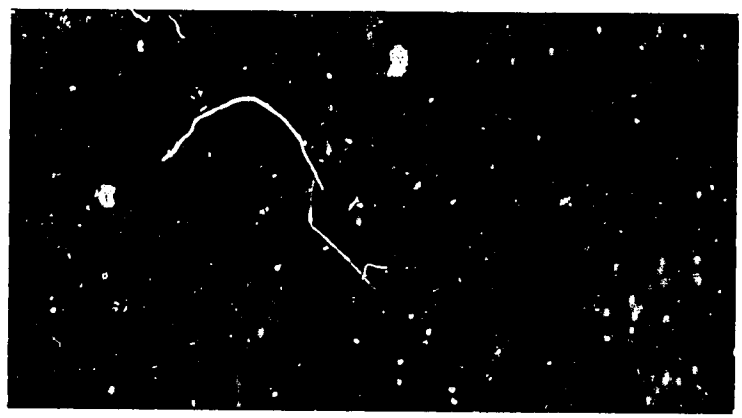
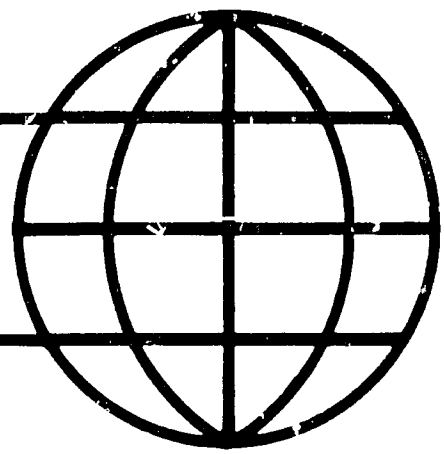
COOPERATIVE AGREEMENT ON HUMAN SETTLEMENTS AND NATURAL RESOURCE SYSTEMS ANALYSIS





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THE ACCELERATED MAHAWELI PROGRAMME (AMP) AND DRY ZONE DEVELOPMENT

REPORT NUMBER FOUR

by

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THE ACCELERATED MAHAWELI PROGRAMME (AMP) AND DRY ZONE DEVELOPMENT

I. INTRODUCTION

This report is the fourth in a series dealing with certain settlement and development aspects of the Accelerated Mahaweli Programme (AMP). The first report was submitted in May 1979, and the next two in September 1980 and September 1981. In each case the two authors worked closely together, with the reports issued within several months of the completion of field surveys. Although no report was issued during 1982, our intention is to prepare annual reports for at least the next five years.

Our current assessment is based not just on field visits and discussions during 1983 but on our accumulative experience with new lands settlements and, more specifically, with the AMP. Between the two of us, this experience with settlement projects stretches over half a century. As for Mahaweli, Kapila P. Wimaladharma's contact with that project began in 1970-72 when he was Deputy/Assistant General Manager (Settlement Planning) of the Mahaweli Development Board, while Thayer Scudder made his first visit in 1979.

In 1983, further field visits were made to settler households in Systems B, C, and H between June 9 and July 20. During our evaluation, discussions were also held with officials in the Mahaweli Authority of Sri Lanka (MASL), the Mahaweli Development Board (MDB nee MECA), the Mahaweli Economic Agency (MEA), the Ministry of Mahaweli Development, the Ministry of Lands and Land Development, the Ministry of Plan Implementation, the Ministry of Finance and Planning, and the Ministry of Health. We also met with concerned faculty members from the Universities of Colombo and Peradeniya and with representatives of the Ceylon Tobacco Company and other private sector companies. Discussions were also held in Colombo and in the field with officials of the United States Agency for International Development, which has provided the funding since 1979 for our ongoing collaboration through U.S. AID/Colombo and through the Clark University/Institute for Development Anthropology Cooperative Agreement on Human Settlements and Natural Resource Systems Analysis. In the field we were ably assisted by M. Sirisena who has been working with us as a research assistant since 1980.

As in the past, this report reflects not just our own evaluation of the AMP but also the concerns of those to whom we talked. Where major problems are discussed, these too were agreed upon in broad outline by ourselves and a number of Mahaweli officials, although we take complete responsibility for our conclusions.

Because these conclusions are more critical than in the past and because they have major policy implications, we discussed them in draft form with officials of the MASL, the MEA and the Ministry of Mahaweli Development in July 1983 so that we could take under consideration their reactions prior to finalizing our report. Since that time further commentary on our Draft Summary has been received from Dr. A. Attanayal Director, and Dr. M. U. A. Tennakoon, Evaluation Study Adviser, of the MASL's Planning and Monitoring Unit, from Dr. D. V. W. Abeygunawardena, Agricultural Consultant, MASL, and from Mr. J. Bandaragoda, Executive Director of the MEA. We have assessed these comments carefully and have incorporated some of them into this report. They were greatly appreciated for we are well aware of the busy schedules of the officials involved.

The Accelerated Mahaweli Programme is a grand concept; indeed, it may well be the most ambitious program of its kind currently being implemented in the tropics and subtropics. It is a program that we fully support simply because it has such potential for improving the living standards of Sri Lankans at the household, village, district, regional, and national levels. We believe, however, that there is a very real danger that this potential is not being realized, and will not be realized in the future, unless action is taken now on the critical issues discussed in subsequent paragraphs. If present trends continue it is doubtful, in particular, that the AMP will meet its goals for employment generation.

II. METHODOLOGY

Because it is unorthodox and because questions have been raised about its reliability to assess events as they unfold in large scale an complex projects, it is important to discuss our methodology at some length. It is a form of rapid appraisal based on repeated interviews with a small number of settler households over an extended time period.

Although the participatory households have not been randomly selected, we believe them to be representative of the major categories of settlers incorporated within the AMP. The initial households were

picked because family members happened to be at home at the time of our first field visits. Thereafter, however, we have added settlers according to a range of background criteria which are described below.

The purpose of rapid appraisal techniques is to offset the weaknesses for policy purposes of conventional sample surveys. The phrase "for policy purposes" is important here. While we would be the first to agree that our methodology has weaknesses, these relate more to studies carried out for scientific as opposed to policy purposes. Policy makers and administrators need up-to-date information on a regular basis which is relatively reliable. The trouble with more conventional survey techniques is that data collected from the much larger samples involved are financially expensive to obtain and time consuming to analyze. For those reasons, reports are often delayed and restudies following initial benchmark studies are apt to be postponed for years if they are undertaken at all.

In recent years there has been an increasing interest in rapid survey techniques to offset such weaknesses. In 1979, for example, a conference was held at the Institute of Development Studies in Sussex on Rapid Rural Appraisal at which forty-two papers were presented on a wide range of subjects. One of these dealt with the Sondeo Methodology which has been utilized successfully in Central America to identify and present within a one-week period a picture of the nature of a particular farming system, including constraints. As in our case, the quality of the data accumulated improves over the years because close contact is maintained through time with a relatively small number of households.

