

TRIBUNE

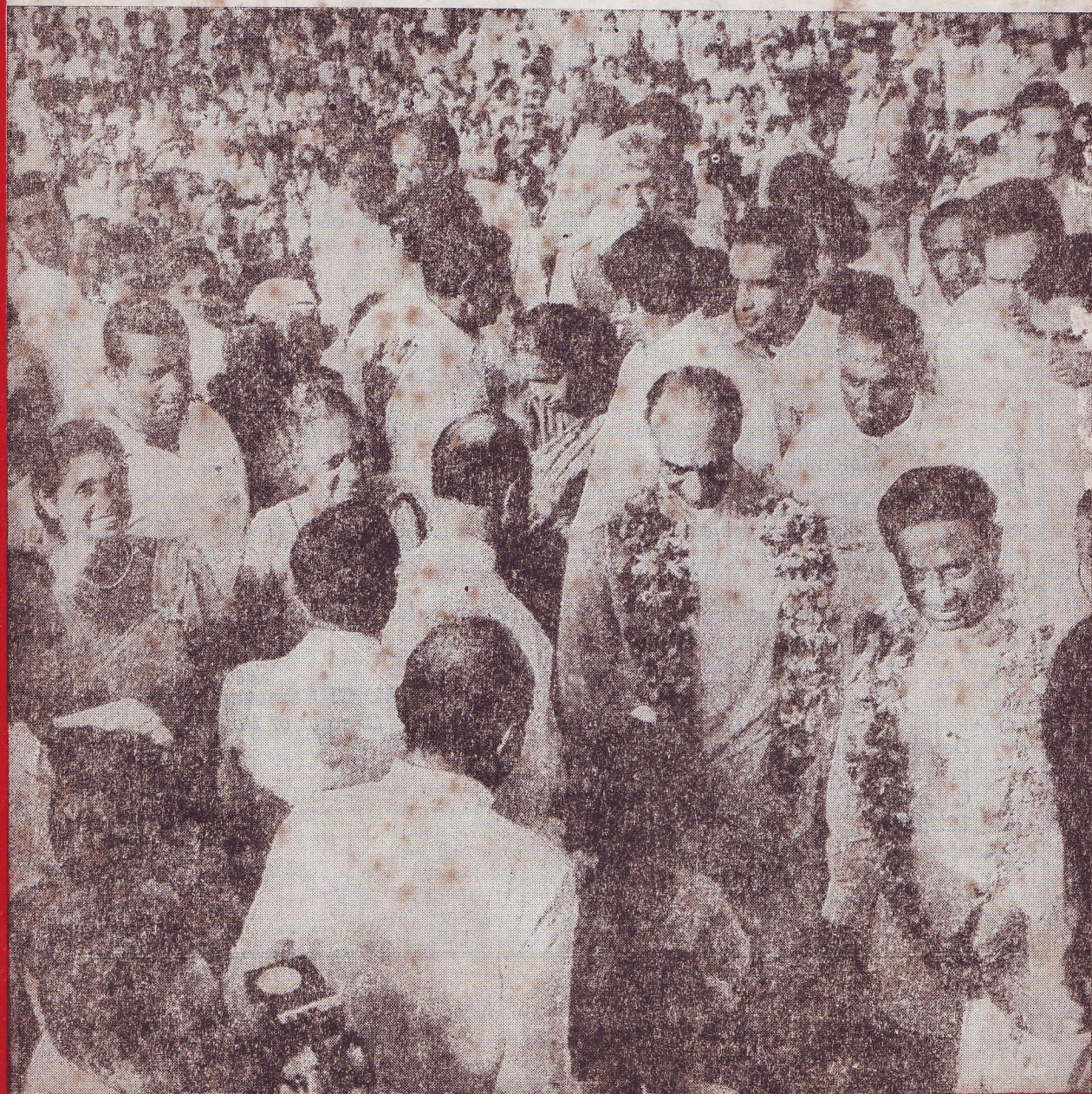
CEYLON NEWS REVIEW

Vol 28 — No. 5

November 19, 1983

Rs. 4.00

- MILLION HOUSES
- HECTIC WEEK
- ENCROACHMENTS
- MILK & MEAT
- LIVESTOCK
- WATER DECADE
- SEED SCANDAL



TENDER NOTICE

MINISTRY OF LOCAL GOVERNMENT HOUSING AND CONSTRUCTION. DEPARTMENT OF BUILDINGS.

Tenders for Construction of the under mentioned buildings at Karaliyadda Hospital will be received by the Chairman, Tender Board, Department of Buildings, Colombo 1. up to 10,00 a.m. on Wednesday 30th November, 1983

02 Tender Forms could be obtained from District Engineer, Kandy North before 4.15 p.m. on 25.11.83. by contractors and 'Trail Letter' holders of Department registered for amount shown against each of the items below and on production of a tender deposit receipt for Rs. 250/- for each of the items issued by the Buildings Department, Colombo, or any Kachcheri outside Colombo.

Schedule.

Minimum amount of Registration.

1. 2 No. wards of 12 Beds	..	Rs. 1,260,000/-
2. Maternity ward of 24 Beds	..	Rs. 1,200,000/-
3. Kitchen	..	Rs. 420,008/-
4. Children's ward of 11 Beds	..	Rs. 630,000/-
5. House Officer's quarters	..	Rs. 1,440,000/-

Any further particulars and / or instruction could be obtained from the above Engineer.

K. C. Samaraweera.
Director of Buildings

Department of Buildings,
P. O. Box 504,
Colombo 1.
12.11.1983.

TRIBUNE

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LETTER FROM THE EDITOR

THE PICTURE ON THE COVER this week is a scene from the Udagama held at Nikaweratiya towards the end of June this year when the President paid his official visit there on this return from his foreign tour. Much water has flown under the bridges of Sri Lanka since that time. The nationwide euphoria generated by the Nikaweratiya Udagama was unfortunately rudely disrupted by the ethnic disturbances in July/August which dealt a serious blow to law and order, communal peace and the national economy. But it is to the credit of the Prime Minister that he has sustained his Gam Udawa and Village Reawakening Movement through the dark aftermath of the holocaust. And apart from carrying the message of peace, communal amity and national unity in an undivided country to the rural countryside, he has started the work from the next Udagama next June. The site was chosen whilst the Nikaweratiya Udagama was in progress in the hamlet of Korakewa near the Tissawewa Tank in Anuradhapura. The new village comprising 60 houses will mark the fifth anniversary of the Village Reawakening Movement. Prime Minister Premadasa visited the site recently and after inspecting the work already done instructed the officials to ensure that the centuries old big trees on the site were not destroyed to make room for the new village. The Prime Minister had also detailed his plans for his million house programme to be launched in all electorates in the rural areas from January 1, 1984. He has repeatedly pointed out that the Gramodaya Mandalas must play the most vital role in the implementation of the one million house programme. Speaking at a seminar recently held at the Colombo Kachcheri on the One Million Houses Programme and the Gramodaya Mandala Scheme he had called upon the Chairmen of the Mandalas to consider the responsibility thrust on them as a challenge and prove their worth by making this bold and ambitious national exercise a success. He had said: "We don't expect to implement our program through private contractors. We rely on the masses for manpower, and planning involved. The people themselves will be the architects of their future." He further pointed out that the involvement of Gramodaya Mandalas in this housing program would also help them to foster communal amity at the village level and thereby preserve our unitary state. Those who tried to undermine national unity were against the people's welfare and progress. Mr. Premadasa also said the one million houses program would transcend all barriers whether it be political, racial or linguistic. The main aim was to work for the betterment of humanity and give a better standard of living to the people even under trying circumstances. Peace, unity, discipline, which were the prerequisites for development, should be the guiding force in the operation of this gigantic program. It was therefore important, he said, that before construction work on the program commenced on January 1, religious observances should be held in every village, in each Gramodaya Mandala area, to invoke the blessings of all religions and faiths towards the success of this project and the realisation of its objectives. These religious ceremonies should be held in Buddhist temples, kovils, churches or mosques situated in the village with the assistance of the Gramodaya Mandalas of the area. Mr. Premadasa said that with housing development many other amenities and development like water supplies, roads, sanitary facilities as well as agriculture like home gardening would follow. The tendency to divide the people through petty differences should be avoided as unity and discipline were the essential factors for the success of this program. The one million housing program is to be implemented at the Gramodaya Mandala level when people would be given loans or building materials to upgrade or put up new houses on self-help basis. From January 1, five houses are to be built each month in each of the 5000 Gramodaya Mandala areas.

New Political Upsurge

Colombo, November 12: In the period after the July disturbances, political activity was minimised for nearly three months but in the last fortnight there has been a hectic resurgence of developments on the political front. Three left Parties, always highly vocal and articulate, were proscribed at the end of July. Of the three—CPSL, the JVP and the NSSP—the first (the CPSL) has now come back to legal existence but the ban on the other two has not been lifted. Some of the leaders of the JVP and NSSP are underground or have escaped abroad, and though the SLFP, MEP and now the CPSL have demanded that the ban on the two Parties should be lifted and that all political detainees should be released, the Government has not acceded to this request. Only the leaders of the CPSL who had been detained have been released. The *Aththa* and the *Forward* have made their welcome appearance and their sharp and terse comments have begun to enliven the political firmament. The SLFP went through a further period of turbulence and Mrs. Bandaranaike had emerged once again in total control of the Party. The so-called "radicals" led by daughter Chandrika and her film-star husband Vijaya Kumaranatunge, through ably assisted by one-time SLFP heavyweights like T. B. Illangaratne and the late Hector Kobbekaduwa, were routed in the inner-party politicking and squabbling. Maithripala Senanayake had kept out of this final drama and now seems to be willing to serve under young Anura Bandaranaike who has been elevated to the high eminence as the Leader of the Opposition. Though the SLFP (S) had at first picked on Lakshman Jayakody as its choice for the Opposition Leader's post, there was a sudden reversal early this week, 48 hours before Parliament was due to meet, and Anura became the SLFP choice. All other Opposition Parties and groups, being agreeable including CPSL, MEP, SLFP (Maithripala) and SLFP (SDB), the Speaker had no difficulty in naming Anura as the Leader to the Opposition.

IN THE NORMAL CIRCUMSTANCES, judging by the amount of votes polled in the 1977 general elections by the different parties, the SLFP should have headed the Opposition. But the vagaries and anomalies of the first-past-the-post system had created a situation where a regional party, the TULF, was rocketed into being the chief Opposition Party. The *Daily News* (9/1/83) in its editorial had pointed out: "With a measure of consensus unusual in the recent history of the SLFP, the various factions of the party have agreed on the nomination of Mr. Anura Bandaranaike as Leader of the Opposition. Other Opposition parties too appear to have acquiesced in the selection in a Parliament that has witnessed the TULF, until now the

largest group in the Opposition benches, liquidate itself as a force in the assembly of national representatives. The latest event might prove significant in several ways. In the eyes of many, the TULF in Opposition emphasised the communal content in our national affairs. The Tamil pro-occupation with ethnic differences featured as repeated element in debates and on variety of issues. Plainly, the communal line has proved self-deeating. This is not the first occasion on which, of course, the Tamils staged a boycott of a national assembly. Hopefully, a changing climate will lead to a reconciliation and the re-appearance of other Tamil representatives who will work for the common good without insisting on a truncation of the country...."

The editorial then went on to point out: "Mr Anura Bandaranaike, youthful in years, but seasoned in the processes of public affairs has sometimes been the stormy petrel within the SLFP. In the several encounters in which he has figured, he was not been unwilling now and then to resist various sections of the family. His isolation at times from the rest of that circle, implies a capacity for a larger vision than parochial considerations alone can supply. If Mr. Bandaranaike can infuse a keener participation of the Opposition in the larger interests that affect the people, he will be making a healthy contribution to democracy in Sri Lanka. As early as 1977, the UNP leader on seeing the overwhelming majority his party had won, soon realised that he would have to lead the country without the benefit of strong Opposition. Neither freedom, nor development whether economic or intellectual is served by a single party system where thought is controlled, dissent suppressed and the clash of views mistaken for treason. Plainly of, course, a Parliamentary Opposition is clearly distinguishable from any resort to arms, from violence and bloody conflict as a way of resolving different points of view, as a way of balancing conflicting interests. While Mr. Anura Bandaranaike can claim to have risen above the charge of family bandyism, he can also rightfully claim something of the charisma that his parents in turn, once claimed. His father was one of President J. R. Jayawardene's colleagues once. Despite their party differences, Mr. Bandaranaike plainly enjoys the confidence of Mr. Jayawardene. All these factors seem to favour a new start—on a road that will hopefully lead to a brighter future and a renewal someday of Tamil participation in its fullest splendour. The door to such renewal remains open."

The *Island* (10/11/83) in an editorial entitled THE CHALLENGE BEFORE ANURA stated: "The more noteworthy and piquant features of Mr. Anura Bandaranaike's nomination as Leader of the Opposition have already been commented on in the profiles of him which appeared yesterday. He is the son of two Prime Ministers who were themselves Leaders

of the Opposition. He is also perhaps at 34 the youngest Leader of the Opposition in modern times anywhere in the world. But these are only the more public oddities of Mr. Bandaranaike's rise in Parliament. What is much more important is what this portends for the system of Parliamentary Government and the country as a whole at a sensitive and delicate time in Sri Lanka's history. The Tamil United Liberation Front was the beneficiary of the SLFP's humiliating rout at the 1977 General Election. If not for the SLFP's decimation and the Left's total rout, a political party basing itself on a single community and one part of the country could not have propelled itself to the head of the country's Opposition. The leaders of the TULF, such as Messrs Amirthalingam, Sivasithamparam and the late Kathiravelupillai, were undoubtedly men of ability capable of making a contribution to the country and the affairs of Parliament but unfortunately their mandate circumscribed them. Thus did post-1977 parliamentary politics undergo its most serious distortion, a distortion which had to culminate in the bloody holocaust of July 1983. This is also the measure of the challenge which Mr. Anura Bandaranaike faces. For the first time since 1977 the country sees in him a Leader of the Opposition who stands for the interests of the inarticulate and the oppressed all over the country, the classical role of the parliamentary opposition. The task is all the more challenging because Mr. Bandaranaike stands at the head of a dispirited and bedraggled opposition which has not distinguished itself to any great degree since 1977...."

ANURA BANDARANAIKE, after his appointment as the Leader of the Opposition, has said all the correct things in the best parliamentary traditions. He would speak for the entire opposition and safeguard the rights and privileges of all members. He has further said that he did not think it was the duty of the Opposition only to oppose, and that he would support all the good things the government has undertaken to do: that he would strenuously expose all acts of commission and omission of the government and also fight for the rights of the minorities. He has said that he was opposed to Marxism because Sri Lanka was essentially Buddhist. He has also stated that should his mother's civic rights be restored and she returns to Parliament, he would stand down and help to make her Leader of the Opposition—a post she had held from 1965 to 1970. *It is yet too early to say what the repercussions on other political parties will be because Anura has become the Parliamentary leader of the SLFP and the undisputed Number Two in the Party (after his mother).* The parties, especially the CPSL, JVP and even NSSP, have never taken too kindly to Anura's anti-Marxism. MEP's Dinesh Gunawardene has ambitions of becoming a supreme leader of the Sinhala masses and may see in Anura a rival not easy to overcome. But the 64-million

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dollar question is how the dissident "radicals" in the SLFP itself will react. They had fought tooth and nail to oust Mrs. Bandaranaike mainly to pre-empt any attempt to make Anura continue the male dynastic line of succession in the SLFP. It will now be up to Anura to make good the opportunity that has fallen into his lap—without the travails of a general election—only because of the traditional (since 1931) boycott and non-cooperation strategies of the Tamil party. But for this, Anura could not have hoped to have this honour until 1989, that is if the mother was not in Parliament even at that time. But even if the mother now comes in and assumes the post that is rightfully her's Anura's claim to succession in the SLFP has been firmly established—unless he throws it away by what he says and does.

