The CTC experience at MCS and H-9 offers some solid lessons. They may not be new or profound, but the fact that donors keep re-learning them suggests that fresh attention is warranted.

Projects should be planned and documented in advance. The MCS plan existed in a few people's heads but not on paper. It made heroic assumptions that should have been scrutinized but evidently were not. CTC had some good planning documents for H-9, but they rested on the quicksand of an informal understanding with MASL about division of responsibility. Both agents and their principals deserve better than that. At its best, giving a private entity partial responsibility within a government system is difficult for all parties, including the intended beneficiaries.

Great endowment breeds great dependency. We are less confident of the converse, but it seems clear that CTC's lavish support of MCS is not the way to guide a settlement toward self-reliance. The following principles might lead to more realistic expectations:

- set specific limits to support, in advance, and make them well known;
- require settlers to contribute labor and -- once harvests are being marketed -- money as well;
- be sparing in cost and direct staff attention;
- avoid unusual or expensive support, especially that which individuals or rural communities could not hope to provide for themselves;

- try to move toward placing agricultural inputs and services in private hands, encouraging a business relationship with farmers.

Donors and agents do best what they know well. A firm like CTC that knows one field of commercial agriculture is likely to do well in another. But it should not be expected to manage community development.

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MAIN REPORT
(MCS)

I. PROJECT SETTING

Sri Lanka in the mid 1960s had not yet experienced the economic difficulties that came to dominate the 1970s. Although per capita product was small and annual growth rates low, a solid structure of social services existed and impressive gains in conventional quality of life indicators were taking place. Today's infant mortality (32/1,000), life expectancy (69), adult literacy (87 %) and population increase (1.8%) rates are well known to observers of modern economic development.

In the 1960s, the first oil price shock remained several years away. Diesel fuel, for example, sold at retail for Rs. -/90 (then about US\$ 0.15) a gallon.

Government power had shifted several times from one political party to another since independence in 1948. Although policy changes accompanied those political changes, the basic national trend stressed equitable social and economic benefits for the ordinary citizen and gave less attention to economic incentives or stimulating economic growth. Public sector participation in the economy was increasing, but a number of large companies since nationalized or now gone from Sri Lanka still continued to operate.

When the United National Party (UNP) took power after winning the 1965 elections, it faced a general problem of low national production and productivity and the specific phenomenon that Sri Lanka imported large quantities of rice, its staple food. As one effort to stimulate agricultural production and involve the private sector in a "National Food Production Drive", the Government of Sri Lanka (GOSL) gave a dozen private firms long-term special leases on undeveloped tracts of land in the dry zone, usually 1,000 acres each, along the right bank of the Mahaweli Ganga near Mahiyangana in central Sri Lanka. The leases placed no specific restriction on what was to be done with the land, though the GOSL clearly expected it to be put to productive use. Among the firms holding the special leases were Carson Cumberbatch and Company, Moosajees Limited, Whittal Boustead Limited and the Ceylon Tobacco Company (CTC), Limited. All the lessees except one undertook commercial agricultural production of one type or another on their lands.

CTC is an 80 % owned member of the British-American Tobacco (BAT) group headquartered in London (the remaining shares, privately held in Sri Lanka and abroad, are traded on the Colombo stock exchange). It enjoys overwhelming dominance of tobacco production and tobacco product manufacture in Sri Lanka. Rather than owning tobacco producing lands itself, the company provides tobacco smallholders with inputs and technical advice in exchange for buying their production at a guaranteed price. CTC's reputation locally is that of a well-managed progressive firm with a fair and effective symbiotic relationship to the tobacco producers.

Unlike the other leaseholding companies, CTC decided to use Lot No. 12, its 1,000 acres to establish a new agricultural settlement under the name of the Mahiyangana Colonization Scheme (MCS). At the granting of the lease, the land was covered with thick jungle occasionally disturbed by chena cultivation. Starting in 1966, the company cleared and developed some 527 acres, a little more than half of the tract. The developed portion lies in rough rectangular form stretching east from the Mahaweli Ganga. The river frontage is approximately 1,000 meters, and the northern and southern boundaries are some 2,500 meters long. A second phase settlement originally intended on the remaining undeveloped land farther east did not materialize.

In describing its motives and intentions in MCS, CTC consistently stresses themes of "social responsibility," "charity" and participation in national economic development. We found no reason to doubt the sincerity of the company's statements on these points. Its ultimate goal, evidently, was to advance its own position in public relations and political terms, a fact that CTC's officials freely acknowledge, yet the purpose of the project -- in AID terms -- is quite properly described as economic development (see Annex D for our after-the-fact attempt to construct the essential elements of a logical framework).

II. PROJECT DESCRIPTION

Logical Framework

Drawing on our hypothetical logical framework, we state CTC's goal in MCS as follows: To reap broad public relations and political benefits for the company by offering a public demonstration of its corporate sense of social responsibility and willingness to make a direct contribution to national economic development.

The purpose: To create a self-reliant, socially cohesive rural development settlement on 1,000 acres near Mahiyangana.

Establishing the project's intended outputs is more difficult since CTC did not have a detailed implementation plan, nor did it state in advance the outputs it hoped to realize or the length of time it intended to finance MCS. In the hypothetical logical framework, we have elected to show those outputs actually achieved as a step toward assessing the extent to which the purpose was or was not accomplished.

Our effort to reconstruct CTC's implicit assumptions, especially regarding output-to-purpose and input-to-output linkages, is a key factor underlying the findings and analysis section that follows. A full appreciation of these assumptions is necessary to understand the effect of an operating policy that began by giving the settlers, free, all essentials of life plus a number of nonessentials but ended in a series of ad hoc decisions that changed

the economic basis for many of these inputs or, in a few cases, withdrew them entirely.

We consider these to have been CTC's principal implicit assumptions:

1. That heavy early doses of free CTC inputs (commodities, services, supervision) would establish a setting that encouraged settler self-reliance and eventual self-sufficiency.
2. That CTC's support was to be limited (although expected cost and intended life of project were not spelled out).
3. That the cost of achieving the desired end-of-project status would not exceed CTC's willingness to pay.
4. That any political difficulties MCS might encounter could be neutralized with the good will and political benefit anticipated from the project.

Summary Project History

The physical work at MCS began in the second half of 1966 with the arrival of the first CTC staff on site. Constructing their own office and housing and starting jungle clearance constituted the main early tasks. The company's files from that period and interviews with those who served at Mahiyangana give the clear impression of a pioneering venture in which a frontier spirit of challenge and excitement prevailed among the professional staff. The resident manager at the start, for instance, writes delightful progress notes to the supervisory CTC office (then the Leaf Division, Kandy) recounting in exuberant style their daily successes and setbacks. The arrival of eight CTC trainees in February 1967, raising the staff total to 13, no doubt contributed to this ambiance. The trainees appear to have been enthusiastic young men eager to make their mark with the company.

CTC implemented the land clearing and building construction, as well as reservoir and paddy field construction and paddy field leveling, with a combination of casual labor and contract services, both functioning under the supervision of its resident staff. The day labor, which came mainly from other parts of Sri Lanka, lived in Mahiyangana and was transported back and forth to the project site by CTC. At the peak, something like 200-300 workers held employment in this manner. Overall management responsibility shifted from CTC's Kandy office to Colombo in mid-1967, when Cedric Forster took charge of MCS.

By 1969, the land had been leveled, with roads laid, and CTC had begun construction of houses using timber felled in the land clearing. The brick and cement houses were tile roofed and supplied with electricity from generators and pipe-borne water. To irrigate

the paddy fields, CTC renovated and enlarged an old tank to 400 acres feet, providing gravity irrigation to 16 two acre allotments. The remaining 44 allotments received lift irrigation from the river, using two diesel driven Sigmond pulsometer pumps. A network of lined channels provided an independent supply of water to each field.

In 1969, CTC officials chose settlers from among the laborers who had cleared land and participated in construction. Initially 59 colonists received a house and one acre of highland but continued to work as paid laborers on the irrigated lands. In 1970, each colonist household received an individual two acre allotment of paddy land.

To help make the colonization scheme a self-sufficient community, CTC established several institutions to provide necessary services. Initially, CTC wives and an educated female settler ran a day care center for small children of mothers working on the communal lands. A school, built and furnished by CTC, was handed over to the Government about 1971, at which time day care facilities ceased, within a year of their inception. (Subsequently, about 1980, CTC allotted one acre to the Department of Education for a new school building). The company also provided a building and initial stock of drugs and supplies for a dispensary and arranged for a government medical officer to visit twice weekly. In emergencies, company officials arranged transport to the Mahiyangana hospital eight miles away throughout their involvement in the project. In addition to the school and dispensary, CTC established a community center housing a library as well as facilities for in-door and out-door games and meetings.

In 1969 or 1970, CTC allocated a building to house the Navaajeewana ("New Life") Multi-purpose Co-operative Society (MPCS) which was linked to a national co-operative network. The co-op arranged agricultural loans through the People's Bank, purchased paddy, provided agricultural inputs, textiles, food provisions and housed a bakery and tea shop. Until the MPCS and the community center were fully operative, CTC transported the settlers to Mahiyangana to buy vegetables and see films.

CTC's aim was to establish a self-sufficient community, and it consequently reduced its staff from a maximum of about 25 in 1969 to a minimum in 1973 of one Field Instructor, who became the Officer-in-charge, and one person to operate the irrigation system. From about 1973, CTC staff were spending about 75 percent of their time dealing with a 50 acre experimental farm leased that year from the Department of Agriculture for soya bean production. Overall responsibility for MCS had been returned to the Leaf Director in Kandy in 1971.

In 1975, electricity was withdrawn due to the high cost of fuel. Running water was also withdrawn in 1975, because settlers used the domestic water supply to irrigate their home gardens. The company assisted them to dig wells.

The MCS was officially turned over to the Mahaweli Authority of Sri Lanka (MASL)* on July 14, 1980, where it became part of system C, zone 2. The dispensary and community center buildings were appropriated for other purposes. MASL did not operate the lift irrigation system and the settlers were unable to bear the cost. Consequently, the majority of settlers were without irrigation water until 1984 when MASL's gravity fed system was ready. The MPCS went bankrupt about 1981 and is now managed directly from the Mahiyangana Co-op.

III. PROJECT IMPACT: Findings and Analysis

Goal

Since CTC's project goal was outside the economic development domain, an analysis of the extent to which the company achieved that goal is beyond the scope of this impact evaluation. Suffice it to note that the MCS did generate favorable publicity. CTC officials today look back on the project as a public relations and political success. We leave to others any judgment as to the part MCS might have played in the company's success at avoiding nationalization, especially during the 1970 - 1977 SLFP Government, an outcome that presumably was also influenced by many other factors.

Purpose

Although the MCS had a startling impact on the small area it occupied and of course on the lives of the 59 colonists settled there, it is our definite finding that the project purpose was not achieved. That meant, of course, that no model emerged for others to follow. What remain from the experience are lessons to be learned. Instead of developing into a self-reliant community able, eventually, to wean itself from outside support and become self-sustaining, the MCS settlers remained largely a collection of individuals who each depended heavily on CTC and, at the time of handover to MASL in 1980, transferred that dependency to the Mahaweli Authority.

In short, we found no evidence that the colonists developed any elements of a self-reinforcing community with its own leadership and institutions, as opposed to a collection of individuals who happened to be settled near one another, despite eleven years (1969-1980) under CTC and four subsequent years under MASL.

*Mahaweli is a multi-billion dollar irrigation, agricultural development, resettlement and hydroelectric program that originated in the early 1960s. Since 1977, the GOSL has obtained massive donor support to allow a sharp acceleration of the program's pace: all major features are now scheduled to be in place by 1986. Mahaweli has operated under several names and structures. The current one, used throughout this evaluation, is the Mahaweli Authority of Sri Lanka (MASL).

CTC did make certain paternalistic attempts to build settler institutions and leadership. In addition, we detected an instance or two of colonist-generated community activity (see Annex B. But the net, long-run result of all this has been nothing whatever. If any settler leadership or institutions, however generated, existed at any point in the past, they did not survive. The standard pattern from the start was that each settler depended heavily and individually first on CTC and subsequently on MASL. That is still the case today, 15 years after the first colonists arrived.

This means, of course, that no model emerged for others to follow. What remain from the experience are lessons to be learned.

Without implying that others possess special insight into fostering self-reliance among settlers subjected to outside intervention, we suggest that CTC did not really have a strategy for accomplishing its purpose. The company's approach appears to have gone something like this: (1) Pour in the inputs for some unspecified period on the assumption that they will result in useful outputs; (2) hope that the simultaneous presence of these many outputs will, by a kind of spontaneous synergism, eventually reach the desired end-of-project status. Point one, in our judgment, definitely occurred. Equally definitely, point two did not. As in a great many other development projects, the crucial evolution from a collection of worthy outputs to a larger result that constitutes purpose achievement simply did not happen.

In trying to explain this failure, one must certainly cite CTC's lack of planning, inadequate understanding of the complexity of integrated rural development (not to mention the added dimension of setting up an entire new settlement at the same time), and general naivete regarding the unexamined assumptions it was making. We are not so rash, though, as to predict that MCS's purpose would have been achieved had these serious shortcomings not existed. Many an exquisitely planned, exhaustively studied rural development project has failed to accomplish its purpose. It is only from careful assessment of the great body of such experiences that we can hope to reach productive conclusions. Speculative "what if" questions about a single unique project are unlikely to help very much. The more interesting questions, as we'll see, treat positive vs. negative and intended vs. unintentional impact.

Impact

The major physical impact or change wrought by MCS was the transformation of jungle into productive agricultural land. In the process a small group of people acquired three assets of lifelong value: their housing, their land, and their knowledge of agriculture. Before MCS started, these people were mainly landless laborers; without the settlement, they might well be in the same condition today. Whatever subsequent vicissitudes life may have brought them, their eternal gratitude for what they acquired from CTC is most obvious.

CTC, then, transformed not only jungle, but also human beings. While it did not, in our judgment, transform them as much as it had once hoped to -- i.e., the self-sufficient community did not emerge -- the beneficiaries did change radically. The project's impact on them was enormous and permanent. Physical as it was, that transformation also was heavily psychological. A benevolent if paternalistic institution intervened decisively in 59 families' lives by settling them on newly cleared land and spoonfeeding them with all necessary (plus some extravagant) support. CTC planned, organized and orchestrated the settlers' activities in a way they had probably not known since being young children.

But a well-intentioned effort to endow them with everything they would need to achieve independence became the cause of an extraordinary degree of dependency. That dependency, the principal unintended impact of the project, was fundamentally economic and psychological though it had social and institutional manifestations as well.

By its rapid phase-down of support in the early 1970s, CTC naturally had an effect on this unintended dependency. So has MASL since 1980 with its far larger, more remote and less personal structure. But the change appears to be limited to the physical fact that the settlers receive fewer goods and services than they once did. We were unable to detect basic changes of attitude or expectation among the farmers or development of self-generated institutions that might seek to compensate for much lighter support. Psychological dependency has not changed even though its physical fruits are now much less abundant.

Explanation of Impact

Our explanation of the main factors causing the economic, social and institution impact we found turns on two principal points. The first is the total change brought about by CTC in the 59 farmers' style of life. Once laborers who had come to Mahiyangana from elsewhere seeking a daily wage, they had their destinies taken in charge by an organization that had decided to guide their every step toward a presumed future self-reliance. Second, CTC provided a degree of physical support and individual attention to problems that is possible only in a small model or pilot settlement (it is inconceivable in the Mahaweli program, for example, or any of its component systems). With the small number of farmers involved and the large staff and financial resources CTC brought to bear, major impact was almost inevitable.

Sustainability

Answering part of this question is easy. We have already noted the permanent economic character of the settlers' direct physical and skill endowments from MCS. These acquisitions, by their very nature, have a sustained effect that should continue indefinitely, even beyond the original generation.

Sustaining dependency, of course, is an entirely different matter! The real question becomes whether the MCS settlers' dependency can be undone. Like it or not, that dependency is alive and well more than a decade after CTC tried to stimulate independence by cutting back support. The irony is that CTC, in first trying to establish the colonists' independence through heavy support, created the massive weight of dependency that it later sought to lessen by the opposite tactic of cutting back services and supplies. Both approaches failed to produce the desired result.

Scaling back entrenched dependency may well be very difficult, but guarding against it from the start is surely feasible. In the conclusions, we offer some suggestions for how CTC might at least have hindered the building of heavy dependency among the MCS colonists.

IV. CONCLUSIONS

CTC gave to its settlers enormous endowments that they likely would never have obtained otherwise. It also created in them a heavy dependency, as much psychological as material.

One reason for excessive dependency, we suggest, is that the settlers were never told of any limits to CTC's support. This may be due to CTC's own lack of a clear, specific plan laying out limits to the nature or length of its commitments. Such limits only began to emerge, ad hoc and after the fact, as the company became concerned about costs. The same lack of foresight led to lavish support in money and staff time, neither of which could have done much for community self-reliance, especially when settlers did not have to contribute labor or, until later, cash.

Another factor that could have contributed to the colonists' excessive dependency is the unusual nature of some of CTC's early services: a home electricity supply, weekly transport to Mahiyangana for movies and other purposes; the provision of meals, day care, vitamins and laundry services for school children; a household water supply. Since it is improbable that even a self-sufficient settlement could have maintained this kind of support for its members, the very nature of some of the services enjoyed from the start could well have inhibited the later development of a degree of independence.

Over time, as the farmers earned money from harvests, CTC might have tried to shift input supply to commercial sources. That would not have been easy, but any success could have helped to reverse the intense relationship with the company -- to all parties' advantage.

Would it be feasible today for a private firm, or any organization, to undertake an MCS-like project? The answer is clearly negative. We divide our reasons for such a conclusion into two parts, those that are unique to MCS or the prevailing situation at the time, i.e., they would not or could not be repeated, and those that ought not, given the Mahiyangana experience, be tried again.

In the first category fall the following:

- MCS was unique in that a private firm chose the settlers, installed them on allocated plots of land, and controlled irrigation. No one has been able to cite for us, from the long history of settlements in Sri Lanka, another case in which the government did not carry out those functions. No one considers that such a happening would recur.
- Of the 59 MCS farmers, 42 depended for irrigation on water lifted from the Mahaweli Ganga and distributed through field channels by pumps. At pre-oil shock diesel prices, CTC found such a method feasible. Today it would not be, and in fact the first big price hike of 1972 was a major influence leading the company to its belated conclusion that some limits in cost and time needed to be established. It is worth noting that at handover on August 1, 1980, MASL immediately discontinued lift irrigation. Mahaweli made this decision, of course, in the year following the second huge fuel price increase.

Examples of the second type of reason:

- The cost* per settler, in money and staff attention, was much higher than development organizations ought to wish to replicate. Expending as much money and time as CTC did is not unusual, but lavishing it all on 59 families is extraordinary and unlikely to be acceptable to rural development planners of the 1980s and beyond.
- Related to cost as well as to dependency vs. self reliance is the issue of the type and terms of support. CTC constructed expensive and well-meant if unsuitable housing and simply handed it over free to the colonists. It furnished luxuries like electricity, trips to town and laundering of school children's clothes. We think it would be a most remarkable and unwise donor that today would wish to assume such burdens with all the attendant complications.

The Future

It is certain that the ex-MCS settlers today will continue to take whatever they can get from MASL while expecting much more. What alternative might be suggested? With enough time and sufficient incentives, the private sector could probably assume virtually every agricultural service and input function in system C if the GOSL wished to move in that direction, thus placing the farmers in a direct business relationship with, ideally, a number of different, competing suppliers and buyers.

*CTC spent about Rs. 9.7 million or, converted at the differing exchange rates over the life of project, some \$1.4 million. Income from MCS amounted to about Rs. 2 million, leaving a net cost of Rs. 7.7 million. See Annex A for details.

Normal government functions like education, health services and road maintenance could remain the responsibility of regular line ministries under such a scenario, leaving MASL primarily to control irrigation water and maintain the systems that impound and deliver it.

All of this lies in the realm of speculation, of course. Were it eventually to occur, we assume that the agricultural side of it would correspond to the original CTC vision and would constitute at least a sharp lessening of dependency. Services received from line ministries, provided they are generally similar to those available outside the Mahaweli systems, should not themselves encourage a settler to be more dependent than any other citizen.