Our rapid survey methodology provides suggestive information on an annual basis within a matter of weeks after completion of each field survey. And unlike most conventional surveys it is longitudinal, following the fortunes and misfortunes of the same households over an extended time period. As a result, we obtain quite accurate cumulative histories of a number of households, with the quality of our data improving with each successive interview. And since these histories are remarkably similar from one area to another we believe that they are a valuable means for providing timely and updated information for policy makers which would not otherwise be available. Where this information relates to potential problems, or newly emerged problems, our methodology serves the function of an "early warning system."

While we believe it is important to cross-check our conclusions, we also believe that it would be a mistake to ignore them simply

because of skepticism over the methodology. In the Mahaweli case, the recently completed World Bank financed survey in System H under the directorship of Dr. Percy Silva would be an important cross-check. Less thorough but also useful would be the field surveys carried out in System H in 1982 and 1983 by the trainees under the University of Colorado-University of Utah Water Synthesis II Project. During informal talks in the field and Colombo about preliminary results from these various studies, we got the impression that they were identifying similar problem areas. If this is correct, broad agreement not only reinforces our conclusions but also indicates that our rapid survey methodology is indeed sufficiently accurate to provide prompt and updated information on all AMP settlement areas for policy purposes.

During 1983, we interviewed thirty-one settler households in Systems B, C, and H. We began to select these households in 1979, our intention being to reinterview the same family members at least once a year. Although interviews were not carried out during 1982, we have now visited with twenty-two of the families over a two-to-three-year period and all thirty-one households will be interviewed at least once annually in the future. Indeed, we hope to reinterview members of each household after both the maha and yala harvests, and to train at least some family members to keep farm records -- a procedure which has proved very rewarding in connection with the Sondeo Methodology.

Sixteen of our households are settled in System H, with one in H-1, three in H-2, three in H-4, six in H-5 and three in H-9. In System C we have selected eight households, some of whose members we first interviewed while they were working as worker/settlers prior to building houses and bringing their families. All but one of these households are in C-2, including one on the old CTC farm. Members of the eighth household were interviewed for the first time this July just after their arrival in C-4. As for System B, there we have selected seven households, of which four are in Zone 5, two in Zone 1, and one in the command area of Pimburetewa Tank.

Fairly well distributed throughout the AMP, these households also represent the range of settler categories being incorporated within the AMP -- including resettlers (purana villagers, encroachers, and residents of older settlement schemes within the areas concerned); evacuees (from such sanctuary areas as Wasgomuwa and Madura Oya as well as from Bowatanne, Kotmale, and Victoria); and selectees from various electorates (including households from six different electorates). They also include older (three generation) families with married children living at home as well as younger families with small children, and

they include different income categories from relatively wealthy resettlers and evacuees to relatively poor selectees and encroachers.

As new zones are settled in the future, additional households will be added to increase the total to approximately fifty. Though interviews will continue to focus on these fifty households, often relatives and neighbors living nearby listen in, with a more open-ended discussion following the formal interview. Involving more people, this extends our network of informants, as do interviews with, and queries about, married children and other settler relatives whom we have met in the past.

In summary, though the number of families is small and has not been selected on a random basis, nonetheless we are convinced that information obtained reflects the views of settlers in general on the issues examined. This conclusion is based on a number of considerations. When we picked the first thirty-one households, we knew nothing about them; yet their problems and their settlement histories are remarkably consistent from one zone to another. Secondly, the type of problems mentioned are consistent with our own knowledge and experience with the settlement process in Sri Lanka and elsewhere in the tropics and subtropics. As for the methodology itself, it is a type of rapid appraisal technique which social scientists and agricultural economists are now formulating to evaluate development projects for planning as opposed to scientific purposes. In reaching our conclusions, however, we have also utilized other sources of information. In addition to discussions with informed individuals within government departments, the universities, and the private sector we have also referred to a wide range of reports on the Mahaweli settlement areas. And we have conducted larger group interviews wherever we have gone.

III. NEW LANDS SETTLEMENT AS A MEANS FOR INTEGRATED AREA DEVELOPMENT

The purpose of this section is to provide background material which will help the reader understand better our 1983 conclusions as they relate to the Accelerated Mahaweli Programme. In Appendix 1 a short bibliography is provided for those interested in exploring further the points made.

As the costs per hectare and settler household escalate, it becomes increasingly difficult to justify individual settlement projects unless they catalyze a process of integrated area development

in which the agricultural production systems of the settlers stimulate nonfarm employment within the region through the production of a wide range of goods and services. Because of the more spectacular influx of rural people into urban areas, it is easy to forget that over half of the nonfarm employment in Asia continues to be in rural areas, a point which the World Bank documented in their 1978 publication on Rural Enterprise and Nonfarm Employment.

Looking at the situation from a different angle, Chuta and Liedholm note in their 1979 study of eighteen developing countries that "one-fifth or more of the rural labor force is primarily engaged in nonfarm activities," with 20 percent so engaged in India versus 28 percent in Indonesia. If rural towns are included the proportion is still higher, increasing to 40 percent where towns in rural settings have populations of twenty to forty thousand (this being one reason why we put so much emphasis on the importance of regional towns). Referring to Sri Lanka specifically, Lubell (1980) states that "72 percent of total employment in manufacturing in 1971 was rural." And he adds that "S. V. Sethuraman found a surprisingly degree of sophistication among small scale producers in Sri Lanka in 1977."

Referring just to settlement schemes in Sri Lanka, Wimaladharma (1982) notes that historically nonfarm activities tended to be neglected during both the planning and implementation phases, hence ignoring "the full potential within the settlement scheme to generate still higher rates of employment as well as high levels of income and productivity." Yet clearly the potential is there -- as shown by Wimaladharma's analysis of what is probably Sri Lanka's most successful settlement project. This is Minneriya where nonfarm employment almost equals farm employment after approximately fifty years of development due to such factors as relatively reliable water supplies for twice annual cultivation, diversified economic activities among household members, and relatively large farm allotments. However, farm allotments are significantly larger at Minneriya than in the AMP and the nonfarm employment generated there was a long time in coming. For the Minneriya experience to be replicated by the AMP within a shorter time period will require careful government planning and stimulation. Though some planning is under way, we believe that it continues to be too "ad hoc" in nature, with the various ideas under consideration or implementation not integrated into a systematic plan for generating nonfarm employment.

Recent comparative evaluations of new lands settlements, including one by the World Bank, indicate that certain interrelated features of

settlement tend to be more closely associated with improved social benefit-cost ratios and greater indirect benefits including nonfarm employment. Aside from the necessary infrastructure, soil surveys, and agronomic inputs, these features include the following: [1] numbers of settler households in the thousands (as opposed to hundreds); [2] agricultural diversification at the household, community and project level with agriculture here defined to include crop agriculture, livestock management, agro-forestry and community forestry, and fisheries; [3] rising settler household net incomes; [4] strong settler participatory organizations; and [5] strong rural-urban linkages which are best provided through a hierarchy of service centers ranging in scope and scale from the community center up to the regional town. Through the AMP has the potential of including all these factors, current planning and plan implementation assures only the first and possibly the second.

[1] Number of Families. There is no problem here. From the very start, the AMP has been based on the settlement of thousands of households.