AS WE HAD ANTICIPATED LAST WEEK, the second visit of G. Parthasarathi, India's special envoy has been constructive and fruitful. Two separate statements issued in Colombo on Thursday, November 10 by the President and G. Parthasarathi indicated that a package of proposals to end the communal conflict had been worked out. President Jayewardene's statement was as follows: "Mr. G. Parthasarathi, the Special Envoy of the Indian Prime Minister discussed with me proposals regarding amendments to the DDCs Law which he would place before the TULF leaders to enable them to arrive at an acceptable solution to the present problems facing the Tamil community in Sri Lanka. Any proposals which are acceptable would be placed before an All-Party Conference in Sri Lanka. The consensus of opinion of the All-Party conference would itself be considered by the United National Party, Executive Committee and presumably by the executive bodies of the other parties as well, before being placed before Parliament for legislative action. The proposals would include: (1) The giving up of the idea of a separate state; (2) the merger of DDC within a province after acceptance by the Council's members and a referendum in the district. This proposal is applicable to the whole island; (3) The recognition of the administration of Trincomalee Port as Central Government function. I hope that if these proposals are implemented violent activity or support for violence will wither away."

In his statement, Mr. Parthasarathi said: 'I have spent three days in Colombo at the invitation of the Sri Lanka government. As I have mentioned earlier, my visit was part of the continuing process of India's good offices to explore the possibility of reaching a political settlement which would be acceptable to all communities and promote national harmony. During my last visit in August certain proposals were put forward and these were further considered during this visit. Intensive discussions were held in a friendly and constructive atmosphere on specific

issues of concern. I had five long meetings with His Excellency the President and met the Prime Minister Foreign Minister and other Cabinet Ministers. I also had discussions with Mr. S. Thondaman, Minister of Rural, Industrial Development. I also met several leaders of the Opposition parties. Positive ideas have emerged in the course of these discussions and tentative proposals have been worked out to provide for greater devolution of powers to the region. These essentially centre on the creation of Regional Councils with appropriate powers within the framework of a united Sri Lanka. The President's statement mentions the procedure to be adopted. Since the leaders of the TULF were not present in Colombo, I will be discussing these proposals with them in my return to India and will communicate their responses to His Excellency the President when he comes to Delhi for the Commonwealth summit. We are looking forward to his visit."

REPORTS INDICATE that Parthasarathi will meet the TULF leaders in New Delhi on November 17 and place their views before the Indian Prime Minister before she meets President Jayewardene in New Delhi before, during and after the Commonwealth Summit. TULF Chairman Sivasithamparam in a statement in Madras had stated that it was necessary to obtain clarification and amplification about the proposals and had also indicated that it was necessary in the Tamil areas for the local authorities to have some control over the police and armed service. Mr. Thondaman is expected to join the TULF-Parthasarathi talks in New Delhi on November 17. It is believed that he will also have discussions with terrorist leader Uma Maheswaran and Prabhakaran and has suggested that if the discussions prove fruitful a pardon on the lines afforded to JVP leaders should be extended to them. Whilst the UNP leadership and the rank and file now seem willing to accept Thondaman's role in the Jayewardene-Indira Gandhi-TULF talks, some circles in the SLFP and MEP seem to resent his "interference"

The *Daily News* (12/11/83) no doubt reflecting government thinking on the matter in an editorial entitled SINGS OF RECONCILIATION stated: "The separate statement issued by President J. R. Jayewardene and Mrs. Indira Gandhi's special Envoy Gopalaswami Parthasarathy cast a clear ray of hope that the hitherto intractable problem of the North might yield to determined negotiation. The negotiation between the Lankan President and Mr. Parathasarathy could reopen the way to a new approach free of fears and bitterness. The exchanges so far show signs of determination to pursue a settlement: what is more, a settlement through negotiation with out violence or rancour and, if we may be forgiven for harking back to the Bible, without letting any man put asunder what God has bound together. The negotiations have proceeded within a framework

that ensures a single unitary state. Propitiously the new Leader of the Opposition, Mr. Anura Bandaranaike has declared his own willingness to assist in protecting the rights of the minorities while, of course, doing justice to the rights of the Sinhala majority as well. The Sinhala/Tamil dispute undoubtedly is primarily a domestic issue. But it is also true that several national problems in today's world can spill over and involve others—not always with the promising results that the Indian Envoy's presence has achieved. For the present, then, the country must acknowledge the statesmanship of His Excellency President Jayewardene, the good offices of Mr. Parthasarathy and the goodwill that others have shown in the effort to restore peace and stability to our island paradise." *It is to be hoped that the spirit of goodwill that has been generated in Colombo will develop until reconciliation is achieved. The next two or three rounds will be in New Delhi and no one can complain that either Mrs. Gandhi or Parthasarathi have used the big stick to achieve the progress so far made.* In this connection it would be useful to refer to The *Forward* (7/11/83), CPSP's English journal, which had a pithy editorial comment on INDIA'S ENVOY: "We welcome President Jayewardene's latest decision to invite Shri Parthasarathy to visit Sri Lanka for the second time. After the first visit, President Jayewardene apparently got cold feet, caved in to the pressures of a powerful section of his Cabinet and asked the Indian envoy's second visit to be postponed. If he has now picked up courage and decided to reassure himself, it is a positive development. It is utter nonsense to accuse Mrs. Gandhi of trying to interfere in our internal affairs. After all, it is President Jayewardene and his government that in the first place asked her to play a role in these matters. No amount of howling by those who want the ethnic problem to remain unsettled or by the CIA lobby that wants a confrontation between Sri Lanka and India can alter this fact. We do not expect Mrs. Gandhi to provide either short or long term solutions to our ethnic problems. We must do this job ourselves. But she can help to break the deadlock between the government and the TULF and thus get started the search for a solution through discussion and negotiation. ..."

It is in everybody's interest that the Delhi talks make it possible for President Jayewardene to place before Parliament a package acceptable to the TULF and which would create a situation where terrorism will wither away. Everybody must realise that this country cannot go forward unless there is communal amity and peace.

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ENCROACHMENTS

Of State Lands

Speech delivered by Hon. Gamini Dissanayake Minister of Lands & Land Development and Mahaweli Development at the press conference held on 31st October 1983 on the encroachments of State land.

I WISH TO BRIEF YOU very comprehensively and fully not only on the encroachments of the Right Bank of the Mahaweli. I want to express my views to you on the totality of all the problems related to land settlement the establishment of irrigation schemes and the policy that our Government has adopted from 1977. It should not be restricted only to the problem connected with the encroachments of the Right Bank of Mahaweli about which also I will discuss with you to any degree of clarity or detail that you would like to discuss with either myself or with officials of my Ministry. I need hardly stress, because most of you have been to the Mahaweli areas about the complexity of the programme. It is not a programme of merely constructing dams. There has been for years detailed studies both in relation to the engineering and settlement aspects of the Mahaweli scheme. After these were done with the Ministry of Finance & Planning our Ministry sat down the funding of these projects and what was originally considered to be a pipe dream, due to the vision of His Excellency the President, soon became a reality and today the Mahaweli Accelerated Programme is an ongoing programme, not only one of the biggest in Sri Lanka but perhaps one of the biggest in Asia.

There were serious problems—Engineering problems, manpower problems, and acquisition problems—problems associated with designing—for example as in Kotmale, the problems associated with the very difficult soil conditions. There were problems associated with the construction of the tunnels as in Victoria, where the tunnel cave in, and special equipment had to be flown from England, what you call telescopic shutters to prevent the tunnel caving in. We had shortages of engineers, we had problems in the transmission lines and every work site has a work force of 3,000—4,000 people whose discipline and morale has to be kept, problems of security where large quantities of blasting material and dynamite are stored, questions associated with the Port and transportation with huge machinery coming in, special facilities had to be created for cranes and thereafter transporting them safely to the work sites. Then for a third world country the very acute managerial problems of man power for finding enough engineers to work side by side with the Swedish engineers, British engineers, Canadian engi-

neers, German engineers, Indian and Pakistani engineers. Access roads had to be constructed, houses put up for expatriates and locals, whole villages had to be evacuated, homes found for the evacuees, compensation determined and paid in short a whole gamut of administrative and management jobs for which we were hardly ready. Virtually for every engineer who is here from abroad there are 2-3 Sri Lankan counterpart engineers, some of them very young but who have responded to this very complex programme very satisfactorily up to now. We have to clear the jungle which the Ministry of Lands does, before people move in. Timber cleaning, construction of bridges constructing major irrigation canals, secondary canals, tertiary canals are all part of this project. It is, I need not stress too much, one of the most complex projects that have been undertaken in this part of the world.

HAVING SAID THAT, we have never had a serious problem up to now. With 75% of the programme over, this is the first time that I had to speak to the press or explain to the press about a problem. Now what is this problem? The problem is the problem of some encroachments on the Right Bank of the Maduru Oya. Having dealt with that I will deal in some detail about the land policy of this government. The encroachments which were referred to in the press, and I do not know who is representing the *Daily News*—Mr. Sabaratnam—the *Daily News* had a front page article a few days ago saying that 35-40,000 people have moved in and that the Left Bank construction is affected and that the Right Bank construction programme has been affected and that there were serious problems associated with the encroachments which were referred to in those articles. I wish to say categorically that, that is not so. *The construction of the Left Bank is proceeding without any problems and the encroachers are nowhere near the parameters where the Left Bank Canal is being constructed and there has not even been half an hour's loss of work there.* I wish to say the same thing in relation to the construction of what we call the first step of the Right Bank Canal namely the construction of the NDK dam—NDK because it is a Dam built immediately below the Maduru Oya reservoir blocking 3 small rivers the Nagolla Oya, the Dioya and the Kadiyanna Ela. The NDK is going on without any interruption whatsoever and when I visited the Maduru Oya site with the Secretary and the Director General, I was assured by the Project Manager that they will finish the construction of the NDK dam before schedule—it will be completed this month. So it is incorrect to say that any Mahaweli Development work had been in any way hindered or affected by the encroachers. And if our Ministry was informed about any such hindrance, I can assure you that we would have attended to any such hindrance the moment it was brought to our notice. But no such communication

has been made and we have personally verified that these works have not been affected at all.

Secondly about the numbers involved. It was stated that 35-40,000 people have moved in. The view of the Army officials in command of the security of the area was to the effect that the numbers involved are about 3,500. My own view is that it could be more. It could be about 5,000. Now in constituting this 5,000 it is clear that personnel working with some of the contractors in the area—there are major contractors and sub-contractors who have also moved across to stake their claims for land. From the nomenclature of the places which people have put in front of their cadjan huts, a large number of electorates have been named but no classification has been done, no census has been taken and I wish only to say that the figure of 35-40,000 is overstatement of the numbers involved. But in relation to what steps we propose to take, it doesn't matter whether it is 5,000 or 45,000 because the steps that we take will be in conformity with the principles of government in relation to encroachments and the numbers involved will have no bearing at all on the steps that we should take and intend to take.

WISH TO JUST REFER to certain irrigation projects which have been done in other parts of the world—one is an Irrigation Project in the Philippines called the Chico River Irrigation Project where the construction work had to be stopped for one year because large numbers of people 5,000-10,000 people moved into those areas trying to stake a claim for Land It has been so with the Amazon River Basin Development. Encroachments became a daily occurrence. Thousands moved in from the North-eastern sectors of Brazil where there was subject poverty with a view to obtaining land. It has been so in Bolivia, Columbia and Venezuela. It has been so in some African countries and it has been so in our own country when my own Secretary, Mr. Ivan Samara-Wickrema was the Government Agent for Polonnaruwa and Anuradhapura when Padaviya Siripura irrigation scheme was implemented, when Kaudulla stage III was implemented, when Minneriya Stage IV was implemented, when Divulankadawela was implemented. It has been so in Jaffna when the Kariyalai Naga Padduwan Scheme was implemented. In relation to Anuradhapura, Polonnaruwa, Minneriya areas nearly 10,000 moved in and it had taken my Secretary then as the Government Agent together with the late Mr. C. P. de Silva, nearly two and a half years to regularise those encroachments. *That is a fact, so I have given these facts to you so that what has happened will not be taken out of context. What has happened I think has been a part and parcel of the crisis of civilisation which His Excellency referred to*

in his address on the occasion of the James Peiris Memorial Lecture.

That crisis of civilisation that he mentioned referred not only to the people who came to Colombo and threw petrol bombs at houses. It must include the totality of our society, and the search that we are making now after centuries of colonialism to find answers to some of our problems. Today in Colombo you see a large house which one generation owned consisting of one acre to 1½ acres. That garden is now subdivided into 10 perches and 15 perches for the children to put up houses or the land is sold in order to give an income to the children. This is so even in the villages. If a parent had one acre to 1½ acres unlike in the urban areas that one acre also gave an income to the family. Jak trees, Breadfruit, vegetables were cultivated. Income giving trees like pepper creepers, cardmons were grown. What is happening in the villages is that all these trees are being cut and land is given to children to put up houses

I would like to give you some facts and figures about the land pressure in certain parts of our country. In Galagedera the total land area is 30,720 acres. The population is 57,446. The average land holding therefore is .53 acres per person. In Harispattuwa the land area is 38,240 acres. The population is 136,699 and the land holding is .27 per person. In Kundasale, the land area is 21,760 acres. The population is 69,370. That is 31 acres per person. I wish to give you some facts from the Southern electorates. In Matara the total land area is 13,568 acres. The population is 100,000, and the average land holding .4 acres per person. In Devinuwara the land area is 21,612 acres, and the population is 92,344. Average land holding is .23 acres per person. In Akmeemana the total land area is 23,680 acres, and the population is 88,669, average .23 acres per person and if you take into account the fact that in these electorates there are people who own 50 acres, that is the maximum permitted under the land ceiling, you will understand how much you got to reduce from the total acreage that is available for the people.

I haven't got the figures in Jaffna, but in Jaffna the situation is the same. Then when you come to the plantations you find that all the villages in the hill country are encircled by the plantations and the villagers had no land for village expansion. I myself represent a hill country constituency and I find it difficult to get half an acre from a plantation because the position that is taken up is that those plantations are yielding valuable foreign exchange, and that it could be not in the national interests to yield such land for village expansion purpose. *Then the plantation labour itself has increased in large numbers and there is a lot of pressure from plantation labour itself to spill out, to move out, That*

is also a phenomena which we have to recognize and solve, and solve by concerted thinking, not by ad hoc methods, by all of us involved in this problem to find out what is the mist rational way by which a solution can be worked out.