Water control and its system maintenance remain a special case. With all the complexity that this subject involves, not to mention traditional Sri Lankan practice over the millenia, we see no reason to consider government withdrawal either desirable or possible. That means accepting a certain minimum of dependency even under the best of all outcomes. As a corollary, the original CTC hopes for self-sufficiency -- at least to the extent that they applied to water management -- must be deemed unrealistic.

V. LESSONS LEARNED AND POLICY IMPLICATIONS FOR A.I.D.

The lessons from MCS are something less than startling or extraordinary, in our view, in that they reinforce what common sense and general development experience already teach us.

1. CTC did well at Mahiyangana when it was extending agricultural services similar to those it makes available to tobacco smallholders in its normal commercial operations. This basically means managing the flow of inputs and credit, offering technical advice in the farmer's field, and marketing his produce. CTC does this successfully for tobacco; at MCS it did the same successfully for paddy and high value food crops.
2. As for the rest of the scheme, CTC entered a domain in which it had no experience and where the results proved far less satisfactory. These run the gamut from activities like water management, where the outcome was reasonably adequate at least before oil prices leaped, to nondisabling mistakes like inappropriate housing, to unsustainable services like domestic electricity and water or the benevolent personal touch for shopping excursions and child day care. Here is where the project bogged down, as CTC the agricultural commercial success demonstrated itself to be less than adept at settlement and social services management.

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The broad lesson, evidently, is that a private firm is likely to do far better at development activities reasonably similar to its regular operations than at brand new undertakings.

The implications for AID -- and for the private sector as well -- are obvious: commercial companies are best suited to participate in those aspects of development projects that are relevant to their experience and skills. Like other institutions, they are much less effective in fields outside their own.

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16:

MAIN REPORT
(H-9)

I. PROJECT SETTING

Following the 1977 elections, the new UNP Government resolved to accelerate implementation of Sri Lanka's vast Mahaweli irrigation and rural development program. Western donors responded with large amounts of financing intended to compress a 30 year construction and development plan into six years. The currently estimated date for having all structures in place and operating is 1986.

Mahaweli's system H with its many blocks lies in the dry zone south of the former royal capital, Anuradhapura, in central Sri Lanka. Incorporated in system H are certain earlier settlement schemes, namely H-6 and H-8. By contrast, H-9 is a "new" block, new in that land development took place in 1977 - 1978 and the settlers were installed in 1978 - 1979 on allocations of 2 1/2 acres of irrigable land and 1/2 acre of highland. But an estimated 70 to 75% of these people are not new to H-9. They were there earlier under a variety of traditional arrangements, with government land use permits, or as squatters. Some of them, under Mahaweli, lost the use of much of the land they'd been farming before; many others gained from Mahaweli's allocations. There remains a considerable distinction between the old, settled or purana villages and those inhabited by arrivals from outside system H.

The Ceylon Tobacco Company (CTC), Ltd., functioned in H-9 from yala 1979 through yala 1983 as a management agent under MASL. The arrangement, conceived informally between top officials of the two organizations, got underway quickly, perhaps because it was not preceded by negotiation of a detailed written agreement or contract. Indeed, no such agreement was ever drawn up, to our knowledge, leaving ample room for many subsequent disagreements and misunderstandings. CTC believed it had responsibility for agriculture extension and input delivery, the credit system and agricultural marketing. Unlike the others, marketing was not an exclusive CTC function, for private traders already operated in H-9. But CTC began marketing as well, agreeing to buy whatever the farmers offered to them for sale, and in turn earned revenue on the resale.

MASL appears to have been seeking a private sector management model for some or all aspects of Mahaweli development. To that end, the CTC deal served as an experiment in using a private firm to manage public development -- or a part of it.

Though CTC seems to have entered this venture quite willingly, there is ample evidence of caution on their part, based mainly on the Mahiyangana (MCS) experience. The company from the start wished to earn something from its H-9 involvement or at worst not to lose money. The implicit MCS lessons appeared to be: (1) stay out of colonization itself -- that's a government matter, (2) concentrate on CTC's own strong suit, namely production and marketing, (3) avoid capital costs, and (4) seek revenue opportunities to offset all

operating expenses. This time, in a word, CTC desired to demonstrate its management capacity as a development partner with government and enjoy public relations and political benefit from the venture, but it did not want to incur any net costs in so doing.

The policy climate of the late 1970s turned on economic liberalization, as the government sought to stimulate a long-stagnant economy by encouraging private sector commerce. In such an atmosphere, and being clear on its own principles already sketched out, CTC agreed to proceed on nothing more than a general oral understanding.

II. PROJECT DESCRIPTION

As with MCS, we constructed a logical framework for H-9 (Annex D) in the 1979 - 1983 period, which represents our best judgment of the intentions lying behind MASL's and CTC's actions.

Logical Framework:

We consider that the two organizations shared the following overall goal: To test whether an enduring relationship can be established among a public development authority, a private firm charged with certain management responsibilities and the affected farmers. That relationship should advance government development objectives and simultaneously offer a reasonable financial return to the company and the farmers.

The purposes, though, diverged somewhat:

MASL

To develop an innovative management model in which a private company successfully assumes responsibility for as many aspects of an integrated rural development settlement scheme as possible (ideally, all aspects).

CTC

To demonstrate its development management capacity in system H, block 9, while (a) realizing a net financial return and (b) generating favorable public relations and political mileage for the company as a partner in national development.

As with MCS, our statement of outputs essentially amounts to those actually achieved.

Along with the operating principles listed earlier, we believe that CTC was working from several implicit assumptions in H-9:

1. That its marketing functions along with any agro-industrial activities it could develop would eventually produce enough revenue to offset all expenses and preferably to yield a profit.

2. That MASL would construct, maintain, staff and finance all aspects of H-9 development apart from agricultural extension, inputs, credit and marketing.
3. That CTC and MASL could develop a mutually satisfactory working relationship on key MASL-controlled activities that bear directly on agricultural production, principally, irrigation water management.

Summary Project History:

At project inception in yala 1979, CTC provided agricultural inputs including tractors, supervised farmers and trained them in cultivation methods, arranged bank credit, and purchased crops at guaranteed prices. CTC installed a project management staff for which no reimbursement was requested. MASL took responsibility for community development, water management, and extension staff. It also selected farmers and settled them while paying for irrigation construction, buildings and fencing.

By _____, CTC discovered that its costs were outrunning its marketing revenues. The company's _____ budget projected expenditure of Rs. _____ vs. income of Rs. _____, leaving a deficit of Rs. _____. Subsequently, CTC negotiated an annual Rs. 700,000/- management fee from MASL starting _____.

The divided loyalties created by the informal management arrangement soon became a subject of discussion between CTC and MASL. CTC indicated willingness to assume responsibility for community services, water management, and irrigation system and road maintenance. CTC's records even show _____ as the date fixed for takeover of water management. The company was also prepared to accept some association with the health volunteer program and supervision of the construction of wells and latrines. Though in the end, MASL did not relinquish formal responsibility for community development and water management, part of the management fee paid to CTC for the quarter commencing April 1, 1980, was to cover direct expenses of staff salaries and traveling connected with water management and community development.

Though CTC never had formal water responsibility, the company did intervene with MASL authorities on behalf of farmers to ensure the timely supply of irrigation water. CTC's Resident Project Manager from 1980 to 1983, Mr. N. Wijewarnasuriya, held the basic view that farmers' problems were also CTC's problems and must be solved. He felt that CTC should assist MASL in the field with water management and urged greater CTC involvement in community development. As early as January, 1981, CTC hired a community development officer, and the corporate plan for 1982 includes community development as one of the key areas.

While liaison continued between CTC and MASL on their programs in H-9, the company undertook its own community development efforts that were natural outgrowths of work in agricultural extension and crop diversification. The most successful were the Young Farmers Clubs and a Home Garden Competition, both started by mid-1982. By mid-1983, there were twelve YFCs which cultivated demonstration plots; offered training programs and educational tours, for example to the Victoria Dam; organized shramadana-s ("gifts of labor") to accomplish agricultural work and community projects; established libraries; undertook charitable and religious functions; and participated in interdistrict youth exchanges.

The Home Garden competition attracted 600 competitors from the more than 2,000 households in H-9. In preparation, CTC instructed the farmers in cultivation practices and sold seeds and seedlings. The YFCs organized entertainment for the prize distribution in May 1983, an event that attracted 3,000 spectators and resulted in three radio broadcasts.

In March, 1983, CTC founded four Farmer Development Societies as a pilot project to strengthen farmer participation in the hamlets and turnout groups. Each group included separate subcommittees on agriculture, health, culture and religion. These groups carried out only a few activities before MASL assumed all of CTC's extension, credit, and community development activities in August 1983. With CTC's operations subsequently limited to marketing, the Young Farmers Clubs and Farmer Development Societies have ceased to function.

Termination of CTC's Services:

In 1982 - 1983 other factors cropped up that influenced the decision to end CTC's services, even though they had little or nothing to do with CTC's performance or the farmers' assessment of it. Land hunger is acute in H-9. Especially among certain purana villagers, dissatisfaction persists over the number of land allocations per family. Some of these people controlled the use of more land under pre-MASL arrangements than they do now. Others have family circumstances (several adult children) that make getting more MASL allocations a pressing matter.

CTC worked in H-9 from 100 acres that MASL has assigned for its use. Villagers who wanted land saw this tract as offering some relief if MASL could be persuaded to reallocate it to their relatives. But a local political leader also had his eye on those 100 acres as a site for settling new arrivals from outside system H. A certain political pressure grew, and was stimulated, in the form of petitions bearing many signatures that asked MASL to remove CTC from H-9, essentially on grounds that it exploited the farmers like a colonial trading company.

No farmer we talked to, including those whose names appeared on a petition, raised economic exploitation complaints. Several made plain their families' land hunger. Some farmers who said they'd signed petitions claimed ignorance of the exact contents but felt that signing might be helpful in obtaining more land. Our assessment of the format, style and substance of the petitions we saw is that they probably did not originate from the grassroots.

Since 1983, CTC's allocation has been thirteen acres rather than the original 100. The rest is not yet assigned to settlers. Evidently the problems alluded to above are not resolved. A couple of months before our visit in the third week of September 1984, a group of purana villagers staged a "squat-in" on the contested land because they feared it would be allocated to outsiders.

The one agreed reason for the mutual parting of the ways between MASL and CTC is money. Neither party was happy with the Rs. 700,000/- management fee, MASL because it was too much and CTC because it was too little. Many other factors were also involved, and we sense that some of them may have been much more important. But there is no doubt that both sides were ready and willing to end the arrangement in 1983.

III. PROJECT IMPACT: FINDINGS AND ANALYSIS

H-9 is a far more complex proposition than MCS was. The sheer magnitudes are entirely different: 2,122 families on a maximum of 4,601 acres (yala) and 7,507 acres (maha) compared to 59 cultivating 177. The simultaneous presence of two organizations in H-9, each responsible for certain functions, would be difficult enough to assess under the best of circumstances. When in fact the duties of the private firm and the public authority were never specifically delineated -- leading to a welter of interpretations about who was supposed to do what and even who was doing what -- retrospective analysis becomes most complex.

Goal and Purpose:

Nonetheless, it is clear as a broad statement that H-9 project did not realize the goal we have ascribed to it on behalf of MASL and CTC. And neither MASL's purpose nor CTC's, as we have described them, was achieved. Impact there was, to be sure. But we remain skeptical that the 1979 - 1983 experience caused long-run impact. If it did, that impact certainly cannot be measured only a year after the fact.

Since the goal was "to test whether ...," one might argue that a negative outcome realizes as much as a positive one. We could agree, if circumstances had offered a full and fair test of the proposition. They really didn't, in the absence of a

specific written agreement on functions between MASL and CTC. We call that a failure to lay normal groundwork for a real test rather than a goal realized in the negative.

MASL did not achieve its implicit purpose of developing an innovative private sector management model. No such model emerged; if anything, the outcome suggests the extreme difficulty of trying to accomplish such a purpose. In the end, the GOSL abandoned the attempt far short of the "ideally all aspects" version of management we believe it originally sought.

CTC had some, though certainly only partial, success with its ascribed purpose. It did demonstrate a capacity to manage those development functions it believed were expected of it. But it lost money in so doing, even after MASL agreed to pay a management fee. Some public relations and political benefit probably accrued to CTC from its participation, though this surely was offset at least in part by serious misunderstanding of its H-9 role as well as by the confusing circumstances associated with the termination of its management functions in 1983.

Impact

The CTC period had two principal impacts on the immediate beneficiaries of the project, the H-9 settlers. First, it offered a high quality, well-organized, responsive agricultural extension system that achieved measurably better paddy yields than in other H blocks or island-wide. Second, it stimulated high-value crop cultivation in yala, especially of chillies. Both impacts raised farmers' income over this four-year span.

An unintended impact is that water management, according to the settlers, was better in the CTC period than it is now even though CTC had no responsibility for it. The reason, we were told, is that CTC's field officers regularly intervened with the Mahaweli authorities on behalf of the farmers when water problems arose. Lacking such an intermediary today, said the farmers, water management is noticeably less efficient.

Unlike our MCS findings, it seems doubtful that the four-year CTC presence will have long-term social or economic impact in H-9. From the start, the structure was Mahaweli's. CTC's work concerned a very important but by no means the only set of activities brought to bear on the beneficiaries. Judging long-range social and economic impact just a year later is presumptuous anyway; but our guess is that in the longer history of the Mahaweli program CTC's relatively brief management of H-9 will not bulk large. A corollary conclusion is that the short-run impact mentioned is certainly not self-sustaining at this stage. For it to be maintained at all,

MASL will probably have to step up its extension quality and intensity considerably.

The policy and institutional impact of the CTC experience in H-9 occurred within the Mahaweli authority itself. Not only did MASL reach the decision to end CTC's management functions, it now appears to have moved past the stage of wishing to seek any private sector involvement in development management. Regardless of how well or how poorly the H-9 CTC experience served as a test of possible private sector management, we gained the distinct impression from Mahaweli officials that this type of collaboration with private companies is just not in the cards anymore. H-9 is now being run by MASL like any other Mahaweli block, and there is no present likelihood of that changing.

Mahaweli officials continue to express interest in seeing private firms move into agro-industry or agricultural processing in the H system. Their view is that a company might be able, for example, to strike a deal with a group of farmers to supply fresh fruit for local production of fruit juice to be marketed in Sri Lanka or abroad. Other types of local value-added processing might also be possible. MASL is clearly expecting such firms to put up their own capital for processing facilities: it is not willing to do that itself. But any such arrangement would be strictly one of processing and marketing not involving any type of development management by the private sector. MASL now appears to regard traditional development functions as proper only for government management.

Our basic finding, then, is that the impact of CTC's H-9 experience is probably only short-run and is likely limited to rather specific yield and income results that will have little or no sustained effect. The effect on GOSL's policy and institutional approaches is probably also a fairly limited and specific one. From the broad MASL viewpoint, block H-9 is not a large, important or high priority concern. Many other more significant factors could have influenced the MASL conclusion that interest in private sector management of development should become a thing of the past.

At the same time, the officials we talked to seem persuaded that the private sector is in fact more efficient at handling agricultural production and marketing than the public sector is. They understand that the discipline possible in a CTC offers the promise of greater productivity and more efficient operations than MASL can provide. It is presumably for that reason that Mahaweli continues to express an open interest in agro-industrial ventures between the farmers and private companies. Another factor, surely, is the clear need for additional employment opportunities for the second and third generations of settlers, since subdividing small allocations is not economically feasible.

Explanation of impact:

We suggest two dominant ones:

1. CTC had a positive economic impact on the settlers because it provided good agricultural services. Its water management interventions with MASL were successful. From these facts flowed the income benefits to the farmers, however short-run they may turn out to be. Despite other problems, agricultural production under CTC did work well.
2. Because there was no detailed, written agreement of CTC's functions in H-9, much misunderstanding arose and still exists about what the company was supposed to do and what it actually did. Some functions overlapped between CTC and MASL, but others fell between the cracks or were performed less well by MASL in H-9 than elsewhere in the H system. A certain climate of rivalry developed. CTC was dissatisfied because it did not meet its costs despite the management fee it succeeded in obtaining from MASL. Under the circumstances, the surprising thing may be that the arrangement endured as long as it did, not that it fell apart in 1983. The situation hampered CTC's effectiveness, kept MASL from having a full, real test of private sector development management, and doubtless contributed in some measure to MASL's current view that private sector management is no longer desirable.

The evident MASL policy to arrange private sector involvement in H-9's management did not meet with full acceptance within the bureaucracy. Our discussions with officials at all ranks in the structure elicited many ambiguous reactions, even contradictory ones -- sometimes from the same person. Most acknowledged MASL's desire to experiment with private management of development. Many stated flatly that CTC's services in H-9 were more effective, more flexible and better staffed than MASL's. Many also expressed the belief that irrigation, water management and community services could not or should not be left to a private organization. In response to specific questions, officials usually agreed that CTC had not been expected to take on water and social services.

Nonetheless, they often went on to blame CTC for not having assumed these functions or to complain that the company had indeed assumed some of them but should not have.

The atmosphere, then, appeared to be one of considerable internal MASL disagreement or at least inconsistency. MASL's policy intentions simply were not clear to all of those charged with implementing the policy. Questions raised about CTC's role were not answered; a specific written agreement was not negotiated between MASL and CTC that might have laid many of these matters to rest.

The net costs amounted to much more than CTC intended. CTC's marketing earnings did not come close to covering the agricultural extension costs. Even after MASL agreed to a Rs. 700,000/- annual management fee, CTC's documents show an annual loss running at about Rs.

The MASL Resident Project Manager who oversees H-9 told us that MASL's expenses of running the former CTC functions certainly exceed the Rs. 700,000/- management fee that used to go to CTC. But MASL never had been happy about the fee, feeling that CTC should earn more from marketing or be willing to absorb the difference as a contribution to national development. One reason MASL officials gave for ending the CTC arrangement is that Mahaweli could save the management fee while putting some underemployed MASL staff to work in H-9.

IV. CONCLUSIONS

1. We find that CTC succeeded in showing that it is possible for a private firm skilled in commercial agriculture to transfer those skills to the agricultural extension, credit and marketing needs of H-9. Two sub-conclusions under this heading are:
 - farmers do respond to good technical assistance and strong encouragement by investing in higher risk, more profitable crops;
 - once CTC's functions were assumed by MASL, farmers clearly became dissatisfied with the quality and quantity of the extension services they received.
2. Given CTC's relatively brief tenure in H-9 and the short time that has passed since its departure, it is impossible to assess whether there has been or will be any long-term positive impact on H-9's agriculture. As far as we can tell, CTC's organizational and institutional activities (e.g., Young Farmers Clubs) had no lasting effect.
3. Contrary to what some people assume, CTC did not encourage tobacco growing in H-9.
4. H-9's water management is less effective today than it was during the CTC period even though CTC was never responsible for it. The reason is CTC's paternalistic intervention with MASL on behalf of the farmers when water problems occurred. It also appears that CTC counseled the farmers on such matters as cleaning the water channels near their fields.

5. The lack of a detailed written agreement between MASL and CTC that spelled out the latter's duties and reimbursements clearly meant that division of responsibilities was not well delineated between the two organizations. In addition, the lines of authority were unclear. Dual responsibility is difficult under the best of circumstances; and these circumstances were far from the best.
6. Relative to other nearby H blocks, MASL neglected the non-agricultural aspects of development in H-9 during CTC's tenure there. This contributed to greater misunderstanding of CTC's effectiveness and MASL's motives. Had MASL done as much in H-9 for community development and social services as it did elsewhere, CTC might not have attempted anything in those fields and a de facto delineation between the two organizations would have become more evident. There might also have been less reason for some to feel that CTC was negligent in not doing more outside the domain of agriculture.

V. LESSONS LEARNED AND POLICY IMPLICATIONS FOR AID

New profundities did not emerge from this study of H-9 any more than they had from the team's work in MCS. Rather, we find reinforcement of some fairly evident common sense conclusions about the most fruitful relationship between public and private sectors, conclusions that have been borne out by other experience elsewhere.

