

Bitter truth and better tomorrows

People's Report on
**Sustainable
Development**
Sri Lanka



prepared for the
World Summit on Sustainable Development, Johannesburg, South Africa



Green Network of Sri Lanka

Any part of this publication may be reproduced, stored in retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, with or without the permission of the publishers, as may be the wish of the reproducing party, since the publishers firmly believe that everyone has drunk from other people's wells and has been nourished by other people's ideas, and therefore are happy to feed the hunger or slake the thirst of people they may or may not ever encounter.

August 2002

ISBN: 955-8784-00-1



Published by

Green Network of Sri Lanka
9, First Lane, Wanatha Road,
Gangodawila, Sri Lanka

Phone: 94-1-817156

Fax: 94-74-305274

Email: green@pan.lk, wssdsri@sltnet.lk

Website: www.ecolanka.net/wssdsri

Editorial Board

Ven. Keeranthidiye Pannasekara
Ashoka Abeygunawardana
Kaminee Vitharana
Hemantha Vithanage
Thilak Kariyawasam
Willie Gamage

Editor in Chief

Suranjan Kodituwakku

Consulting Editor

Malinda Seneviratne

Photographers

Nihal Fernando
Bandu Ranga Kariyawasam
Janaka Withanage
Douglas Chandana Kumara
Lalith Walisundara

Writing Team

K. Munagama
S.Vishwalingam
K.Kakulandara
Namal Premawardana
Sampath Ariyasena
Wasantha Wejewardane
Jagath Gunawardana
Dr.T.Jayasinham
Dr.Jayanath Abeywickrama
Udaya Eakanayake
Danesh Wisumperuma
Channa S. Ekanayaka
Kamel Malvani
Ranjan Karunanayake

Type Setting

Subashinee Jayasekara
Rasika Kumari Perera
Sujeewa Ranasinghe
Channa N. Ratnasiri

Design

T.P.G.Amarajeewa

Sustainability was never foreign to our people. It had to be plundered from us. Several centuries later, those who authorized and justified the plunder of our resources and who sought to destroy our way of life, are seeking to recycle the idea back to us, and this in a form that has been shredded of all substance. This report is humbly dedicated to those whose sensibilities are tuned to perceive the laws of nature and who therefore choose to live by them, to those who preserved this tradition, passing it down from generation to generation by simply living the idea, and to all those who are willing to walk this gentle and regenerative path.



National Steering Committee of Green Network



Green Movement of Sri Lanka



Energy Forum



Environmental Foundation Ltd



Ruk Rakaganno



National Forum for People's Organisations



Intergrated Social Development Foundation

Principal Sponsors



Contents

Page

A DECADE OF BROKEN PROMISES	9
IN SRI LANKA WE MUST CONTINUE TO HOPE...	11
TOWARDS SUSTAINABLE AGRICULTURAL DEVELOPMENT	13
ENERGY: EVEN DEEPER INTO CRISIS	25
THE COUNTER - SUSTAINABLE INDUSTRIAL SECTOR	33
POVERTY: ITS DEVELOPMENT IS SUSTAINED	41
NATURAL RESOURCE CONSERVATION, RESTORATION AND MANAGEMENT	50
GOOD GOVERNANCE: THE NEED TO CHANGE POLITICAL AND ADMINISTRATIVE PATTERNS	60
WOMEN, YOUTH, CHILDREN AND SUSTAINABILITY	65
HEALTH: NOT A SECONDARY ISSUE	68
WE CANNOT FORGET OUR SEAS AND INLAND WATERS	72
TOURISM: TEARING THE SOCIAL FABRIC AND HARMING THE ENVIRONMENT	74
THERE IS NOTHING THAT DESTROYS MORE VIOLENTLY THAN WAR	77
THEY ARE AMONG THE BLESSED OF THE EARTH...	79
THEY MADE THE LONG JOURNEY POSSIBLE.....	83

A note from the editorial desk

We are especially grateful to the following persons and organizations for all their help and encouragement:

First and foremost, we remember with great appreciation all those who in their day to day lives live in ways that enhance the vision of sustainability. Their assistance and hospitality were the bedrock on which this document was put together. In this, we cannot forget the many NGOs and CBOs who facilitated these encounters.

The UNDP, GEF Small Grants Programme, ANAC, WHO and the DF generously provided funding for this project.

The NSRC, Wilpotha K.I.P, Podujana Himikam Kamituwa-Horana, Women's Bank - Borella and ITDG-South Asia, provided information, photographs and helped us in the preparation of the report.

Sherine Samarasooriya, Nihal Fernando, Banduranga Kariyawasam, and T.P.G. Amarajeewa were magnanimous in their contributions to this report.

Finally we thank those who helped us in small but important ways but who are too numerous to be mentioned by name. They will not misunderstand.