[2] Agricultural Diversification. There are at least four reasons for diversifying settler household farming systems in terms of multiple cropping and livestock management. First, diversified systems are more productive economically, generating higher incomes for the producers. Second, they are more resilient and ecological stable. Third, they make better use of the labor of all family members, adding to their status within the household in the process. And fourth, they provide food for nonfarm labor and agricultural produce for processing.

Within the AMP the recent trend has been away from an initial overemphasis on rice production to a more diversified production system. Hence yala season production is slowly being diversified in H System, while a 1983 task force dealing with System B included agricultural diversification within its terms of reference. While this trend is gratifying, we are uncertain as to the extent that it is based on an awareness of the positive effects of diversification on development as opposed merely to "coming to terms" with the soil characteristics and water requirements of the Mahaweli settlement areas.

[3] Net Income. We do not believe that there has been sufficient emphasis to date on settler incomes as opposed to overall production goals. Recent research indicates that increased settler purchases of a widening range of consumption and production goods and services generate greater indirect benefits (and more specifically employment)

than does the processing of agricultural products (and rice in particular). We are especially concerned that the appearance of the "second generation problem" among an increasing proportion of settlers now will lead to reduced incomes and a consumption mode of production unless special efforts are made to increase off-farm employment opportunities.

[4] Settler Participation. While the MASL is committed to increasing settler participation in theory, and correctly recognizes the importance of avoiding a proliferation of government-induced settler organizations, we also view with alarm the decision to appoint the unit manager as the president of what are supposed to be participatory settler organizations. Stated frankly we believe that this is a mistake. Though we have been assured that at the proper moment control will indeed be handed over to settlers, in fact devolution of authority from a strong hierarchically organized development agency like the MEA to settlers at a later date is a very difficult task. A case in point is the Sudan Gezira Corporation which has ignored long-standing government orders to hand over certain managerial responsibilities to the settler organization. Good intentions to the contrary, the tendency in Sri Lanka to date has been for government agencies to control whatever settler organizations they have initiated.

[5] Rural-Urban Linkages. The Mahaweli authorities have consistently pushed for a hierarchy of service centers at the hamlet and small town level. However, if benefits from the AMP are to be kept within the Mahaweli basin and interbasin areas (as opposed to being siphoned off to Colombo), we believe that far more attention need be paid to the development of regional towns at the upper end of the hierarchy. Examples would include Anuradhapura, Polonnaruwa-Kaduruwela, Mahiyangana, Batticaloa, and Trincomalee.

IV. CONCLUSIONS AND RECOMMENDATIONS

Previous reports in this series have dealt more with basic settlement issues of possible relevance to the AMP than with conclusions and recommendations. We have changed our approach in this report because, for the first time, we are fearful that the opportunity for realizing the AMP's potential is slipping away because of various planning and implementation inadequacies.

While we take responsibility for the conclusions that follow we wish to emphasize that many of them are shared with government

officials and other experts familiar with the AMP. Indeed, in a number of cases officials within the MASL and the MEA are not only aware of the problems but are actively looking for solutions. One example concerns the problems that some settlers are having with credit. In such cases we wish to strengthen the hand of the officials involved by providing reinforcing evidence. AMP officials, however, seem much less aware of other of our conclusions, such as Conclusion A. These we present as "red flag" warnings of dangers ahead which we consider to be serious. In this sense, a major goal of this and future reports is to provide Mahaweli agencies and interested donors with an "early warning system" for identifying problem areas. Early warnings, based on incomplete data, may well be wrong. But when the stakes are high the warnings should be carefully checked out and acted upon where necessary.

CONCLUSION A: In System H settlers are becoming disillusioned. Some are becoming distrustful and cynical about the MASL'S intentions. The same disillusionment, cynicism and lack of trust in MEA officials could easily appear in System B and C unless corrective actions are taken.

Perhaps our most important conclusion, Conclusion A was also the most heavily criticized by some MASL and MEA officials. Though we have carefully assessed all comments received, we believe the conclusion is still valid. We also note that one MASL official supported our viewpoint. In his words, there is "a sense of 'being let down.' This stems partly from the consequences of unfavorable weather and (unexpected) water shortages and partly from the consequences of heavy bureaucratization at the field level (down from RPM level to UM level). Some changes are needed."

The pioneer settlers in the oldest portions of H System have now been present for over seven years. By that time the "slow growth" transition period that characterizes all settlement projects during the years immediately following recruitment should either be over or coming to an end in the more successful settlements, having been replaced by a dynamic stage of community formation and economic development. In 1981 we thought that this dynamic stage of growth had begun in System H, but in 1983 the early stage of promise appeared to be slipping away. Though community formation continued as measured by the emergence of temple and funeral societies and the development of government induced organizations, economic progress had definitely slowed down.

In H-2, for example, we found increasing stratification, with the more successful farmers leasing in land, while the larger number of less successful farmers were leasing out part of their holdings because of insufficient capital. Even our most successful settler noted that "now all the facilities are available (by which he meant educational, health and other services) but there is no food" (by which he meant food from his allotment). Though clearly this is an overstatement, it nonetheless points to an undesirable state of mind.

We suspect that our observations here will be reinforced by the World Bank financed study in the older areas of H System as well as by the training surveys carried out during 1983 by the Water Synthesis II Project. Certainly that is the impression gained from the Water Synthesis II report on the 1982 survey which stated that "farmers in the area are operating at subsistence level." That would be a major reversal of the situation we observed in 1981 when we optimistically thought that the older System H settlers were rapidly realizing the MASL goal that Mahaweli farmers obtain "higher incomes to make them entrepreneurial independent farmers far above peasant production levels." Since we believe, however, that this reversal has in fact occurred, it is critical that any trend toward subsistence be reversed.

During discussion, some colleagues noted that even if our appraisal of the situation in System H is correct, that does not mean that similar problems will recur in System C and B, especially granted the ability of the Mahaweli agencies to learn from experience. We agree that some of the problems afflicting System H are localized, while others may well be temporary and still others are being corrected in the design and development of Systems C and B. System H, for example, contains a larger number of purana villagers who are said to be initially less innovative and productive than selectees. System H also has extensive areas of red brown soils which are particularly susceptible to the exceptional drought which has plagued the area although hopefully the conversion to other crops, the completion of the Kotmale Dam, and the return of more normal rainfall will alleviate the problem. While we recognize the importance of these factors in explaining the current situation in System H, nonetheless we believe that policy, implementation and maintenance inadequacies must also share the blame -- and we believe that some of these inadequacies are being replicated in Systems C and B.

Under policy, we continue to believe it is a mistake to combine water management and community development functions within the same

settler organization, a belief that a number of senior officials in the MASL and the MEA also share. Though we agree that the proliferation of government sponsored settler organizations in the past (with each major ministry wishing to sponsor its own organization) was counterproductive, such would not apply to the Mahaweli areas if MASL-MEA sponsored organizations were restricted to one dealing with water management and another with community development.