1. It is difficult for both sides when a private firm has partial responsibility within a government system. The never-never land of community development was a good example in this case. Of greater significance, potentially, was having one organization control irrigation water while the other handled agricultural inputs and technical assistance. Interestingly enough, the coordination worked better in the latter case than the former, perhaps because CTC felt confident and comfortable in its agricultural role and did not hesitate to take the initiative in coordinating with MASL.
2. When government doesn't act sure of what it wants but the "contractor" goes along anyway -- especially to the extent of not even having a contract -- there is likely to be trouble ahead. It is in both parties interest to spell out exactly what is expected and who will pay for it.

Admirable as it may be that both sides wished to get on with the job and not delay action with red tape, hindsight shows us that negotiating an agreement would have been worthwhile in the long run. At minimum, it should have been drawn up during the first year while CTC was undertaking work in the pilot phase

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ANNEX A: ECONOMIC ANALYSIS
MAHIYANGANA COLONIZATION SCHEME (MCS)

I. Project Area Description:

In 1967 when the Ceylon Tobacco Company first began clearing land in Mahiyangana, the area was virtually uninhabited dense jungle. Over time, the company over 500 acres and left the balance as reserve.

Average annual rainfall in Mahiyangana, in Sri Lanka's dry zone, is 1900 mm (1960-77 average) divided into two distinct seasons: the maha rainfall (October-January) comes from the northeast monsoons and accounts for 60% of total precipitation; the yala season (April-August) gets rain from the southwest monsoons. Even with 1140 mm of rainfall during maha, its unpredictability warrants irrigation, while only limited cultivation of paddyland is possible without irrigation during yala.

There are two main types of soils in the region: poorly drained Low Humic Gleys (LHG) suitable for paddy cultivation, and Reddish Brown Earths (RBE) which are better drained highland soils more suitable for pulses, cereals and vegetables.

II. Project Agricultural Components:

The company undertook a comprehensive program of integrated rural development. Agricultural components included:

A. Irrigation works. An engineering feasibility study conducted by the firm of Research Engineering International concluded that the most economical technical solution to providing irrigation for paddyland was to divide the area into two parts: gravity-fed and lift irrigated areas. A reservoir with catchment area provided water to irrigate 30 acres. Two 8-inch Sigmund pulsometre diesel-driven pumps lifted water directly from the Mahaweli and diverted it along main channels irrigating another 88 acres of paddyland. A third pump and distribution channels to irrigate 50 acres were installed in 1973 on adjoining land leased from the Department of Agriculture for a CTC research and seed production farm.

B. Introduced cropping systems. In the project's first settlement year, settlers were given one acre of highland and communally cultivated paddyland. In 1970, this communal area was divided among the 59 colonists, each receiving a 2-acre plot which brought the total of acreage belonging to each family to 3 acres.

Colonists followed a paddy-paddy rotation on the irrigated LHG SOILS. Depending on the availability of water, they also included chillies and soybeans on the drier portions of their paddyland during yala. The highland allotment was devoted to a variety of

vegetables, pulses and tree crops. CTC gave each colonist coconut, citrus, and mango tree seedlings, banana suckers and a variety of other trees such as breadfruit and jak, now full-grown and producing well.

While paddy cultivation is largely the male head of household's responsibility, with women contributing labor at transplanting, weeding and harvesting times, the upland gardens are primarily tended by women. In addition to the tree crops, chillies, plantains, soybeans, green and black gram and tomatoes are grown during both maha and yala both for family consumption and sale.

C. Input delivery, credit and marketing. CTC introduced a credit scheme to finance high quality seed (mostly from the CTC farm), fertilizers, and weedicides at planting times. Credit in cash was also given for labor calculated on standard piece-work rates. Although these inputs were supplied through an "independent" farmer cooperative, CTC remained in control through their local manager who served as president until 1975.

Loan recovery was consistently over 90%; since CTC was the buying agent for the official Paddy Marketing Board, it simply deducted the cost of inputs plus other credit from the farmers' proceeds at harvest time.

D. Extension. The extension model used successfully by CTC with tobacco growers was implemented, with the same positive results. Colonists received intensive classroom and individual training in the art of growing paddy. Bi-monthly classes were held throughout the year, with additional sessions called prior to land preparation, fertilizer and weedicide application, harvesting, and post-harvest. After 1974, classes were discontinued but individual field visits were conducted on an as-needed basis.

E. CTC Farm. In 1973, the Department of Agriculture asked CTC to grow certified soybean seeds on contract. Since CTC's irrigated lands were not suitable for soybean cultivation, the Department leased to them a 50-acre tract bordering the original 1,000 acres which played the role of research and seed production station for CTC. Acreage under soybean cultivation fluctuated between 18-35 acres, depending on the Government's requirements; other crops grown and marketed by CTC included paddy (mostly for seed), gingelly, sugarcane, sunflower, and tobacco (as certified seed).

From the outset the farm was a lucrative operation, netting an 80% profit and providing employment throughout the year to settlers.

Although the precise intended role of the CTC farm in technology development and transfer is unclear, experimental results reached the farmer quickly. CTC conducted a wide range of agronomic and varietal trials--especially rice varieties obtained

from IRRI--on the farm and even toyed with the idea of growing pumpkins and stocking fish in the reservoir. Once the research/seed production station was established, CTC broadened varietal trials to include not only rice but vegetables and legumes as well. Quality seeds produced by the farm were distributed to farmers.

III. Project Implementation:

In brief, jungle clearing, land preparation, and layout of the irrigation channels were completed without delay by December 1969. CTC did nothing hastily or sloppily: for example, the layer of topsoil was carefully removed and heaped to the side before land leveling was done and replaced prior to planting, assuring high yields in the early years.

The 59 settlers, selected by application from a pool of over 200 laborers on the basis of strict selection criteria, moved into their finished Israeli-designed brick homes in 1969. At least three settler families owe their land to the woman's skill as an agricultural laborer.

Electricity and domestic water supply were installed at the outset, and minimal user fees were charged. Service was curtailed in 1973 due to increases in the cost of operating the diesel-fuel generators. (For at least the next 4 years, CTC staff also made do without electricity in their homes.) Domestic water supply was replaced by wells in 1975 when water abuses, such as using faucet water to irrigate upland crops, led to pipe breakages, leaks and other problems.

The 1969-70 maha season was the first cultivation season; the next maha season, paddy land was turned over to the colonists. By 1973, CTC felt that farmers knew how to farm and concentrated its efforts on the profit-making CTC farm. Certain incentives to motivate farmers, such as "Outstanding Farmer" competitions (Goviraja), continued to be held.

By 1976, CTC considered the costs of running the colony to be exorbitant. User charges for irrigation facilities, first introduced around 1972, were increased by 50% in 1976 and again by 25% in 1978, but receipts still accounted for a fraction of the cost of diesel required to operate the pumps. CTC investigated the possibility of enlarging the tank to provide all colonists with gravity-fed irrigation. The completion of the engineering appraisal coincided with increased government interest to seek financing for its Accelerated Mahaweli Development Program which would incorporate MCS into System C.

IV. Agricultural Benefits:

The major project benefit was increased farmer incomes from (1) sale of paddy surplus; (2) employment opportunities on CTC farm; and (3) other productive investments.

A. Paddy yields. The relatively high yields of paddy (see Table III.), all the more remarkable in that theoretically none of the selected colonists were land-owners and had little experience in farm management, can be attributed to three factors: (a) an extremely motivated, well-trained extension unit which supervised activities and insisted on discipline and careful farm management practices by its farmers; (b) an efficient input delivery system supplying high quality seed and other inputs on a timely basis, adequate credit and assured marketing by CTC; (c) a research/seed production station serving as a fresh source of improved and successful varieties and agronomic practices.

B. Employment. The CTC farm was mentioned repeatedly by everyone interviewed as a major source of income lost once CTC terminated its involvement in Mahiyangana. Although exact numbers of casual laborers employed are not available, project personnel estimate that 60% of MCS families had at least one person on the CTC payroll. In the early years, CTC hiring policy gave preferential treatment to colonists; however, they found that some colonists neglected their own fields. CTC then imposed a strict system whereby employment on the farm was contingent upon the applicant's having properly completed work on his or her own fields. According to the local manager, CTC employed an average of 40 laborers a day -- more during peak periods of transplanting, harvesting and weeding. Excluding wage earners such as service unit personnel or caretakers, CTC paid at least Rs 64,000/= yearly to the casual laborers who were MCS colonists.

Women interviewed most frequently bemoaned the loss of income. In fact, the CTC farm did employ many more women than men because "women are better at weeding and transplanting than are men." (Local Manager)

C. Investments. As settler savings increased, so did settler investments. Signs of settler well-being include non-directly productive investments such as radios, motor bikes, home improvements (including additions allowing room rentals), and even one portable television set. Productive investments include two small stores, poultry raising (highly risky because chickens are apparently a favorite food of the numerous MCS snake population), work oxen and milk cows.

Some settlers, especially those with access to household or hired labor, have leased out or entered into sharecropping arrangements with less motivated colonists or have encroached on Crown lands and are reaping the benefits of cultivating an extra acre of paddyland.

An unquantifiable but clearly important source of family -- and especially women's -- income is the highland. Not only do highland allotments contribute to improved family nutrition, but sales of plantains, chillies and soybeans can bring considerable sums. Their importance was highlighted during the 1980 to 1983 period, the interim years between CTC withdrawal and full MASL start-up when the majority of farmers lacked water to cultivate their paddyland during yala. Highlands are also important for widows and other women whose husbands are not primarily involved in farming. Women interviewed said that the income they earn from the sale of upland crops is used, in order of importance, for medications, clothes and school supplies.

VI. Project Costs:

The Ceylon Tobacco Company's total expenditure on the Mahiyangana Colonization Scheme from 1967-80 was approximately Rs. 10,000,000/-. Total company income from MCS, including the CTC farm, for the same period was approximately Rs. 2,000,000/- for a net loss to the company of about Rs. 8,000,000/- during the life of project. (Note: figures are exact until March 1978. For the last two years of project life, the amounts are not verified by the CTC accountant.)

It is impossible to compare actual company expenditures to projected ones since no such planning document was formulated. In early correspondence (1967), it appears that the company expected to spend approximately Rs. 3,000,000/- (1967-71), offset in part by Rs. 602,000/- income. No longer-range cash flow analysis appears to have been done by CTC.

Initial expenses, including land clearing and preparation, construction of roads and irrigation facilities, largely completed by 1970, cost Rs. 3,000,000/-. Settler houses, equipped with electricity and running water, completion of irrigation facilities and purchases of heavy farm machinery brought the total capital expenditure to Rs. 5,200,000/- by late 1971.

Until 1973, with the startup of the CTC farm, the company received only negligible income, mostly from rent charged to permanent laborers and from minimal charges for electricity and domestic water levied on the colonists. The user charge for irrigation was introduced in 1972.

The CTC farm proved to be a profit-making enterprise from the outset. In 1974-75, it netted Rs. 128,750/-; in 1975-76, Rs. 191,200/-; and in 1979-80, it made a Rs. 186,600/- profit. Certified soybeans grown under Department of/-griculture contract were an especially profitable crop, with a 100% profit margin.

The farm's positive ledger was hardly sufficient to offset MCS expenditures. For example, in 1974-75, MCS expenditures were Rs. 435,470/-; MCS income was Rs. 22,000/- for a loss of Rs. 413,470/-. Total losses for CTC, including the farm, were Rs. 274,740/-.

The single most important cause of the project's increasing negative balance sheet was the soaring price of petroleum products. The original design of the lift irrigation scheme had assumed a constant low price for POL (petroleum, oil and lubricants). Instead, the cost of petroleum on the world market increased enormously. Because of the complicated system of Foreign Exchange Entitlement Certificates (FEECs), CTC paid a premium of 65% over world prices for its oil imports. The table below shows the rapid increase in the POL cost of operating the two pumps which irrigated the colonists' 118 acres.

TABLE: IRRIGATION COSTS: MAHIYANGANA COLONIZATION SCHEME

YEAR	PETROL, OIL ^{1/} LUBRICANTS (000)Rs.	MAINTENANCE ^{2/} & REPAIR (000) Rs.	TOTAL COST (000)	COST/ ACRE	COST ^{3/} RECOVERY (000) Rps.	PERCENTA TOTAL CC RECOVER
1974-75	47	72	119	1.01	14 ^{3/}	.12
1977-78	65 ^{4/}	60 ^{5/}	125	1.06	15 ^{6/}	.12
1979-80	289 ^{7/}	56 ^{8/}	345	2.92	18 ^{9/}	.05

- 1/ For two 8-inch diesel-driven sigmond pulsometer pumps each serving 22 allotments.
- 2/ Repairs to channels, clearing spillway, service unit wages and 25% of total M&R.
- 3/ Rs. 150/colonist family/season.
- 4/ Total 1320 gallons/month at Rs. 5/65 /gallons for 7 months plus lubricants at 25%.
- 5/ Direct repair of machines, channels, service unit wages, and 50% salaries.
- 6/ 44 colonists x Rs. 300/year; 15 colonists x Rs. 150/year.
- 7/ Total 1380 gallons/month at Rs. 21/gal. for 8 months plus lubricants at 25%.
- 8/ Direct repair of machines, service unit wages only.
- 9/ 44 colonists x 350/year; 15 colonists x 150/year.

(Note: The following figures are in nominal rupees.)

From 1974 to 1980, the cost to CTC of POL rose by 532%. The big jump occurred during the 1977-80 period when diesel rose from Rs. 5/65- a gallon to Rs. 21/- a gallon.

By 1980, pumps, generators and other equipment needed close attention and frequent repairs. Because of age, they were running less efficiently. Maintenance and repair costs were also rising.

As stated earlier, in 1976, CTC commissioned an engineering firm to investigate the possibilities of enlarging the tank to provide all 118 acres with gravity-fed irrigation. The estimated cost was approximately Rs. 500,000/- but events in Colombo regarding Mahaweli pre-empted any need to invest further in MCS.

Cost Recovery. During the five years when colonists were provided with running water and electricity, CTC charged a nominal fee of approximately Rs. 165/- a year. As the cost of providing these services increased CTC did not feel it could pass on a larger percentage of the cost to the colonists. But the colonists grumbled at having to pay any fee, as per file correspondence, and service was discontinued. As the water pipes fell apart, they were replaced by 15 wells.

User charges for irrigation facilities were Rs. 150/- per season from 1972-77 when differential rates were imposed according to lot placement. The 44 colonists on pump irrigation continued to pay Rs. 300/- a year while gravity-fed user rates decreased to Rs. 150/- per year. For the 1979-80 seasons, charges rose to Rs. 350/- a year for pump-users. The table below shows user charges as a percentage of POL cost.

User Fees. Since project costs to the company so far outweighed the financial benefits, one can question why CTC continued financing the Scheme. One possible answer is that the tax write-offs allowed the company for its heavy losses in capital expenditure lessened the financial impact. This perhaps made it more attractive to continue its involvement. However, the answer for continued subsidy appears to be linked more to the company's original goal in undertaking the scheme, that is, public relations. This public relations cost Rs. 8,000,000/- over 14 years.

VI. Events since MASL Takeover:

The Mahiyangana Colonization Scheme was incorporated into System C of the Accelerated Mahaweli Development Program by the Mahaweli Development Board in 1980. Given the spiraling costs of providing lift irrigation to the colonists, CTC was eager to negotiate the turn-over with Mahaweli. The only contentious issue was whether MASL would operate the pumps while constructing the feeder channel leading from the Minipe channel to the CTC tank and

the enlarged distribution channels (these improvements were to provide gravity-fed irrigation water to the entire settlement). It was CTC's understanding that MASL would absorb the cost of doing so. With this in mind, CTC turned over the pumps, spare parts, and all of their infrastructure (buildings, stores, warehouses,) to MASL in August 1980.

MASL offered to run the pumps if the settlers paid Rs. 500/- season and assumed responsibility for all maintenance and repairs. The settlers refused. However, the 15 settlers already fed directly from the CTC tank were unaffected by this.

Settlers were informed of the change by CTC ex post facto. Although the settlers interviewed concede that they could not have afforded a larger share of the operating costs, under either CTC or MASL management, they feel that CTC did not do all it could to assure a continued water supply and hence blame CTC for the next two years' lack of water to undertake yala cultivation.

MASL treated MSC colonists very similarly to other System C colonists. From January 1982-July 1983, colonists received free food from the World Food Program (see table VI for quantities). Monthly rations totaled Rs. 202/80 per person.

Settlers also received MASL construction materials and/or cash payments totaling approximately Rs. 2,500/- each for (a) repairs to their houses; (b) construction of wells and latrines; (c) land preparation.

MASL channel construction for gravity-fed irrigation water was complete enough to permit yala '83 cultivation. However, most farmers were wary and followed a cautious strategy by broadcast planting and not using high levels of inputs. There are presently at least two farmers who still do not have access to water.

A. Changes. The most significant change for settlers is the flow of water. The water distribution system for the 44 previously lift-irrigated allotments is completely reversed: front-end users are now tail-enders. Moreover, since the system is still new, water in large or even limited quantities is not assured to all farmers. No user fee is charged by MASL, though consistent with GOSL policy one is envisioned to begin in 1985.

1. Cultivation Practices. Farmers complained that the inefficiencies of the MASL system have led them to decrease the amount of land cultivated and to change their cultivation practices. Because water is not assured and inputs have not been delivered on time (though credit is easily available to those not in arrears), they are pursuing a less risky strategy using lower levels of fertilizers and pesticides, are broadcast rather than transplanting, and consequently are obtaining lower yields. Farmers also remarked that the price of

inputs has risen relative to rice producer prices, and labor is more scarce and hence more expensive. Whereas during CTC days one could hire a laborer for breakfast, lunch, tea and Rs. 5/- per day, now it costs lunch, tea and Rs. 30/- a day.

2. Extension. Former MCS farmers have had only minimal contact with MASL extension officers. Most farmers interviewed have yet to meet the field officer responsible for their unit.

3. Marketing and credit. These have not changed since 1978 when private marketing of paddy was legalized in Sri Lanka.

VII. Major Issues

A. Income Distribution.

The issue of income distribution is especially interesting in this case where all farmers share so many common characteristics: they theoretically conformed to a similar profile, they were settled at the same time on equal-sized plots of land and all had similar access to inputs, credit and technology. The farmers interviewed were unanimous in citing the most important benefits they reaped from CTC: (1) whereas they were landless laborers, they are now landed gentry; (2) they are good farmers, having received excellent agricultural training; and (3) they own the fanciest houses in System C.

However, in the 15 year interlude since MCS settlement began, significant income disparities have grown in the colony. These disparities were exacerbated during the transition to MASL. Several reasons account for the income disparities:

1. Physical Endowments: Although all farmers received two acres of paddyland and one acre of highland, soil quality and water availability differed widely. One farmer's house, for example, was built on land more suited for paddy cultivation. He receives extra income from planting his entire allotment of 2.9 acres in paddy. Moreover, this settler was a front-end user (closest to the tank) and never experienced water shortages. In contrast, two settlers experienced infrequent water problems, but their highland soils did not drain properly and were in fact more suitable for low-yielding upland rice cultivation.

2. Management Skills: Although selected for their knowledge and interest in agriculture as evidenced by their performance as agricultural laborers, a few colonists could not make the transition from laborer to manager. At least three women laborers were given land but, overworked with the responsibilities of childbearing and rearing, left management decisions to their husbands. One husband interviewed told how his wife fell

ill after receiving the land, and left him, a part-time bakery worker in Mahiyangana, to make decisions; he leased out the land.

CTC encouraged and supported good farmers. For example, two winners of the Outstanding Farmer Competitions showed us newspaper clippings, yellowed with age and tattered from frequent foldings, documenting their record yields of 302 bushels for their plots. Notwithstanding the rewards given by CTC for good farm management, some farmers were simply far more talented and enthusiastic than others.