We wish to express our special gratitude to Nihal Fernando who narrated visually the tragic and hopeful stories about our land, our people, and our future, and who has always been in the forefront of the effort to reverse the destruction of our ecology, cultural heritage and way of life. In particular, we acknowledge with thanks his generosity in allowing us to use the pictures his keen lens has captured over half a century.

Cover :

Depicted here is the *vee bissa*, the traditional paddy storage facility. It is the primary cultural symbol of food security, sustainability and prosperity. The *vee bissa* has expressed the social, economic, political and environmental stability and the ethic of self-reliance until the current mode of development destroyed all this in the name of "progress".

PREAMBLE

It was over 80 centuries ago that human beings, themselves products of nature, developed a methodology or a practice to live with nature. This took the human being several millennia. The development of agriculture and animal husbandry was a product of his understanding of the interrelatedness of processes. The character of knowledge accumulation and the practical application of knowledge is perhaps best illustrated by the number of plants and other living organisms that human beings have, over the years and across continents, found uses for.

Communities have respected and indeed protected such life forms, often ensuring the continued reverence and thereby conservation by developing notions of the sacred around them. There was worship, there were beliefs and sometimes there was a trace of fear in their engagements. In any event, it is evident that the spiritual engagement of ancient societies were intimately entwined with the natural world. These practices imply that they were aware that they were in fact constituent parts of this same natural world.

The natural world was not "created" by any supernatural entity "for the sole purpose of providing the needs of human beings". All the rights that people have, animals have too. The human being has to acknowledge that he, just like any other animal or plant, is a part of nature. Neither of these categories can survive without the others.

It is said, that after attaining enlightenment, Siddhartha Gauthama, the Buddha, had spent a week gazing upon the *esatu* tree, which had sheltered him during his search for truth. During this time, it is said, the Buddha had not blinked even once. In this way did he express his gratitude. The Buddha preached that it was an unfriendly act to break off a branch or a leaf from a tree that has given one shelter:

The idea of owning, controlling, overcoming and plundering the natural world is antithetical to the cosmologies of all ancient peoples. Understanding it and developing a symbiotic relationship with it was our ancient practice, the foundation of and indeed the pride of the early people of this island.

How can one expect a human being who is violent towards his fellow creatures and who has no qualms about cheating and stealing from them, ever be expected to maintain even a semblance of a mutually beneficial relationship with other beings or live in ways that do not disrupt the cycles of the natural world? It is not possible.

Where greed and deceit is present, an occupation or a trade, cannot be righteous. Take for example the medical profession. If a doctor makes money through charging his patients exorbitant sums of money for treatment, he is but engaging in a fraudulent occupation. The same goes for someone who uses loaded weights and measures. Righteous livelihoods are not associated with burdening the public. It refers to those who would not indulge in the most trivial of falsehoods or frauds.

Profit is one drive of today's society. Profit generates selfishness. It facilitates fraud and violence. We are engulfed by the dominant life ethic, "by hook or by crook". There is deception, bribery, fraud, murder etc., in unprecedented proportions. There is repression exercised by state agencies. The repression unleashed by the private sector, on the other hand, is at times worse.

To purchase after tricking the farmer and to sell after tricking the consumer are not just acts of fraud. They also speak of violence. Trade, as a means of facilitating the exchange of goods, is not inherently something bad. However, is it necessary to throw dust in the eyes of the consumer for this?

When profit is the sole purpose, brutality ensues. Where only profit matters, humanity retreats. Concern for fellow human beings and in fact all fellow creatures, big and small, animal life and plant life, can only diminish when profit is the sole priority.

In today's society, a large proportion of people, including entrepreneurs, workers, young people and the old, are suffering from intense tension. They lack peace of mind. This is even the case in the USA, where a recent study showed that over 3 million people suffer from mental conditions.

Is it just the worker and the consumer that is exploited? No. Nature also suffers on account of the human being's mad pursuit of profit. The natural world is quietly being subjected to gradual destruction. Profit seeking humans have not spared any corner of the earth and her bountiful resources, which are seen only in terms of the possible monetary value generated through exchange.

The ancients say that in the ideal interaction with the natural world, the human being should follow the example of the bee; obtaining

the nectar of the flower without harming either the colour or the fragrance. In fact in this process, the bee helps ensure the survival of genetic strains by facilitating cross-pollination.

Why cannot the human being act like the bee? Instead of striving to fulfill one's basic needs, the human being relentlessly pursues the satisfaction of greed, competing violently with his fellow creatures and in the process bringing the entire earth to the brink of irreversible disaster.

Even at this late hour, the human race has to rein in its uncontrolled greed for material things and move towards a practice that is nourished by a spirituality capable of comprehending the eternal verities which include the cycles upon which the planet's health rests. There is a limit to the earth's capacity to suffer the body blows inflicted by the human being. Suffice to say that we are dangerously close to these limits.