We also do not believe that the justifications for appointing the unit manager as president of the community development society offset the risks involved in coopting and undermining settler organizational development. Three major reasons are given in justification. These are that placing the unit manager in charge would (1) reduce inefficiencies; (2) keep rural elite from taking over control and (3) ensure that developmental as opposed to political activities are stressed. While such justifications sound convincing, government control has major costs. Two major ones are the difficulty of convincing the settlers that the organization is theirs when it is dominated by MEA officials and the dangers that managerial responsibilities won't be gradually handed over even when a fixed time table is set. As for inefficiencies, we have been impressed throughout our field surveys with the quality of the settlers and believe that settler organizations will be stronger in the longer term if they are run by settlers from the beginning with MEA officials in advisory positions. The problem of rural elites dominating local organizations in their own interests is a very real one. On the other hand, we have been impressed by the extent to which turnout organizations have not only been able to replace self-serving and inefficient leaders but also have selected leaders from among middle and tail enders. Concerning political activities, it is better that these come up in a context where MEA officials at least have an advisory role; otherwise there is a very real danger that settlers will take their complaints elsewhere, perhaps joining in the process organizations which will indeed provide a constraint to development.

As an alternative to the current community development societies, we recommend the water management committees which are being experimented with in Zone 2 of System C (and dealt with in more detail under Recommendation B). There a settler serves as president with the unit manager as adviser (and the engineering assistant as secretary). For community development functions a parallel organization might be launched, again with the unit manager as adviser but with the community development assistant as secretary. Regardless the option chosen we support the view of the PMU's evaluation study adviser that more

emphasis should be placed on training for all unit level officials. In his words, most of the unit managers are "young and need a change -- need a residential work-shop training to improve their attitudes towards settler problems, to be more tolerant of settler-follies and have patience."

Under implementation and maintenance, very real water management problems continue to exist in System H which have yet to be corrected and which may well be replicated in other systems. These problems have been identified for years, yet action to correct them has been slow. This is not just our conclusion. According to the 1982 report of the Water Synthesis II team, "the experience in Kalawewa, particularly in the Yala season of 1982, clearly illustrates the deficiencies or poor conditions of control structures, measuring devices, and management of the water distribution to deal with shortages." Though water was limited, "studies in four turnouts of the two distributaries within the study area indicated that water issues were in excess of upland crop requirements in three turnouts"; indeed, in two of those turnouts the water supplied was in excess of paddy needs.

"Similar discrepancies were observed in five other D-channels, two of which had less water discharge than the required amount for upland crops. . . . Water shortages or excesses can be explained in terms of the following: (1) a lack of an operational plan which takes into consideration the uncommon situation that came in during Yala 1982; (2) a lack of or poor conditions of water control structures and measuring devices; (3) a lack of institutional devices for effective monitoring of field conditions, and the inflexibility in system management to accommodate variations in water allocation decisions; and (4) the tendency of the staff to issue extra water to minimize complaints by farmers."

As more and more systems are brought on line through the Accelerated Mahaweli Programme, we fear that this type of deficiency will reoccur elsewhere. We also see the lack of capacity to identify and deal with legitimate settler problems and complaints already being replicated in Systems C and B. For these and other reasons we believe that Conclusion A poses a problem not just for System H but also for Systems C and B. The reasoning behind this conclusion is discussed in the paragraphs that follow.

Between interviews in 1981 and 1983, we believe that a major shift in settler family attitudes has occurred. In 1981, conditions were difficult for settlers, as they always are during the pioneering phase

of any new lands settlement project when households must establish new residences, familiarize themselves with new lands and bring them into production, and adjust to new neighbors and to the project management. But most or the people to whom we talked were optimistic about the future which they expected to be better than the past. By 1983 this sense of optimism, while present in some families, was greatly reduced. In its stead was a growing sense of letdown: being promised water, improved schools, a better life which had yet to materialize -- hence the growing distrust and cynicism, especially in those families which have had the hardest time.

We continue to hold the MASL, MEA, and MDB in very high regard, which is why we are so concerned about the above changes in settler attitudes, or the potential for such changes if present trends continue. The planning for settlement is excellent as is the monitoring of progress; indeed, it is as good as occurs anywhere else in the world. But in the rush to meet targets and to bring fixed numbers of settlers into each system, we believe that the Mahaweli authorities are placing too little emphasis on the well-being of settler families. Yet it is these families who are the main risk-takers in the Mahaweli enterprise. And it is these families who will make the AMP a success, or a partial success, or a partial failure, or a failure in the years ahead. We recommend that more attention be paid to their well-being at the level of the individual family.

It is commonplace for large scale development agencies to forget that the well-being of individual families is crucial if production and other development goals are to be met. Two problems that arise frequently are (1) over-bureaucratization and over-regimentation of settler households (often causing lack of initiative and dependency) and (2) the "burned-out syndrome" among officials. We believe that settler families already are being over-regimented. And we believe that signs of the "burned-out syndrome" are already appearing among Mahaweli officials. We would like to give two examples to illustrate this point.

1. Over-Bureaucratization and Settler Participation

In trying to meet tight schedules, settlement authorities often begin to behave like military organizations. The risk here is that in time officials begin to think about the settlers as soldiers or laborers who must be led and ordered about. But a new lands settlement is very different than a military regiment or a plantation for its

ultimate success depends on the enterprise and initiative and productivity of the settler family and of settler-led organizations.

In planning Mahaweli settlement areas much thought was given to helping the settlers organize themselves. Two products of this thinking were the formation of turn-out groups and of worker/settler groups. Over the years, however, there have been gradual changes in the nature of these groups which we believe may undermine their effectiveness in the future. The main change is the formation of community development societies at the hamlet level in which the president of the society is the unit manager.

We can see no justification for this change since the unit manager can be just as effective in facilitating development in an advisory role. Already settlers to whom we talked were consistent in their view that the community development societies were not their own societies but rather MASL organizations. The more cynical and distrustful settlers believe that the unit manager as president "bottles up" their complaints -- not passing them upward for fear that they will reflect negatively upon his leadership role. The evaluation study adviser of the PMU shares this view, noting that "there is a need to hand over the leadership functions in many areas of settler organizations to the farmers. For instance, it is not advisable to retain the UMM as the presidents of the community development societies. Over and over again in the field I hear of farmer criticisms of this strategy. It is true that UM is often accused of 'bottling up' members' complaints."

Of course, the important point here is not the accuracy or inaccuracy of such beliefs but the fact that they exist among settler households. As for the majority of households to whom we talked, whether distrustful or not, they still see the community development societies as "paper societies," "societies down at the office," or "societies down at the school" -- the phrases in quotes being the settlers own words. Looking at the future, we recommend that the MASL resist the temptation to control and dominate settler organizations but rather encourage such organizations to grow in strength through their own leadership.

An increasing number of studies show that strong settler dominated organizations are associated with higher productivity. There is also evidence that once a settlement agency comes to dominate settler organizations, such agencies find it very difficult to hand over the leadership functions even when settler organizations have developed the necessary competence. In the Sudan, the Sudan Gezira

Corporation (which is responsible for the largest irrigation project in the world under single management) has been under instruction for over twenty-five years to delegate increasing managerial responsibility to the tenants' union. Those instructions have yet to be carried out, with the current inefficiencies of the Sudan Gezira Corporation and the opposition between corporation and settlers being a major constraint to increased productivity.