3. Access to Labor: Labor-intensive practices, such as transplanting and weeding, differed widely among settlers. Those farmers with large families hired little labor, purchased oxen and pursued largely a family-based production system. Those with smaller families seemed to purchase oxen and hire more labor. Although no formal system of exchange labor was described, in fact various forms of extended family labor exchange have evolved with intermarriages over the years. Most farmers were bachelors at the time of colonization; some married sisters of fellow settlers. One married the daughter of his next-door neighbor. Other settlers were brothers. Almost everyone interviewed now has a relative living in the scheme. Given the higher cost of labor, recourse to extended family labor may play an important factor in the choice of cultivation practices.

4. Women's cash contribution. Women appear to have primary responsibility for household "gardens" and for highland cultivation generally, especially during maha. The cropping intensity of these areas varied tremendously with the most intensively cultivated homesteads belonging to the most dynamic farm families.

Women earned income from a variety of other sources as well, including working as agricultural laborers on the CTC farm, share-keeping cattle, and in one case, playing the role of village money-lender. The degree to which husbands and wives pool their income varies; clearly women's cash contribution to family nutrition is important.

5. Unusual circumstances. By her own admission, later substantiated by fellow colonists, the least well-off head of household in the colony is Sarah Fernando, widowed in 1974. She had three young children to care for at the time her husband died and no relatives in the colony. CTC gave her the laundry to run while she leased out her two-acre plot. She also worked as casual labor on the CTC farm. Her laundry business has been replaced by share-keeping cows for other villagers, doing piece work for MASL (ditch digging), and helping with the harvest while continuing to share-crop her own

land. To make matters worse, her farm is located on the fringe of the irrigation perimeter and is one of the two still not receiving Mahaweli water.

The colony's other widow, whose husband died of a snake bite in June, 1984, has suffered a less severe fate. Her husband's brother is also a settler and has entered into a share-cropping arrangement with her.

The victims in both cases were cared for: the first by CTC and the second by her own family, and hence the negative impact on the families' welfare has been minimized.

6. Encroachment. Encroachment on Crown lands is not a new phenomenon. In a 1976 report, CTC described its land distribution as "quote". Informants insist that more settlers are encroaching on even larger tracts of land now than before although it proved impossible to confirm these assertions. Access to land, especially to low-lying fertile areas, can substantially increase a family's income.

7. Windfall from MASL. The 15 families served by tank irrigation have continued to receive water throughout the transition period. Yet they too received the World Food Program allowance for 18 months in addition to the other MASL hand-outs. These 15 settlers earned sizeable income from the sale of most of their paddy during the maha 81/82, yala '82 and maha 82/83 seasons. One farmer estimated that he sold 60 additional bushels during the yala '82 period, earning approximately Rs 3,750/- (\$163).

B. Importance of Assured Inputs.

CTC's key strength in implementing the colonization scheme was its efficiency. The company provided high quality seeds, fertilizer, credit, water and know-how. Farmers adopted farming practices confident that these inputs would arrive in the right quantities at the right time.

Since MASL has yet to establish its input delivery system (although its water system is hailed by settlers as permanent, and that is perceived as an improvement over CTC's), farmers have changed their cultivation practices, according to all interviewed, and yields have decreased accordingly. (No disaggregated figures for the former MCS population - now integrated into two blocks of System C - exist.)

C. Importance of Off-Farm Employment Opportunities

Colonists viewed the CTC farm as a major employer. This source of income was especially important as insurance against insufficient water and as an additional source of income for women.

MASL is apparently not hiring as many people as did CTC, or perhaps the distance to Mahiyangana and to the new reaches of System C is too great; whatever the reasons, reduced employment opportunity is being felt, especially by women, and is contributing to a decline in families' living standards.

S&T/AGR/EPP/S&T/PO:JAlbert/GTEaton:ds:gma:3/5/85(#0542a)

TABLE I

MAHIYANGANA COLONIZATION SCHEME

RAINFALL, 1960-77

1960	110.69	1970	92.37	
1961	106.01	1971	105.73	
1962	93.23	1972	78.62	
1963	106.77	1973	85.31	
1964	86.74	1974	65.55	1441mm
1965	102.35	1975	67.05	
1966	91.05	1976	92.54	
1967	84.25	1977	89.79	1975mm
1968	64.97			
1969	101.11			
			Average:	1901mm

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TABLE II

MAHIYANGANA COLONIZATION SCHEME
DISTRIBUTION OF LAND - 1975

Company farm	85 acres	
Colonists highland	60 (cultivated)	
	<u>20</u> (encroachment)	
		subtotal: 165
Colonists lowland		
(2 acres for 59 colonists)	118	
encroachment (3/4 acre ea.)	<u>36</u>	
		subtotal: 154
Uncultivated	<u>248</u>	
		subtotal: <u>248</u>
		Total: 568

S&T/AGR/EPP:JAlbert:ds:2/13/85:wang2396h

TABLE III

MAHIYANGANA COLONIZATION SCHEME
PADDY YIELDS - 1969-76

Year/Season	Colonists (118 Acres) In Bushels	Average Yield Bushels/Acre	CTC Farm Average Bushels/Acre 122.5
1969/70 Maha			
1970 Yala			
1970/71 Maha	6,175 Bushels	52.33	
1971 Yala	6,390	54.0	
1971/72 Maha	8,600 3/4	72.8	
1972 Yala	8,914 1/4	75.5	
1972/73 Maha	8,170 1/4	69.0	
1973 Yala	9,903 1/4	84.0	61
1973/74 Maha	8,244 1/2	69.8	107.2
1974 Yala	7,342	62.22	51
1974/75 Maha	8,800	74.6	113.7
1975 Yala	5,300	45	104.3
1975/76 Maha	8,953	76	116.7
1976 Yala	8,150	69	112.6

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MAHIYANGANA COSTS

TABLE IV

YEAR	EXPENDITURE in rupees ('000)	EXCHANGE RATE	U.S. \$ COSTS ('000)	PRICE INDEX	COSTS IN 1980 PRICES	
					\$U.S. ('000)	Rupees ('000)
1969	3279.00	5.95	551.09	4.60	2535.03	15083.40
1970	1347.66	5.95	226.50	4.56	1032.83	6143.33
1971	552.48	5.95	92.85	4.32	401.13	2386.71
1972	336.65	6.00	56.11	4.20	235.66	1413.93
1973-73	847.20	6.50	130.34	3.50	456.18	2963.20
1975	673.57	7.03	95.54	2.92	278.98	1966.82
1976	188.45	8.46	22.28	2.70	60.14	508.82
1977	656.25	9.15	71.72	2.51	180.02	1647.19
1978	604.92	15.61	38.75	1.85	71.69	1119.09
1979	474.31	15.57	30.46	1.37	41.73	649.80
1980	757.84	16.30	46.49	1.00	46.49	757.84
TOTALS	9718.33		1362.14		5339.89	34644.14
COST	PER SETTLER	FAMILY :			89	577

TABLE V

START-UP COSTS PER SETTLER FAMILY, MAHIYANGANA COLONIZATION SCHEME

	COST RUPEES	IN 1970 U.S. \$	COST 1980 \$	COST PER FAMILY
LAND CLEARING, PREPARATION	343140	57571	262401	4373
ROADS	10644	1789	8140	136
TIMBER EXTRACTION	50000	8403	38235	637
IRRIGATION WORKS	522000	87731	399176	6653
TRANSPORT	243237	40880	186005	3100
AGRICULTURAL EQUIPMENT	1083887	182166	828855	13814
SALARIES	500000	84034	382353	6373
SETTLEMENT				
COTTAGES	486000			
WATER	80000			
ELECTRICITY	37000			
SUB-TOTAL	603000	101345	461118	7685
TOTAL	3355908	564018	2566283	42771

Value of [or] Food per Fam. J

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Food Ration per Day		Food Ration per Month		Price per 1 Kg. Rs.	Value of the Ration per Person Rs.	Value of the Ration for a 5 member family Rs.
Variety of Food	Quantity Grams	Kgs.	Grams			
Wheat	400	12	000	6.25	78.00	390.00
Cereals	30		900	18.00	116.20	81.00
Dried Fish	40	1	200	38.00	45.60	228.00
Butter oil	30		900	20.00	18.00	90.00
Sugar	20		600	12.50	7.50	37.50
Rasins	25		750	50.00	37.50	187.50
Total		16	350		202.80	1014.00



ANNEX A: ECONOMIC ANALYSIS

H-9

I. Project Description

The Mahaweli Authority of Sri Lanka's System H, located in Anuradhapura District in the north-central part of the country, consisted in the mid-1970s of 37,000 old settlers living in purana villages, 70,000 inhabitants settled during the 1946-1964 development phase, and 33,000 recently settled farmers for a total of 140,000.

Block 9 is in the southeast corner of System H. The only town in H-9 is Galkiriyagama, an hour's drive from Galnewa, the site of the main office for the Resident Project Manager responsible for H-9 and four other System H blocks.

The area developed as H-9 consisted mostly of purana settlements of Tamil and Sinhalese traditional homesteads clustered around village tanks. The farmers cultivated paddy during maha and practiced slash and burn agriculture (chena cultivation) as extensively as family labor allowed on the surrounding highlands during yala. Resettlement began in March 1978, and was completed by December 1980. There are now a total of 2122 families in the block divided into five units of approximately 450 families each, except for unit 205 which has. Average family size for System H is 5.5. Consistent with the resettlement policy throughout System H, families are given three acres, of which 2.5 are irrigated and .5 is destined for the homestead.

The rainfall in System H is 56 inches per year, well below the 86 inches received in System C, and very irregular. Two-thirds of the precipitation falls during the October-January (maha) period, while barely 18 inches fall during the April-August (yala) cultivation period, making irrigation a necessity for year-round cultivation.

Total irrigable land area in H-9 is 6,000 acres, of which approximately 3,000 acres are suitable for paddy cultivation in the yala season; virtually all irrigated land is devoted to rice cultivation during maha. Approximately 60% of the soils are classified as reddish brown earths -- moderately coarse, highly permeable soils suited to upland crops. Brown to grey-brown (low humic grey) soils which are finer, poorly-drained bottom lands with higher silt and clay content suited to paddy cultivation account for most of the remainder.

MASL/CTC collaboration was the result of informal discussions between top ranking officials of MASL and CTC. On the most general level, MASL and CTC considered the goal of the project to "ascertain whether an enduring relationship could be built up between a private sector organization and the farmers, which would give both a

reasonable financial return for their effort." "Weaning the farmer away from paddy" -- consistent with MASL's diversification goals -- was the "necessary strategy" to be pursued to make the enterprise self-sustaining; CTC was adamant that its H-9 project should "not be allowed to degenerate on the lines of our MCS." (September 12, 1979 CTC correspondence).

Earlier internal company documents suggest that CTC's initial motivation for involvement in H-9 was different: "(1) it would improve our public image...to participate actively in a major development program of the Government; (2) there was potential for extending the acreage under tobacco" (May 23, 1979 Auditor's report).

The parameters within which the joint venture experiment was to evolve were set by MASL and conformed to the Government's general objectives and plans for System H. MASL aimed to diversify and intensify crop production in System H by encouraging non-paddy production.

II. Project Agricultural Components

Both CTC and MASL provide the same description of CTC's early role in H-9. According to CTC documents "it was agreed that CTC would manage H-9 with the (MASL) providing extension, water management and community development staff" (August 1982 CTC report). After the first season, it became clear that split management created divided loyalties and areas of conflict. CTC staff replaced MDB staff in the above areas, and MASL paid a management fee for these services and to cover other costs that CTC's marketing margin was not offsetting.

CTC was never actually given formal authority to take over responsibility for water distribution, management of roads and canals and community development. However, throughout the 1979-83 period, CTC was solely responsible for the following agricultural components:

A. Extension The CTC model of intensive extension services used successfully with its tobacco outgrowers and with colonists in CTC's Mahiyangana attempt at non-tobacco related agricultural development was tried in H-9. Ten experienced field officers (F.O.), each responsible for an average of 200 farmers, were recruited from CTC's other field operations for duty in H-9. In order to develop a close working relationship between the farmers and the organization, F.O.s visited each farmer at least once weekly and more, frequently at planting time. They were also responsible for (1) holding pre-season sessions to discuss proposed cropping patterns and methods; (2) attending and sometimes calling turnout group meetings to discuss problems of water management; (3) determining with the farmer the needed amounts of inputs and providing the farmer with these inputs on a timely basis; (4) certifying that

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the amount of credit requested by the farmer was both appropriate and repayable to People's Bank; (5) convincing farmers to repay their loans by selling their crop to CTC.

Extension advice was not limited to paddy and vegetable cultivation but included technical assistance for highland allotment crops, livestock and home gardens.

B. Input delivery CTC-provided inputs to farmers in H-9 included planting materials, weedicides, equipment for plowing, and credit through People's Bank. Much of CTC's planting material was grown on the CTC farm in Block 203 of H-9. Field officers delivered all inputs directly to the farmer's door and for this service charged a handling fee.

The farmer credit program differed from the MASL approach in two ways: (a) CTC introduced People's Bank to the area; and (b) CTC linked their credit scheme to marketing of produce in order to assure credit recovery. Most MASL settlers were given inputs on credit to be repaid in kind and cash loans for labor.

C. Marketing. CTC provided the farmer with an assured market for all produce. Since CTC did not have a marketing monopoly in H-9, it had to offer competitive prices with other private traders. For some highly perishable or not locally marketable crops, CTC was the buyer of last resort.

III. Project Implementation

A. The CTC Pilot Project began during yala 1979 with 90 families cultivating vegetables on approximately 45 acres of irrigated land. The .5 acre per family was the maximum possible since most "families," having just acquired the land, consisted of one or two resident male workers.

Crops cultivated included beans (42%) tobacco (24%), capsicum (13%) and cabbage (11%); the remainder were mostly soybeans and red onions. CTC provided certified seed grown in CTC's own nurseries to farmers. Water requirements and release schedules for the new cropping patterns were agreed to by MASL and CTC. The company purchased the crop at the farmer's field.

For services rendered, CTC charged farmers a handling fee as a percentage of turnover. Farmers strongly opposed the charge, arguing that CTC provided the same service as MASL did in other H areas at no additional cost to farmers. To circumvent the charge, many farmers sold their produce to outside buyers, often at lower prices than those offered by CTC both to avoid payment of the handling charge and repayment of their agricultural loan.

Although the first crop of cabbage and bush beans failed, CTC learned valuable management lessons from the experience:

- Farmers needed convincing proof that crops other than paddy could be grown during yala--highlighting the importance of demonstration plots.
- Good yields depended on timely supply of inputs, especially of extension advice;
- Colonists will try to circumvent regular loan repayment by not selling their produce to CTC. Only close supervision will ensure high rates of loan recovery;
- Private sector management is more labor-intensive--and hence more costly--than public sector management. The private sector must be able to recover its administrative expenses or else it will have no reason to continue. Since passing the cost on to the farmer through an handling charge is unacceptable to farmers, the only alternative in the short term is for the government to reimburse the company for its services. (September 1979 "Lessons Learned," internal CTC memo.)

CTC incorporated these lessons into the planning and implementation of subsequent phases of the H-9 project.

B. Implementation changes. First, CTC negotiated a management fee with MASL.

Second, CTC actively explored the potential for agriculture-based industry, such as (a) installation of a paddy processing mill; (b) installation of a solvent extraction plant for soybeans; (c) processing of chillies; (d) dehydration of vegetables; (e) export of vegetables; (f) papain production. Feasibility studies were done by Dutch, French and American firms, and an aggressive campaign to find import markets was launched by CTC Headquarters in Colombo.

Thirdly, although CTC continued to charge a handling fee, it was decreased and added directly to the cost of inputs.

Fourth, CTC requested and was granted a 100-acre parcel by MASL for use as a research station/seed farm; the farm eventually provided certified seed for H-9 farmers; CTC sold the balance to System H.

Fifth, CTC field officers imposed severe discipline upon the farmers and intensified their extension information efforts to ensure that farmers knew precisely how and when to plant the new yala crops. All farmers were visited at least once weekly and regular group meetings and preseasonal sessions were attended by 65% of farmers (H-9 quarterly reports).

Sixth, as a result of (a) agronomic research findings that the soils in H-9 were mostly unsuitable for growing tobacco, and (b) MASL's strong displeasure at CTC's initial encouragement of tobacco

(minutes of MASL-CTC meeting, September 16, 1980) CTC largely abandoned tobacco cultivation and concentrated its resources on other crops.

Seventh, consistent with its long-term goal of making H-9 financially sustaining through agro-based processing, CTC encouraged soybean, vegetable and chillie production, while continuing to provide input supply, extension advice, credit and marketing for paddy cultivation during maha.

CTC gradually incorporated all the new settlers of H-9 under their management: from 290 farm families cultivating 725 acres in maha 1979-1980 to 2122 families growing crops on over 7,000 acres in 1982/83 maha (See Table I.).

CTC's efforts at diversification were frustrated by two consecutive years of water problems. The drought during 1982 which affected all of System H allowed only rainfed crops to be cultivated. The following year, poor water management necessitated halving the amount of acreage. A system called bethma whereby two families split one family's allotment was in effect and explains the low acreage under cultivation (See production statistics, Table III).

CTC's agricultural extension activities included organizing Young Farmer Clubs and assisting the government in its tree planting campaign. Over 10,000 tree seedlings, half of them coconut trees but also including mangoes, orange, lime, guava, jak, cashew, teak, and eucalyptus were distributed to farmers at a fraction of cost with instructions on care given by field officers. CTC held home garden competitions to encourage farmers to plant and care for their seedlings.

CTC never ceased exploring possible investment opportunities to offset its high management costs. CTC correspondence files provide interesting insights into the company's efforts at profit-making. The seed multiplication farm in area H-9-203 was the most successful income earner; papain extraction may now be the most lucrative.

To increase productivity, CTC initiated a tractor scheme where farmers could rent tractors for certain field operations, land preparation and harvesting. Realizing that tractors were not efficient on certain terrain, and for some farmers were simply too expensive, CTC started an animal traction (draft power) program.

C. Problems in Implementation The informal nature of CTC's early involvement in the development of H-9 and continuing fluidity of the arrangements created numerous problems for both CTC and MASL. Although repeated attempts were made to articulate the precise delineation of responsibilities for administering H-9, no signed contract or agreements were drawn up. The jurisdictional problem persisted throughout the CTC-MASL collaboration. Although

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CTC and MASL objectives may have been congruent, water management procedures and government subsidies in other areas of System H differed greatly from those in H-9. Eventually these two problems proved insurmountable and led to the end of CTC activity in H-9, except for its marketing operations.

1. Water management is one of the most highly-charged political issues in Sri Lanka today. (The other is land rights.) MASL controls the entire water distribution from the reservoir to the field channels. Seasonal schedules are drawn up by System headquarters based on projected water supply and farmer needs; farmers are usually notified at least one month ahead of the date of first water release and subsequent water schedules. Since the Systems practice central planning, variations in water requirements within blocks are not easily accommodated.

To accomplish the goal of diversification -- especially if the cropping pattern included export or highly perishable crops -- CTC insisted on an assured water supply at specific times and in the proper quantities. (Vegetables and chillies have very different water requirements from paddy). According to CTC, and corroborated by MASL officials, the Mahaweli Authority was unable to accommodate the different water requirements insisted upon by CTC.

Had MASL been efficient at providing water with regularity, CTC might have been able to adapt its vegetable-growing calendar accordingly. However, according to everyone interviewed, MASL was inefficient at water management and hence farmers increasingly turned to CTC for help. CTC field officers eventually took over turn-out groups, and the CTC project manager repeatedly intervened on behalf of the farmers.

Both sides attempted to resolve the water management issue. At one point (April 1982) CTC and MASL agreed and had even worked out the details to give CTC water management responsibility from the distribution channels and onward and for repairing the channels and bund roads. CTC hired irrigation engineers for this, but for reasons which are unclear and inconsistent in the correspondence, the plan fell through in August 1982.

From the CTC perspective: water management was crucial to the diversification effort; if MASL couldn't assure CTC farmers of the necessary water, then CTC was reluctantly willing to assume the responsibility. However, operation and maintenance costs of an irrigation system are very high (see MCS). This was especially true for H-9 where, according to MASL officials, (H-RPM); the land-leveling had been poorly done and hence the water flow in the first years was extremely inefficient. Hence, CTC insisted on reimbursement by MASL of O&M costs incurred.