The problem arises therefore in this way. With all this land pressure which I have mentioned to you just now seeking a solution, it is correct to say that there are still within this small country, consisting of 25,300 square miles large extents of land still uninhabited north of the NCP and east of Maduru Oya extending as far as Trincomalee and further down towards Batticaloa. These have not yet been developed, at least after independence, because there has been no irrigation facilities. No water. But even in these areas you will find where there is a small village tank, there is a nucleus settlement. So on the one side you will get as you find in Sri Lanka densely populated areas in different parts of the country and on the other hand you find vast extents of land either in jungle or in shrub jungle from capable of being developed and as in the case of the Right Bank of the Mahaweli, presently being developed.

To be concluded...

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BIOLOGY—TEACHING—2

The Colonial Legacy

By Prof. A. C. J. Weerakoon

Four and a half centuries of existence as a colony brought important addition to our feudal ethos. They brought us poverty; and they engendered in us (including our leaders and administrators) the colonial mentality. The first legacy, poverty, leads to insufficient and poor facilities in our teaching institutions. (Poorer than they need be, thanks to the operation of the second legacy, the colonial mentality). And though Biology-teaching generally does not need much very costly equipment it does need some—like microscopes and field-stations and transport and laboratory accommodation—When starve of these Biology-teaching must necessarily suffer.

Poverty also leads to overcrowding; that is, to far too many students per teacher. (Here again, more per teacher than there need be, thanks to the operation of the second legacy, the colonial mentality). At Glasgow University during the last academic year 1981-82—that is during a very lean and financially difficult time for universities in Britain—the Annual Report of the University court states that there were 2,144 academic staff to teach a total student body of 11,582; which gives student

staff ratio of 5.4: 1 whereas in Sri Lankan universities each teacher is required to teach nearly twice that number of students on an average. Biology-teaching here (as indeed teaching of all the sciences) must suffer and has suffered grievously.

It is both a measure of and a tribute to the dedication of our sadly demoralised teachers that there has not been a complete break-down of teaching programmes. Incidentally, it is interesting to note (in an article by D. P. Jayasuriya in the *Ceylon Daily News* of 21.9.83) that the Chinese Buddhist monk Huen Siang had reported that when he was a student at Nalanda University in India of the 7th Century AD, there were 7,000 students at 1,510 teachers. Each of those teachers, therefore had to teach 4.6 students—a better average than even Glasgow in 1981-82. It is no wonder that Nalanda was one of the glories of the ancient world; and that it is claimed that teaching there was mainly by discussion, that is, tutorials.

IN SRI LANKA on the other hand poverty has been allowed, indeed one might with considerable justification say, has been used, to over-crowd and to under staff our universities, and has already damaged the quality of teaching, including biology-teaching. History which lauds Nalanda, will have a much grimmer verdict on Sri Lankan universities; and will accept no excuses on behalf of those who fund and control them.

More damaging than the poverty which colonialism brought us is the mentality bred in us during those 450 years as a subject people. Those years, when our affairs were run by others, have taught us to be dependent on and to admire the foreign, have instilled in us a lack of confidence in ourselves and in our own abilities. Political independence when it came at long last did not bring the required, the essential spiritual and moral independence. It is sad how even the most revolutionary and anti-imperialist amongst our leaders, when in power looked abroad for advice and assistance in tackling any problem.

Whilst timely and essential help is valuable, to ask for foreign advice and assistance at every turn is to ensure that our nation shall continue in a state of tutelage of dependence. It leads to a lack of confidence in one's own specialists, in one's own experts, one's own teachers, including Biology teachers. It leads to rejection of their advice in favour of any advice from abroad, even the most meretricious and even the obviously self-interested.

It leads to a steady depression of the salaries one is prepared to pay these teachers, relative to those prevailing in less vitally important sectors of our society and, worse still relative to the current cost

of living. When one believes that one can import expertise in Biology teaching (and in other teaching) from abroad, expertise one has been conditioned (with the colonial mentality) to admire and to have confidence in, then one can with self-righteous composure neglect the fostering of local expertise in Biology teaching (and in other teaching as well, and indeed in all science and technology). It appears to one that there is no need at all to pay Sri Lankan teachers enough to attract the best talents into their ranks, nor enough to permit them to cultivate themselves so as to become better teachers.

Self-cultivation of the teacher (school, university, biology or other teacher) becomes more and more impossible because he hasn't the money for it. Instead he is forced more and more frequently to cultivate private practice of various sorts; private tuition, for example, leading to the neglect of his students during school hours; and even private business like that of making or buying and selling so that—so I have been given to understand—there are school teachers today who are known by names like "Karola Sir" and "Patties Miss" after their special lines of business. The university teacher hasn't yet come to this but the private practice he favours is basically as damaging namely, the marking of huge heaps of *non-university* examination scripts. Teachers are thus destroyed by the working of that second legacy, the colonial mentality, in their employers.

Is it really so difficult to realise that if one pays little better than one would a minor employee of a bank, than one must ultimately get a teacher little better than a minor employees of a bank? Perhaps it is; and perhaps that is what made someone state the following aphorism in easy understand language, Pidgin English: "Cheap things no good; good things no cheap".

To be continued...

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October 31 - November 6

**DIARY OF EVENTS IN SRI LANKA
COMPILED FROM DAILY NEWS-
PAPERS PUBLISHED IN COLOMBO**

DN—Daily News; *CDM*—Daily Mirror; *EO*—Evening Observer; *ST*—Sunday Times; *SO*—Sunday Observer; *DM*—Dinamina; *LD*—Lankadipa; *VK*—Virakesari; *ATH*—Aththa; *SM*—Silumina; *SLDP*—Sri Lankadipa; *JG*—Jnadina; *SU*—Sun; *DV*—Davasa; *DP*—Dinapathi; *CM*—Chinthamani; *WK*—Weekend; *RV*—Riviresa; *DK*—Dinakara; *EN*—Eelanadu; *IS*—Island; *DI*—Divaina; *IDPR*—Information Dept. Press Release.

MONDAY, OCTOBER 31: Two missions from the World Bank and the International Monetary Fund are due in Colombo next month for talks with the finance ministry on continuing assistance. A deputation from the Democratic Workers' Congress (Political Wing) led by Mr. A. Aziz, President of the Congress, will meet President J. R. Javewardene on November 2. US forces in Grenada came under sporadic attack yesterday as marines captured a Marxist leader whose feud with Grenada's late Prime Minister led to the military take over that ignited the US-led invasion—*DN*. Sri Lanka is likely to tighten the screws on all foreign diplomatic personnel following intelligence reports that most of them are over-staffed and that diplomats are moving far too freely particularly in highly sensitive areas in the country—*CDM*. The World Bank has pledged Rs. 625 million in soft loans to finance viable Sri Lanka industries. The Kaluwanchikudi Police arrested 13 youths on Friday night; the arrests followed intensified security operations in Batticaloa district; police believe these arrests will lead to a breakthrough into the robbery of 87 guns from the vault of the Batticaloa Kachcheri a fortnight ago. Fisheries Minister Festus Perera will consult the Ministry of Defence on a plan to provide protection for deep-sea fishermen who may be subjected to threats from extremists—*SU*. All India Radio has quoted the Tamil Nadu Chief Minister Mr. M. G. Ramachandran as having stated that several Indians were masquerading as Sri Lankan refugees to obtain state assistance; the Chief Minister said that a couple who met him had claimed that they were from Sri Lanka but were actually from Erode in Salem. Government is to empower the Labour Commissioner to challenge medical certificates issued to workers in the private sector to withdraw their EPF contributions on medical grounds. The prices of eggs have come down during the past month; a medium sized egg which sold at Rs. 1/40 in Colombo and the near suburbs like Nugegoda and Kiribathgoda now fetches a price of only Rs. 1/15—*IS*. It is understood that public servants and corporation employees who went to Jaffna and Batticaloa due to the July disturbances will be transferred to safe areas where they like to work—*VK*.

TRIBUNE, NOVEMBER 19, 1983

TUESDAY, NOVEMBER 1: Fourteen TULF MPs who have forfeited their parliamentary seats by not attending sittings have lost both pay and perks; however most of the MPs who have vacated their seats have qualified for a parliamentary pension. The Minister of Lands and Land Development Mr. Gamini Dissanayake yesterday described first reports on the extent of encroachment on the right bank of the Maduru Oya as gross exaggerations. The Commonwealth's search for identity of its own, distinct from power blocs and the Nonaligned, might suffer a setback if current efforts fail to defuse the situation in the Caribbean and end the invasion of Grenada before the New Delhi summit next month. US forces spearheading the invasion of Grenada have reported capturing a man claiming to be General Hudson Austin leader of the island's short-lived military government—*DN*. The government will shortly take action to evict all encroachers on state land through the full process of the law, irrespective who they are and without any consideration to race, religion or political affiliations; this step will be taken in the interests of national security—*CDM*. The Central Bank of Ceylon last night imposed a "credit squeeze" on all loans and overdrafts indefinitely; the closing of all credit lines according to Finance and Planning Ministry Secretary Mr. W. M. Tillekeratne was chiefly as an anti-inflationary measure. A Presidential Land Commission will be appointed by Government shortly to make a full study of the country's land problems. Hospital services and the Free Trade Zone industries will be exempted from the two-hour rolling power cuts which will be imposed throughout the country from today—*SU*. The Ceylon Hotels Corporation was forced to adjourn its 17th annual general meeting held at Hotel Taprobane yesterday when shareholders demanded that the accounts could not be passed because "it was not in order". A probe has been launched into a possible Tamilnadu connection in recent terrorist activities in the North—*IS*.

WEDNESDAY, NOVEMBER 2: The Central Bank yesterday attributed the credit ceiling imposed on the commercial banks with effect from November 1 in an effort to ensure that priority sectors received the needed credit and to prevent "undue credit expansion" creating "unhealthy price and monetary developments". Nuwara Eliya farmer representatives confronted Agriculture and Food Minister Gamini Jayasuriya with a barrage of criticism and allegations of official corruption at a conference conveyed by him here a few days ago. The Revolutionary Military Council that has ruled Grenada since the killing of Prime Minister Maurice Bishop on October 19, formally surrendered to invading US and Caribbean forces on Monday, a party of journalists was told. Two companies of US marines landed on Carriacou island north of Grenada before dawn today to follow up a report that Cubans were on the island but met no resistance, the Pentagon said yesterday—*DN*.

A big drop in the total earning of the Railway Department has been reported following the cancellation and non-operation of a number of trains on the Colombo Fort-Kankasanturai route, informed sources stated. The Department of Immigration and Emigration yesterday ordered the closure of all its regional offices in Jaffna, Galle and Kandy; Passports and Emergency certificates will be issued only from the Galle Buck offices of the Department until such time the Department decided to reopen the regional offices—*CDM*. Confusion reigned in Sri Lanka's money market yesterday as commercial banks groped in the dark unsure of how to effect the sudden "credit squeeze" imposed by the Central Bank from midnight on Monday. With fourteen of the sixteen TULF MPs losing their seats and the SLFP being the next largest opposition party in Parliament, political circles expressed uncertainty about the person who would finally be chosen for the post of the Leader of the Opposition. Government re-introduced press censorship from midnight yesterday; it will apply to all matters relating to part five of the Prevention of Terrorism Act; this will include reports of incidents centred on terrorism and violence as well as related matters—*SU*. Rev. Fr. A. Singarayer, who is being detained in the Batticaloa prison, was yesterday flown to Jaffna for a half-hour meeting with his aged and ailing mother Mrs. Anbaranam Singarayer. Reveal the names of all those who were suspected to have been behind the events of Black July, a joint committee of 25 opposition trade unions yesterday decided to ask the government; they also called upon the government to remove the ban imposed on some political parties and release all the political prisoners taken into custody in this connection. The SLFP has initiated action to find a lasting solution to the problems of all minorities living in Sri Lanka. The spadework is now being done on this project by a special committee appointed by the party—*IS*. The Commissioner of Elections Mr. Chandrananda de Silva has written to TULF Secretary Mr. M. Alalasundaram asking him the fill vacancies of Members of Parliament of the Party which have fallen vacant—*VK*.

THURSDAY, NOVEMBER 3: Finance Minister Ronnie de Mel in a comprehensive report on the economy, which the Cabinet considered yesterday, has indicated a possible Rs. 2,000 million increase in new revenue. A seven-member panel of competent authorities has been appointed under the Prevention of Terrorism Act to control publication of news relating to acts of terrorism or investigations into terrorist offences. The State Department said on Tuesday that US-occupied Grenada's Governor-General Sir Paul Scoon has ordered Soviet, North Korean, Libyan, East German and Bulgarian diplomats to leave the Caribbean island. Lebanese reconciliation talks have come to life as the feuding factions set to work to find a common formula fixing the balance between Western and Arab influences in their country—*DN*. President J. R. Jayewardene will appoint a

high powered five member National Resettlement Authority to take steps to prevent further encroachment of state Land and the legal action against encroachers and organisations which sponsor encroachment—*CDM*. The Ceylon Worker's Congress is likely to field candidates at the forthcoming by elections in the North and East. The Central Bank of Ceylon is expected to relax the credit squeeze on the export trade immediately with new guidelines to commercial banks on how they should continue financing the export trade without imposing any credit levels on it. President J. R. Jayewardene yesterday began a dialogue with several non-governmental organisations in what appeared to be a prelude to the visit of Gopalaswamy Parthasarathy, Indian Premier Indira Gandhi's special envoy. Two days of rain in the catchment areas have increased the capacity of the Castlereagh and the Mousakelle hydro reservoirs by seven million units, Ceylon Electricity Board sources said yesterday—*SU*. Declining output in Sri Lanka is one of the reasons put forward for a deep rise in the price of tea at the London auctions. Sri Lanka's budgetary policies came in for a great deal of criticism from the Executive Directors of the IMF when the request for a stand-by credit of SDR 100million was discussed recently; the main criticism was that the Government had attempted over the last six years to implement an over ambitious investment programme in a context in which revenue was inadequate to meet even the recurrent expenditure. The water levels in both the Castlereagh and Mousakelle reservoirs are reported to be going up with heavy rains in the catchment areas of these two reservoirs—*IS*. Sub post offices in the North which had been closed due to terrorist attacks have been reopened since Monday—*DP*.

FRIDAY, NOVEMBER 4: The Governor of the Central Bank, Dr. Warnasena Rasaputram, yesterday warned that action under the Exchange Control Ordinance would be taken against private sector businesses houses which failed to bring in export earnings within the stipulated period of six months. Government is reviewing the viability of the State Fertilizer Manufacturing Corporation's urea plant at Sapugaskande which is saddled with high production and maintenance costs. Almost half the US troops in Grenada pull out today, nine days after the invasion by American and Caribbean forces that followed a bloody coup on the island—*DN*. Fisheries Minister Festus Peera has decided to modernise the Fisheries Training Programmes conducted by the Ministry; under the new scheme, the island's first Fisheries Training Seminar began at the Targale Fisheries Training Institute on Tuesday; the first batch of 40 trainees drawn from the regional training schools will follow a three week course—*CDM*. The Ministry of Food and Co-operatives has decided to sell 2,000 tons of rice at a cut price with immediate effect; the decision to dispose of the rice, according to official

sources, follows reports that if the stocks were not disposed or early the rice could become unfit for human consumption. Finance Minister Ronnie de Mel is putting the final touches to his seventh budget at his estate, Geekiya Kande. Claims for compensation so far received by the two Insurance Corporations in respect of properties damaged during the July disturbances, amounted to Rs. 1,250 million, an official said—*SU*. Sri Lanka's newly demarcated 25th administrative district Kilinochchi is still being administered as part of the Jaffna district. Four delegates met the President on Wednesday evening separately to discuss the memoranda submitted by them on the problems facing the nation after the recent ethnic conflicts; the delegations from the YMBA, DWC, ACBC and one from the Council of Muslims, All Ceylon Moors Association and All Ceylon Muslim League—*IS*. All graduates who went to Jaffna as a result of the July disturbances should return to their respective campuses by January 2 1983—*DP*.