The most ancient of our ancients knew all this. In other cultures, in other places, there has existed and still exists the foundational

knowledge necessary for a re-consideration of the models which we have fooled ourselves to believing as divine edict and as beneficial. The answers, then, do not lie in a magic formula that some "expert" will one day reveal in some seminar. They lie within us, whichever way one decides to define "us". For over several millennia, our people have understood the importance of being in concert with the cycles of the natural world. That was the basis of our food security, self-sufficiency, prosperity and a spirituality that tended towards treating the vicissitudes of life with equanimity. When we rediscover our heritage, we relearn the ancient teachings. From the ancients, we can learn our true relationship with one another and all other biotic and abiotic forms. It is when we stand on such a foundation that we can learn who we are. Such comprehension will wean us of arrogance, teach us humility and the primacy of inter-dependence.

A sustainable world can never be a target. It is necessarily a process. It is a journey that may or may not contain landmarks and such signs as there may exist would be visible only to those who have realized something of the unity of things. Let us be hopeful.

IN SRI LANKA WE MUST CONTINUE TO HOPE...

Sri Lanka is an island in the India Ocean. It has a total land area of 65,610 square kilometers, and population of 19.36 million people.

Though Sri Lanka is a small country, it has a wide range of topographic and climatic variation, and this contributes to the special feature of its biological diversity. Human diversity, genetic diversity, species diversity, and ecosystem diversity are noteworthy features in the Sri Lankan environment. The central mountainous region is the source of the country's major rivers. The climate is determined mainly by rainfall. The South-West of the country receives rain throughout most of the year, while the rest of the country experiences a dry period of several months' duration. The mean annual temperature ranges between 26-28 degrees in the coastal areas and between 15 and 19 degrees in the hills. The island has been divided into seven climatic zones. They are:

- wet zone
- dry zone
- intermediate zone
- arid zone
- mountain wet zone
- mountain intermediate zone
- mixed wet and intermediate zone

Sri Lanka has a strong historic tradition, dating back 25 centuries, of caring for the environment and managing its natural resources. The creation of wildlife sanctuaries, preservation of forests on erodable land, and national management and collection of water for irrigation purposes in environmentally-friendly reservoirs known as *wewa* (tanks) were some of the remarkable manifestations of this tradition.



Up to the latter part of the 19th century, traditional practices of dependent agriculture were pursued without damaging the long term sustainability of agricultural land, forests, waterways, and the atmosphere. Unfortunately, this system has been heavily influenced by the British colonial system of administration that ruled the island 1815 until independence in 1948. The colonial masters transformed the traditionally peasant dependent agricultural system in to the cultivation of economic crops such as tea, rubber, and coconut. This practice paved the way to rapid deforestation in the central hills, from where all the country's rich waterways begin. The forest cover in 1990 was 75% of the island's total land area. Due to rapid deforestation for commercial cash crops, forest cover fell to 50% in 1950. Since independence, large-scale irrigation development projects and eight resettlement projects have also adversely effected the country's forest cover. Now it has been reduced to 18.5% of the total land area. This is the "context" in which Agenda 21 has unfolded. This document is then a narration of this unfolding.

We did not rest

Various environmental organizations working in Sri Lanka did undertake a number of initiatives to tackle the issues associated with the environment and development with little success. Consequently individuals and organizations that are concerned about the environment & sustainable development of Sri Lanka decided to come together and formulate a common program under the name of Haritha ("Green") Network. The major partners of the Haritha Network are, the Green Movement of Sri Lanka, Environmental Foundation Ltd., the Energy Forum, Ruk Rakaganno and the National Forum for Peoples Organizations.

The Haritha Network helped form a National steering Committee for the RIO+10 WSSD program and all activities were carried out by this committee. This Committee includes the NGO representatives who attended the Rio Summit, experts, and community groups engaged in the sustainable development process in the island. Relationships were established with the Ministry of Environment and Natural Resources, the state agency responsible for WSSD activities, and active lobbying was carried out on the National Report prepared by the Ministry. Contacts with relevant Regional and International Networks who are actively working on WSSD were established in order to participate more fully with the global dialogue on the subject.



In addition to various agitational campaigns on environment & development issues, the Haritha Network conducted a national program (which includes preparation of this report) related to WSSD with seven hundred farmer, women, youth, labor, community development, environment, child rights, organizations working island wide. Haritha Network has completed twenty one workshops for civil society organizations covering twenty one districts in the island. These workshops focused on sustainable development initiatives implemented by community groups. Steps were taken to exchange experiences and transfer the appropriate technologies related to best practices to needy communities.