Under Conclusion C we suggest a mechanism whereby the MASL can get back "on track" in regard to developing strong settler dominated participatory organizations. If unit managers remain as the main leader of the principal "settler organization," we believe that in the long run this will stifle settler initiative rather than foster it, will increase the risks of settler resentment over an all too embracing MASL control, and will direct settler organizing efforts outside the community development societies where MEA officials will be less able to influence settler actions.

2. The "Burned-Out Syndrome"

The burned-out syndrome occurs when officials begin to see as "complainers," "troublemakers," and as "a general nuisance" the people whom they are supposed to serve. It is especially common with officials in organizations which must daily deal with immense human problems such as hospitals, homes caring for the elderly, police departments, and settlement agencies. After dealing with peoples' needs and demands day after day it is easy to become emotionally exhausted, and it is easy to attempt to protect oneself by distancing oneself from the people served, by seeing them as ciphers to be manipulated, and by rejecting their needs and demands as unreasonable.

We have already seen signs of the burned-out syndrome both in the offices in Colombo and in the field. Two examples relating to System B are pertinent here. In relating them we do not intend to imply criticism of any Mahaweli officials, many of whom we know work overtime at considerable expense and sacrifice as illustrated by a recent example given by the Minister to the press on July 2, 1983. And in the field we have been impressed with other RPMs and senior staff, and with various staff members stationed at the block and unit levels. But the burned-out syndrome sooner or later effects everyone unless preventive steps are taken.

a. Tract 9 in the Pimburetewa Scheme

Mahaweli water is now available in most of the tracts of the old Pimburetewa Scheme, with many settlers now able to cultivate their paddy fields during both maha and yala. That is a major accomplishment. Tract 9 at the tail end of the scheme, however, has yet to receive water on a reliable basis. Settlers were brought there in the late 1970s. Though a minority stayed on with their families, the majority returned to their homes (largely in Polonnaruwa) because water supplies were unreliable in maha and nonavailable during yala. Then in 1982 the MASL took over the area for development. In Colombo and in the field we were told that 335 families were involved. Prior to Mahaweli involvement only forty-two were in residence, but by the years' end this number had risen to 225. As for the rest, we were told that they would be evicted if they did not take up residence soon with their families.

In the field we visited the Tract 9 settlers and held discussions with them. They know that they must bring their families or run the risk of losing their lands. But they also know that there are no facilities for those families, including irrigation water for yala, or medical services, or schools within a reasonable distance. Though some land preparation was done by the Mahaweli authorities prior to maha 1982/83, and many people returned with their families, the maha crop was not a successful one because there were insufficient water issues. And there is now no yala water. Yet these people have been ordered to come with their families or run the risk of losing their land. So many have come bringing food from their parents' homes in Polonnaruwa or taking out loans which they will not be able to repay unless their conditions improve in the near future.

We believe that in trying to meet settlement deadlines the welfare of these families has been neglected. It just does not make sense to order people to bring their families, or to give them the impression that they must bring their families to retain their land, when water and services are unavailable. If such vital services are not actually provided in a timely fashion (rather than promised), then settlers should not be required to bring their families in advance of services. We will return to this point under Conclusion D which deals with the policy of advanced alienation.

b. Zone 5 in System B

There have been various settling in problems in Zone 5 areas, including an outbreak (or possibly outbreaks) of diarrhea which has caused some settlers to petition the authorities for assistance. In discussing their problems with officials, settlers told us that they had been severely criticized for speaking out, even though their complaints had been delivered, in their opinion, through proper channels. Our assessment is that their problems were legitimate, and the derision to which they have been subjected (including being referred to as the "diarrhea village" or the "petition village") is indicative of the burned-out syndrome among some officials.

c. Discussion

The burned-out syndrome can have a very negative impact on a major project like the AMP. Not only can it hinder the identification of potentially serious developmental constraints but it can undermine the trust and cooperation between officials and settlers. It is important that officials be made aware of this syndrome through proper channels, including frank discussions of it in meetings and during on-the-job and short-course training sessions. As an example, we suggest that increased sensitivity by officials to settler problems be publicly and substantively rewarded. It is also important that adequate leave time and other incentives be provided to reduce the risks associated with the burned-out syndrome.

3. Reasons for Settler Disillusionment

The main reason for disillusionment is due to the living standards of settler households improving at a slower rate than expected, though a secondary reason may well be the overbureaucratization of the AMP as it relates to settler family participation. As one drives through System H the initial impression is one of increasing prosperity among the settlers as shown by the number of improved houses already built (or being built); by the number of two-wheeled tractors; and by the development of local townships including Eppawala, Nochchiyagama, and Galnewa. While it is certainly true that the majority of the settlers are better off than in their previous homes, the rate of

development appears to have slowed down -- rather than increased -- during the past two years in spite of the very good 1982/83 maha harvest. This slowdown can be measured in a number of ways, including a slowdown in the ability of many settlers to improve their housing and to purchase household furnishings (there has also been a slowdown since 1980 in tractor sales in spite of inadequate draft power as noted in the 1982 Water Synthesis II report). While new housing continues to come up, we suspect that a good bit of this is not financed by income earned from Mahaweli allotments but rather from compensation (among evacuees) and from other business interests (MDB contracts taken, for example, by the wealthier purana villagers and evacuees).

The slowdown in development in System H at this point in time is most unfortunate since it has occurred just at the time that a shift could have occurred from the settlement phase of the AMP to the development phase. The fact that settler net incomes are rising more slowly than expected also means that less nonfarm employment is being generated, hence adversely affecting employment goals.

There are a number of reasons for this slowdown with attendant settler disillusionment. They are outlined below, along with possible corrective actions that might be taken.

a. Inadequate Water Supplies During Yala 1982 and Yala 1983 As Well As During Maha 1981/82, Especially in H-5

Though this problem has been exacerbated by the drought, we believe that it requires more urgent attention by the Water Management Panel of the MASL. Until Kotmale waters are available, one approach already under consideration would be to alternate yala issues between H-9, H-2 and H-3, and H-4 and H-5. Though this option is being considered for the next yala, H-5 settlers would be in a much better frame of mind if they had received water as initially promised during yala 1983. Another approach would be to experiment with the Minipe Model of Water Management in at least part of H-5. Even with Kotmale, we fear that H-5 and H-4 may suffer from inadequate issues in the future simply because during periods of water scarcity the temptation will be to divert waters eastward through the turbines at Bowatanne (hence receiving both hydropower and irrigation benefits) rather than into System H. Improved water management will insure better use being made of available issues.

b. Credit

The MASL and the banks have shown great foresight in working out an exemplary program for making credit available to settler families within the AMP. Both the Mahaweli authorities and the banks have also shown an ongoing willingness to reassess and modify the credit program which is one or the best that we have observed in the tropics and subtropics. Nonetheless, like the Water Synthesis II team in 1982, we found more settler disillusionment over credit, especially the rescheduling of loans, than over any other issue aside from water. Bitterness is especially evident in H-4 and H-5 where at least some settlers are of the opinion that the MASL and the banks deceived them into repaying all outstanding loans at the end of maha 1982/83 by promising them water issues during yala 1983, which were then not delivered. In the meantime not a few settler families had sold most of their consumption paddy to repay their loans, assuming that they would be able to replenish their food stocks during yala 1983. This, of course, they will not be able to do, causing considerable suffering among the poorer families who will have to take out private loans from relatives, mudalalis, and others and rely on less nutritious foods like cassava.