SATURDAY, NOVEMBER 5: With a medium sized coconut costing anything between Rs.4 and 5 in many urban areas and the farmgate price an unprecedented recent high of Rs. 2,500 to Rs. 3,000 per thousand nuts, the Agrarian Research and Training Institute has sounded a warning on the urgent need for a sustained effort to resuscitate the country's coconut sector. Mr. G. Parthasarathy Prime Minister Indira Gandhi's special envoy will be in Sri Lanka on Monday and Tuesday governmental spokesmen said yesterday. Waves of Israeli planes bombed Palestinian positions in Central Lebanon yesterday in swift retaliation for a suicide car bomb attack at dawn which destroyed an Israeli headquarters in the south of the country. A UN fact-finding team was heading for Grenada yesterday after the General Assembly gave Secretary General Javier Perez De Cuellar 72 hours to report on conditions in the Caribbean island—*DN*. Airlanka will bring 100 tourists from Australia today on its inaugural flight from Vienna; this group of tourists is being sponsored by three leading tour operators in Austria—Panorama Austria, Ceylon Tours International and Meridian tour operators—*CDM*. Over 1,400 policemen in the metropolitan police area were yesterday deployed in a massive anti-crime operations by the city's new Commissioner of Police, Neil Weerasinghe. Encroachments on state land will be made a penal offence under emergency regulations; new regulations introducing tough measures against encroachers will be gazetted shortly by the Government—*SU*. A Mercedes Benz car imported under the names of a prominent Raja Rata politician and a Pettah businessman was detained by the Customs on Wednesday on the grounds of an alleged false declaration. Customs yesterday said that the signature of four top men of the Mahaweli Authority has been forged on documents pertaining to the import of a crane valued at Rs. 153,000—*IS*.

TRIBUNE, NOVEMBER 19, 1983

SUNDAY, NOVEMBER 6: The conflicts within the SLFP (S) Central Committee which arose over the round table conference have had far reaching repercussions even on the appointment of the Leader of the Opposition. The government last week approved in principle certain proposals put forward by the Minister of Finance and Planning, Mr. Ronnie de Mel, for the better management of Sri Lanka's economy in the next few years. The business community and leading economists expressed the view that the credit squeeze should be temporary although they conceded that the Central Bank took action to avoid speculation on the eve of the budget. Energy consumers will soon receive a better service through the Lanka Electric Company which is being set up exclusively for the distribution of power—*SO*. The appointment of the Diyawadana Nilame will in future have to get the recognition of the President; whenever the Commissioner of Buddhist Affairs who is to replace the Public Trustee declares a nomination for the appointment of the Diyawadana Nilame, he will within a month have to obtain the President's recognition because this is the highest lay office a Buddhist can hold. Tea Small Holdings Development Authority has called for applications from small holders who wish to participate in 1984 in the three subsidy schemes operated by the Authority—*S7*. A workshop of export promotion and market development has been organised by the International Trade Centre in Geneva in collaboration with Sri Lanka's Export Development Board, counsellors and trade commissioners overseas. Batticaloa Priests Superintendent X. J. Philipps yesterday arranged for an armed escort for Dr. S. Tharmalingam the Tamil Eelam Liberation Front leader who refused to leave the prison on his release unless he was escorted to Jaffna. Lankan youth in large numbers are falling victims to heroin addiction—a phenomenon virtually unknown until 1981; in less than a year, it has developed into a problem of grave magnitude; some of the country's leading psychiatrists and law enforcement officers told *WEEKEND's* Insight team that the situation may have already gone out of control—*WK*. Negotiations between certain members of the Sri Lanka Freedom Party and the Mahajana Eksath Peramuna are now underway to form a joint front with a view to contesting future elections as a grand alliance. The postponement of by-elections to 16 seats rendered vacant by the TULF until the State of Emergency is called off, is being actively considered by the Government, authoritative sources said yesterday. The National Film Corporation is in severe financial difficulties as a result of which it has not been able to clear a package of Tamil films that has arrived in Sri Lanka; this is despite the fact that some cinemas are eagerly awaiting the arrival of Tamil films for release, according to an authoritative source in the cinema industry—*IS*.

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TENDER NOTICE

Ministry of Local Government, Housing and Construction. Department of Buildings.

TENDERS for the Constructions of the under mentioned buildings will be received by the Chairman Tender Board, Department of Buildings, P. O. Box. 504, Colombo, up to 10.00 a.m. on Wednesday 07.12.1983.

<i>Item. No.</i>	<i>Name and Place of work</i>
01.	Divisional Health Centre at R. H. Cheddikulam.
02.	Ward of 12 beds at R. H. Cheddikulam
03.	Quarters Gr. V, Gr. III and Gr. II at R. H. Cheddikulam
04.	Veterinary Surgeon's Office, Veterinary Surgeon's Field Quarters and Quarters Gr. III at Cheddikulam.
05.	Veterinary Surgeon's Office and Veterinary Surgeon's Field Quarters and Quarters Gr. III at Nedunkerney.
06.	Veterinary Surgeon's Office and Veterinary Surgeon's Field Quarters at Vavuniya.

2. Tenders should be made in duplicate on forms obtainable from the District Engineer, Department of Buildings, Vavuniya from whom all particulars can be obtained and at whose office plans can be seen.

3. Separate tenders should be sent for each of the items 01 to 06. Particulars of the service should be clearly indicated on the top left hand corner of the envelope.

4. Only registered contractors or "Trial Letter" holders of this Department for the minimum amount as given below will be eligible to tender on production of a Tender Deposit Receipt for Rs. 250/- for each of the works 01 to 06, to the above named officer before 4.15 P. M. on Friday 02.12.1983.

<i>Item. No.</i>	<i>Minimum Amounts of Registration or "Trial Letter" Value</i>
01.	Rs. 400,000.00
02.	Rs. 550,000.00
03.	Rs. 700,000.00
04.	Rs. 800,000.00
05.	Rs. 800,000.00
06.	Rs. 550,000.00

5. The Contractors Record Book or "Trial Letter" must be produced by each applicant before tender forms are issued to him.

6. The Tender Deposit may be made at the Buildings Department Head Office, Colombo 1 or at any Kachcheri outside Colombo.

7. Tenders will be opened at 10.00 a.m. on 07.12.1983. Tenderers are permitted to present when the Tenders are opened and the officer opening Tenders will read out to the tenderers present, the name of Tenders as well as the amounts.

8. Private Companies tendering should declare their Directors and Share-holders and Public Companies only their Directors.

9. Any further details could be obtained from the District Engineer, Department of Buildings Vavuniya.

Department of Buildings,
P. O. Box. 504,
Colombo, 1983.10.25.

K. C. Samaraweera
Director
Department of Buildings

TENDER NOTICE

Ministry of Local Government, Housing and Construction. Department of Buildings.

TENDERS for the Construction of the under mentioned buildings will be received by the Chairman Tender Board, Superintending Engineer's Office, Department of Buildings, Beach Road, Jaffna up to 10.00 a.m. on Wednesday 07.12.1983.

<i>Item. No.</i>	<i>Name and Place of work</i>
01.	Sub-Divisional Health Centre at C. D. & M. H. Poovarasankulam.
02.	Gramodhaya Health Centre at Unchalkaddy.
03.	Gramodhaya Health Centre at Kangarayankulam
04.	Gramodhaya Health Centre at Sannasi Paranthan.
05.	Ambulance Garage at P. U. Nedunkerney.

2. Tenders should be made in duplicate on forms obtainable from the District Engineer Department of Buildings, Vavuniya, from whom all particulars can be obtained and at whose office plans can be seen.

3. Separate tenders should be sent for each of the Items 01 to 06. Particulars of the service should be clearly indicated on the top left hand corner of the envelope.

4. Only registered contractors or "Trial Letter" holders of this Department for the minimum amount as given below will be eligible to tender on production of a Tender Deposit Receipt for Rs. 250/- for each of the Items 01 to 04 and Rs. 100/- for Item No. 05; to the above named officer before 4.15 p.m. on Friday 01.12.1983.

<i>Item. No.</i>	<i>Minimum Amounts of Registration or "Trial Letter" Value</i>
01.	Rs. 225,000.00
02.	Rs. 275,000.00
03.	Rs. 275,000.00
04.	Rs. 275,000.00
05.	Rs. 100,000.00

5. The Contractors Record Book or "Trial Letter" must be produced by each applicant before tender forms are issued to him.

6. The Tender Deposit may be made at the Buildings Department Head Office, Colombo 1. or at any Kachcheri outside Colombo.

7. Tenders will be opened at 10.00 a.m. on 07.12.1983. Tenderers are permitted to present when the Tenders are opened and the officer opening Tenders will read out to the tenderers present, the name of Tenderers as well as the amounts.

8. Private Companies tendering should declare their Directors and Share-holders and Public Companies only their Directors.

9. Any further details could be obtained from the District Engineer, Department of Buildings, Vavuniya.

Department of Buildings,
Beach Road,
Jaffna, 1983.10.25.

S. R. Kanaganayagam
Superintending Engineer,
Northern Division,
Jaffna.



BANGLADESH

Milk & Meat

We publish in this issue the second in a series of articles on a grave problem that came up in Bangladesh not very long ago on the question of milk imports and the livestock industry. The situation in Sri Lanka, with a few variations, is now not very different from Bangladesh.

THOUGH LIVESTOCK is an essential resource for the country, close to nothing is spent for its survival and development. Large funds are directed to expensive projects to supply milk to towns. Cattle-feed is very short; yet it is exported. As a consequence, milk availability is falling to extremely low levels. One of the basic motivations behind purchasing baby-food and milk powder is the unavailability or the high price of cow milk in Bangladesh. According to FAO statistics, total milk production would be around 9.5 kg per year per capita, and total meat production 2.9 kg. But a nutritional survey by the University of Dacca showed availability had decreased by 22% between 1962-64 and 1975-76, from 22 grs/day to less than 17 grs. i.e., around 6.2 kg per year per capita. Meat availability had decreased by 37% (from 5.2 grs to 3.8 grs) i.e., 1.4 kg. per year per capita, according to the same study. These figures compare with 26.3 kg. of milk per year per capita (over 4 times the average for Bangladesh) and 12.9 kg. of meat (over 9 times the estimate for Bangladesh) for all Asia, again according to FAO.

Current price of milk in Dacca varies from 6 to 8 takas per seer (2 lbs.) but regular consumers will always get the preference, which means that only upper income groups can afford it. even it is often adulterated and mixed with water etc. In Mymensingh (130 miles north of Dacca) milk comes from 30 miles

away, by train : if, for any reason the train does not arrive, price of milk can double in a few hours. A survey on several villages in Hariakandi (Bogra) showed 80% of the milk for sale on the market was brought either by sweet and tea shops, or by government officers.

There are about 26 million cattle in Bangladesh i.e., more than one animal per acre. But most of the land is under cultivation, and only 3% is classified as cultural waste and another 8% as fallow land. Cattle-feed is thus a determinant factor. According to the second five year plan "11% of animals are not utilisable for cultivation due to ill health". "The severe shortage of animal draught power, already a serious problem, could potentially threaten the realisation of the crop production of the second five year plan unless remedial action is taken soon. At present draught power shortage may be as high as 50% during the peak ploughing season March/April" notes a recent World Bank report.

THE EXTREMELY LOW BUDGET for livestock development has been mentioned above: Tk. 200 million for the current fiscal year, i.e., Tk. 7.7 per animal. The comparison of the following figures (1979-80) is en igniting:

Importance of Livestock		
National statistics		Takas per cattle
Input for crop production	20%	
Source of employment	14%	
Exports (leather mainly)	10%	46
Share of GDP	6.4%	443
Share in development budget	.7%	4

Total draft power available from existing livestock is also estimated to be four times the installed capacity of electricity production. *How little share of government expenditures is devoted to livestock is thus very apparent. It should be noted here that, though this study looks mainly at milk production, milk is but a very subsidiary income to the farmer, compared to draft power and source of fertilizer and fuel. This makes the argument even stronger, for a fairer development programme.*

According to *Holiday* "10% of cattle die annually of different diseases. Besides about 20% of our cattle production becomes crippled each year due to "overwork" and being attacked by some particular diseases like 'foot & mouth' round worm and liver flukes". As a consequence, the yearly loss in meat production is estimated at Tk. 7.4 million (equivalent to half the total aid disbursements in Bangladesh in one year) and in milk production Tk. 854 millions (or almost twice the value of commercial imports of milk powder and baby-food). Experts acknowledge "very little is known of the occurrence and epidemiology of cattle diseases in Bangladesh. According to the chief of livestock section in the planning commission, only 8 and 4% of essential" vaccine and medicine

do not get credit for livestock farming, and the amount sanctioned is very small (and) may be treated as negligible".

THOUGH CATTLE-FEED is considered to be the main limitation for livestock development, Tk. 35.6 million of oilcakes, bones, and molasses were exported, in 1975-76. Even if exports constitute a minor part of available quantities (1.6% for oilcakes, 4% for molasses), they obviously do not show the way towards self-sufficiency. To quote a Danish livestock expert in Bangladesh: "...for 8 million import milk powder for Tk. 56 million. In other words Bangladesh could save Tk. 48 million by converting that feed into milk at home".

The lack of importance given by the Government to local milk and meat production is blatantly shown in the "List of Aid Worthy Projects" (1980), where Bangladesh seeks foreign funds for a cattle raising and fattening project: "The objective of the scheme is to produce 'halal' beef and export the same to the Middle-East countries. The main purpose of the project is to establish a beef complex to supply 12,000 beef cattle of 3 years of age year to the slaughter house to be established under this project". Total cost: Tk. 210 million (of which 45 million in foreign exchange) i.e., again more than the whole government development budget for livestock in 1980-81.

The British Overseas Dev. Adm. (ODA) has been requested to consider a cattle-feed concentrate milling mixing palletising plant in Dacca District but how such capital intensive projects can help the farmers is doubtful, except to feed "a small number of cows (who) produce a lot of milk that has to be processed in a dairy plant, making it very expensive and available to an urban minority. Advocates of feed mills have to realise that what they are advocating is a strong underutilisation of the only feed which is available in relative abundance in Bangladesh, namely straw" commented an expert. The two largest projects are the Savar Dairy Farm (i.e., the Central Cattle Breeding Station) and Milk Vita (not properly a livestock project, but involved in large scale marketing of milk). The Savar Dairy Farm was started in the early 60s and has been running since with German assistance. Even after so many years, there are still a dozen German experts at the place. The "farm" is covering an area of 1,300 acres for its establishment 5,000 people had to be expelled from that area. It breeds local animals with imported ones, to be raised at the Farm, or to be distributed to interested farmers (up to now only 100 animals have been distributed), but the initial and main objective is clearly to supply Dacca with cheap, fresh cow milk. Total cost per litre is according to one of the German experts, above Tk. 7 (Tk. 2.5 for processing and marketing), but selling price is Tk. 3.5 thus a 50% subsidy. With a daily production of 8,000 litres, yearly subsidy to the Dacca consumers is over Tk. 10 million.