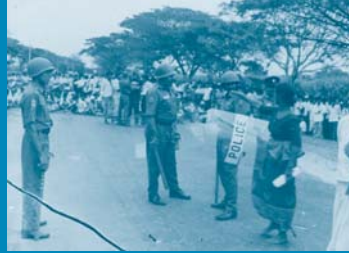
Awareness creation programs for conceptual change towards sustainable lifestyle were also discussed with different age groups and sectors of the society in mind. With the matter of creating awareness in mind a mobile exhibition was developed and shown in 200 Grama Charikas or "village meetings" all over the island to educate people about the global environmental crisis, and to share people's initiatives (best practices) to overcome the crisis. A program for school children covering 10000 schools including those in the war torn north and east provinces was also launched. This took the form of an essays and paintings competition for school children in both Tamil and Sinhala mediums. A three-day workshop for media personnel was conducted to create awareness on WSSD and community based "Best Practices" related to sustainable development. Two field trips were organized for journalists to visit places where large-scale project-related destruction had taken place and to places where peoples based sustainable practices are in operation.

Finally, this, the People's Report on Sustainable Development was prepared as a alternative to the National Report for the WSSD using funds from the Small Grants Program under the Global Environment Facility of the UNDP as well as support from the Development Fund of Norway and the World Health Organization. The report gives the people's perceptions on the present state of the environment. The purpose is not just to document how far we have come since the Rio Summit (or, how lax we have been), but to come up with something that can contribute to the debates surrounding issues that are of critical concern to all of humankind. Moreover, the report seeks to discover the truth that lies between rhetoric and practice for it is only then that we can look for pathways that lead to a world that is even remotely close to that which was envisaged ten years ago.

The report is organized around several key sectors such as agriculture, industry, poverty, biodiversity, governance and energy, all of which are admittedly interrelated but treated separately here for the purpose of clarity. Embedded in the text are brief profiles of practices that are best suited for emulation if goals of sustainability are to be achieved. The narratives are also interrupted, hopefully in a positive way, with issues, agitation and failure, for these also teach.

Ten years after "Rio" there is little to brag about. But, as the ancients say, time is longer than life. We are hopeful that we are yet to reach those tragic regions that solemnly observe "too late". If there was no reason to hope, this Report would be meaningless, it goes without saying. Let us see. ■

- 6 The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generation 9



A DECADE OF BROKEN PROMISES

The “Earth Summit” was promising...

World leaders of the time met in Rio de Janeiro, Brazil from June 5-12-1992 and pledged to uphold a wide range of convention aimed at creating a healthier planet and generating sustainable livelihoods. Of these the following, in a nutshell, could have been expected to have the widest impact:

- Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.
- All States and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development.
- States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem.
- Environmental issues are best handled with the participation of all concerned citizens.
- Women have a vital role in environmental management and development; their full participation is therefore essential to achieve sustainable development.
- The creativity, ideals and courage of the youth of the world should be mobilized to forge a global partnership in order to achieve sustainable development and ensure a better future for all.
- Peace, development and environmental protection are interdependent and indivisible.





The last decade was like a golf green: lush and beautiful to gaze upon, a playground for the rich and privileged and in the final instance, a desert.

Towards this end, a comprehensive work-plan was also developed and this is how "Agenda 21" entered the lexicon of development. Agenda 21 not only served as a handbook for the journey in search of sustainable development, it was the path-breaker and the discursive platform of the process. Ten years have passed. Those promises and pledges have for the large part gathered dust or have been shattered into pieces that will require much work to put together.

But there was a blurring of dreams and a breaking of promises

The world leaders who gathered in Rio and their successors who were beholden to make good the boasts of their predecessors have, as a community, failed miserably in delivering on the promises made. What really has happened?

The idea that human beings are at the centre of concerns for sustainable development has been virtually thrown out of the window, so to speak. Instead, the greedy (in particular the industrialised countries and multinational corporations) who have siezed control of power and are persuaded by the ethic of maximising profits, employed the unfeeling mechanism called "the market" (which neither has a regard for history and therefore heritage, nor for the future and therefore for notions of sustainability) to plunder and exploit. The lives of the world's poor, i.e. the vast majority, and their livelihoods have unparardonably been compromised in the process.

Instead of poverty being eradicated, the phenomenon is spreading at an ever increasing rate across the globe. Diseases associated with the poor such as Tuberculosis and AIDS are effecting increasing numbers. That the rich, meanwhile, spend millions of dollars on perfumes, for example, is nothing less than scandalous.

Far from narrowing disparities, processes have been set in motion to exacerbate the gaps in incomes, access to resources and power. The hackneyed phrase, "the rich have got richer, the poor poorer", sadly, is yet to lose currency. The debt burden of the poverty stricken South

has futher strengthened prosperity in the North. Debt itself has been used as an alibi by the "developed" world to make further inroads into the sovereignty of these countries and plans are afoot to unashamedly plunder their resources on the same account. The labour of the poor is exploited. Their resources are plundered, their traditional knowledge systems stolen by nefarious intellectual property agreements enforced by a global political economy pathetically skewed against them and even their rights to water and other basic human rights have been robbed. All in the name of "progress".