The solution to this problem is greater flexibility in rescheduling loans along lines already suggested by the PMU of the MASL with appropriate incentives to repay, and the issuance of loans for legitimate hardship cases (as certified by the unit manager) perhaps through use of a special revolving fund. We suspect that there always will be legitimate hardship cases. Even during good seasons, some families will have poor yields due to no fault of their own -- owing, for example, to sickness, other family misfortunes, and/or design faults in the irrigation system. Hardship loans for such families will reduce the danger of their losing their lands in the future through indebtedness.

c. Drop-Off in Job Opportunities During the Slack Periods Due to the Completion (or Near Completion) of the Construction Phase of the AMP

Settler hardship has been increased by having reduced water issues at the very time that jobs in construction have fallen off. Since such jobs have not been replaced by other forms of nonfarm employment, household heads in H-5 in particular have had to leave the area to look elsewhere for work to support their families. In a few cases household

heads have already found permanent employment elsewhere, leaving representatives behind to look after their lands and houses. In other cases many families have temporarily moved back "home," intending to return to farm their land during maha 1983/84.

The only solution to this problem is to ensure that the tapering off of the construction phase and the reduction in the number of job opportunities coincide with the commencement of reliable water issues. There is also a need to reassess the importance of casual labor for settler well-being after the construction phase terminates. We certainly have underestimated its importance, and believe the same applies to Mahaweli planners. For this reason, more attention need be paid to ways for increasing the employment of settler family members in the ongoing maintenance of main and branch canals and of D-channels. Such work could be integrated with the strengthening of water user associations, including their capacity to do maintenance contract work.

d. Sickness

While the deathrate in Mahaweli Settlement areas appears to be gratifyingly low (with the exception of deaths from snakebite), we have found frequent cases of illness among household members of our thirty-one families. These include malaria, diarrhea, and respiratory ailments. To cope with illness, we believe that the health care system pioneered in H-5 should be replicated as soon as possible in other systems.

We believe that the need for improved health services is especially critical in Zone 1 of System B, and perhaps equally critical in Zone 4 of System C. This is for the following reasons:

(1) The relative isolation of these two zones.

(2) The lack of existing medical facilities in the form of both personnel and buildings.

(3) The fact that many of the settlers currently being moved into the areas concerned are evacuees from the Victoria reservoir basin.

Currently being settled, we were told that these evacuees will have to bring their families by the end of the year because of the construction timetable for the Victoria dam. That means that either

just before maha (and hence during the hotter, dryer months) or during maha (and hence during the rainiest months) wives and children from a malarial-free area will be brought into an isolated malarial zone. We believe that current arrangements made for medical services for them are completely inadequate, with the result that the type of heightened death rates and rates of illnesses that have accompanied the resettlement of reservoir evacuees elsewhere in the tropics could occur here. Morale among these settlers may already be low (especially in regard to those going to System B) since some of them had expected to go to System H as early as 1981/82.

We suggest that the evacuation timetable for the Victoria reservoir be very carefully reassessed to determine whether or not it is absolutely necessary to move out all these families by the end of the year or whether or not their removal can be better coordinated with the provision of adequate services within Zone 1. Regardless of the evacuation timetable, however, medical services should be improved. Specifically, we recommend that a resident doctor be recruited to serve the needs of these settlers; that staff and facilities at the Aralaganwila rural hospital be upgraded (we understand that no nurses are currently in residence there); that a reliable mobile medical service be organized to visit each area on a fixed schedule; and that properly refrigerated antivenin be made available, especially in the more isolated areas such as Zones 4 of System C and 1 of System B. In assessing the first draft of these recommendations, the evaluation study adviser also re-emphasized adequate drinking water, "perhaps by stepping up the number of bowsers in operation."

e. Schools

The better education of their children is one of the major goals of settler households around the world. Unless schools are well staffed with trained teachers, relevant curricula, and adequate equipment there is the danger that children will drop out at an early age, hence leading to both unemployment and underemployment as well as to wastage of human potential. Though many settlers consider current schooling facilities to be better than in their home area, others (especially evacuees and new settlers from electorates) consider them to be of lower standard. The main problem is not so much buildings (although their construction is behind schedule in a number of areas) as trained teachers -- especially in such areas as math, science, and English-language medium.

Though improved housing is an important incentive, we believe that other incentives are needed to attract first-rate teachers. One possibility, which could also be used for nurses and other medical personnel, is to link a home garden or other agricultural resources (possibly including a 2.5 acre allotment) with each post which could provide additional income and perhaps be used for demonstration purposes. Should a teacher leave after several years, the resources would be reallocated to his successor, although, as a further incentive, they might be permanently handed over after a prolonged period of service. Such incentives might attract better teachers, especially those who were born and raised in the Mahaweli settlement areas.

CONCLUSION B: It is best that water management functions not be merged with community development functions, and that settlers be the principal office bearers in both water management committees and in community development societies.

We have already discussed under Conclusion A why we believe it is a mistake for MEA officials to head up at the hamlet level community development societies. As currently organized, these societies consist primarily of turnout leaders supplemented by representatives from women and youth. We believe that it is a mistake to combine water management functions in this way with community development functions. In the years ahead water management at the turnout level is going to be crucial. If turnout leaders operate and maintain their turnouts efficiently and effectively, and if they cooperate to carry out similar activities at the D-channel level, that will be a major step toward increasing productivity. In the meanwhile there is a major danger of overloading turnout groupings and their leaders with too many activities; of spreading them too thin.

A possible alternative or supplement to the community development society at the unit level is the water management committee that is being experimented with in parts of System C, Zone 2. This is based on the Minipe model. We interviewed the members of one such unit in Agalooya, including the president who is a settler rather than a MEA official. This jalapalaka committee (as its members referred to it) consists of twenty-two turnout leaders. They meet monthly during the cultivation season, discussing the water rotation calendar and pointing out leveling and canal defects to attending MEA officials (including the engineering assistant as secretary and the unit manager as adviser).

We suggest that this experiment with water management committees be very carefully assessed for possible replication throughout System C and in Systems B and H. Consideration should also be given to reinforcing the development of such committees by expanding the Institutional Organizer system pioneered at Gal Oya (and proposed for the Pimburetewa area in System B) to the Mahaweli areas. During the next few years improved water management is going to be a key to raising agricultural productivity and general production. For this reason we believe that participatory settler organizations based on the irrigation system are more important in both the short run and the long run than are associations based on residential units like hamlets. Generally speaking our observation is that the smaller turnout units are working quite well, with a significant number of turnout leaders being selected from the bottom end of the turnout. According to the large majority of household heads whom we interviewed, their turnouts were slowly improving their capacity to handle operations and maintenance activities. Rather than disperse the activities of turnout leaders too much, we believe it makes more sense to federate them at the unit level as is the case with the experimental water management committees in System C. In time, such committees might also play a greater role in mobilizing manpower for maintaining D-channels and eventually branch and main canals. Such activities would also provide needed employment, especially for settler children.