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Feeding cost for these expensive animals is Tk. 12 per day i.e., more than what a poor family of 6-7 people would usually spend on food... As a matter of fact, the German expert willingly acknowledged local breeds are often better than imported ones. The government requested the farm to provide 20 of these cows to the Bhongo Bhongo (presidential palace where, all important receptions take place) as well as a regular supply of cattle-feed from Savar, as a demonstration farm for foreign guests, and for an assured supply of 200 litres of milk daily. As commented by a person on the farm, it would be a lot cheaper to have that milk sent directly from Savar.

But also, how outside of these sophisticated projects, the poor resources allocated for livestock are really helping cattle development, can be questioned. Though lack of cattle-feed is accepted as a determinant factor, only 2.5% of the budget is devoted to "fodder and feeds". Corruption is widespread than livestock officers are used to at least double their salary through bribes and "services"—and medicine "disappears", or are not available. "Several farmers I contacted, said that they left the vet's office when they heard they would have to pay 150 takas for a 'wash out' of a cow which failed to conceive after artificial insemination", commented a project coordinator. In Bogra district, right in a village where the government livestock office for the thana was established, all inseminated cows had got semen from a private project four miles away and on the other side of the river.

* * *

LIVESTOCK DEVELOPMENT

Crossbred or Indigenous?

By John Maule

IN THE LAST TEN YEARS increasing emphasis has been placed on the advantages of crossing low-producing, but hardly, indigenous tropical cattle with temperate breeds, both dairy and beef, though the former probably predominate. The assumption is that because the first cross cow on government farms almost always shows an all-round improvement on the indigenous parent, crossbreeds will therefore do well on small-holder farms. Those who advocate crossbreeding on a large scale seem to forget or do not fully appreciate that to feed the crossbreeds properly requires considerably more purchased feeds than the farmer probably foresaw and a degree of skill in managing the crossbred cow and calf that he may not have.

Furthermore, there is the problem of the breed of bull to use on the crossbred cow. Here, the owner is probably dependent on the AI (Artificial Insemination) service and on the advice of whoever controls this service, but the results obtained with AI in some countries have been disappointingly

ow, sometimes with a non-return rate of less than 30 per cent. It is therefore possible that this approach to the problem of increasing productivity may be too ambitious, especially where the resources of skilled technical staff and the necessary back-up services are limited. With a few exceptions, it is not longer fashionable to expect a good indigenous breed to justify time and effort spent on trying to raise its productivity, yet in the past several promising breeds both in Africa and in the Indian sub-continent were selected and good nucleus herds established in introducing new breeds, but also no doubt in the genuine belief that crossbreeds would provide the answer to the increased demand for milk and beef in the more affluent areas, many quite unsuitable breeds have been introduced and their management has all too often been inadequate.

Also, where pure bred *Bos Taurus* females have been imported with the object of increasing milk production rapidly, the losses among the imported cattle have sometimes been extremely high. For example, in Malaysia, 30 per cent of 129 Friesian cows imported from Australia between 1966 and 1969 died before calving. Calf losses can also be very high: one report (from Bolivia) gives adult and calf mortality of 12 per cent and 33 per cent respectively on five farms that had imported 696 Brown Swiss and Holstein cattle. In order to evaluate the overall herd performance of crossbreeds (or any group of cattle), it is essential to take into account not only cows that have calved and milked normally, but also those that failed to breed, or had very long calving intervals or milked for only a short period. It is still the practice in many Indian herds to exclude from overall herd performance, cows that milked for less than 100 (or even 150) days. This exclusion gives a false impression of herd performance and may easily bias one's judgement of particular crosses.

THE UPSURGE IN CROSSBREEDING has been particularly rapid in India where there are now said to be about one million crossbreeds. Yet it is in India that conditions for maintaining crossbreeds are often unfavourable. Professor M. G. Jackson has pointed out that, because supplies of protein-rich concentrates are limited, if a disproportionate amount of these is fed to crossbred milking cows to supply urban milk demands, it follows that the indigenous village cattle, which include the millions of work oxen and young stock, will suffer. He makes the point that the Indian farmer must maintain a pair of oxen (or their equivalent) to cultivate his land and that, because of the need to grow crops for human consumption and the extreme pressure on the cultivatable land, there is little scope for growing forage crops (e.g. lucerne) for his cattle. Except in the vicinity of the largest cities, the production of milk is of less importance than the provision of good work animals and their dung which is the only available fuel for cooking.

In Africa, the situation is somewhat different; here beef is often more important than milk, although several tribes do depend largely on the milk provided by their indigenous cattle. Crossbreeding to improve carcass yield and quality is confined largely to the better environments and, in some countries, the best indigenous breeds (e.g. Boran, Angoni, Tuli and Mashona) can compete successfully with crossbreeds in terms of carcass weight. In the light of these restrictions and in particular where the long term policy is to build up a larger population of dairy crossbreeds (as in India), one must ask whether the expenditure and effort involved is entirely justified. This policy is intended to meet the urban demand for milk and can only be of limited benefit to the rural population.

It may be argued that in the long term, the objective is a crossbred that is acclimated, (i.e. she must not have more than 62.5 per cent *Bos Taurus* blood), give a reasonable daily yield of milk (10-12 kg) on a mixture of home produced food plus purchased concentrates and will produce a viable calf every 12 - 15 months. The problem is whether, with present resources, such a crossbred can be maintained profitably. The alternative is to develop a more satisfactory method of management of the best indigenous breeds.

THE 'DUAL PURPOSE' SYSTEM is such a method. Based on once-a-day milking and allowing the cow to suckle her calf during the day, it offers opportunities of maintaining both cow and calf on straw-based or green forage and crop residues often with molasses added and with only a minimum of concentrates. This system, which might also be adequate for some crossbreeds, gives milk yields (apart from the quantity taken by the calf) of about 3-4 kg per day for indigenous cows. Breeds such as the Sahiwal, Boran and Gir seem ideally suited to this system and one could expect yields of 500-800 kg of milk annually apart from the calf's shares.

It is arguable that, where capital, feed resources and skilled breeders are scarce, a cow which will yield 4 - 6 kg per day in addition to rearing a calf and which will breed regularly is a better bet than one which gives 14 - 15 kg per day but requires a lot of concentrates and is liable to suffer ill health. This does not mean that all crossbreeding is doomed to failure or that crossbreeding has not produced some excellent results (e.g. the Jamaica Hope and Karen Swiss). But it is doubtful that it can lead automatically to the evolution of a reliable crossbred type giving greatly increased yields of milk unless. (1) ordinary breeders are given sustained help in the provision of feeds appropriate to high producing cows and in the prevention of sickness; (2) a reliable breeding structure with A1 is set up in such a way that tested bulls can be produced and a level of exotic blood maintained so that breeding failures are kept to the minimum; (3) there is sufficient skilled and reliable staff.

These requirements are not easily provided, especially in smallholder farms, but the alternative of developing economic indigenous cow—one that can be described as dual or even multipurpose milk, draught and beef has not received sufficient attention in the recent past.

—Development Forum

WATER

Requirements of Cattle

Dr. K. James Christopher

CATTLE must be given enough water. Deprivation of water whether intentional or accidental has several adverse effects upon the health and performance and production of animals. Water requirements of cattle are dependent on many factors. Some species take more water than others. Generally young and growing animals take more water than small ones. The nature of feed has direct bearing on water intake. When cattle are fed with husk or bhoosa, they require more water than cattle fed with lush or green grass. Succulent fodder can further reduce water intake of cattle. It is estimated that cattle need about 5 kg of water to digest about one kg of dry feed. Calves require about one or two more kg for it. A cow or a buffalo requires about 5 kg of water for every kg of milk it gives. The climate or local temperature is also a deciding factor. In summer animals are to be given 60% to 80% more water than in winter. In addition, they are to be watered one or two times more in a day. Cold water is advantageous in summer as this can enhance water intake resulting in enhanced production.

TO ENCOURAGE animals to take more water addition of salts or sweetening agents are usually recommended. These can increase feed intake also. Drugs, especially the ones with bitter taste decrease water intake, when administered in water. Hot water intake limit both water and feed intake, especially in summer. This can result in reduced production. A cow or a bullock or buffalo drinks about 60 to 80 litres of water in a day. They are to be watered twice in a day, morning and evening. After six months of pregnancy they need about 25% more. After parturition about 50% more water is needed by animals, with calf at their feet. They are to be given enough time to drink freely and fully. Water is to be given about half an hour after the first feed. After heavy work water can be given immediately but animals should be given some rest after it. It is always better to rest animals after ingestion of water. Animals are not to be put to work immediately after watering.

RECOMMENDATIONS: (a) Water should be made available to cattle readily at all times in view of the close inter-relationship of water intake and feed intake. They should be given water at least twice in

a day; (b) Pregnant animals nursing animals and work animals need more water. Water given to them must be for their maintenance as well as for their performance; (c) In summer animals are to be given more water and they are to be given one or two times more in a day. Cold water is advantageous; (d) Addition of sugar or some other harmless sweetening agent to water improves the health and activity of animals. (e) When administering drugs in drinking water care should be taken to see that water intake is not decreased due to bitter taste or the allied imparted by some of them. Even, when using these drugs adhere strictly to the recommended dose.

SAVE CHILLIES

From White Aphids

RECENTLY white aphids (*Myzus persicae*) has become a serious pest on chillies, a cash crop, in Tamil Nadu and other areas. Until recently, it was affecting only tobacco, cabbage, cauliflower and tomato. This aphid is also a vector of Mosaic virus. White aphids are seen usually on the lower side of the leaves in large numbers. They suck the sap reducing the vitality of the plant leading to stunted crop growth. Fruit production is also reduced. Their presence can be easily identified from the shiny appearance on the upper surface of leaf, yellowing of leaves and sugary secretions on the plant parts. The sugary secretion invites black sooty mould growth which inhibits the photosynthetic activity of the plant. Any of the following insecticides may be sprayed at the respective doses in one litre of water with hand operated high volume sprayers for the effective control of white aphids: Monitor 0.05% (1.5 ml) + Nuvan 0.05% (0.5 ml). About 500 to 750 litres of spray fluid will be required for spraying one hectare depending upon the crop growth.

THE VILLAGE & THE NATION

Drinking Water & Sanitation

THE INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION DECADE for the years 1981-1990 was the outcome of the United Nations Water Conference, held in Mar del Plata, Argentina

in March 1977. The purpose of the Decade was to respond to the crying need for a concerted international water and sanitation effort, and the goal of the Decade was to be: "safe drinking water and sanitation for all by the year 1990". The statistics of need among those who live in the poorer parts of the rural and urban Third World have been rehearsed again and again in the years since the delegates to Mar del Plata passed their Water Decade resolution.

Over half the people in the Third World have no access to safe water, and three out of four have no better facilities for excreta disposal than a disgusting bucket, or a walk in the fields. The effect of this massive in sanitarness on their health, and particularly on the health of their children, is almost incalculable. But efforts have been made to quantify it; WHO estimates that between 10 and 25 million deaths each year, and 80 percent of all the world's sickness are attributable to inadequate water or sanitation.

In the developing countries, half the deaths occur among children under five years old. Among the infections responsible for this high infant and young child death rate, diarrhoeal diseases—almost invariably caused by a combination of poor drinking water and insanitary living conditions—top the list. Diarrhoea is thought to kill around five million children every year, and in a fatal combination with malnutrition, contributes to the death of many millions more. Skin and eye diseases, known as "water washed" as opposed to "water-borne", cause countless millions of children constant discomfort and if left untreated, can lead to disability. Parasites—works of all descriptions, including the noxious guinea worm which plagues the people of Ohaozara—find their way into the stomachs and intestines of more than half the Third World's children, depleting their energy, their health, and their growth.

CALCULATING THE COSTS of meeting the Water Decade goal is another mathematical exercise in mind-numbing variables. The World Bank estimates that extending water services can cost from 1 to US \$ 300 per head, depending on whether the water source to be tapped is near or far away, deep in the ground under layers of rock, or just a few feet below the surface. It also depends on whether a tap is to be installed in every home, or a community handpump to serve 5,000 people.

According to the World Bank calculations, the total investment required to meet the Water Decade target could run up to US \$ 600 billion. UNICEF, one of the leading proponents of lowcost and appropriate waste and excreta disposal technologists, cuts this figure by half to US \$ 300 billion. But either figure demands an astronomical input of billions more dollars a year than could ever be generated. *Is the goal realistic? The question is rhetorical. But cruel economic reality should not be allowed to detract from the sincere efforts of many countries and orga-*

nisations to respond to the challenge of the Water Decade.

During 1982, UNICEF's assistance to water supply and sanitation programmes amounted to US \$ 60.1 million more than three times the amount contributed five years ago. For the first time, assistance to water and sanitation overtook the amount devoted to health. UNICEF's contribution is but a small proportion in financial terms of the total assistance given annually by the international community to water supply schemes, but it has very special quality. The emphasis of UNICEF's assistance is not on construction of major dams and reservoirs, designed provide water to large urban populations.

The programmes in which UNICEF is involved are exclusively geared to meeting the needs of poor rural and urban communities, whose economic clout is too negligible to command a share of water supply capital resources from a return-on-investment point of view. UNICEF has traditionally justified its commitment to water supply and sanitation programmes on the grounds of their effects on children's and mother's health. And indeed, a plentiful supply of clean water and a hygienic environment is precondition of healthy living. But over the years, experience showed that the health advantages so evident to the public health experts and the analysis of declining mortality rates in the industrialised world, do not necessarily follow hard on the heels of the inauguration of a new borehole and handpump in, say, a Sudanese village.

To begin with, the experts focussed on their technical failures. A new water supply system which broke down, and which was outside the reach of regular maintenance and repair facilities, quickly lost its appeal to villagers forced to rely on the streams and other polluted sources to which they were accustomed to. The realisation that no low-cost handpump existed in India that could withstand constant use by a village community without soon collapsing into disrepair inspired UNICEF's development of the India Mark II. This handpump is now exported to many other countries for use in village water supply projects, and its record of sturdiness has earned it's respect from the engineering profession.

IT WAS IN INDIA too, in the southern state of Tamil Nadu, that UNICEF first experimented with a handpump maintenance system that depended on village caretakers selected by the community, and given a brief training, a couple of spanners, and a can of grease. This idea has also been exported, and today in Cameroon, village handpump caretakers are receiving training along much the same lines. But maintenance and sound engineering are by no means the end of the story.