Instead of protecting and restoring the health of the planet, we are now at the brink of total environmental collapse. The temperature of the planet continues to climb. Climatic change is of a magnitude that is no longer calculable. We are facing unprecedented droughts. The violence that the powerful have unleashed on the environment is only matched by the magnitude of the price being extracted from the poor. The rights to make decisions on the future of the Earth's genetic resources has been usurped by the director boards of a handful of multinationals.

Agenda 21 envisaged the full participation of women in sustainable development. Ten years on, they constitute the vast majority of those who have been evicted from the process. Their labour continues to be exploited, their bodies continue to be violated. The meaningful participation of women in development is an ideal whose intensity fades like the sun, as it drops into the Western horizon.

Youth, whose energies and creativity were to be harnessed, are facing increased levels of unemployment and underemployment.

Instead of respecting and protecting the traditional knowledge of native peoples, this knowledge is being mercilessly exploited and, in fact, plundered courtesy of intellectual property rights agreements enforced through the global political economy.

Peace has never felt so far away. The end of the Cold War has seen a proliferation of arms, including nuclear weapons. In fact the arms industry has never had it so good. "Evil Nations" and "Evil Agencies" are systematically spawned to fuel the arms industry. Wars are created, partly as giant advertizing campaigns and partly to create markets for weapons. Governments are subtly coaxed to use monies set aside for development and the conservation of the environment for military purposes.

There is no healthy commerce between governments and the general public. Instead governments increasingly play the role of capital-facilitator, disempowering the voter and pushing him/her to virtual slavery.

We expected Agenda 21 to at least offer us a shadow of a world without war, drought, flood, hunger and the fear of death. Ten years since Rio, in retrospect, we would have been happy to have with us just the shadow of a terrible future. In truth, we are living in the hell our leaders pledged they would not allow to materialise on Earth.

All this is not to say that no effort has been expended as per Agenda 21. The truth, however, is that despite the rhetoric and the countless programs formulated and implemented, some headway was made only with respect to the Ozone depletion measures, and this too only in part. The attempts to retard the rate of biological diversity depletion, desertification, food security, and to address the issue of climate change can hardly be called successful.

6 To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production 9



TOWARDS SUSTAINABLE AGRICULTURAL DEVELOPMENT



TOWARDS SUSTAINABLE AGRICULTURAL DEVELOPMENT



The history of ecological irrigation development in Sri Lanka

Sri Lanka has had one of the most sophisticated hydraulic civilizations in the world. It is a civilisational drive that goes back to more than 8,000 years. Prince Vijaya and his team who are considered to be the pioneers of Sri Lankan civilization, built their villages near the rivers (Kadamba Nadee) and agriculture had been their main livelihood. There is evidence of irrigation systems built as far back as the 3rd Century BC in Irugalhinna and Bellanbandipallassa. History shows that Sri Lanka has built its irrigation civilisation over a period of 17 centuries. Due to its regular usage, water became the most critical element in the lives of the island's people. Thus it also became the foundation of their economy.

In a country beset with climatic change, cultivating under dry conditions is naturally a major problem for the people. It is this that persuaded them to use river water for agricultural purposes. They began to take water from the rivers using small irrigation canals and streams. A further obstacle was the fact that certain rivers too tend to dry up during the dry seasons. Therefore, ancient Sri Lankans realized the need for gathering water during the rainy seasons to be used when there is acute water scarcity. This was the beginning of the magnificent history of Sri Lanka's water management technology.

Ancient tank (reservoir) systems and irrigation technology

In a typical irrigation system there is a major tank and around it several small tanks. Thousands of small canals were also built according to the contour lines and were used to connect these tanks with one another.

The technologies used in these irrigation systems were quite eco-friendly and their sustainability was simply unimaginable. The very fact that some of these systems survive even today, some more than twenty centuries old, is evidence enough OF their sustainable character. Water was carried through many miles in the dry zone and growing trees on either side of those canals minimized evaporation and increased the water retention capacity. A prime example of the superior technology

used and the efficient water management practiced by our forefathers would be the "Yodha Ela" (literally, "Giant Canal") which has been proposed as World Heritage Site. It is 56 miles long and carries water from Kala Wewa (an ancient tank) to the city of Anuradhapura. Thousands of paddy farmers use this water for their cultivation. The most significant thing about this canal is that it carries water a very long distance at an extremely low gradient, a rare technological achievement by any standards. Suffice to say that with all the modern technology at their disposal, present day engineers are yet to come anywhere near the emulation of this feat.

There is evidence to suggest that there has existed in this island over 35,000 major tanks or reservoirs and over 300,000 small tanks. More than 17,000 major tanks are still in usable condition. The majority of small tanks have been destroyed to make way for modern "development" projects while some have been abandoned or are in a state of disrepair.