While emphasizing water management, we do not mean to imply that community development societies as currently implemented at the unit level are unimportant. On the contrary, in a number of units they are playing an important role in fostering women's and youths' activities and in bringing into existence funeral aid and temple societies. Such activities and societies are a very important means for fostering a sense of community. But at least initially we believe that the main responsibility of turnout leaders should be water management rather than community development. We also suggest that community development societies as currently organized are too bureaucratic. Dominated by the unit manager they are seen by settlers as MASL organizations rather than settler organizations. They should have their own leaders.

CONCLUSION C: In all systems the second generation problem exists now. During the next five to ten years it will result in subdivision or fractionated claims on output, increased pressure to grow rice, reduced incomes, and reduced development potential for the AMP as a whole unless a serious effort is made now to diversify food production and to create nonfarm employment. This effort should start now.

The second generation problem exists now because the proportion of Mahaweli settlers who are resettlers and evacuees is higher than initially estimated. Though we have incomplete data on this point, it would appear that these two categories made up nearly 75 percent of all those families settled to date in Systems H, B, and C. Although the proportion will be lower in the future, nonetheless at the end of the AMP it would not be surprising if 50 percent of all settlers are resettlers and evacuees. These two categories, of course, include the full range of family categories -- from recently married couples with no children to elderly couples with five or more. At least half of the families that we interviewed have children who have either recently married or will marry within the next five years. They will need land or jobs or both for their support.

The most recent research on the second generation problem has been carried out by R. Wanigaratne at Kaltota in the Upper Uda Walawe Basin during 1982-83. In various discussions he told us that while actual subdivision of holdings may not occur, "the claim on the output is highly fractionated" among the descendents of the original settler who has allowed children and other dependents to work the holding. With reduced access to land per capita, these operators tend to emphasize paddy production to meet the subsistence needs of their households. As more and more people cultivate less and less land, incomes tend to drop as does the potential for the scheme to generate nonfarm employment.

The logical solution to this problem is a synchronized approach that involves increased agricultural productivity, farming systems diversification and nonfarm employment generation.

CONCLUSION D: The present system of advanced alienation should be reassessed in terms of current advantages and disadvantages for settler heads and their families.

Over the years major changes have occurred in the way in which settler household heads and their families are involved in downstream

activities. The current system of advanced alienation practiced in System C, Zones 3 and 4 and in System B is very different than what occurred in System H or in Zone 2 of System C.

In System H, household heads and their families were not actively involved in the construction of D-channels and in field canals. In Zone 2 of System C a new system was initiated whereby household heads became worker/settlers. Prior to the arrival of their families they lived in dormitories and as members of worker/settler groups they did contract work on D-channels and downstream work at the turnout level. The amount of time that they spent in dormitories varied, lasting in some cases for nearly a year or more.

Subsequently, for a variety of reasons including settler desires to be reunited with their families at an earlier date, the current system used in System B and System C was initiated. Here so-called worker/settlers are organized into groups of six of their own choosing in their areas of origin, with a self-selected leader. Within a few days of arrival they are shown their home lots and begin building their houses (temporary in System C and permanent in System B). In some cases the group of six works in turn on each allotment, in other cases it is split into segments, and in still others individuals work largely alone with their own relatives. As soon as a kitchen or part of the house is complete they are assisted, indeed encouraged, to bring their families, with families then helping with on-farm development.

The present system has both advantages and disadvantages. Advantages include the following:

(1) The period of separation of family members during the settlement phase is reduced.

(2) The risk of subsequent disruption of initially formed worker/settler groups is also reduced, allowing attention to be focused on the formation of turnout groups (and, as recommended under Conclusion B, of water management committees) when 2.5 acre paddy and other crop allotments are shown.

As for disadvantages of the present system, these include:

(1) Arrival of families before social services are ready for them, putting the education of children and the health of all in jeopardy.

(2) Failure of the present system to encourage group activities in the same way that the initial worker/settler system did in Zone 2. Though groups of six are formed from the start, as soon as settlers receive their home lot:

(a) They are more apt to work alone on their houses and highland allotment.

(b) They are less likely to do contract work on D-channels.

In both cases the formation and strengthening of participatory action groups may be delayed.

We believe that it is very desirable for settlers to participate in canal construction and on-farm development provided they do not have to wait more than eighteen months for their first water issues, and provided families are not subjected to the hot and windy months of August-September and the rains of maha without access to adequate health and educational services.

The eighteen month figure is considered the maximum. One senior MASL official felt that the first water issues should be made available within six to eight months. He favored viewing those working under advance alienation conditions as settlers/casual laborers rather than as worker/settlers with causal labor providing needed income during the initial months and reducing the MEA workload. We find this view an attractive one. Where water issues are delayed beyond a certain date there is the danger that settlers will lose their initial pioneering spirit, with disillusionment replacing optimism. Or as another senior MASL official put it, "if resettlement is continued in haste without being sure of providing irrigation water shortly, (the) same disillusionment and cynicism that prevail in System H would soon occur in System B & C also. Perhaps it would be more serious in these latter two systems." The final point is an important one. While some of the problems constraining development in System H are not applicable to Systems C and B, no advanced alienation was practiced in System H -- hence eliminating one potential cause of disillusionment. Such disillusionment is definitely a possibility in Zone 5 of System B if irrigation water is not available for the first settlers this maha. In that event careful monitoring is crucial with corrective action taken as needed.

Ideally, the best system may well be the hardest to achieve in practice. This is where settler/laborers live and work together for approximately three months during which time:

(1) They become familiar with their new area.

(2) They learn to work together in self-organized and self-led groups.

(3) They work on D-channel contracts, let to their own groups.

Then at the end of three months, they are shown their home lots and begin house construction and land preparation. But such scheduling is hard to achieve with the result that settler/laborers may find themselves living in dormitories for over six months ("hell on earth" in the words of one settler) because of delays in home lot surveys and so on. Or when 2.5 acre allotments are finally surveyed, it is impossible to give members of a particular settler/laborer group contiguous plots so that their earlier cooperation in constructing canals and doing on-farm development cannot be transferred to water management simply because the distribution of land requires the original group to be split up. For these reasons the system currently practiced may well be the best provided:

(1) Social services are available when families arrive.

(2) Water is received within eighteen months at the very latest.

We recommend that the MECA, MEA, and the MASL be continually alert to hamlets and zones where these conditions cannot be met. In those cases, a different strategy of induction of settler families should be followed so as to reduce unnecessary suffering among family members.

CONCLUSION E: The MASL, the MEA, and the MECA have still not developed the planning capabilities to realize the full development potential of the AMP. As each month goes by the possibilities for realizing a fuller range of benefits are reduced. The necessary planning studies are needed now, especially in regard to increased employment generation.