The key to turning water into health as is increasingly echoed down the years of Water Decade is now recognized to be the understanding by the users of a new water supply that it has a potential for reducing

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sickness in the family. Of course, no one in the world wants to drink water that is dirty and foul-smelling, and most people instinctively appreciate the risk of ill health that doing so carries. But germs and worms too tiny to be seen are not self-evidently harmful to people who prefer the taste of the water they have always drunk, or consider its cooler temperature health-giving.

If habits too used to with collecting, storing, and using water are deeply ingrained and not easily altered by the "health education messages" which are these days regarded as mandatory components of water projects, habits concerning excreta disposal are even harder to influence. People in almost every society are intensely private about the way in which they dispose of their bodily wastes, and address the subject—if at all—in euphemism and distaste. Not surprisingly, people whose task in life is to handle excreta are not accorded the highest of status in any society; in the Indian sub-continent they used to be regarded as "untouchable".

To those used to the fresh air of field and furrow, the pit latrine which entraps dirt and contamination beneath the house, and noxious smells within its own confined space, seems an improvement of dubious merit. Even a simple health precaution like covering your own waste with a shovelful of earth will not command much support unless the connection between its exposure and disease can be graphically brought home. "I informed the villagers of the 'cat system' of excreta disposal", said a village based worker in Imo State, "but they did not welcome it, they did not welcome it at all".

IF THE POTENTIAL for improved family health, even when fully explained in health education messages, is not quickly seized upon by village mothers, why is it that water supply programmes are so keenly wanted—which they unquestionable are? The reason is mainly convenience. Water-carrying is the almost exclusive preserve of women in most Third world societies, and the drudgery entailed in fetching a heavy bucketful or gourdful, or pottful from many miles away, and carrying it home on an aching back or neck, begins almost as early in life as a small girl can walk. As the dry season progresses, the source becomes increasingly distant, the water more brackish and dirty, the walk hotter and the effort more painful. Not surprisingly the most marked effect of many water supply programmes has been the release of women's time and energy to devote to other domestic tasks. If these consist of growing vegetables and spending time on the children, they may have more impact overall than the direct health effects of the water itself.

In immediate results, the most frequently reported health gain from providing a village with a new water supply is a decline in skin disease and eye infections. A drop in diarrhoeal disease does not occur so perceptibly, and villagers often seem unsure

whether their children's health, or the number of times they have diarrhoea, has altered in any way since the pump or the standpipe was installed. But even if it is hard to show the dramatic effect on children's health that provided the original justification for the new water supply, the effect on the quality of life for everyone in the village and particularly for the women, is invariably dramatic and provides its own justification. If the full range of health gains takes a little longer to bring about at least one essential precondition is now in place. And the community effort inspired by the need to dig trenches for pipeline, or send members of the community for training may have laid groundwork for other types of community endeavour.—UNICEF NEWS.

* * *

BACTERIA

To Purify Drinking Water

TINY BACTERIA that feast on micro-organisms in the Ottawa River may soon be producing pure, virtually chemical free drinking water, says inventor Sam Klein. To prove it, he has released a horde of microbes on samples of the raw, rusty looking liquid that flows daily into a filtration plant.

Klein, who has a grant from the National Research Council, has hooked up an "aerobic sludge" system in the plant and is testing its efficiency against the conventional chemical method that currently furnishes tap water in the capital. "I've always been interested in water and I figured the best way to clean it is to use nature's own methods," he said. "There are bacteria that will quite willingly eat up the pollutants in water. I wanted to harness them and put them to work. Who wants a lot of chemicals in their drinking water?"

Although it is uncertain which bacteria do the trick, Klein has found he can encourage a slew of helpful microbes by adding oxygen to their environment. This results in a bacteria sludge he uses to coat a stainless steel filter designed by his company Klein Engineering of Ottawa. The slimy covering, combined with a very fine sand, sticks to the filter, as raw water flows over it. As the water passes the hungry microbes devour meaty micro-organisms, and pollutants such as phenols, phosphates, fertilizer, lead, radionuclides and chlorinated hydrocarbons. "Then and only then do we add a little bit of chlorine, just to pick up residue," Klein says proudly. The noticeable—clearer looking water then washes over a filter of activated carbon.

Mr. Klein's biological water treatment philosophy, shared by many environmental groups concerned about chemical additives, differs markedly from the conventional system which uses five chemicals—chlorine, silicon, aluminium sulphate, lime and fluoride—to meet Ontario health standards for drinking water.

The Ottawa engineer said his test results are as good as these from the normal system, at much less cost. That remains to be proved, say federal health officials.

But they admit they're getting interested. "At this point it's too early to say how effective the process will be," said Dr. Richard Tobin of Health and Welfare. "But federal and provincial governments realize it's important to encourage any new ideas or developments that might be less costly or could be used as an alternative to current methods. The health evidence so far has been encouraging. Studies on how effectively the system filters out viruses, for instance, have been positive. Dr. S. A. Sattar, a microbiologist at the University of Ottawa, said he released a harmless polio-like virus into the raw water of Klein's filtration system and found the venous microbes capable of destroying 99.9 per cent of the virus. "We need a higher degree of challenge for it though—greater volumes of water to see how we can better relate it to the conventional system."

The next step will be to test a larger scale model and try to cut down further on the small amounts of chlorine used now. This could have applications besides municipal water supplies: the beverage industry, even fish farms, anywhere where a cheaper, easier method of water filtration is needed," said Mr. Klein.—*Canada Weekly*.



FOR RURAL FOLK

Solar Energy for Refrigeration

ZEOLITES are hydrous aluminosilicates. The first specimens of these silicates were discovered in 1756. The name zeolite derived from Greek, signifying "stone which boils": their crystals bubble up under the flame of a blowpipe. The crystal lattice of zeolites is honeycombed with empty spaces in the form of canals or cavities, which gives them adsorbant properties. For example, these spaces can take up molecules of water without any appreciable change in the dimensions of the crystals, unlike clays which swell up on adsorbing water. Zeolites have often been compared to sponges (sponges whose water holding capacity depends on the temperature and the vapour tension of the water.) The water contained in the zeolites can be gradually eliminated without destroying their structure, by placing them in a dry atmosphere or by heating them. By a reverse process, a dehydrated zeolite can regain its water with the dissipation of a large amount of heat. The refrigeration process described here is based on this fundamental phenomenon. *The French National Centre for Scientific Research (CNRS) has recently developed a refrigeration system that runs solely on solar energy.*

CNRS scientists have developed a process using a microporous-compound (alumina silicate) having a very high capacity for adsorption: zeolite. (Adsorption is the penetration of a gas or a liquid into a solid, proportional only to the surface of contact between this solid and the gas of liquid distinguished from absorption which is a penetration proportional to the volume of the solid).

The three basic elements of this system are: solar heat energy absorbed during the day; zeolite, and water. It would be difficult to imagine a simpler principle: the water is alternately absorbed and desorbed by the zeolite as it goes through its thermal cycle, with the zeolite acting as a "chemical pump" during evaporations and as a "chemical compressor" during condensation. The cooling effect is produced by the evaporation of water during the absorption phase. In the system, which adapts the intermittent zeolite 13X-water cycle to solar energy the chemical compressor (zeolite) forms an integral part of the solar collector, the system functioning without any moving parts. One complete cycle of operation takes 24 hours. With the present system, the air-vent valves of the collector and the valve between the evaporator and the collector, have to be operated manually every morning and evening. But the system can be made completely automatic by installing a simple thermostat control and a check-valve.

At the movement, two main applications have been found for this process: an ice box and a solar cold store. *Solar ice box*: With the system described above, the solar energy collected in the daytime through the intermittent cycle is used to make ice. The ice thus formed helps maintain the ice-box between 3° to 7°C for preserving foodstuffs. The volume of ice in the evaporator of the present-set-up is designed to permit an autonomy of two days without sunlight (8 kg of ice). *Solar cold store*: The principles remains the same as for the solar ice-box: formation of ice in the evaporator and storage of the cold produced in the form of ice (to make up for no-sun-light periods.) Condensation begins and continues till the zeolite reaches its maximum temperature (about 5 pm in summer, at Montpellier in France). After 5 pm the temperature decreases and the pressure goes down progressively; when this falls to the same value as the low pressure inside the evaporator (after about 8 pm), the evaporator valve can be opened. *Day time operation*: Once the collector air-vent holes and the evaporator valve are closed, the temperature of the collector gradually increases raising the saturated vapour pressure of the water corresponding to the temperature of the condenser. *Night time operation*: After opening the collector air-vents and the valve connecting the collector to the evaporator, evaporation takes place producing the cooling effect (and, therefore, ice) in the evaporator, since the water has been kept at a constant 0°C by the ice produced during the previous night.

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Absorption takes place till early morning (7 - 8am) when the temperature of the collector is at its lowest. During absorption (exothermic) the heat given out is evacuated by natural ventilation. *CEDUST Scientific News from France.*

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FOR VILLAGE UPLIFTMENT

Small Hydro Power Stations

By Zhu Xiaozhang

IN OLD CHINA the rural areas had almost no electricity. For 34 years since the birth of the People's Republic, the government has been bringing power to the countryside. By 1982 annual rural power consumption was 45 billion kwh, about 14 percent of the nation's total. There are two sources of electricity in the countryside the nation's large power grids and small local stations which are developing very rapidly. Vast territory and uneven economic development make it uneconomical and unrealistic to attempt rural electrification solely from large national grids. These play a role but small local power stations are becoming increasingly important. Today over 6 000 small stations supply one-third of the countryside's electricity. Power is now available to 99 percent of the country's 88 percent of the communes, and 56 percent of the production teams in the century. China has greater hydropower potential than any other country—a possible 680 million kw. Those resources suitable for developing small hydropower stations amount to 70 million kw. and are mainly scattered in the southwest and central south areas. About half the nation's countries have exploitable resource of more than 10 000 kw capacity.

THE DEVELOPMENT of small local power stations in China has passed through three stages. In the 1950s about 9,000 stations with capacities totalling 240 000 kw were built in conjunction with water conservation projects. The annual increase in capacity in this period was only about 25 000 kw single stations averaging 26 kw. Most of them operated separately and were of inferior quality. The main difficulty was the lack of designs and good engineering. Training of specialists had just begun. In the 1960s some districts began to build larger key stations. The increase was 789 000 kw. annually averaging 80 000 kw. In 1969 the Ministry of Water Conservation and Power held the first national meeting on small hydropower stations. Some effective measures were adopted such as subsidies in the provision of necessary materials, including silicon steel, copper, and aluminium to local manufacturers of small station equipment. Small station development accelerated.

In the last five years, small hydropower stations have developed very rapidly, with an average annual capacity of over 500,000 kw. stations increased. The average capacity of stations has reached 99 kw. Some stations could be linked and in many places local grids of country size have been set up. Quality and reliability of supply increased. Why have small local stations developed so rapidly on a nationwide scale? The motivation came not only from the authorities but from the people themselves, a decentralized approach. The government gives necessary support on construction materials and financial subsidies, and also guides and coordinates development.

The benefits of small hydropower stations should be evaluated from the viewpoint of their effect on the national economy as a whole. Take Yongchun county in Fujian province, for instance, which in the last decade has built 250 small stations with a total capacity of 23,000 kw. These provided cheaper power for county and commune run industries, promoted their production and increased their output value, which reached 40 million yuan in 1982, about five times more than in 1969 when the first national meeting on small hydropower stations was held. Small stations promote the construction of electric irrigation and drainage projects. More commune-owned industries, farm sideline products processing enterprises are developed, limited not only to traditional processing such as rice husking and flour milling, but extended to other undertakings such as brick making and tea drying.

Small stations also increase local financial holdings. In 1982 such stations in Dayi county in Sichuan province grossed 300 million yuan, of which 150 million was net profit. Electricity also enlivens rural cultural life, especially in the more remote mountain villages beyond the reach of power grids. Seasonal surplus electricity from small stations in some rural areas is used for household cooking and baking, thus helping to alleviate the increasingly critical shortage of firewood.

Investigations in Hunan, Guangxi and Sichuan show that cooking with electricity several months a year can save 50 percent on the fuel expense of the average family (normally a household of five people burns a ton of firewood a year). Usually the charge per kilowatt hour to seasonal surplus electricity is lower than normal. Using electricity instead of firewood of course helps prevent deforestation and consequent soil erosion. The general policy for the development of small hydropower stations in China is one of self-reliance—constructions mainly by local people with the support of the state. The key points of their policy are: (1) Local funding, with state aid if necessary through subsidies or long-term low-interest loans; (2) Local ownership and administration, not to be taken over by the state, even if connected with a larger power grid; (3) Power to be used locally.

International exchange and cooperation in the field of small hydropower stations is growing. In October 1980 the Second Seminar Workshop, organized by United Nations departments and China, was held in Hangzhou. (The first and third were held in Nepal and Malaysia). An Asia and Pacific Regional Research and Training Centre for small Hydro power Stations was established in Hangzhou. It coordinates training, information, research and consultation. The first international training course is now underway. On a bilateral basis, China has also sent several teams of small hydropower experts and exported equipment to Asian and Latin American countries. Although a 1981 UN Conference on New and Renewable Sources of Energy report states that "perhaps the greatest experience in the development of small hydropower stations is in China," the country still has many shortages and problems to solve in rural electrification.

—China Reconstructs.

x x x

ENVIRONMENT

Earth's Temperature is Rising...

By Martin Urban—in *Süddeutsche Zeitung*

GLOBAL MEAN TEMPERATURE on the surface of the Earth will increase by about two degrees centigrade in the next 40 years, says Bonn climatologist Hermann Flohn. Writing in *Geographische Rundschau* on the basis of what was known at the end of 1982, he says the estimated increase will be due to gases released into the atmosphere by virtue of human activities. About seven tenths of a degree will be due to the higher carbon dioxide count in the atmosphere. A further six tenths will be due to nitrogen fertiliser, the end-product of which is nitrous oxide, or laughing gas. The third major factor will be a higher level of water evaporation, accounting for a temperature increase of 0.4 degrees. Combustion of fossil fuels currently releases 5.3 gigatons of carbon dioxide into the atmosphere annually, and the output is increasingly by 2.2 per cent per annum. Destruction of tropical rain forest at a rate of 160,000 square km per year adds a further two to four gigatons annually.

According to the most reliable estimate the atmosphere absorbs about 55 per cent of carbon dioxide and the seas the remaining 45 per cent. The carbon dioxide count in the atmosphere has increased from 290 parts per million in 1900 to over 340 parts per million at the beginning of this year. It is currently increasing at a rate of 1.2 parts per million a year. The less biomass there is, the less carbon from the carbon dioxide in the atmosphere is absorbed by plants and the faster the carbon dioxide count increases.

In Central Europe, and arguably in North America, forest growth is steadily declining. It is certainly declining rapidly in German woods and forests. The estimates do not take into account the increase in carbon dioxide that is likely to result from the demise of trees and forests.

THE BUNDESTAG COMMISSION OF INQUIRY into future atomic energy policy reported in 1980 that experts were agreed an energy policy aimed at growth would have a specific effect. Even if the emphasis were to be on promoting atomic energy the result would be a heavy consumption of fossil fuels. Energy saving, especially electric power, is likely to have a positive effect on the carbon dioxide problem, Flohn claims. This aspect was covered exhaustively by Wilfried Bach, of Munster, last year in a book entitled *Gefahr Für Unser Klima* (Danger for the Climate). "We are burning up in 200 to 300 years the fossil fuels nature, in the shape of photosynthesis, took 400 million years to produce," Flohn writes. What consequences will a mean temperature increase of two degrees by the year 2020 have?