These irrigation systems made it possible to keep groundwater at an optimal level and this in turn ensured that ecological balance and bio-diversity were preserved. These factors greatly contributed to the sustainability of agriculture and went a long way in the island earning its reputation as the "Granary of the East". The ancients clearly knew what they were doing; there was a scientific base to their interventions. What this implies is that there clearly exists a tremendous wealth of knowledge and experience, which could be harnessed to enhance sustainable development approaches.

The sponsorship and protection of the king was critical for the development of the irrigation systems in the island. It was possible for the ruler of the country to facilitate and promote such ecological approaches since the motivation in policy then was to look into the needs of feeding the people and achieving food security rather than focusing on policies aimed at quick profits. Modern development methodologies, however, neglected this technology and the thinking that dictated such policies, rejecting them for being "unscientific" and "backward". Today, large-scale development projects are destroying the environmental systems that our ancestors preserved for the future. The myths that are propagated in the name of modern development seek to hide these truths. Poverty, hunger and environmental crises, nevertheless, bring us back to these hidden reservoirs of knowledge, again and again.



Ancient sluice gate, Gantalawa

It is therefore a pity that policy and decision-makers are still reluctant to accept the worth of returning to this time-tested paradigm of development. Instead, they embrace uncritically the recommendations of the World Bank, IMF and transnational corporations and impose various alien and patently inefficient and anti-poor water management policies, leaving us to reap the hazards that will inevitably result.

Proposed Water Policy

In April 2000 the Water Secretariat produced a document titled "National Water Resources Policy and Institutional Arrangements", a piece of paper which had obtained cabinet approval on March 28, 2000. Arrangements were made to prepare legal drafts based on this policy. Preparations for this policy had actually commenced in the third quarter of 1996, without the participation of the public. In fact public opinion on the draft policy was never solicited. The Cabinet made no public announcement even after approving the document. No mention was made about the existence of this policy even at the Presidential and the General Elections by either of the two major political parties.

The policy claimed to be driven by the objective of protecting and conserving the water resources to prevent a future water crisis and to ensure equitable distribution of water for the present and future generations. Even the most cursory study of this policy shows that the actual intention of the policy and arrangements was a far cry from these objectives. It was in fact designed for the ownership of all water resources to be vested in the state and to initiate a process of water marketing,

diverting much of the water resources in the country for private commercial purposes by inviting international water companies for water marketing.

The background to this process was the proposal made by the World Bank in March 1996, dubbed "Non-Plantation Sector Policy alternatives" to stop free water and irrigation to farmers as a means of encouraging small farmers to give up agriculture and sell their land. This policy was also clearly influenced by the present processes advocated by the World Bank and TNC lead "World Commission on Water for the 21st Century" which strongly insists on the pricing of water and converting water into a commodity. Pricing of water is said to be the most effective way of conserving water. However, no detailed explanation is needed to show how the conversion of water into a commodity would completely destroy the ecological approaches to dealing with water.

A disastrous change in the approach to irrigation

The present Water Resource Management and Irrigation Ministry says that the above water policy needs to be adopted to supply water for the business community to engage in commercial purposes. The amount of water available for agriculture will surely be reduced as a result. At present 85% of the usable water is being used for agriculture. Because of new policies this amount will be reduced substantially. It is argued that the current irrigation systems are causing lot of water wastage. So it is proposed that most of the canals which carry water to the fields need to be lined with concrete to minimize wastage. Clearly the relevance of seepage has not been addressed here.

These modifications to the irrigation systems have already been put into practice in some areas of Sri Lanka. Their harmful effects have already become visible, especially in Hambantota, Anuradhapura, and in all Mahaweli areas. Hambantota District had one of the most advanced irrigation systems in the past. Its agriculture was based on 20,000 small tanks and over 60,000 irrigation canals. This system was destroyed by major irrigation projects (funded by the ADB) started after 1977. There was a drastic decline in eco-friendly agriculture and the ecosystem itself was severely compromised. Last year Hambantota experienced a heavy draught and a severe water crisis. About 404,000 people suffered from that draught and 40,663 families were without drinking water. About 53,000 Ha of paddy fields and 143,000 Ha of up lands were destroyed up to September 2001 due to this draught (Government statistics). Hardly a year has passed and the area is in the throes of a similar catastrophe. These can no longer be considered random events. They contain all the signs of ecosystem degradation and point to tragically faulty policy "imperatives".