From the MASL perspective, water management, i.e., local organization, is a political issue and responsibility for it belongs unquestionably with the government. In addition, construction and repair contracts are also political, and finally, since no other block enjoyed independent decision-making, why should CTC in H-9?

For all of the above reasons, CTC and MASL never achieved a compromise.

2. Subsidies. The second area of conflicting and irreconcilable procedures stemmed from a fundamental difference in development philosophy or ideology. CTC as a private company insisted on 100% cost recovery at a minimum and preferably a profit. Consistent with Sri Lankan government policy of subsidizing agricultural production and resettlement in general, MASL wished to provide agricultural services free of charge to farmers.

CTC tried several means of recouping costs. First, as stated earlier, they investigated the long-term potential of agro-processing. Short-term solutions included charging a handling fee as a percentage of total turnover. When that encouraged farmers to sell their produce to outside private traders, CTC for one season imposed a slightly higher rate of interest on bank loans. When that led to a decrease in borrowing, CTC then levied a handling fee on inputs to cover transport costs. For instance, a bag of fertilizer sold at MASL-managed block headquarters for Rs. 150/- a bag while CTC sold the same bag at Rs. 158/- delivered to the farmer's door.

Farmers whose neighbors in adjoining blocks were subsidized and who themselves had grown accustomed to hefty government resettlement subsidies (housing, education, land agricultural inputs) balked at the extra cost. The handling fee was the central issue contained in the 1982-83 petitions against CTC management.

IV. Project Costs

According to CTC project records, the H-9 experiment cost the company to run cash flow deficits of Rs. 33,000/- in 1981 and Rs. 34,000/- in 1982, despite financial assistance from MASL. The H-9 budget figures presented below are reconstructions of CTC balance sheets and CTC annual reports; this accounts for the inconsistency in categories of expenditures.

By far the most costly line item is staff salaries. The farmer discipline demanded by CTC required intensive staff-farmer interaction. This meant well-trained, well-paid staff and high transport costs to enable staff to visit farmers on a weekly basis.

The exact amount of MASL reimbursement of CTC costs seems to have been negotiated in a gentlemanly manner, that is, rather unscientifically. No one from either CTC or MASL could explain why the sum was Rs. 700,000/-, not more or less. However, CTC seemed to feel that it was adequate, though not entirely; MASL officials considered the figure too high and unjustifiable.

CTC's H-9 BUDGET, 1980-83

	<u>1981¹</u>	<u>1982²</u>	<u>1983³</u>
INCOME:			
Marketing of Crops	155,838	551,000	285,630.
Farm 203	81,550	18,000	13,958
	-----	-----	-----
Sub-Total	237,388	569,000	299,588
EXPENDITURE:			
Field Officers/Staff Salaries	519,000	935,875	374,266
Travel		227,850	49,610
Building Maintenance	91,625	57,900	29,610
Administration		57,250	21,946
Water Management ⁴	360,000		
Vehicle Fuel and Repair		25,000	36,191
Insurance			52,703
Miscellaneous ⁵			53,062
	-----	-----	-----
Sub-Total	970,625	1,303,875	617,388
Net Loss	-733,237	-734,875	-317,800
MANAGEMENT FEE, MASL	700,000	700,000	408,333
BALANCE AFTER FINANCING	-33,237	-34,875	90,533

1/ Includes maha 80/81 and yala 81

2/ Includes maha 81/82, yala 82 and maha 82/83

3/ Includes first 7 months of 1983

4/ The 1981 budget is not disaggregated.

5/ Includes depreciation, turnover tax.

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V. Economic Analysis

Since August 1983, the Mahaweli Authority of Sri Lanka, has incorporated H-9 into the 5-block area under the jurisdiction of the Galnewa Resident Project Manager. MASL now provides the same type of services to H-9 as did CTC during the 1979-83 period. Since the services provided are meant to be similar, the questions asked by the evaluation team were:

- were the costs of providing similar services similar?
- if the costs were similar, then did the quality differ?
- did the quality difference result in different agricultural impacts?

A. MASL vs. CTC costs. The most obvious way to determine whether MASL and CTC spent comparable sums to manage H-9 is to compare MASL H-9 budgets in 1983 and 1984. As a control, MASL expenditures on neighboring block H-7 are presented along with H-9.

The MASL budget is divided into operating (recurrent) and capital accounts. As can be seen in the table below, H-9 recurrent expenditures rose by 64% as did capital expenditure. In comparison, H-7 experienced a 44% increase in recurrent costs, while capital expenditures were 18% less than in 1983.

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MASL's BUDGETS

	1983		1984	
	H-7	H-9	H-7	H-9
<u>Recurrent Budget</u>				
Finance & Administration	2,831,000	2,478,000	2,706,000	2,339,000
Prod., Marketing and Credit	2,450,000	1,863,000	4,989,000	4,892,000
Community Services	70,000	66,000	-	-
Total	5,351,000	4,407,000	7,695,000	7,231,000
% Change			44%	64%
<u>Capital Budget</u>				
Finance & Administration	80,000	80,000	181,000	162,000
Buildings	914,000	93,000	358,000	1,465,000
Prod. Marketing and Credit	1,018,000	1,143,000	-	-
Community Services	175,000	260,000	72,000	56,000
Settler Services	1,058,000	1,191,000	-	-
Land Administration	25,000	25,000	-	-
Total	3,270,000	2,792,000	611,000	1,683,000
% Change			-18%	-40%

A closer examination of line items reveals that although H-9 1984 recurrent costs increased by Rs. 2,824,000/-, an amount more than twice CTC's total expenditure in the previous year, salary and other direct costs related to extension actually decreased. The line items which account for most of the increases are shown below. The most dramatic increases are due to maintenance and improvements in the irrigation system. MASL officials explain that earlier neglect of the bunds, roads and channels in earlier years necessitated major investments. One highly placed MASL official admitted that earlier civil works contracts had not been properly supervised and had been poorly executed. CTC officials agreed but pointed out that such capital costs lay outside their management mandate.

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MASL's EXPENDITURE in H-9, 1983 to 1984

	<u>1983</u>	<u>1984</u>	<u>Difference</u>
Maintenance of Irrigation System	507,000	770,000	263,000
Maintenance of Roads		240,000	240,000
Maintenance of Buildings	150,000	200,000	50,000
Fuel: Irrigation	75,000	148,000	73,000
Jeeps (fuel plus repair)	233,000	280,000	47,000
Improvements to Irrigation	748,000	1,967,000	1,219,000
Reforestation	47,000	455,000	408,000
	<u>1,760,000</u>	<u>4,060,000</u>	<u>2,300,000</u>

Since total operating costs for MASL and CTC are almost equal, the questions of quality of service and quantity of additional output achieved due to CTC involvement in H-9 need to be assessed.

B. Quality of Service.

1. Extension. There was unanimous agreement by farmers interviewed that CTC extension services were consistently outstanding. "They (the field officers) came every week. If we had a bug problem, they would be here the same day. MASL agents don't even know our house numbers," complained several farmers. Over half of the farmers interviewed have never been visited by MASL agents. The lack of contact between MASL agents and farmers is not surprising, given that MASL agents receive lower pay and are less experienced (though they are well trained) than their CTC counterparts. Most importantly, while CTC field officers were equipped with motorbikes, MASL agents have only bicycles to cover the rough terrain.

2. Inputs. CTC had delivered inputs to the farmer's door and had provided the farmer with consistently high quality seed. Farmers now have to purchase the inputs at the Block Manager's office, in some cases over one hour's drive away.

When reminded that the handling charge passed on to the farmer to recover transport costs had been a cause celebre and the main point of contention in the petitions to MASL, farmers shrugged and said, "Now we realize that it was worth it." Many farmers reported that MASL seeds are "unpure." "We buy a bag of MI₁ chillies -- the highest quality from MASL -- and we find that intermixed with the pure seed are inferior varieties, green chillies and sometimes not chillies at all. Yet we paid the highest price."

Many farmers pointed to the orchards and planned home gardens carefully planted around the compound as an example of CTC's follow-through on input delivery. "We paid for the trees but CTC delivered them to us and taught us where to plant and how to water!"

The credit system has not changed since the MASL takeover. However, there are two differences in the implementation of the system: whereas the CTC F.O. visited the farmer to help him complete the application form, farmers now must apply in person at the bank. And without CTC's close supervision, the credit recovery rate has slipped to under 60%. (See Table VI).

3. Water management. Although water management was never directly a CTC responsibility, the company nonetheless organized turnout meetings and intervened on the farmers' behalf to MASL authorities when water shortages occurred. Hence, almost every farmer interviewed believed that CTC in fact was responsible for water management. "During CTC days, we had no water problems," was a comment reiterated by almost all farmers. The farmers appear to feel that when CTC managed H-9, they (the farmers) had some leverage vis a vis MASL.

4. Marketing. CTC has continued its marketing operations in H-9. However, very strict quality controls on chillie purchases disqualify a number of farmers from selling their crop to CTC. The company marketed approximately 10% of the 1984 chillie production in H-9.

There has been a significant decrease in vegetable production in H-9 from over the past two years (see Table III). Farmers who have switched from vegetables to chillies told the evaluation team that although vegetables yield a higher profit than chillies. But without the assured market provided by CTC and without their own means of transport, their vegetables might rot before a private trader could buy them.

C Agricultural Impacts

An important objective in the CTC-MASL collaboration was increasing agricultural production and farm incomes through crop intensification and diversification. The degree to which this objective could be attained is a function of assured water, appropriate soils, assured inputs: credit, seeds, fertilizers, and information and assured markets.

In order to assess CTC's performance, in absolute terms over time and in comparison to other System H blocks, the evaluation team gathered qualitative information through interviews of a random sample of 25 farmers in different areas of H-9. Quantitative data showing cropping patterns and cultural practices for paddy yields were provided by MASL and by CTC's extensive project files. Although CTC's production data appear to be carefully collected and more accurate, MASL data were used when comparing the two blocks. The unit of comparison for H-9 was selected after extensive research. On the recommendation of MASL officials, we chose H-7 which borders H-9. Although H-7 is slightly larger (6,156 acres cultivated vs. 5,694 during 1983/84 maha) and was settled one year

earlier, soils in H-7 are very similar to those in H-9. Water availability is also similar, though H-7 is closer to the headworks and experiences fewer water shortages.

With the control group, H-7, sharing the first two of the four variables above, it is assumed that differences in paddy yields during maha and diversification during yala would be a function of assured inputs and markets.

Tables III (yala yields) and IV (paddy production) show that:

1. H-9 diversified its yala production from a 73%-27% paddy-nonpaddy cropping system in 1980 to an almost even mix the following year. In contrast, H-7 went from a highly diversified cropping pattern in 1980 (33% paddy) to almost total concentration on rice in 1983 and 1984.

Until 1983, CTC's agreement with MASL required it to purchase all production in H-9. In 1983, CTC withdrew from H-9 except for its marketing arrangement, concentrated primarily on chillies. This may account for the shift from a fairly diversified production system to a heavy concentration in chillies. CTC purchases chillies at prices 50% above official prices and usually 5-10 rupees above other private traders, except of course during the height of the harvest. However, it is now the responsibility of the individual farmer to find a buyer for his vegetables.

2. H-9 paddy yields during both maha and yala surpassed H-7 yields. Although initial high yields must be attributed in part to the greater soil fertility of virgin land, this advantage disappears by the third cropping season. Only during maha 82/83 were H-7 yields significantly higher than H-9. In 1983 yala, H-9 again took the lead.

According to farmers interviewed, the decision to grow non-paddy crops was based on (a) dependability of inputs, (b) confidence that CTC would provide assistance in case of emergencies (pest attacks, lack of water), (c) profitability, and (d) access to labor. It seemed from our discussions with farmers that most of them had access to soils (RBE) suitable for non-paddy cultivation. The two crucial factors, then, were labor availability and producer prices. Table V (costs of production) illustrates the relative profitability of H-9 crops under average yields and at 1980 prices. Consistent with what farmers told us, by far the most profitable crop was onions, especially big (Bombay) onions. However, as can be seen from annex A (detailed costs of production), onions are labor intensive, with labor accounting for over 50% of production costs. Although all farmers interviewed grow at least a few square meters of onions, the extent depends on the availability of family labor.

VI. Implications

A. Farmer response to incentives. CTC's success at diversification suggests that if farmers are provided with assured inputs, advice and marketing, they will experiment with nontraditional crops. The emphasis on chillie production at the expense of other food crops such as soybeans, vegetables and onions illustrates the importance of the availability of high quality seed and assured markets provided by CTC.

B. Private sector efficiency. MASL has increased its expenditures in H-9 in an amount roughly equal to earlier CTC (total) costs for providing agricultural services to the area. However, production data and interview reports show that CTC not only achieved the System H-wide goals of agricultural diversification and intensification, but that the quality and timeliness of services offered far surpassed MASL's present performance. The key to CTC's success was discipline; both field staff and farmers had to adhere to strict production schedules.

C. Water management. Control of water resources was the single most contentious issue of the CTC-MASL collaboration. Without strict water control, CTC was unable to follow the appropriate agronomic practices for crops other than paddy. For MASL, water management is synonymous with local organization and is a political issue that falls squarely and solely under the jurisdiction of the government. Given the fundamental differences in perspective, perhaps MASL and CTC embarked on a collision course where no mutually acceptable solution existed.

D. Lessons from the private sector. For any investment the private sector must recover its costs. Otherwise, it cannot justify continued losses on the company balance sheets. If the company expects that after a certain number of negative cash flow years the investment will yield substantial benefits, it may be willing to absorb the short-term costs.

However, lacking sure returns on investments, the private sector will be less willing to continue operating at a net loss regardless of the social value of the undertaking. Finally, the government cannot subsidize farmer services for certain and expect the private sector in other areas to recover its costs by passing them on to the farmer. The government must be consistent in its subsidization program or risk alienating the unsubsidized groups. In this private sector experiment, CTC was placed in the uncomfortable position of charging farmers for services rendered while farmers in adjoining blocks paid nothing for similar services.

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TABLE I

H-9

EXTENTS DEVELOPED AND FARMERS MANAGED BY CTC

YEAR	EXTENT (Acres)	# FARMERS	REMARKS
1979 yala	43	90	Pilot Project: Units 202, 204 only
79-80 maha	725	291	Pilot Project: Units 201, 202, 204
80 yala	3827	1150	Units 201-205
80-81 maha	6061	1906	-
81 yala	4590	1923	-
81-82 maha	6175	2002	-
82 yala	700	2098	No water, rainfed crops only
82-83 maha	7500	2122	-
83 yala	2063	2122	Management of H-9 handed over to MASL, August 1983

Source: CTC records

TABLE II

SETTLEMENT PATTERNS
NUMBER OF LOTS SETTLED

<u>YEAR</u>	<u>H-7</u>	<u>H-9</u>
January 1978	937	-
January 1979	1464	1568
January 1980	2349	1641
January 1981	2628	1964
January 1982	2639	1964
January 1983	comparable	2122 <u>1/</u>

Average family size for blocks H-1, 2, 7, 9 = 5 persons

Source: MASL Annual Report, January 1982

1/ CTC Statistics, August 1983

TABLE III
YALA CULTIVATION, H-7 and H-9, 1980-84

YEAR	CROP	ACREAGE		% OF TOTAL ACREAGE	
		H-7	H-9	H-7	H-9
1980	Paddy	410	2050	33.14	73.29
	Chillies	530	660	42.85	23.60
	Cowpea	181	22	14.63	.79
	Pulses	42	16	3.40	.57
	Onions	15	3	1.21	.11
	Vegetables	58	44	4.69	1.57
	Sub-Total	1,236	2,795	100	100
1981	Paddy	2063	2227	72.44	52.11
	Chillies	577	1625	20.26	38.02
	Cowpea	139	70	4.88	1.64
	Pulses	52	167	1.83	3.91
	Onions	17	28	.60	.66
	Vegetables	0	157	.00	3.67
	Sub-Total	2,848	4,274	100	100
1983	Paddy	1987	1726	90.07	65.88
	Chillies	51	697	2.31	26.60
	Cowpea	65	19	2.95	.73
	Pulses	102	90	4.62	3.44
	Onions	1	7	.05	.27
	Vegetables	0	81	.00	3.09
	Sub-Total	2,206	2,620	100	100
1984	Paddy	6227	3791	88.24	72.00
	Chillies	627	1399	8.88	26.58
	Cowpea	56	0	.79	.00
	Pulses	87	8	1.23	.13
	Onions	14	13	.20	.25
	Vegetables	25	48	.35	.91
	Groundnuts	21	8	.30	.14
Sub-Total	7,057	5,267	100	100	

TABLE IV
PADDY PRODUCTION

AVERAGE YIELDS/ACRE (In Bushels)

YEAR	H-7	H-9	H-Average
<u>maha</u> 79/80	76.4	115.3	87.7
<u>yala</u> 80	-	52.3	-
<u>maha</u> 80/81	85.4	106.0	93.3
<u>yala</u> 81	56.9	56.7	52.2
<u>maha</u> 81/82	63.6	105.6	71.7
<u>yala</u> 82	-	-	52.2
<u>maha</u> 82/83	118.9	110.1	104.2
<u>yala</u> 83	82.4	89.4	81.1

Source: MASL Annual Report, System H, 1984

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TABLE V
COSTS OF PRODUCTION
 SYSTEM H, 1981

<u>CROP</u>	<u>PROD. COSTS/ACRE</u>	<u>GROSS INCOME</u>	<u>NET INCOME</u>
Paddy	2,735	6,000 <u>1/</u>	3,265
Chillies	6,015	12,000 <u>2/</u>	5,985
Soybeans	2,495	5,280 <u>3/</u>	2,755
Red Onions	13,300	28,000 <u>4/</u>	14,700
Big Onions	6,200	28,000 <u>5/</u>	21,000
Vegetables	5,570	10,800 <u>6/</u>	4,730
Manioc	3,700	10,000 <u>7/</u>	6,300

Note: Net income assumes labor is family labor except for specific piece work paid by the farmer.

Source: CTC calculations, 1981 annual report.

- 1/ Yields: 100/bu/acre at Rs. 60/-
- 2/ " 1200 lb/acre at Rs. 10/-
- 3/ " 1800 lb/acre at Rs. 3/50
- 4/ " 80 Cwt per acre at Rs. 350/-
- 5/ " 80 Cwt/acre at Rs. 350/-
- 6/ 1/2 acre capsicum, 600 lbs @ Rs 1/25; Brinjals 1/2 acre, 7500 lbs @ Rs.-/40
- 7/ Yield: 10,000 kgs @ Re. 1/-.

TABLE VI

H-9

AGRICULTURAL CREDIT, BANK OF CEYLON TO H-9 (CTC)

YEAR	FARMERS AVAILING OF CREDIT/TOTAL FARMERS	AMOUNT GRANTED	RECOVERY	% RECOVERY H-9	% RECOVERY OTHER H AREAS
1979 yala	90/90	102,483	97,205	94	93.79
79-80 maha	291/291	500,613	472,122	94.3	88.28
80 yala	264/1180	349,642	333,137	95.2	84.73
80-81 maha	288/1906	594,379	542,932	91.3	78.55
1981 yala	801/4590	1,136,521	972,886	85.6	74.72
81-82 maha	643/6175	1,702,602	1,106,691	65	44.3
82 yala	-	-	NO CULTIVATION	-	-
82/83 maha	1099/7507	2,790,771	1,577,970	60	71.75

Source: CTC records

ANNEX B

Local Organizations and Community Development

The history of the Mahiyangana Colonization Scheme (MCS) and the Ceylon Tobacco Company's management of it provide a case study of the effectiveness of certain institutional mechanisms for implementing an integrated rural development project. The following discussion provides: (1) a brief history of settler selection and the settling-in period; (2) a description of CTC and settler-initiated institutions; and (3) conclusions concerning the viability and long-term impact of social institutions established by this large private corporation. The subsequent section compares CTC's Mahiyangana experience with its community development activities in the Mahaweli Authority's (MASL) H-9 area.