In the early Middle Ages, about the year 1000 when the Vikings colonised southern Greenland, the entire region must have been ice-free. In those days the mean annual temperature was one degree higher than it is today. Deep-sea drilling has shown that about 20,000 years ago, in the interglacial period, the temperatures were warmer than at any time in the past 700,000 years. In those days the mean annual temperature was two to two and half degrees higher than it is today. Lions, mastodons and hippos flourished in southern England. Their bones have also been found in gravel pits near Worms on the Rhine. In those days the sea-level was five to seven metres higher than it is today. The seas extended to Siberia and linked the Arctic Ocean with the Baltic. Scandinavia and Finland were islands.

TO JUDGE THE CONSEQUENCES of even greater increases in temperature we must go even further back in time. Facts found in relation to climate history are in keeping to a surprising degree with the results of model estimates. If there were a substantially higher carbon dioxide count and level of other toxins and mean temperatures were four degrees higher than today, conditions such as prevailed in the late tertiary period might recur. In those days, between 14 and three and a half million years ago, the Antarctic was covered by an icecap but the Arctic wasn't.

SALT AND PLASTER DEPOSITS such as today occur in southern Tunisia accumulated in the Viennese basin and the plateau along the upper reaches of the Rhine. Flohn says the arid zones could move 400 to 800 kilometres further north towards Central Europe. The sub-tropical rain zone would become narrower and likewise head north. California, the Mediterranean and the Middle East would be totally droughtstricken. Exact regional forecasts cannot be made because

TRIBUNE, NOVEMBER 19, 1983

in the late tertiary period the mountain ranges did not for the most part, yet exist.

They now exercise a crucial influence on the climate. Besides, massive volcanic eruptions could cool the Earth down rather than heating it up further. It looks as though the resurgences of volcanic activity since 1963 has ensured that the 0.5 degree temperature increase that might have been expected in view of exhaust fumes has not yet occurred. Flohn stresses that all current forecasts must be seen in the light of what is strictly limited knowledge. There has yet to be a model capable of satisfactorily simulating the present-day climate with its seasonal variations.

—German Tribune,



SPOTLIGHT

• Boxing • Cricket • Rugger

BOXING in Sri Lanka at one time was oozing with talent. This talent enabled Sri Lanka to reach Asian and Olympic standards where our boxers brought honour and glory to the country giving as much as they got in contests against their opponents at these two international Games. To mention a few of those who brought glory to Sri Lanka are Albert Perera, the Henricus brothers, the Obeysekera brothers, the Van Cuyeborg brothers, the Bulner brothers and Eddie Gray. They and many others were pugilists of the highest class. At every meet they fought even as losers they brought credit to the country with their gallantry. After these names faded away, boxing was in the doldrums because the subsequent office bearers who got appointed to the controlling body did not have the capacity to continue to maintain the high traditions of the past. But of late has stepped in a set of office bearers who are determined to put this sport to the very top. The present set of office bearers, it must be said, have started off on the right path and if they continue with their schedules and programmes, boxing should regain its former popularity. With the Asian Games and Olympic Games in view, the Sri Lanka Amateur Boxing Association held the Clifford Cup meet which also attracted boxers from Nepal and Bangladesh. The standard of boxing

at the meet was nothing much to talk about. There was talent, but not of the class of the boxers of yester years. But yet the boxers who entered the ring had determination and guts and with proper coaching should go a long way. The Clifford Cup is one of the most prestigious meets conducted by the Association and this meet which had to be postponed several times owing to no fault of those at the helm was well organised and was resounding success.

The Sri Lanka Army coached by former boxer, Colonel Mahadeva Kandiah, took the honours and retained the Clifford Cup for the tenth year in succession. This is a record which the Army can well be proud of. It goes to prove the love the boxers in the Army have for the sport and their determination to stay at the top. It is also a record for Colonel Kandiah who is a stickler for discipline and hard training. When it comes to boxing the gallant Colonel has always endeavoured to share his knowledge and expertise with other coaches and office bearers. P. L. T. Ratnasuriya of the Army was awarded the Best Boxer's Trophy for the excellent fight he put up against P. M. Nagarante of the Navy. The Army also produced the Best Loser in P. T. Ousman. Army's dominance at this meet was such that they even produced a boxer in the Heavyweight Class, U. J. Silva who was uncontested. This meet served as a trial for the Asian and Olympic Games and the boxers who fared prominently are sure to be called to the "pool" and put through their paces for the meets ahead.

THE RAINS CAME DOWN in torrents after a long dry spell to spoil the *Division One Cricket Tournament* which got off to a start recently. Most of the games ended in no-decisions in the first two weeks of cricket. If the present wet weather continues it is possible that several of the fancied teams will be struggling hard to enter the final round. Of the big names in the game today the worst hit has been the Sinhalese Sports Club who are without the points they would have liked to have after two games. There were seven games in the first week and the first day which was bathed in sunshine saw six batsmen hit centuries. The bat held sway on the first day and on the second day only a few hours of play was possible and in that time the reigning champions Bloomfield, Tamil Union, Nondescript, Nomads and Moors scored first innings victories. The second week of cricket was ruined by rain but the CCC and the Saracens found time to get the better of Panadura and Tamil Union. For the Tamils it was a surprise defeat. Tamils got the Saracens out for 203 and their strong batting line-up which rattled up a near 400 on the sum ground the previous week failed to get into gear and where dismissed for just 184 runs.

This game apparently ended on a controversial note with Tamil Union's Walter Fernando refusing to leave the crease when he was ruled out caught. Fernando apparently felt that the fielder had not

taken the catch cleanly and refused to leave the crease. Fernando's gesticulations were in bad taste and it is likely that he will be reported to the Disciplinary Committee of the Cricket Board. This type of behaviour does not augur well for the game. It is time that the Disciplinary Committee took stern action. The new season also saw the return of Michael Tissera to the Colombo Cricket Club squad. Tissera who walked the cricket fields here and abroad like a colossus crowned his crickering career by being the best captain produced by Sri Lanka. With fortunes fluctuating for the CCC although packed with ample schoolboy talent they called on Tissera to lead them and the true sportsman that he is he was only too glad to help them out of a crisis. Tissera has the rare honour of having led two clubs to championship honours in Division One Cricket. He first led the NCC and a few years back did so with the CCC. He is a cricketer and gentleman every cricketers should endeavour to emulate. All matches on turf in the second week was ruined by bad weather. The new season is of vital importance to all our cricketers because of the tour of Zimbabwe and New Zealand. Competition should be very keen in every game because all of the cricketers participating can aspire to play against these visitors.

The Second Test between West Indies and India ended in a draw with the Indian batsmen showing signs of having countered the thunderbolts of West Indian Malcolm Marshall. Marshall ripped through their batting in the First Test which saw the Indians slump to an innings defeat. In this game centuries were scored by Gavaskar and Vengaskar (India) and Clive Lloyd (West Indies). The Indians who took lease of a perfect batting pitch ran up a formidable first innings score of 464. But they did not have the bowlers penetrative enough to dismiss the Windies cheaply on the first innings and force them to follow on. The West Indies skipper Clive Lloyd struck batting form after a long lean spell. He held the Windies batting together to stem an early collapse and scored a well deserved century. Inida 464 and 233 West Indies 384 and 120 for 2.

THE KNOCKOUT RUGBY TOURNAMENT conducted by the Sri Lanka Rugby Football Union has produced the finalists—CR & FC and the Army when this is being read the final would have been played at the picturesque Longdon Place and it is likely that the CR & FC would have beaten the Army and taken charge of the coveted trophy thus breaking a long hoodoo. In the first semi-final the CR & FC got the better of the ruggerites from Kandy by 19 points to six and in the second semifinal Army downed the Airforce by 15 points to nine. Kandy who were making a determined bid for the trophy had their run halted when the CR displayed better attacking rugby to run rings round them and defeat them.

Kandy have always proved to be a better side on their home grounds at Nittawela. In the quarter-final they upset the Clifford Cup champions the the CH & FC and showed promise of giving the CR & FC a good run for their money. But it was not to be as they came up against a well trained CR outfit who were superior in every department of the game. However Kandy must be congratulated for keeping to the game. With limited facilities for practices they have kept to the game and have also helped to keep the game alive in the schools in the district. However it is sad to note that E. W. Balasuriya has lost interest in the game. One of the pioneers of the game in the district Balasuriya did a lot to keep rugby going in Kandy and it will be a big loss to rugby in Kandy if Balasuriya is lost to the game. It is time that the present set of office bearers of the Kandy Sports Club had a chat with Balasuriya and got him to rekindle his interest in the game.

The Australian cricket scene and the cricketer most talked about there is Pakistan's leg spin, googly bowler Abdul Qadir. He is certain to play a leading role in the fortunes of Pakistan in the coming series. The best of his kind in world cricket today, Qadir is a match-winner on any day. His style of bowling is hard to read and there is no doubt that all Australian batsmen are going to have a tough time reading him. The Australians however have packed their frontline batting with a galaxy of left handers and this is sure to unsettle Qadir.

ALLROUNDER

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October 29 - November 6

SATURDAY, OCTOBER 29: Benedictine skipper. Ravi Irugalbandara brought off another fine all-round display (6 for 40 and 17 not out) to put his side on top in their cricket match against Wesley at Kothahena yesterday: Wesley 115 and St. Benedicts 53 for 4. Gehan Mallawarachchi (57 with 9 fours) and Rukshan Soza (52 with 6 fours) put on 84 for the second wicket and helped St. Joseph's declare at 117 for 5 at the tea break at Darley Road yesterday; Dharmaraja in reply were 105 for 5 at close. Marion Von Hagt (60) and P. Ekanayake (57) saw St. Anthony's total 211 in their cricket match against Thurstan at Katugastota yesterday: St. Anthonys 211 and Thurstan 47 for 2. Opening batsman David Joachim (58 with 3 fours) and S. Sebastian (64 with 6 boundaries) saw the Peterites declare their innings close at 204 for 7 in their cricket match against Carey at Bambalapitiya yesterday: St. Peters 204 for 7 declared and Carey 23 for 1 at close. Richmond helped by a splendid 73 by Chandana Mendis with five boundaries saw them total 191 and Trinity replied with 36 for 2 at the close of the first day of their cricket match at Asgiriya yesterday.

SUNDAY, OCTOBER 30: St. Sebastians College beat Sri Jayewardenapura MV Kotte by wickets 5 in their inter school cricket match played at Kotte yesterday: Sri Jayewardenapura 120 and 117 all out and St. Sebastians 94 for 4 overnight 156 for 8 dec. Colts opening batsman Sandula Fernando hit an unbeaten 140 with 18 boundaries in 256 minutes against BRC at Havelock Park yesterday Hiran Cooray scored 70 with 11 fours in 197 minutes. Colts 320 for 6. Nomads made 191 with Deepal Madurapperuma scoring an unbeaten 55 against Police at Police Park in their Lakspray tourney game yesterday: in reply Police made 23 for one wicket at close. Three good knocks by Amal Silva (75) skipper Ranjan Madugalle (63) and Rohan Buultjens (66) carried NCC to 312 for 8 wickets in their Lakspray Trophy match against CCC begun at Maitland Crescent yesterday. Zahira held S. Thomas Mt. Lavinia A to a draw in their inter schools cricket match conducted at Mt. Lavinia yesterday. S. Thomas A 210 for 9, declared and Zahira 150 and 120 for 7 at close A knock of 75 runs by Keerthi Ranasinghe helped Bloomfield to a total of 196 runs in their Lakspray trophy cricket match which began at Panadura yesterday: Bloomfield 196. This game was called off at the tea interval due to bad weather; it will be continued today.

MONDAY, OCTOBER 31: In a high scoring weekend interrupted by bad light defending champs Bloomfield beat Tamil Union NCC Nomads and Moors scored first innings victories in the Lakspray Trophy first round matches concluded yesterday. SSC and Saracens and BRC and Colts figured in no-decisions with bad light affecting a winning decision in both matches. NCC beat CCC: 312 for 8 declared and CCC 197. Nomads beat Police: Police 140 and Nomads 191. Blomfield beat Panadura: Bloomfield 196 and Panadura SC 178. Tamil Union beat Air Force: Tamil Union 392 for 7 declared and Air Force 131. Moors beat Kandy CC: Moors 321 and 89 for 5 and Kandy CC 1 for no loss continued 167 all out. Defending champions the Army, cruised into the Semi Finals of the SLRFU President's Trophy Championships with 21 points (1 goal 1 penalty goal 3 penalties) to 9 (2 penalties 1 drop goal) victory over Navy in the Quarter Finals yesterday at Havelock Park. CR Bees edged out Dambulla by 13 points (1 goal 1 try 1 penalty) to 12 (1 goal, 2 penalties) in their SLRFU B Division Knockout game at Darawela yesterday.

TUESDAY, NOVEMBER 1: Right arm spinner P Wijetunga had a match bag of 10 wickets for 24 runs to rout St. Thomas Gurutalawa by an innings and 21 runs at St. Anthony's College Kandy grounds yesterday in an under 13 cricket tournament match: St. Thomas 33 and St. Anthony's 123 for 3 declared. Two good knocks by Chrisan Fernando (106) and Hemal Mendis (93) helped Ceramics Corporation beat Wellawatte Spinning and Weaving Mills by 89 runs in their Nationalised Services A Division 40 over Knock out game at the Colts grounds yesterday: Ceramics Corporation 243 for 3 in 37 overs and Spinning and Weaving Mills 154 in 31.5 overs. Hosts and world champions Pakistan beat arch-rivals India 2-0 on the third day of the six-Nation PLA champions trophy hockey tournament at Karachi yesterday.

WEDNESDAY, NOVEMBER 2: Kurunegala Youth CC made a winning debut in the Donovan Andree Trophy Tournament when they beat BRC on the first innings at Havelock Park on Sunday; Kurunegala Youth CC 203 and BRC 174. In a low scoring Donovan Andree Trophy game at the Tyrone Fernando Stadium, Moratuwa CC defeated Tamil Union on the first innings on Sunday: Moratuwa SC 125 and Tamil Union 90. Matara SC beat Peterson SC B in a thrilling Pure Beverages trophy Division III match played at the Uyanwatte esplanade Matara on Sunday: Petersons SC B 65 and Matara SC 68 for 9 declared. In a good batting double by Ian Colombage (83 and 73) and a fine piece of bowling by skipper Lal Perera enabled Negombo CC beat Nomads on the first innings in a Donovan Andree trophy match played at the Air Force grounds Katunayake: Negombo CC 188 and Nomads 171. Bad light prevented Moratuwa SC from beating Bloomfield in a Pure Beverages trophy match played at Reid

Avenue on Sunday. Bloomfield were struggling on 118 for nine in reply to Moratuwa SC's 168.