Kirindi Oya: A well strategized disaster

Inadequate planning /project preparation

The Kirindi Oya Irrigation and Settlement Scheme was conceived and implemented without a proper analysis of costs and benefits. It was begun without an Environment Impact Assessment (EIA) and the reservoir was sited badly, sacrificing the most fertile soil to the reservoir in return for infertile fields. Following the dam's initial

closure, it became quickly apparent that actual water availability was considerably less than expected. Hence the irrigable land would be only 77 percent of the original estimates. Salinity has increased alarmingly in the project area, and negative environmental impacts have been observed in the Bundala National Park, Sri Lanka's main Ramsar wetland site. Prawn fisheries have been wiped out in the Malala Lagoon. The number of fishermen has declined from 400 to less than 10. The economic losses have been estimated at up to 4 million rupees annually.

A detailed hydrological analysis, i.e. of surface water, drainage return flow and ground water, has not been done. Despite

the availability of detailed information about rainfall since 1944 and advice and warnings from the Irrigation Department, construction work continued. The average annual yield was over-estimated, resulting in an oversized reservoir at a huge cost. The ADB over-estimated the annual inflow as 318,000 acre feet whereas in 1995 the inflow was calculated, at a 75 percent probability level, to be only 136,362 acre feet.

Participation

It has been said of the reality of people's participation, that "where opportunities for the participation of affected people, and the undertaking of environmental and social impact assessment have been provided, they often occur late in scope, and even in the 1990s their influence in project selection remains marginal". Kirindi Oya then is typical of this "syndrome".

The project intended to replace paddy with high value crops such as sugarcane and cotton. However, the farmers were unwilling to engage in multiple cropping, and continued growing paddy instead. This indicates that little or no consultation was done. If these kinds of changes are to be implemented in a sustainable manner, local ownership, equitable dialogue and training around new cultivation regimes, are essential. Any proposal for growing other cash crops should also take into account traditional cultivation priorities and practices, as well as farmer's investment and labour requirements, access to markets, access to market information and so on.

The project's initial planning and implementation did not involve any popular participation, although there was an attempt to remedy this situation in phase 2 of the project. However, at no stage in the entire process were settlers consulted in the planning and/or conceptualizing process. Their involvement was confined to employment as unskilled and semi-skilled labourers relating to infrastructure construction. A unifying theme of all the interviews conducted was that people had not been consulted during the planning stage. They felt that their views were solicited only in crisis situations, to minimize the damage caused by short sighted policies. The farmers cited numerous examples where they had proposed practical solutions to urgent problems, which, in a few cases, had resulted in halving the water used in cultivation. However, in each of these occasions, once the immediate crisis was over, consultation was suspended and an official got the credit for the farmers' solution. This would continue until the next crisis. Interviews with farmer families in the area indicate that the privileged Ellagala residents and the politically influential new settlers located at the head of the irrigation canals have reaped disproportionate benefits from the Kirindi Oya Project. This has led to increased conflict between the disadvantaged new settlers and farmers under the five tanks in the Ellagala scheme. Interviews substantiate the fact that other (relocated) farming families deeply resent the privileges provided to the Ellagala residents. The project then, in addition to all its initial faults, has also generated local conflict over water rights and access. The following response is typical: "The Ellagala farmers want special

privileges over all of us. They claim historical rights of access to the water, which is unfair. But the authorities seem to favour them."

Gender Equity

Among affected communities gender gaps have widened; women have frequently borne a disproportionate share of the social costs and were often discriminated against in the sharing of benefits.

Prior to the scheme, women were engaged in curd making, vegetable growing and other small scale production activities that gave them access to a regular income while working in their own homes. Women's needs in terms of incomes and participation in economic activities have clearly not been considered in the formulation of the project proposal. Land was not allocated for grazing, and as a result women lost the income they used to get from cattle and cattle products. Nor was provision made for small-scale home gardening, as there was no well water from the canals allocated for this purpose. Farmer organizations are dominated by men; women have little or no voice at all.

On the positive side, as part of the ADB project, pipe-borne water was made available to women and this is considered to be a significant benefit by women. Due to the shortage of irrigation water in the newly developed areas, men and women had to move out of their villages in search of employment. Many women go to the Ellagala and other water fed areas to work as farm labourers, where they are paid Rs125 per day. Men, on the other hand earn Rs200 per day. Some women have also sought employment in the Middle East as domestic labourers, where many have become victims of severe of exploitation and work under very harsh conditions. The number of women who have gone to the Middle East in search of employment is as high as 30 percent in the Left Bank. This has led to severe domestic disruptions and broken homes. In many households it was reported that children's education was often disrupted because of family disputes.

Alcoholism and domestic violence have also increased in the poorer areas of the Right and Left Banks, which women attribute to increased unemployment caused by inadequate water available for cultivation. There have been reports of women having gone to Colombo to become sex workers in order to earn money to maintain their families.

Seetha and her four children belong to the "second generation" of farmers, a group which has not been considered in the allocation of land by the planners. They live in the project area and yet they have no access to land and they also don't have any access to other benefits such as pipe-borne water.