Since 1979 this point has been made time and again by informed people within the Mahaweli agencies, in other government departments, and in nongovernmental agencies. Since 1979 very little action has been taken to institutionalize the necessary planning capability within the Mahaweli agencies. While it is probably too late to take action

within the MASL and the MEA or to commence the lengthy process of contracting for expatriate expertise, it is not too late to pull together a team of Sri Lankans, with expatriate assistance where needed, to carry out the necessary planning studies. These are vital if the production and employment potential of the AMP are to be tapped. Without them, there is increased risk that ten to twenty years from now the current settler population will have subdivided their holdings among their dependents -- whose main production goal will be to produce rice for subsistence.

We suggest that the common theme of the planning studies be employment generation, here defined to include the following categories:

(1) Settlers and their dependents.

(2) Seasonal farm labor.

(3) Permanent farm labor.

(4) AMP administrative and service personnel (including MASL, MEA, and MECA personnel, teachers, health workers, police, and so on).

(5) Nonfarm employees and employers in hamlets, village centers, and townships (including artisans, shop owners, and commercial and industrial employees), with special emphasis on the larger regional towns.

We also suggest that the separate studies be carried out under a single management structure, with reports submitted directly to the Director General of the MASL so as to speed up their implementation and their utilization in the making of policy decisions.

While the terms of reference need be designed by those with the necessary expertise, we believe that the following types of studies are needed.

1. The Employment Potential of Different Agricultural Diversification Strategies at Different Levels of Production

The current emphasis on agricultural diversification is based more on water management (water scarcity), soil suitability, and imminent rice self-sufficiency considerations than on employment generation

potential. Yet it is well known that many of the SFC require more labor than rice. Already teams of seasonal laborers are traveling about the Mahaweli systems for rice transplanting activities. Crop diversification at the household and hamlet level raises the possibility of a permanent labor force resident within the Mahaweli areas or adjacent to them which can make a living wage by carrying out a range of agricultural activities throughout the year. Seasonal and permanent farm laborers have different needs for social services and housing; hence policy decisions are needed regarding the desirable mix between the two types of farm laborers.

2. Pricing Policies for SFCs and Dairy Products

Current thinking within the MASL includes, for example, the further integration of livestock within the farming system at household, hamlet, and systems (especially System B) levels, with special emphasis on dairy products. Yet it is doubtful if this potential can be realized granted the present prices paid to dairy producers. This is only one example of pricing policies that need to be reexamined.

3. Farm Budgets that Can Be Expected by Intensifying Rice Production During Maha and by Growing SFCs on Better Drained Soils During Yala

Recent research shows that linkages between the agricultural and urban-industrial sectors have been underestimated. As production increases and settler net incomes rise, the main value added comes not from agro-industry but from the increased consumption by settler households of a widening range of production and consumption goods and services. In both cases employment generation is stimulated provided the goods and services consumed are locally produced and the foodstuffs locally processed. At the same time agricultural diversification provides both food for nonfarm employees and materials for agro-industry.

4. Marketing Needs as They Relate to Local Processing and Storage, Transport, and Local and International Demand

The recent AID-financed study by Agro Skills shows that Sri Lankan agencies have the capability to carry out such studies.

5. Employment Generation in Market Towns Serving the Older, More Successful Sri Lankan Settlement Schemes

Several such studies would provide considerable insight into the types of goods and services that "successful" settlement households consume. Such information would assist planners in formulating the necessary incentives and policies to attract and speed up the growth of the more relevant private sector enterprises. Though some of these enterprises can be expected to develop independently in due course, others will not. And even those that would have developed without government stimulation will take longer to appear as in the Minneriya case. But, as previously noted, the second generation problem has already begun within the AMP so that development agencies can not afford the luxury of allowing nonfarm employment to grow slowly over the next fifty years.

Studies might be carried out, for example, in Hingurakgoda (an older settlement town in Minneriya) which continues to boom; in Amparai (a Gal Oya settlement town of the 1950s); in Embilipitiya (a Uda Walawe settlement town of the 1960s); and in Eppawala (a Mahaweli settlement town of the late 1970s). As net incomes go up, the Minneriya experience suggests that a significant amount of settler income is spent on imported goods. Projections of demand for such goods might lead to policies for their assembly and/or manufacture in Sri Lanka.

6. Incentives and Policies Needed for Attracting the More Relevant Commercial and Industrial Enterprises

Such incentives could include rural electrification and special rates at time of start up, various tax incentives and hedges, small enterprise loans and so on. Based on evidence elsewhere in Asia, we assume that it costs less to create industrial jobs in small scale enterprises in the rural towns of Sri Lanka than in Colombo.

7. Urban Functions Needed to Serve the Agricultural Communities and Urban Populations

Current Mahaweli planning pays very little attention to nonfarm employees. If their needs for housing, social services, and community are neglected, that very neglect will be a factor in reducing the employment potential of the AMP.

8. Rural-Urban Linkages Between the Mahaweli Systems; Between New and Old Settlements; and Between Existing Regional Towns Like Polonnaruwa-Kaduruwela, Kekirawa and Trincomalee, and the Mahaweli, Madura Oya and Kala Oya Basins

No systematic surveys for planning purposes have yet been carried out in regard to such linkages, nor have studies examined the impact that other development projects within the Mahaweli basins areas might have on dry zone development. A case in point is the vast fertilizer deposits in Eppawala which are apparently soon to be worked on a much larger scale with literally hundreds of thousands of tons exported through Trincomalee. This enterprise is apparently being planned as if it existed in a vacuum, just as the Mahaweli systems have been planned as if they existed in a vacuum. Yet surely they have important implications for each other and for Sri Lankan development. Indeed, special attention probably should be paid to Trincomalee's potential role in Mahaweli and dry zone development.

Those eight studies have been broken down in order to briefly describe them. But they are still interrelated, hence our suggestion that they be carried out under a single management which might well be a joint venture involving several Sri Lankan consulting agencies, along with Sri Lankan university and other personnel (including expatriates where desirable). Since the Sri Lankan Mission of U.S. AID is well disposed toward the types of studies outlined above, AID could be approached as a possible source of funding.

In closing, we wish to reemphasize that the policy decisions which could arise from such studies are long overdue -- hence the need for the studies to commence no later than the end of the current year.

CONCLUSION F: The Mahaweli agencies need their own institutionalized evaluation capability.

Though the PMU of the MASL has a fine-tuned capacity to monitor the AMP and in time (with UNDP assistance) will develop a region-based planning capability, currently it has no evaluation unit. As for the MEA, its evaluation capacity, like that of the PMU, is restricted to a single senior official -- the socioeconomic studies unit of the MDB having been previously disbanded. We recommend that small socio-economic evaluation units (with three to four trained personnel under senior leadership) should be institutionalized within both the PMU and the MEA. Such units should have the capacity to carry out

rapid surveys relating to the types of critical issues that inevitably arise as settlement projects evolve. They also would have the responsibility to draw up the terms of reference for the type of surveys and studies contracted to university personnel, consulting agencies, and others outside the Mahaweli structure. Their existence would also allow the current settlement adviser in the PMU and the MEA research officer to more effectively use their research and analysis skills.

CONCLUSION G: The MASL should give more priority to developing the regional planning capability of the PMU.

Although the PMU already has a macroplanning section, we believe that the potential of this section to act as a development planning secretariat for the Steering Committee has yet to be thought through, let alone realized.

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