The Mahiyangana Colonization Scheme

Settler Selection

MCS is the only colonization scheme in Sri Lanka planned and implemented solely by a private company. From 1967 to 1969, laborers cleared jungle and leveled the land for cultivation. The eventual settlers were chosen from among the hired labor, though these people did not know they would become landed farmers until sometime after CTC began constructing houses. The workers came from many different home villages, with an estimated 50% from the Central Provinces, 10% from the southern parts of the island, and the remainder from the areas of Anuradhapura and Polonnaruwa. Because of the laborers' diverse backgrounds and CTC's goal of molding them into a community, settler selection was done carefully. The company screened prospective settlers on the basis of: (1) personal conduct; (2) family background; and (3) occupation or special skills. Thus, CTC endeavored to eliminate alcoholics, gamblers, and criminals, as well as people with poor work habits. Each potential settler's wife was interviewed to ascertain her willingness and ability to work and resettle. As a result of this purposive selection process, the 59 settler families included a carpenter, a blacksmith, a barber, a laundry man, a baker, an Aryurvedic (traditional) physician for first aid, two teachers, and two tailors. Others had gained experience working for CTC as tractor and water pump operators, and some had prior agricultural experience as laborers or working on their parents' lands. Though CTC intended to settle only landless people, some of the settlers did own land elsewhere. All the settlers were Sinhalese; the community included about 80% Buddhist and 20% Christian families. About 15% of the community could read Sinhalese and some had studied to the 10th grade (0 level); consequently, there were nine or ten settlers who were capable of assuming some management responsibilities in the school, library, and cooperative society.

The Settling-In Period

Contrary to experience in other settlement schemes¹, the early years of MCS were the easiest and most hopeful for the new settlers because of CTC's direct and complete management. Most families settled in 1969, at which time they were allotted one acre of highland and a tile roofed house constructed of brick and cement. Each house was equipped with piped water and electricity, both considered luxuries at that time. Designed by architects, the houses had one large room, a loft for sleeping, a kitchen, a shower stall and an indoor, flush toilet. This design was alien to the settlers' previous experience or expectations. Consequently, many people remodeled the inner space or used it in ways not intended by the architects. The most frequent changes included subdividing the big room into two or more small rooms and closing up the trellis work doors and verandas to keep out rain. Some people slept on the ground floor and stored paddy in their lofts; some used the shower stalls for storage and bathed outdoors. When the domestic water supply was withdrawn in 1975, many people built out-houses to replace the indoor toilets.

When the first settlers came, the houses, fields, and irrigation system were ready, but the opening of the dispensary, school, community center and cooperative store were still in the future. In order to prevent people from leaving the colony, the CTC staff endeavored to meet all the settlers' needs. Company vehicles transported settlers to Mahiyangana for shopping, consulting doctors, and, once a week, for films. Finding that the settlers spent all their money, CTC staff introduced savings accounts in 1969 and deducted money from salaries for deposit; this scheme does not seem to have lasted more than a year.

As a service to mothers laboring in the fields, the company provided day care facilities manned by wives of CTC staff, a U.S. Peace Corps volunteer, and two settlers -- a man and a woman, who had tenth grade educations. The day care center had toys and provided milk and cod liver oil to the children, who were all under five years of age. While their mothers were working, the children received a bath and the settler-volunteers washed their clothes. These day care arrangements ended within a year, when CTC handed over its school to the Department of Education. By that time about 52 families had settled. CTC had provided the building, furniture made in the colony, and some land for training the children in agricultural practices; after relinquishing control, the company had no further involvement in the operation of the school until 1980, when it allocated an acre of land for a new building.

About 1970, CTC opened a dispensary. The company built one cottage, costing Rs. 50,000/- and donated an initial stock of drugs and supplies for Rs. 10,000/-. A doctor visited the colony twice a week. Medical services, including an antimalaria campaign, were coordinated through the Superintendent of Health Services in Badulla. The Family Planning Association promulgated birth control

methods. After its initial inputs, CTC did not manage the dispensary, though throughout its management of the colony the Company continued to provide transportation for settlers to the Mahiyangana Hospital eight miles away, where there are a maternity ward and facilities for minor surgery.

CTC's Institutional Mechanisms for Community Development

The responsibility for community development and settlement fell to Nihal Perera, a young accountant who joined CTC in 1969 as an office manager at MCS and later became the Resident Project Manager. Mr. Perera's involvement in the colonization scheme, from 1969 to 1972, spans the period of CTC's most intensive efforts. Mr. Perera belonged to the Lions Club and was imbued with a volunteer spirit; he viewed as a challenge the transformation of jungle into productive farm land and the settling of landless laborers. In addition to his community development duties, Mr. Perera, as a manager, was charged with setting up the accounting system and organizing the CTC office at MCS.

Describing the effort to create a community out of settlers from diverse locales, N. Perera characterizes his roles as that of a guide and counselor rather than as a boss. Nevertheless, he emphasizes that as manager his first responsibility was to CTC. In discussions with Mr. Perera, it became clear that he regarded the Community Center and the Multi-Purpose Cooperative Society (MPCS) as the primary mechanisms for developing local leadership and engendering community spirit.

The Community Center was formed in the early days of MCS and housed a library of books and newspapers as well as indoor and outdoor games. The Center was the focus of New Year festivities and, one year, a competition for the New Year Princess. More regularly, the CTC manager invited settlers to meetings where experts spoke to them about such matters as family planning, the use of malaria tablets, boiling drinking water, subsidiary food crops, irrigation, banking, or any other topic of interest to the settlers. From N. Perera's perspective, the Community Center was a vital forum for a continual dialogue between the settlers and CTC staff. The manager encouraged settlers to speak and express their opinions; when a group task was being planned, settlers decided upon the division of duties and contributed food when needed. Though N. Perera intended to nurture initiative through participation in community activities, discussions with settlers suggests that all the organizational initiative originated from CTC staff. One man commented that the farmers worked all day until 5:30 P.M., bathed, and then bought provisions; they were not interested in trying to organize community affairs. After Nihal Perera's time, settlers did not maintain the community center; when MASL took over management in 1980, the building which had housed the Community Center was converted to quarters for MASL personnel.

The Navajeevana ("New Life") Multi-Purpose Cooperative Society (MPCS) was established about 1970. CTC provided a building and an area for grain storage; the Coop members borrowed an estimated Rs. 10,000/- from CTC to open the outlet and repaid the loan within five years. The key functions of the Coop were to provide credit to members through the People's Bank and to purchase paddy at a set price as an agent of the Paddy Marketing Board. In addition, the Coop store sold fertilizer, agro-chemicals, dry foodstuffs and textiles and housed a bakery and tea shop. In establishing a Coop, the objective was to provide settlers all they needed so they would not have to go outside the colony. In the early days, the Coop even sold furniture made by MCS carpenters.

The MPCS is an outlet of a national network; goods are purchased in Colombo and sent to base towns, in this case, Mahiyangana. Though membership was voluntary, all MCS residents joined the Coop. Members paid a one time fee of Rs. 75/- for basic privileges or Rs. 150/- if they wanted to be able to get credit. At the inception, farmers borrowed an average of Rs. 1,300/- for each of the two agricultural seasons; by 1975-76, the amount was about Rs. 2,750/-. Credit was given in kind as required: seed paddy, fertilizer, insecticides and weedicides. During sowing and harvests, farmers received cash for hiring labor. After the harvest, farmers sold their paddy to the Coop, receiving the cash value minus the loan and 4 1/2% interest. During the first five years of operation under CTC management, the Coop prospered and was acknowledged to be the best in Badulla District. Capital exceeded Rs. 100,000/- and the rate of loan repayment was high; applicants for loans were denied credit if they had outstanding debts.

For the first five years, the president, secretary and treasurer were CTC staff members; eight settlers chosen by a show of hands at the annual meeting of the general membership served on the Coop committee. The President was the CTC Resident Manager, who had attended a training course offered by the Cooperative Department concerning purchasing, reporting, and bookkeeping. The settler who became Coop manager in 1975 also attended this training course.

The general membership met once a year, but the Coop committee met with the CTC officers and the manager once a month to discuss loans, bank communications, farmers' needs, and purchasing. The main function of the settlers' committee was stocktaking. Ostensibly, the decision making process was consensual; a general discussion between officers and committee members preceded any decisions. Nevertheless, discussions with N. Perera and involved settlers make it clear that the committee acquiesced to the decisions of CTC officers, because the CTC staff had close rapport with the settlers, and the latter felt that CTC had their best interest at heart.

After N. Perera left MCS, the CTC Officer-in-Charge acted as ex-officio president of the Coop. From 1975, the management was

turned over entirely to the settlers. According to informants, the MPCS ran smoothly for about two years and then deteriorated due to corruption. The manager lent Coop money to people in order to obligate them to him. The committee was too weak and the officers too corrupt to stop the embezzlement. In 1979, the manager absconded with a truck and Rs. 15,000/-, leaving his son as manager of the Coop. It is symptomatic of the Coop's weakness that members tolerated the son for two years, though admittedly he was from "the same bunch of coconuts" as his father.

Under CTC's management, the Coop had been a model supplying all the settlers' needs and providing agricultural inputs on time. As the years went by, other shops grew up to compete with the Coop. When the Coop began losing money from corruption, it had to purchase goods weekly rather than monthly, and the quality of its merchandise declined. By 1982, it could no longer supply farmers with agricultural inputs and they no longer needed to rely upon one source. The Coop was declared bankrupt in 1983 and is now managed from Mahiyangana; though one of the MCS residents is the nominal president of the Coop, he has no actual responsibilities in its operation. Credit and inputs are now coordinated by MASL.

Organizational Initiatives by Settlers

Settlers' organizational initiatives have been sporadic and generally unsuccessful; they include (1) mutual benefit societies; (2) a temple society; and (3) attempts to negotiate with CTC. Several times, settlers have formed death societies (Maranadara Samithya) to provide aid to families at the time of a funeral; all these have failed because members did not pay their dues. Recently, the current president of the Coop has founded an Anyonyadara Samithya, i.e., a mutual aid society, whose purpose is to aid members' families, not only upon the occasion of a death but in times of any genuine need, whether illness or the need to purchase fertilizer. According to plan, members are expected to contribute Rs. 100/- every six months after harvests; applicants for aid will receive cash grants and have to pay ten percent annual interest on the loans. This society has existed for only six months; so far, thirteen members have accumulated Rs. 3,000/- and have chosen officers, but nobody has yet applied for grants. The association is too new to predict whether it will succeed where more narrowly focussed groups have failed.

In 1976, MCS residents organized to start a Buddhist temple and chose a priest. With the consent of CTC's Leaf Director in Kandy, an old generator room was allocated for the temple as well as two acres of irrigated land and four acres of highland. The colonists constructed an Audience Hall for which the company donated sixteen benches and a table; the structure was dedicated by the Leaf Director in May, 1976, at which time he promised Rs. 10,000/- for the construction of a shrine room. Thereafter, the colonists showed little interest in the project, and the priest complained to CTC staff that they did not give alms to support the temple. CTC

staff met with colonists to stress their responsibility to care for the temple and the priest. MCS residents chose another priest to replace the first and with his help completed the temple in March, 1978. The Leaf Director officiated at its opening and personally donated a brass lamp; though the Leaf Director laid the foundation stone for the shrine room, CTC never gave the money for its construction. Nine months later, the second priest departed suddenly, leaving the keys to the temple and the brass lamp in the care of a head priest in a Mahiyangana temple. CTC staff retrieved the keys and lamp, and then sealed the temple until its management could be handed over to an established Buddhist organization.

The inability of MCS residents to sustain organizational initiatives is again reflected in their handling of conflicts, an examination of which also provides clues for an explanation of the leadership void. During the time of CTC's management, settlers went directly to the operations managers or their underlings to resolve disputes among colonists. MCS residents accepted the managers' decisions and clearly respected the discipline maintained in the colony. Settlers felt that a relationship of mutual respect existed between themselves and the CTC staff. Direct intervention by CTC employees resulted in a low level of conflict; but it also undermined the emergence of local leadership and contributed to the consequent inability of settlers to deal collectively with CTC when their interests diverged or to solve their own problems.

The first confrontation between CTC and the settlers seems to have occurred in 1970 after the SLFP government came to power. During the election campaign, the local SLFP candidate for parliament had raised expectations that, if elected, he would take land from the companies holding special leases and distribute it to the people working the land; he had advocated unionizing. In the CTC colony, a tractor operator instigated settlers to unionize; these settlers pressed CTC to provide them free tractors, allowances and more services. By this time, CTC had already allocated individual two acre plots of paddy land to all MCS settlers and was the only company not forced to abandon its special lease project. Feeling that CTC was in a strong bargaining position the Resident Manager persuaded the SLFP member of parliament to speak to the settlers; in his speech, the MP apparently distinguished CTC from the other companies, which had commercially exploited their leased lands, stressing that CTC was performing a service and did not owe the settlers anything. The result was the discrediting of the local union leader, his departure, and the termination of the movement.

In 1975, the company decided to cut off electricity because of the rising cost of diesel fuel that powered the five generators. In the same year, CTC terminated the domestic water supply, because settlers were using tap water to irrigate highland crops and thus emptying the water tank rapidly. One informant recalls the settlers approached the MP to intervene, but he was unsympathetic. Others relate that small delegations of settlers approached CTC

officials locally or in Kandy. Though informants differ on the details of the incident, they all felt that negotiations were useless. The company determined its policy, and the settlers were neither consulted nor could they bring any pressure to bear to alter the outcome. Some informants allege the company provided favors to the most vociferous settlers to end the agitation. Whether or not the accusations are true, MCS residents clearly felt powerless in their dealings with CTC.

CTC files reveal that by late 1978, several MCS residents had formed the Kotaliya Navajeevana Rural Development Society to negotiate with the company. It is noteworthy that colonists interviewed seemed unaware of its existence, and internal company memos assume the society did not have broad support among colonists. Even though CTC had drastically reduced its staff and direct involvement in the settlement by the end of 1972, minutes of a meeting held on December 1, 1978 indicates that colonists still looked to CTC officials to solve problems. At this meeting, five representatives from among the colonists raised several issues including the promised donation of Rs. 10,000/- for the MCS temple, malfunctioning pumps, damage to irrigation channels, the development of the remaining acreage under lease to CTC, use of irrigation water on the experimental farm, housing the school staff, provision of tractors, the management of the Coop, indebtedness among farmers, transportation for medical emergencies, and the necessity of regular meetings between colonists and CTC officials. Though the company agreed to regular semi-annual meetings, the minutes indicate the colonists gained little from this first one. Company responses to the issues ranged from a declaration of no intention to develop the land further to promises to consider further the donation to the temple and housing for school staff. While assuming complete responsibility for the lift irrigation pumps, in other matters CTC stressed the colonists' responsibility for their own affairs, specifically for channel maintenance, using the Coop to arrange tractors, paying debts, and riding the bus to consult doctors. The company's responses reveal their desire to wean colonists from their dependent relationship as well as a clear message not to take their grievances to government officials or to the Managing Director of CTC.

The Rural Development Society does not seem to have improved MCS settlers' bargaining strength. The same pattern of ineffectual, one-sided negotiations characterized colonists' final confrontation with CTC over the company's decision to relinquish responsibility for the lift irrigation system to MASL in July, 1980. MCS residents signed a petition agreeing to a higher water tax and sent delegations to the CTC office in Kandy as well as to their MP. As in previous cases, the settlers were powerless to change CTC's policy, and the MP did not intervene to reverse the decision. Originally, settlers had paid Rs. 175/- per season per allotment for irrigation; in maha, 1979/80, the price increased to Rs. 350/-, according to CTC files. Due to increases in fuel prices, MASL would not operate the irrigation pumps for less than

Rs. 500/- per season and also wanted colonists to pay for maintenance and repair, which they could not afford. Consequently, the 44 allotments receiving lift irrigation were without water until 1984, when the Mahaweli Authority provided gravity-fed irrigation. In the interim, people who had earned their income entirely from agriculture and had achieved yields well above the national average sought other sources of income and received World Food rations and other aid which MASL provided to all System C settlers. The point is that in the case of lift irrigation, CTC had made the settlers totally dependent upon the company's continuing expenditure to maintain the system; even the existence of effective settler organizations would not have altered the outcome, because the colonists lacked the resources to maintain the pumps and had no leverage on CTC.

Conclusions: Impact and Lessons Learned

In retrospect all colonists interviewed agree that the lasting impacts of CTC's project for them have been their receiving a house, land, and agricultural knowledge from CTC's intensive and excellent agricultural extension services. However, though CTC's stated objective was to create a self-sufficient community, the foregoing discussion has described the failure of CTC-initiated institutions as well as settler-founded institutions to produce self-sustaining settler organizations or leaders. When asked about leadership, settlers comment that they are neither united nor disunited; everyone at MCS attends each others' weddings and funerals but otherwise minds his own business. Some commented they all have the same things or are not from the same home villages and therefore do not accept anyone's leadership. Since CTC's withdrawal, even shramadana-s, "gifts of labor" to accomplish an agreed-upon task, have ceased.

Today, people recall the days of CTC management with fondness, cherishing memories of prosperity, discipline and self-respect. Colonists liken the company to their parents, with the house and land being dowries their real parents could not provide. The MCS settlers did not want CTC to leave, and most were under the impression that CTC's management would continue for at least twenty-five years.

From CTC's perspective, the colonization scheme succeeded in settling landless people, producing high agricultural yields, and in generating favorable publicity.

Viewing MCS as an integrated rural development project rather than as a public relations investment, several factors emerge to explain the high degree of dependency and lack of leadership among settlers and to suggest ways in which CTC's approach might have been modified.

First, the planning was done entirely by CTC without any attempt to involve the settlers. The future colonists were paid

laborers who initially did not know they would be beneficiaries or participants. Even after the chosen settlers received their houses and highland allotments, CTC, for tax purposes, continued at first to pay them as employees working communal paddy lands (in 1970, each household received individual two acre plots of irrigated land). Except for membership in the Coop and later water and electricity payments, settlers did not invest their money, time, labor, or ingenuity in the project. CTC's intensive, high quality extension services transformed laborers into good farmers who were technically qualified to carry on after CTC's withdrawal. The company assumed that providing settlers with agricultural expertise necessary for their livelihood as well as physical and social infrastructure would result in a self-sustaining community. What was lacking altogether was involvement of colonists in problem-solving efforts from the early stages of the project. Given the nature of the MCS project, i.e., carving a settlement out of a jungle, CTC's management and inputs were required from the beginning; nevertheless, the company could have reduced the danger of settler dependence by earlier settler selection, requiring some commitment of their resources, and actively involving them in identifying and solving on-site problems from as early as the clearing stage of the operations. Such an approach might have facilitated identification of leaders and functioned to establish some basis for community cohesion.

Second, in the absence of an initially participatory approach to planning and implementation, CTC's leadership skills and authority functioned as a surrogate for any local social cohesion and served to undermine local initiative as well as any natural processes of group formation. This undermining occurred for two reasons: one was that regardless of the efficacy of settler organizations, CTC's resources were essential to maintain the lift irrigation system; in this respect settlers' dependency increased as fuel prices rose.

The other reason involves the divergent interests of the Company and the settlers. The project was highly successful in those areas where settlers' and CTC's interests were congruent, namely technology transfer and agricultural production. In those areas where their interests diverged, CTC's responses to local initiative in effect robbed people of confidence that collective action could solve their problems. To be more specific, the settlers' interests lay in extracting the maximum benefits from their wealthy patron. CTC's objective at the policy level was to generate favorable publicity by sponsoring a model colonization scheme whose success was measured in terms of crop yields and settlers' incomes. It is not necessary to cast doubt on their good will or sincerity to appreciate that CTC's field staff obviously depended for their careers with the company upon the highest returns at the least cost. They felt directly responsible for agricultural production. Consequently, extension activities had high priority, and the local management intervened directly whenever interpersonal conflicts threatened to disrupt the colony.

While the Resident Manager felt he was nurturing leadership through the Community Center and the Coop, the role of local staff in conflict resolution is likely to have retarded the emergence of influential settlers. Furthermore, whenever settlers organized to negotiate with CTC over benefits, the company was free to bestow or withhold benefits according to its own interests because ultimately the settlers were dependent on the company and had no power over it. Settlers' inability to negotiate with CTC was alone sufficient to undermine confidence in the efficacy of collective action. Further, one other factor is suggestive. In their cross-cultural study, Esman and Uphoff found that local groups seldom enter into sharp confrontations with officials or local elites unless they share some basis for trust and cohesiveness²; in the case of MCS organizations, CTC itself was both the basis for solidarity as well as the opponent. Whereas Esman and Uphoff found that crises often help to consolidate local organizations³, for MCS settlers, each confrontation with CTC provided one more proof of their impotence.