THURSDAY, NOVEMBER 3: Blue Oceanic Hotel SC won all their matches in the Mercantile F Division cricket tournament beating C. W. Mackies, United Electricals, and Singer: Blue Oceanic SC 183 for 6 in 50 overs and C. W. Mackies SC 129 in 40.3 overs. Beat United Electricals by 8 wickets: United Electricals 87 in 43 overs and Blue Oceanic 88 for 2. Beat Singer Industries by 127 runs Blue Oceanic Hotel 205 in 46.2 overs and Singer Industries 78 in 23 overs. Bandula Fernando scored twin half centuries to help Colts to an easy first innings win over Badulla CC in a Pure Beverages Trophy cricket match played at Havelock Park. Colts 223 for 6 declared in 48 overs and Badulla CC 86 in 41 overs. Arpico B helped by a good bowling performance by Tuan Ahamath (4 for 13) and an unbeaten 38 by A. Perera routed Ceylon Tours by 8 wickets in their Mercantile G Division cricket match at the Railway grounds recently: Ceylon Tours 99 in 28.5 overs and Arpico B 102 for 2 in 15.2 overs.

FRIDAY, NOVEMBER 4: Kotte UC pulled off a close 10-run over United Southern CC in a Pure Beverages trophy cricket match played at Matara: Kotte CC 137 and United Southern CC 127. In another match of the same tournament Kotte CC went down by 81 runs to Matara SC at Matara: Matara SC 148 and Kotte CC 67. Two valuable batting performances by Gamini Jayasundera (97) and R. Udupihilla (68) helped Polonnaruwa District CA score a first innings victory over Horana C & AC in their Pure Beverages Trophy cricket played at Royal Central College grounds Polonnaruwa: Horana C & AC 185 for 9 and Polonnaruwa DCC 219 for 5 in 48 overs. Zodiac CC set a target of 96 runs for victory in 17 mandatory overs hit off the runs in just 9.4 overs to record a fine win against Expo Lanka by eight wickets in a match played at the Prisons Grounds: Expo Lanka 90 and Zodiac CC 81. Half centuries by Chandima Mapatuna Susil Shantha and Tuwan Ahamath saw Arpico run up a sizeable total of 266 for 6 in 30 overs and beat Velona by 158 runs in a Mercantile G division cricket match played at Railway grounds: Arpico 266 for 6 in 30 overs and Velona 108 in 23 overs.

SATURDAY NOVEMBER 5: A breeze 39 with 8 fours by opener D. Amerasekera and an unbeaten 36 with 4 fours by S. Kasturiarachchi put Dharmapala, Pannipitiya in a strong position on 103 for 2 at the close in reply to Wesley's 156 at Campbell Park yesterday. An unfinished sixth-wicket partnership of 46 runs in 34 minutes between Riaz Farcy (22 not out) and Royce Buultjens (16 not out) saw St. Peter's recover from 54 for 5 to 90 for 5 at the close in reply to Isipatanas 120 in their cricket match at Bambalapitiya yesterday: Paceman Crethaka Rajakumar took 3 wickets for

12 runs. Rain stopped play at 2 p.m. yesterday when Dharmaraja were 106 for 6 in their cricket match against S. Thomas Mt. Lavinia at Lake View Kandy; the game will be continued at 9.30 a.m. today.

SUNDAY NOVEMBER 6: A sparkling 96 by Harsha Mayadunne with 14 hits to the fence and 4 overnight highlighted Navy's first innings win over Tamil Union in a Pure Beverages cricket tournament match played at Welisara yesterday: Tamil Union 100 off 26.2 overs and Navy 230 for 9 declared off 44 ovs. A fine knock by Lanka Perera who top scored with 58 runs which included two sixes and seven fours enabled Saracens to score 203 in their match against Tamil Union in the Lakspray Cricket tournament match played at Rifle Green yesterday: Saracens SC 203 and Tamil Union 7 for 1. A hard hit knock of 71 by Royce Buultjens with three sixes and seven fours was the only highlight in the drawn encounter between Isipatana and St. Peter's that ended at Bambalapitiya yesterday: Isipatana 120 and 58 for 3 at close and St. Peter's 90 for 5 overnight 222 for 9 declared. CCC medium pace Shammi Silva made a great come back after a long lay off to capture six wickets for 44 runs to send Panadura reeling at 83 for 8 at close after 123 minutes play in their Lakspray Trophy game at Maitland Crescent yesterday. Zahira Sports Club Matala beat Old Matalians 4-1 in a Basil Wijekoon memorial League Tournament Hockey match played at Edmund Park, Matala yesterday.

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ROWING

Inter-Monsoon Regatta

The Inter-Monsoon Regatta concluded on 29th October 1983. The Senior Pairs had three entries. Stroke's seat of one pair jumped the front stop in a heat which was being rowed in the dark and defied all attempts to have it put back again, and the two pairs in the finals rowed an exciting race to finish in a dead heat in 3 mins. 59.8 secs. over the 1,000-yard course. The crews showed a contrast in styles, R. Fernando and S. de Silva volatile, making a fight of it all the way, J. S. Wickremasinghe and H. Z. Anverally, long and steady, accelerating in the last half-dozen strokes to save the race, so that they were moving faster than the other crew at the finish. Anverally also won the Senior Sculls race over the same distance in 4 mins. 18.12 secs. *The H.M.S. Enterprise Fours* turned out to be a fight between Thomian crews, both pairs rowing very well, that comprising R. Wijesinghe, P. Paranavithana, K. Arvind, A. Junaiddeen, coxed by S. Senarath, winning the 1,000-yard race in 3 mins. 39.5 secs, an excellent timing for a junior crew. Careless handling after the race caused the boat to be holed as it was being lifted out of the water, but this damage would not have let in water the boat was carrying at the finish of the race.

The Commodore of the Colombo Yacht Club was present for the race that his club had presented a trophy for in the 1960s. The R.C.Y.C. Trophy is for coxed pairs rowed by junior oarsmen over a 1,000 Yards. Mr. Andrew David was himself an oarsman and he said some encouraging words about character that rowing cultivated before he gave away the mugs and trophies. There were six entries for this race the finals being fought out between two Royal pairs. The standard of rowing was very good in all the crews and G. Sooriyarachchi and N. Fernando, coxed by H. Doranagama were the winners in a time of 4 mins. 55.26 secs. *There are great preparations going on for the Royal-Thomian Regatta which will be held in the middle of December. The carpenters are working late carrying out major overhauls of some of the boats. The attendance is good and no one is left out of the training that goes on all evening.*

OUR ROWING CORRESPONDENT.

Govt



Notice

Notice Under Section 7 of the Land Acquisition Act (Cap. 460) As Amended by Land Acquisition (Amendment) Act. No. 28 of 1964

Reference No. 3/2/1/7/179

It is intended to acquire the land described in the schedule below. For further particulars, please see Gazette Extraordinary of the Democratic Socialist Republic of Sri Lanka No. 269/17 of 03.11.1983.

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A. G. A's Division : Katana
Village : Raddoluwa
Situation :
Name of Land : Kondahenawatta
Lot Nos : 1 - 3
Plan No. P.P. Gam : 341

Kachcheri,
Gampaha.
Date: 21.02.1983

A. L. S. Malwenna
District Land Officer of
Gampaha District.

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CONFIDENTIALLY

Problem of Seeds

THAT READERS WILL RECALL that in this column last week we had taken up the question of seed potato scandal that had been high-lighted on the front page of the *Daily News* in November 2? That before commenting on the *Daily News* story we had published extracts of what *Tribune* had said about the seed potato racket in the Nuwara Eliya district in this column in our issue of July 9, 1983? That we had in that article said that in order to satisfy the "hunger" for seed potato, officials of the Department of Agriculture had supplied what they called "locally grown seed potatoes" at Rs. 600 a cwt. to cultivators? That they had claimed that they had purchased these from other cultivators at Rs. 900 a cwt. and the Government had to pay this price? That a *Tribune* reader had wanted an investigation as to whether these "diseased potatoes" (they were found to be so after planting) were really bought for the alleged price of Rs. 900 a cwt. or really for Rs. 400 a cwt. and whether the balance of Rs. 500 a cwt. had gone into a pool to be shared by "persons unknown"? That this "seed potato" was later sold to cultivators at Rs. 600 a cwt.? That this column had (in our issue of July 9) gone on to say: "That the Government thus officially subsidised this quantity of seed potato (said to be 150 tons, but may be more) at Rs. 300 a cwt.? That on this deal the government was charged Rs. 900 a cwt.? That more lots of 150 tons could have been purchased in the same way? That whilst the government lost Rs. 900,000 for every lot of 150 tons, the operators made over Rs. 1 million in this buying and selling deal? That though this 'story' or allegation sent to us by our reader may be only a malicious canard, it is a matter that merits investigation? That the same Nuwara Eliya reader has pointed out that the back drop to this seed potato deal was the newspaper-radio propaganda barrage early last year that Sri Lanka was 'almost' self-sufficient in seed potatoes? That this, according to our reader, was only a smoke-screen for operation seed potatoes? That if imports were restricted or stopped, operators 'close' to officials of the Agricultural Department could have opportunities of buying poor quality potatoes from some 'chosen' cultivators (willing to give receipts or sign vouchers for Rs. 900 a cwt. after getting only Rs. 400 a cwt.) and thereafter making a cool million or more on passing them off as good seed potatoes under the auspices of the Department of Agriculture?

THAT *Tribune* had in that article taken the opportunity to ride one of its favourite hobby horses and preach a homily: "That is it not funny to see officials of the Department of Agriculture hanging a halo over their heads when they talk of plant protection and keeping this country free of 'imported' pests through the import of rootstock, planting materials, seeds etc.? That whilst they are entitled to shout their heads

off about keeping 'imported' plant pests and virus out of the country and insisting on the strict implementation to the letter of the Plant Protection Ordinance, they forget that the prime objective this law and all other agricultural laws is to increase production? That they also have a duty to do research about indigenous pests and virus that afflict our vegetables and fruit trees and also to supply adequate quantities of certified locally produced seeds and planting materials? That it does not need much investigation to know that little or no research has been done in anything but rice and that local production of seeds and planting materials is totally inadequate for the country's needs? That the Department proudly proclaims that it has a wide network of certified seed growers? That *Tribune* has received several letters from readers about this matter and we would like the Department or the Ministry of publish the list of such certified seed farmers? That *Tribune* is aware of instances where departmental officials, who are expected to promote seed production, have discouraged even educated farmers from embarking on scientific seed production by telling them that only Government farms are equipped to produce them? That *Tribune* is also aware that seeds are 'bought' from favoured cultivators and that they are dumped together with what is produced on some farms and sold to the public in 'official' packets? That it is also known that lime seedlings and other grafts are obtained from private farmers and sold in government farms as their own?"

IS IT NOT NECESSARY for Minister Gamani Jayasuriya to take urgent steps not only to stop malpractices such as the one presently alleged by cultivators in Nuwara Eliya in regard to seed potatoes but also to ensure that good seed and planting materials are made available at the appropriate time to farmers at reasonable prices? That until good quality seed and planting materials are produced locally in adequate quantities, imports of certified seeds should be permitted from recognized sources? That in this connection it is necessary for the Minister to examine (1) the department's production of seed in government farms and the percentage of such seed that really germinates; (2) the department's list of registered seed farmer's (3) whether seeds are in fact purchased from farmers who are not "registered"—but entered into the books as if they are from approved private seed farms? That whatever be the sunshine stories put up before the Minister and the public about seeds the shortage of seed has become chronic in the last three or four years? That the prices demanded for good seed at planting time are so high that most farmers cannot afford them? That shortages are artificially created to enable traders who corner imported seeds and even those produced by the department to make black market profits?



TRIBUNE. NOVEMBER 19, 1983

TENDER NOTICE

MINISTRY OF LOCAL GOVERNMENT HOUSING AND CONSTRUCTION. DEPARTMENT OF BUILDINGS.

Tenders for Repairs to Kachcheri Building at Jaffna will be received by the Chairman, Tender Board Superintending Engineer's Office, Department of Buildings, Jaffna/upto 10.00 a.m. on Wednesday 23.11.83

02. Tender forms could be obtained from District Engineer / Jaffna South before 4.15 p.m. on 18.11.83 by Contractors and "Trial Letter" holders of Department registered for Rs. 150,000/- and above on production of a tender deposit receipt for Rs. 200/- issued by Buildings Department, Colombo, or any Kachcheri outside Colombo.

03. Any further particulars and or instructions could be obtained from the above Engineer.

K. C. Samaraweera.
Director of Buildings.

Department of Buildings,
P.O. Box 504,
Colombo. 03.11.1983

MINISTRY OF LOCAL GOVERNMENT HOUSING AND CONSTRUCTION. DEPARTMENT OF BUILDINGS.

Tenders for Construction of ward of 30 Beds at Ayurvedic Hospital, Meegoda will be received by the Chairman, Tender Board/Department of Buildings, Colombo/upto 10.00 a.m. on Wednesday 30.11.83

02. Tender forms could be obtained from District Engineer / Avissawella before 4.15 p.m. on 25.11.83 by Contractors and "Trial Letter" holders of Department registered for Rs. 800,000/- and above on production of a tender deposit receipt for Rs. 250/- issued by Buildings Department, Colombo, or any Kachcheri outside Colombo.

03. Any further particulars and other instructions could be obtained from the above Engineer.

K. C. Samaraweera.
Director of Buildings.

Department of Buildings,
P.O. Box 504,
Colombo. 10.11.83

**MINISTRY OF LOCAL GOVERNMENT
HOUSING & CONSTRUCTION
URBAN DEVELOPMENT AUTHORITY.
POSTS OF STENOGRAPHERS (ENGLISH) - GRADE VII**

APPLICATIONS are invited from citizens of Sri Lanka for two posts of Stenographers (English) in the Urban Development Authority.

2. The Educational Qualifications, speed in shorthand and typewriting and experience required are given below:—

(a) **Educational Qualifications :**

S.S.C./G.C.E. (C/I) in 6 or more subjects in not more than 2 sittings including a credit pass in English.

(b) **Speed :** Shorthand — 80/100 w.p.m.

Typing — 40/50 w.p.m.

(c) **Age :** Below — 35 years.

(d) **Experience :** 5 years experience as a Stenographer in a recognised institution.

3. The salary scale assigned to this post is Rs. 840—10 x 40—Rs. 1,240/- per month. (The commencing salary inclusive of Government approved allowances and C. L. A. will not be less than Rs. 1,435/- per month).

NOTE: Applicants possessing experience in Secretarial duties or longer experience as a Stenographer will be considered for placement on a suitable salary point above the initial of the scale.

4. The Posts are permanent, the selected candidates will be required to contribute 10% of his/her salary towards E.P.F. The Authority's contribution is 15% of salary. In addition, the Authority will contribute 3% to the Employees Trust Fund

5 Applicants should attach to their applications, copies of certificates regarding age, educational qualifications, speed in shorthand and typewriting and experience. Applications stating the above particulars including the present employment and salary received, should be sent, under registered cover to reach the Director (Administration), Urban Development Authority, No. 27, D R. Wijewardena Mawatha, Colombo 10, on or before Friday 25th November 1983. Applicants should write on the left hand top corner of the envelope, the words "Post of English Stenographer Grade VII".

6. Applicants in Government Departments/Corporations/Statutory Boards, should send in their applications through the respective Heads of Institutions.

8th November 1983

CHAIRMAN,
Urban Development Authority.