A third reason for the leadership void is that the Company's conscious efforts to develop leadership through the Community Center and the Coop were undermined by their top-down approach to the problem. Clearly, the Community Center did not respond to any felt need of the settlers. Though the educational meetings were probably useful to colonists, they regarded the Center primarily as a recreational facility. While colonists were willing to reap the benefits of the Center as long as activities were initiated by CTC, in the end, they were not willing to shoulder the costs in time, effort, or money required to maintain it.

Within MCS, the Coop was the only broadly participatory organization through which leadership might have emerged. Under CTC management, the MPCS was characterized by several of the elements which Esman and Uphoff have found to be associated with successful, self-sustaining local organizations, including the following: (1) fulfillment of settlers' high priority needs; (2) a small base level organization linked to a national cooperative network; (3) member participation in decision making; and (4) membership accountability to the extent that debtors could not receive further credit⁴. Nevertheless, the Coop failed within a few years of CTC's withdrawal for several reasons related to CTC's top-down management. Though decision making occurred after discussions among the executive officers and committee members selected by the settlers, it appears that CTC officers steered the process toward the outcomes they desired. Though CTC's and settlers' interests were congruent in this case, the end result of CTC's management of the Coop was that settlers did not receive adequate experience in planning, decision-making, or resource management. The committee's main responsibility was stocktaking, and its membership changed annually. Consequently, when management was taken over by the colonists, bearing office in the Coop seems to have been viewed as an avenue to control and tap the resources which CTC had managed. The ensuing corruption and failure might

have been averted if more members had received Cooperative Department training in management skills and had gained more practical experience in running the Coop under CTC's watchful eye. Instead, only one colonist, the manager, received formal training, and only he remained involved in the operations of the MPCS from year to year. Under the settlers' management, the coop was unwilling or unable to impose sanctions on the corrupt manager and other dishonest officers, a situation which led to loss of confidence in the Coop and its bankruptcy.

The fourth and final factor in explaining the absence of viable settler organizations or leaders in MCS is CTC's rapid withdrawal. By 1973, CTC staff had been reduced to three people who spent about seventy-five percent of their time working on the newly acquired experimental farm. In studies of the settlement process cross-culturally as well as in Sri Lanka, Scudder has identified four chronological stages, each having distinct characteristics and problems. The second or "transition" stage, when settlers arrive, rarely lasts less than five years; this stage is characterized by risk avoidance in agricultural strategies and low productivity, with settlers aiming only to meet their families' needs for food⁵. Because of CTC's direct management of the colony and intensive extension efforts, the company considerably reduced the risks for settlers and succeeded in achieving high agricultural yields. Nevertheless, because of the short time span between arrival of the settlers' families and CTC's retrenchment in 1973, it is doubtful that the colony had indeed reached the third stage of the settlement process, "economic and social development," in which settler organizations become effective mechanisms for community integration, economic development, and political action⁶. CTC's total withdrawal in 1980, the stoppage of irrigation water to forty-four plots, and the closing down of the experimental farm along with its opportunities for wage labor produced an unprecedented crisis for the MCS residents. Even if from the inception CTC had employed optimum techniques for nurturing settler organizations and leadership, it is reasonable to hypothesize that the company's involvement was too short-lived to have produced a well organized and smoothly running community out of settlers from such diverse backgrounds and places.

In the end, CTC failed to transmit the one skill in which a private, profit-oriented organization is strongest: management techniques. In its goal of producing a model colonization scheme, CTC managed the settlement process and the colonists efficiently and intensively, but in so doing deprived the settlers of the opportunity to acquire the skills needed to organize themselves for collective action in CTC's absence. To their credit, CTC officers involved in MCS and in more recent social service projects have derived useful insights from their MCS experience. Specifically, they realize CTC spent too much on ancillary services such as electricity and domestic water and that lift irrigation was inappropriate for a settlement scheme because of settlers' inability to maintain it

themselves. CTC is now cognizant of the dependency created by paternalism and seeks active involvement of villagers in its ongoing projects. Finally, the company is concerned to restrict operations to areas of its greatest expertise and to transmit know-how rather than largess. With these lessons in mind, CTC withdrew from the Mahiyangana scheme in 1980 shortly after embarking upon a new project in the Mahaweli Authority's H-9 area.

CTC and MASL's H-9

Background

Whereas in Mahiyangana CTC was the sole planner and implementor of a truly integrated rural development project, the company's role in H-9 was far more circumscribed.

There, community development was not considered to be CTC's responsibility either by MASL or CTC. CTC was to handle agriculture, not including water management. But it soon became clear that the initial management understanding was unworkable, creating divided loyalties for colonists and jealousy among the field staff of the two independent organizations. Furthermore, CTC field staff found it difficult to coordinate their cultivation patterns with water allocations planned from Colombo by MASL and not known far in advance of the season. In addition, both parties agreed that community development in H-9 was lagging behind other H blocks. These difficulties resulted in a series of discussions and negotiations between MASL and CTC. By November 1981, CTC expressed willingness to assume responsibility for community services, water management from the distribution channels downward and maintenance of the irrigation system and roads. Minutes of a meeting held in October 1981 note that CTC's community services would include the following: (1) identifying places for the construction of wells and the groups of farmers who would use them; (2) supervising construction of wells and latrines with materials supplied by MASL; (3) "association" with the selection of volunteer health workers and implementation of the health program; (4) maintaining roads with costs reimbursed by MASL; and (5) training farmers through a program organized by CTC. (CTC planned to recruit its own staff to replace MASL field staff in water management and community development.) Though in fact CTC never assumed formal responsibilities for community development or water management, MASL instituted payment of a management fee to CTC of Rs. 700,000/- annually, commencing April 1, 1980/81 (?) to cover salaries of staff and travel expenses connected with water management and community by development.

CTC's Resident Project Manager from 1980 to 1983, Norbert Wijewarnasuriya, felt strongly that CTC should become involved in water management and community development in order to increase the effectiveness of CTC's main functions in H-9. In an April 1982 memo, he is still urging the CTC staff replace MASL people in field level water management, feeling that CTC's proper role was to assist MASL at the field level. He stressed the need for CTC to

bear the cost of transporting health personnel, as well as materials for wells and latrines, for women's training programs, shramadana-s (group labor for a specified task), and major Buddhist festivals.

By January 1981, CTC had hired a Community Development Officer for H-9 and the Corporate Plan including the 1982 budget lists water management, infrastructure, maintenance and community development as key areas along with production, extension and marketing. According to this plan, community development activities would revolve around two key areas: homestead development and community services, such as the provision of wells, latrines, roads and public transport. To improve farmers' incomes, the plan called for introduction of beekeeping, poultry and livestock on the homestead. To implement community services, the plan suggested CTC liaise with MASL, UNICEF and other donors to implement their programs. CTC's contribution would include organizing Young Farmers' Clubs and a home garden competition as well as festivities on two major Buddhist holidays.

CTC's Community Development Activities

CTC's community development activities were natural outgrowths of its extension activities which occurred through regular visits to farmers by the nine field officers, informal discussions in turnout groups of 10-15 farmers, cottage visits, and preseasonal meetings. Cottage visits were made to farmers whose production was poor; during these visits, the field officer or community development officer would try to identify the problem and suggests ways to overcome it, whether the solution was of a technical or a social nature. In addition to the turnout groups, the preseasonal meetings were the most important forum for teaching cultivation techniques. Held twice a year about two months before the maha and yala seasons for 50-75 farmers at a time, the preseason meetings organized by CTC attracted whole families, including women who took an active interest in learning agricultural techniques. The Resident Project Manager spent about an hour and a half giving technical advice; bank officials attended to answer questions about credit. For example, the meeting prior to yala 1983 covered the following topics: (1) experiences of yala 1982 and maha 1982/83; (2) discussion of the program for yala 1983; (3) improvement and maintenance of home gardens; (4) getting the maximum yields in yala; (5) how to overcome waterlogging of highland during maha rains; (6) supply of seeds; and (7) credit. Farmers regarded these meetings as very informative.

The Home Garden Competition, organized in 1982/83, is a direct outgrowth of CTC's interests in crop diversification. CTC sold seeds and seedlings to the over 600 competitors and instructed them in the cultivation of a variety of crops including coconut, mango, papaya, lime, orange, coffee, tumeric, chillies, onions, pulses, soybeans and vegetables. The first prize winner also practiced

beekeeping. CTC offered prizes as incentives. Project-wide prizes included a first prize of two Sahiwal cattle worth Rs. 3,000/-; second and third prizes of sprayer tanks worth Rs. 2,000/- each; and seven consolation prizes, each an agricultural kit worth Rs. 450/-; in addition, first, second, and third prizes were offered within each of the five irrigation blocks of H-9. The competition was a tremendous success in terms of the improvements in home gardens and in the enthusiasm it generated. The prize distribution in May 1983 was attended by two local members of parliament as well as CTC's Finance Director and attracted 3,000 spectators. The Young Farmers' Clubs organized entertainment, and the event resulted in three radio broadcasts, including interviews with farmers.

The Young Farmers' Clubs (YFC), inspired by the 4-H model, were begun as a means to teach agricultural techniques to future farmers and instruct them in the use and preservation of their produce. The functions of the groups went beyond agricultural extension, however, and provided an instructive example of how successful and dynamic local organizations can develop. CTC organized the YFC beginning in 1981-1982 for young people aged fourteen to twenty-five; membership was voluntary and those who attended contributed Re. 1/- at each meeting. The clubs were organized by CTC's community development officer through the nine field officers. In addition, there were four or five adult volunteers from each local community to help in organizing the youth. Notably, about half the clubs' membership was female.

Meetings occurred once a month in a school, home, or public building. A typical meeting began with a Buddhist prayer, followed by the secretary's report on the previous meeting, motions and suggestions, and the collection of dues. Thereafter, members discussed plans for the month's activities and set a day for their shramadana, the "gift of labor" to accomplish some agreed-upon task. The adult volunteers and then the field officer gave talks. Finally members presented some entertainment and planned their next meeting. CTC's Resident Project Manager, Mr. N. Wijewarnasuriya, who had visited the U. S. 4-H Headquarters in Chevy Chase, Maryland, attended as many of these monthly meetings as possible in order to generate enthusiasm and build unity among the members. Typically, the meetings lasted between one and two hours and, because of the entertainment and topics of general interest, would attract up to 150 spectators of which only 40-50 were actual members.

Former YFC members credit the clubs with imparting valuable agricultural knowledge to them. Members cultivated demonstration plots and received instruction on cultivation from the field officers. The club required members to keep accurate records of what they grew in their home gardens. Young people particularly remembered lessons in home gardening, beekeeping, and the use of fertilizer, weedicides, and pesticides.

Shramadana-s were the most popular of the clubs' activities, and involved young men and women working together. The chosen task usually lasted about five hours and included a snack contributed by participants. Through the shramadana-s members became involved in a variety of community activities, including the following: cleaning field channels; maintaining roads; transplanting, harvesting and weeding on members' land; cleaning temple compounds; and building bus stops. One informant recalled that for funerals, CTC officers would organize the YFC to collect money for poor families; to construct the customary pandol, a decorative display; and to decorate the road for the funeral procession.

Through the YFC, in 1983, the community development officer and field officers conducted cooking classes for women. The purpose was to teach women a variety of soybean preparations in order to encourage growing soybeans and to instruct them in making jams to preserve crops such as papaya and tomatoes. Each field officer conducted one class a month in his area; a total of forty-five to sixty women participated.

The clubs engaged in a variety of activities. Two clubs opened libraries from which members could borrow one book or magazine weekly; the collections included both educational and recreational reading. One club sponsored a first aid course. Other activities included a New Year sports meet; film and slide shows for members and non-members from which Rs. 2,500/- was raised to improve existing libraries and establish new ones; a foundation stone laying at a temple; observance on the occasion of Buddhist religious holidays; dramas and variety shows, including one for the prize distribution of the home gardening competition; and a program of farmer interviews which was broadcast on the radio. The YFC's participation in a religious procession on Poson, a Buddhist festival, was so successful that it was planned to be an annual event. An exchange program permitted YFC members to go to other districts to learn about different crops and techniques. In 1983, seven YFC families hosted delegates on exchange from six different districts. In addition, some members participated in educational tours with their parents to places such as the Victoria dam and Polgolla Diversion project.

The YFC were active for about two years, in which time twelve clubs were formed, of which ten were considered quite active.

With the evident success of the YFC and its enthusiastic membership, CTC's RPM, Mr. Wijewarnasuriya, developed a plan to form adult groups to strengthen farmer organization at the hamlet and turnout level and to implement community development programs. The overall objective of these Farmer Development Societies was fourfold: (1) to generate unity among farmers; (2) to identify farmers' problems; (3) to initiate self-help programs for solving problems; and (4) to act as a channel through which farmers could deal with authorities to solve their problems.

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Four pilot groups had been organized in four villages by the first quarter of 1983, each including subcommittees for agriculture, health, and culture. According to the plan, the officers of the FDS groups would come from "turnout helpers." These men were to have been full-time farmers who were influential in their communities and accepted the field officer as a friend and guide. To be effective leaders, they were expected to have the cooperation of their families and to sacrifice some time and expense for hospitality.

The planned scope of FDS activities was truly ambitious, but unfortunately so little time elapsed between their establishment and the end of CTC's management functions in August 1983 that they never really got off the ground. The progress report for June 1983 notes the activities of the pilot organizations. One cultural subcommittee had organized religious activities for Buddhist holidays. Two health subcommittees had carried out health surveys to find out which families were not using latrines, to select groups for well construction, and to popularize boiling of drinking water. Members of the agricultural subcommittee in Dambawatana settlement had established two private seed farms for the production of seeds from paddy, chillies, black gram, cowpeas and soybeans. Through the FDS, farmers learned the proper procedures; according to one field officer, 150 farmers are registered to supply seed paddy and still continue to do so.

Conclusions: Impact and Lessons Learned

MASL and CTC were never able to reach a mutually agreeable delineation of functions and authority in H-9. After four years, CTC handed its functions in H-9 over to MASL and remained in the area to offer only marketing services while exploring investment opportunities. When CTC relinquished responsibility for credit, extension and its community development activities on August 15, 1983, the local organizations it had founded ceased to function.

Former members of YFCs expressed their distinct regret at the clubs' passing. Young men felt they had learned a great deal about agriculture as a result of their membership. Everyone including members' parents expressed enthusiasm for the clubs' shramadana activities and felt that the collective action as well as the interest shown by CTC field officers had generated unprecedented feelings of village unity. Two young women, one of whom had been president of a local YFC, recalled that initially girls' parents had opposed their membership but relented when they met the field officers. For the girls, it was an opportunity to get out of the house and "to come forward in society"; one commented that prior to this club she had not even been allowed to meet strangers on the veranda of her home. According to field officers, women had also shown interest in the FDS meetings.

Both the YFC and the FDS as planned differed from previous and subsequent local organizations in the scope of their functions. YFC differed from the earlier Village Development Societies, organized by government Rural Development Officers, in that the latter were not coed and did not integrate social and cultural functions; consequently, members had found the organization to be less interesting. In Dumbawatana, when the YFC ended, all its members joined the local Buddhist society which is concerned with funerals and religious matters. Though YFC members urged the priest to organize a society like YFC, he has not responded.

In spite of the evident interest of former YFC members, none has taken the initiative to try to keep the clubs going or to organize shramadana-s without CTC's help. In response to questioning, all replied that they needed CTC's leadership. Several factors emerge to explain this. First, it appears that the field officers shouldered much of the initiative in organizing activities and, in addition, were the repositories of the technical expertise which was the *raison d'etre* of the clubs. The withdrawal of their services left a leadership void which members might have filled, but they could not supply the agricultural know-how. Second, CTC directly financed the more expensive activities such as educational tours and films. Though CTC's leadership roles, its knowledge and its funding of local activities might eventually have retarded local self-help initiative as in Mahiyangana, time was the crucial factor in the cases of YFC and FDS. Neither of these organizations endured long enough to allow meaningful assessment of their potential for long-term viability. Though both organizations collapsed with CTC's withdrawal and have not been stimulated or encouraged by MASL, YFC and FDS represent marked departures from CTC's earlier approach to integrated rural development.

In Mahiyangana, CTC officials consciously nurtured leadership through two organizations, a cooperative and a community center, which correspond to two types of local organizations in Esman and Uphoff's threefold typology, namely cooperatives and a form of interest association⁷. Both organizations failed to produce leaders or become self sustaining because of CTC's top-down approach and settlers' real dependence on the company to maintain the lift irrigation system. In contrast, the YFC and FDS in H-9 correspond closely to what Esman and Uphoff have called "local development association," which are characterized by performing multiple development functions on an area basis and have membership based on residence⁸. Furthermore, in conception and implementation, CTC's activities to establish these groups conform more closely to Esman and Uphoff's recommendations on how "catalysts" can assist in the formation of effective local organizations. An effective catalyst usually comes from outside the community, has more education than local people and therefore is less vulnerable to attacks on his reputation; in both CTC projects, their personnel met these criteria. Ideally, a catalyst establishes rapport with local people, then initiates discussions to identify local problems

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and solutions within local means to accomplish. The next step is to demonstrate local capabilities and motivate members to become and remain involved. Outside efforts should supplement ongoing local initiatives rather than substitute for them. Successful local organizations are usually small groups with informal procedures, linked horizontally and vertically into wider networks; they frequently begin with a single valued function. Membership involves people in a learning process, and effective action stimulates the group to assume wider responsibilities⁹.

In H-9, CTC gained considerable respect among farmers for its extension services prior to its attempts to organize people. Having established rapport with farmers, the field officers began organizing YFCs whose main function was the teaching of agricultural techniques to further crop diversification. The shramadanas functioned to solve locally identified problems and thereby demonstrate the effectiveness of collective action as well as to generate enthusiasm and commitment among members. Contrary to the generalization that beginning with a single valued function is the most frequent means of founding a successful, multifunctional development society, discussions with former YFC members make it clear that the social and cultural functions of the clubs from the inception distinguished them from other local organizations and were a significant ingredient in fostering the unity and interest commented upon by several informants.

From the levels and breadth of activities, the interest they generated, and the agricultural training they imparted, it is reasonable to conclude that both YFC and FDS held great potential for becoming effective local development organizations and might have if CTC had found ways to turn over initiative to members and had not had to withdraw its support so soon.

Esman and Uphoff have also suggested that nurturing local organizations requires development agents to have some incentive for working through them¹⁰. In this respect, CTC's role can be distinguished from that of government employees. Field officers were responsible for crop diversification and production; as employees of a profit oriented company, their careers depended more upon tangible results than that of a government servant. Consequently, the field officers' interest in local organizations was directly linked to promoting their company's interests. In H-9, CTC deserves recognition for approaching agricultural and community development in such an innovative way. In contrast to the Mahiyangana experience, the company's circumscribed role in the H-9 area was more conducive to the operation of successful development societies. Compared to MCS, H-9 residents were far less dependent on CTC, and consequently the local organizations would never have been put in the position of trying to negotiate with an omnipotent opponent which was also its benefactor. In Mahiyangana, CTC's real power over the settlers stifled local initiative to an extent that would not have been possible in H-9. In H-9, the local organizations formed by CTC were working for the interests of CTC as well as for the interests of their membership.

Footnotes

1/ Thayer Scudder, "The Accelerated Mahaweli Programme (AMP) and Dry Zone Development: Some Aspects of Settlement," Report Number 3 (1981), p. 5.

2/ Milton J. Esman and Norman T. Uphoff, Local Organizations: Intermediaries in Rural Development (Ithaca: Cornell University Press, 1984), p. 207.

3/ Ibid., p. 262.

4/ Ibid., pp. 145-147, 158, 223, 237.

5/ Scudder, op. cit., pp. 4-5

6/ Ibid., p. 6.

7/ Esman and Uphoff, op. cit., p. 67

8/ Ibid., pp. 61-62, 67.

9/ Ibid., pp. 255-262.

10/ Ibid., pp. 274, 277, 280.

Table _____

CHANGES IN EXTENT MANAGED BY CTC IN H-9, 1979-1983 1/

Season	Extent Managed (Acres)	Number of Farmer Families	Remarks
<u>Yala</u> '79	42.5	90	Pilot Project, irrigation blocks 202, 204
<u>Maha</u> 79/80	725.5	291	Pilot Project in 201, 202, 204
<u>Yala</u> '80	3,827.0	1,150	201 - 205
<u>Maha</u> 80/81	6,061.0	1,906	"
<u>Yala</u> '81	4,601.0	1,923	"
<u>Maha</u> 81/82	6,175.0	2,002	"
<u>Yala</u> '82	706.0	2,098	"
<u>Maha</u> 82/83	7,507.5	2,122	"
<u>Yala</u> '83	3,317.5	2,122	"

1/ Source: CTC files; from the Handing Over Notes, dated July 14, 1983.

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ANNEX C: MANAGEMENT

I. Mahiyangana Colonization Scheme (MCS)

A. CTC's Management of MCS

Staff size and management intensity underwent great changes during the 1966-1980 period.

The largest staff and heaviest management involvement occurred from 1966-1971. In this period CTC acquired the 1,000 acre tract on lease, cleared roughly half of jungle, and chose 59 colonists from among the clearance laborers to settle on the land. The settlement of these people started in 1969, but at first they were allocated only a house and an acre of highland each. Two CTC operations managers directly controlled the land designated for paddy cultivation and used the settlers as hired hands to work the fields. (Some informants believe that this arrangement was, or was intended to become, a communal paddy cultivation system that the CTC and the settlers would hold and operate jointly while sharing in the proceeds; but we found no evidence that the paddy cultivation actually worked that way.)

CTC had four major tasks in the 1966-1971 period:

- (1) The physical work of land clearing, house construction, paddy field leveling, irrigation system construction, etc.
- (2) Choosing the settlers from among the hired land clearance labor and getting them established on the land;
- (3) Providing services and support for the settlers;
- (4) Managing paddy production on the lowlands.

Their staff at MCS consisted of five people at the start of 1967, operating under the purview of the CTC Leaf Division, Kandy. A Resident Manager (RM) was in charge, aided by a supervisor, a field instructor, an overseer and a clerk. A group of 35-50 laborers did the manual work, with more added later.

Eight CTC trainees arrived in February 1967, raising the staff to 13, and an Assistant RM came later in 1967.

In 1967, Cedric Forster joined CTC as advisor to the Managing Director. Management control shifted from the Leaf Division, Kandy, to Forster in Colombo. Forster, who visited MCS frequently and at times stayed there for certain periods with his wife (a

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patroness of the school and the children), brought in a new resident manager, six more trainees and a workshop foreman. In 1969, Forster replaced the RM with two operations managers and an office manager, and added another field instructor. The maximum staff, i.e., 22, was reached at that point, the ARM position having been dropped earlier.

Cedric Forster is remembered as an autocratic visionary who was sure of what he wanted and had full authority from CTC to do it. His style appears to have been to issue commands to his staff to accomplish certain specific tasks over short periods, e.g., two weeks, without necessarily conveying to them an understanding of the desired outcome of these tasks or their relation to the larger picture. He seems himself to have served as the RM, in effect, with the on-site staff carrying out his wishes unquestioningly.

The CTC trainees were the main conduit for passing agricultural advice to the settlers.

Following the July 1970 national elections, Forster left, and management control of MCS was handed back to the Leaf Division, Kandy. The Leaf Division undertook three major changes:

- (1) It allocated the paddy land previously cultivated by CTC with paid settler labor to the settlers themselves at the rate of two acres per colonist.
- (2) It cut back CTC staff sharply, dropping those who had dealt with the CTC paddy cultivation.
- (3) It finished up the remaining construction and released the staff that had been involved in that aspect.

Four trainees had left by 1971; eight more departed in 1972. In 1971 Kandy dropped the two operations managers in favor of a new RM from the Leaf Division and returned the field instructors to the Leaf Division. The staff in 1972 consisted of RM Nital Perera, newly promoted from the abolished job of office manager, two former trainees who had been promoted to field instructors, and a clerk.

The RM left at the end of 1972. His replacement held the title of officer-in-charge, a supervisory rather than managerial rank in CTC. He had a supervisor and a clerk as staff. The former was replaced by an overseer in 1973 or 1974. At this time CTC acquired the adjacent 50 acres and began its own farm. The staff subsequently spent about three-fourths of its time running the farm and the rest directly on the settlers. Regular staff visits ended, and the colonists were told to come in with any problems they might have.

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E. Kumarage, the OIC, left in 1978 as did the clerk. The overseer was promoted to field instructor and took charge, having only two contract handymen as staff. All left at the moment of handover to Mahaweli, August 1, 1980.

CTC gave very close attention to the colonists, especially before 1972. Its on-the-scene staff enjoyed considerable flexibility and leeway in carrying out company policy on the spot. Day-to-day decisions were made in Mahiyangana and reported to CTC in fortnightly reports. The exception to this decentralized style was the Cedric Forster period, during which Forster apparently made virtually all of the decisions and in effect served as his own Resident Manager, whether he was in Colombo or Mahiyangana.

The CTC policy of giving the settlers practically everything they needed changed after Forster's departure to a combination of phasing down services and instituting certain service fees. The former took the form of handing over responsibility to the colonists themselves for certain activities previously conducted by CTC. In some cases, the latter led to the farmers making alternative arrangements that were cheaper. High costs and a growing understanding of the dependency that CTC's practices had created appear to have been the company's main motives for scaling back. It is likely, moreover, that Forster's vision of the settlement was not fully shared by the Leaf Division, whose primary motivation presumably was to get on with the task of running the project at the least cost and bother to the company.

The sample of settlers we interviewed had memories of the CTC period that ranged from generally to highly favorable. The land, houses and agricultural knowledge they received were the principal features of this positive assessment; without these gifts from CTC, it is recognized, most of them would probably be landless laborers today. Another theme often voiced was sadness and puzzlement, sometimes tinged with resentment, at CTC's departure. Several drew the parental analogy, saying that losing CTC support had been like losing their parents. CTC had done everything for them, and they were surprised and distressed when that ended.

B. MASL's Management of System C

After being handed over to the GOSL on August 1, 1980, the MCS became part of the MASL's newly organized Zone 2 within System C, which came under development starting that same year. (Zone 1, essentially untouched by recent development, consists mainly of older settlement schemes; activity in zones 3-6 is moving progressively according to phased plans).

System C is headed by a Resident Project Manager (RPM) responsible to the Executive Director of the Mahaweli Economic Agency in Colombo. (MEA is the settlement arm of MASL). A staff

of functional specialists assists the RPM in dealing with water management, lands, community development, engineering, marketing and credit, agriculture, accounting, administration and security. In line positions below the RPM are the block managers, each responsible for some 2,000 families. The block managers also have staff: block 1, which covers the unit that incorporates the former MCS, has an agriculture officer, a community development officer, a land officer, an irrigation engineer and a surveyor as well as the support personnel. Next in line under the block manager come the unit managers. Block 1 has eight of them, each responsible for day-to-day dealings with some 200-250 families on average. Wiranagama unit, which includes the 59 ex-CTC settlers, has some 240 families. Its unit manager, like the others, is aided by a field assistant. Units depend on staff from the block office for technical services. With each settler in Wiranagama unit allocated an acre of highland and two of paddy, its unit manager has line responsibility for supervising about 720 acres or some 1.125 square miles of cropland with its accompanying roads, tracks, irrigation systems and other facilities.

Unit managers establish settler groups within their units. In Wiranagama, the 59 ex-CTC farmers are organized into three groups of roughly equal size while the remaining settlers comprise five other groups. The unit manager appoints a group leader for each after consulting the members of the group. The choice of ex-CTC group leaders apparently was not difficult to make in 1980, for the MCS colonists had by that time been in the settlement for as long as 11 years and consensus on the appointments emerged fairly readily. For the regular Mahaweli settlers just arriving in 1980, many of them strangers to each other, the unit manager's decisions on leaders may have required guesswork. Getting their groups formed also took longer.

The group structure served MASL as a means of distributing the food aid provided in the early stages of settlement before cropping patterns were established and harvests brought in. The groups also offer the unit manager a structure through which he can pass information, such as announcements of the dates and places of upcoming clinics or cultivation meetings.

Although the group structure was described by System C officials as a top-down channel, they also stated when asked that some complaints or disputes are raised from the settlers through the group leaders. Such matters tend to be of common concern, with individual farmers still taking their own complaints directly to the field assistant or unit manager.

In occasional extreme cases, the unit managers have changed a group leader; once, one asked to be relieved. This has not happened among the ex-MCS group leaders, however.

Group leaders receive no compensation or special treatment, according to officials.

Like the former CTC structure, MASL administration appears to function mainly from the top down and to be fundamentally paternalistic. Unlike the CTC operation, though, MASL operates through a very large, highly centralized bureaucracy and is correspondingly far more remote and impersonal. It is obvious that no Mahaweli settler, ex-CTC or not, can have nearly the same frequency or intensity of relationship with management that the MCS colonists had with CTC. That coupled with the large difference in length of settler experience with the two systems (four years as of mid-1984 vs. 11) makes assessment of the relative degrees of dependency difficult. What is clear, though, is that the settlers in both cases rely very heavily on their sponsoring organizations.

The major factor coloring the former MCS colonists' perception of MASL's management is the latter's decision not to continue CTC's admittedly expensive lift irrigation from the Mahaweli Ganga. Forty-two of the 59 settlers depended on that lift irrigation for their yala paddy cultivation. The other 17, at the opposite end of the settlement from the river, had received yala irrigation water from a small CTC-constructed reservoir fed by rainfall and a local catchment basin. The MASL plan to connect a System C diversion canal to the CTC reservoir, providing constant replenishment and enough capacity to serve all 59 farmers, did not take effect until yala of 1984, meaning that yala crops for most of the settlers were not possible in 1981-1983. Food aid similar to that provided for new MASL colonists offset some of the hardships of this period; certain farmers and their family members also found employment as hired labor with MASL or in related construction work to help make ends meet.

Yala 1984, which was finishing up during our visit in the second week of September, did not produce a good harvest. Though irrigation water via the CTC reservoir appeared to be reaching nearly all farmers freely, including those at the farthest point from the reservoir, production had been held down by pests, poor weeding practices, inadequate maintenance of water channels and possibly some deterioration of settlers' agricultural skills following the departure of CTC's technical assistance and several years without yala harvests. Settlers also tended to be conservative in their cultivation practices out of uncertainty over whether the water had really returned for good. Moreover, the timeliness and intensity of labor inputs were perhaps not all they might have been given patterns of supplementary paid employment that some settlers had established to help cope with the lean years 1981-1983.

The farmers we sampled among the 42 who had relied on CTC's lift irrigation felt themselves abandoned by CTC and inadequately supported by MASL. But with the water now returning, hopes are rising for a better future. If System C can keep the water coming in sufficient amounts and in a timely fashion, plus deliver the other essential agricultural inputs on time, the ex-MCS colonists may have relatively few complaints in future years. Despite some fond memories of the past, they have had to adapt to a new reality as a tiny segment within an enormous scheme. As such, the keys to success are irrigation water and other essential inputs unaccompanied -- as indeed they could not possibly be accompanied -- by the kind of day-to-day individual attention CTC provided.

II. System H, block 9 (H-9)

A. CTC's Management

CTC understood that it was responsible for H-9's agricultural extension and inputs, credit and marketing starting with yala 1979. In the first year its work applied only to a 500-acre pilot area, but starting the second year the company extended these functions throughout H-9. This situation prevailed until yala 1983, when Mahaweli assumed all functions for H-9 except for marketing.

The project in its first year fell under the responsibility of CTC's Leaf Division in Kandy but subsequently was handed over to the jurisdiction of CTC headquarters in Colombo. Since 1979 CTC has maintained a Resident Project Manager (RPM) in H-9. He headed a small staff in the pilot year, but subsequently gained a deputy as well as a production assistant who directed tractor pool operations and land preparation. In addition, a head field officer aided by nine field officers carried out the basic extension work with farmers. In the office, a senior clerk supervised the work of three regular clerks. CTC also added a technical assistant and a community development officer. The remaining employees performed support functions as drivers, mechanics and caretakers. For the most active period, then, the resident staff consisted of 19 plus those in support.

The CTC RPM appeared to consider himself the functional equivalent of the Mahaweli RPM charged with overall responsibility for H-9 and four other H blocks. As such, he maintained basic relations laterally with the Mahaweli RPM but, at times, also raised matters directly with Mahaweli authorities in Colombo. It should be noted that the 1980-1983 RPM was not a career CTC employee; he had a background in government agriculture service and had been picked up on a CTC contract for this assignment. The indications are that he knew his way around the GOSL and did not hesitate to use his Colombo contacts when he felt he needed help or support.

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From MASL's standpoint, the CTC RPM's counterpart was a Mahaweli liaison or coordinating officer who reported to the Mahaweli DRPM for Water Management. This liaison officer evidently oversaw the work of an irrigation engineer, several engineering assistants and the field-level jalapalaka seveka (water control officers), the latter charged with physically turning on and off the water flows according to the irrigation plan. This structure on the Mahaweli side was in place before the system of a block officer, unit managers and field assistants was extended to H-9.

As the above description suggests, CTC managers again enjoyed considerable flexibility within a relatively small bureaucracy. The RPM's background and government contacts probably added to that flexibility.

Our interviews with a selected sample of H-9 farmers elicited the consistent response that CTC's field visits were regular and effective. Most farmers apparently miss the kind of detailed personal attention they felt they received from CTC (one man asked wistfully if we had come to re-install CTC in H-9!). Time obviously did not permit the same proportion of interviews among over 2,000 H-9 farmers that we had conducted among the 59 MCS families, but the responses we got by dipping into portions of four of the five irrigation subdivisions of H-9 were consistent enough to persuade us that we had discovered a common pattern (the sample came from poor families, well-to-do families, those who'd come to H-9 from outside, those who'd long lived in the area but had been resettled by Mahaweli, Muslim villages, etc.).

B. MASL's Management in H-9 Since 1983

(Section III above has a brief comment on the MASL structure before 1983).

The Mahaweli management structure now extended to include H-9 follows basically the same pattern seen in System C. Since System H is so large, however, it operates with three Resident Project Managers instead of one. The RPM whose jurisdiction includes H-9 holds responsibility for five blocks, namely H-1 which in fact comprises two blocks, H-2, H-7 and H-9. The acreage of H-9 alone is 5,635. The RPM's headquarters staff consists of DRPMs for agriculture, marketing and credit, and water management along with a community development officer, a land officer, a personnel officer and an accountant. There's also a manager for forestry and environment, a security officer and a public relations officer. Depending on the position, each of these persons has a technical and support staff ranging from five to 44, for instance, engineering assistants, clerks, mechanics, security "watchers," office aides, bookkeepers, typists, progress control officers, etc. All of these people are available for duty anywhere within the five blocks. Our count of the total came to 193.

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In addition, the usual block managers perform line functions below the RPM. H-9's block manager supervises his nine units, each headed by a unit manager reporting to the block manager and aided by a field assistant. The block manager has a technical staff: an irrigation engineer with various grades of assistants, two community development officers (one a woman responsible for home development), a marketing officer, a land officer, an agriculture officer and an administrative assistant. Including support staff like a radio operator, a surveyor, a draftsman, clerks, typists, and office aides, we counted 52 H-9 block staff, aside from casual labor.

As in System C, authority appeared to be concentrated heavily in the person of RPM, with the rest of the structure designed primarily to carry out his directives. Though the staff is large relative to CTC's resident staff that had fewer duties to carry out, it does not, according to the farmers' testimony, seem to cover as much ground or do it as effectively. The usual comments were that agricultural extension work has dropped off noticeably in quality and quantity. A common response to questions about non-agricultural activities suggested that many respondents were not aware of any such Mahaweli activities either before 1983 or since then. A more bureaucratic structure, more remoteness, markedly less personal attention and less technical competence summarize the tenor of settlers' reactions to Mahaweli's work compared to CTC's.

One especially interesting reaction that we heard frequently was that the quality of water management has declined since CTC pulled out of agricultural extension at the end of yala 1983. That surprised us, since CTC was never responsible for water management. The farmers agreed but stated that when water problems existed, the CTC agents would intervene with Mahaweli authorities to straighten things out. They feel the difference now that this no longer happens. This finding -- that in effect CTC was helping make the Mahaweli bureaucracy work better by a paternalistic intervention on the farmers' behalf -- suggest that MASL still has some distance to go to make its complex structure responsive to the needs of the settlers. The kind of ad hoc intervention that CTC apparently practiced is no long run solution, but the settlers benefited from it and clearly regret its absence.

ANNEX D: LOGICAL FRAMEWORKS

The authors of this report have constructed partial, after-the-fact, AID-style logical frameworks for the Mahiyangana Colonization Scheme (MCS) and for the System H, block 9 project during its Ceylon Tobacco Company (CTC) period.

We did this as an aid to organizing our own thinking about these non-AID projects and to help place them firmly in the context of other AID-financed impact evaluations, nearly all of which deal with AID projects. The logical frameworks should help all readers sort out the major concepts that the team believes lay behind the projects, especially the all-important purposes and assumptions.

With CTC and MASL involved in H-9, the logical framework must treat both perspectives even though our evaluation deals principally with CTC. We concluded that the two parties shared a common goal but diverged on the purpose.

The outputs shown in each case are essentially those that were actually achieved, since the projects did not have detailed implementation plans.

Attachments:

Logical Framework: Mahiyangana Colonization Scheme (MCS)

GOAL

To reap broad public relations and political benefits for the Ceylon Tobacco Company, Ltd. (CTC) by offering a public demonstration of its corporate sense of social responsibility and willingness to make a direct contribution to national economic development.

PURPOSE

To establish a self-reliant, socially cohesive rural development settlement on 1,000 acres near Mahiyangana.

OUTPUTS

Fifty-nine (59) settler families trained in paddy and highland crop production.

Irrigation system supplying water for 118 acres of paddy and 50 acres cultivated at the CTC farm for production and research.

Settler-managed cooperative supplying inputs and arranging for production credit and the marketing of paddy.

CTC farm serving as a research station to provide improved varieties and certified seed to colonists, produce soybean seed for the Department of Agriculture, and produce other seed needed by CTC.

Housing for settler families.

Domestic water and electricity.

Community center, day care center, dispensary, school.

IMPLICIT ASSUMPTIONS

That early heavy doses of free CTC inputs (commodities, services, supervision) would establish a setting that encouraged settler self-reliance and eventual self-sufficiency.

That CTC's support was to be limited (although expected cost and intended life-of-project were not spelled out).

That the cost of achieving the desired end-of-project status would not exceed CTC's willingness to pay.

That any political difficulties MCS might encounter could be neutralized with the good will and political benefit anticipated from the project.

Logical Framework: System H, block 9 (H-9)

GOAL

To test whether an enduring relationship can be established among a public development authority, a private firm charged with certain management responsibilities and the affected farmers. That relationship should advance government development objectives and simultaneously offer a reasonable financial return to the company and the farmers.

PURPOSES

MASL

To develop an innovative management model in which a private company successfully assumes responsibility for as many aspects of an integrated rural development scheme as possible (ideally, all aspects).

CTC

To demonstrate its development management capacity in System H, block 9, while (a) realizing a net financial return and (b) generating favorable public relations and political mileage for the company as a partner in national development.

OUTPUTS

Two thousand (2,000) settler families engaged in diversified production using agricultural inputs and technical assistance.

Functioning agricultural credit system.

Functioning CTC agricultural marketing system.

Functioning Young Farmers Clubs engaged in agricultural and community services.

IMPLICIT ASSUMPTIONS (CTC's)

That its marketing functions along with any agro-industrial activities it could develop would produce enough revenue to offset expenses and preferably to yield a profit.

That MASL would construct, maintain, staff and finance all aspects of H-9 development apart from agricultural extension, inputs, credit and marketing.

That CTC and MASL could develop a mutually satisfactory working relationship on key MASL-controlled activities that bear directly on agricultural production -- principally, irrigation water management.

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