It appears that the project has had very little positive impact on the lives of women. Indirect benefits such as the increases in female school enrolment have been documented. However, the

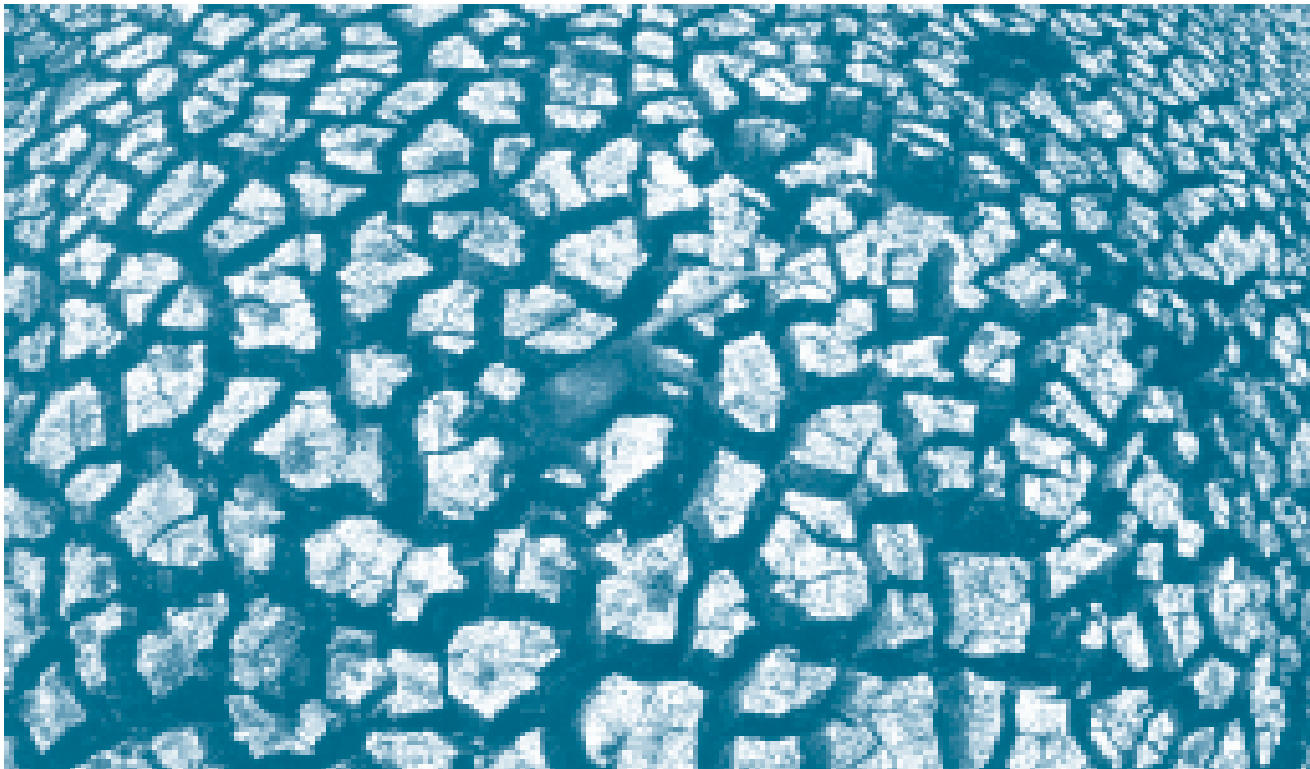
impact of these changes on women's lives both at home and in the community has not been examined

Under existing land laws in Sri Lanka, established during the colonial period, land is inherited by the sons within the family; women are denied access to land in their own right. Women who do not have access to land are also denied access to water, including pipe-borne drinking water.

The lack of attention by the ADB to issues around project impact or desired outcomes in the area of gender equity is a matter of concern. At no point in the periodic project evaluations, nor in any of the other publicly available project documents –such as the initial report –is there any mention of gender concerns being addressed by the project.

Given the ADB's much publicized gender policy, the realities of the gender situation at the implementation and evaluation stages demand explanation and rectification.

It is undeniable demonstrated that for most women interviewed, little improvement in their role and status has resulted from the project. The overwhelming majority felt little or no improvement in their circumstances, despite the huge investment. Many said that their pre-project lives were less burdensome, particularly those who had to contend with uncultivated fields, spiralling food costs and the decay and dereliction that have become the norm in the model townships.



The Government has proposed new water management systems as a solution for this crisis. In the Sooriyawewa area in the Hambantota District, the Hanjun International Company started lining the irrigation canals with concrete. This was started in the year 2001 and it immediately affected almost 2000 families in the area. Adjoining one such canal a coconut grove which previously yielded about 34 nuts per tree now yields only about 4. All the other plantations such as Jak fruit and mangoes have been all but destroyed in this area. It is already causing grave threats to food security and household incomes in the area.

The dryness of the environment causes changes in the biodiversity and it effects changes in the climate. Cementing canals limit people's access to water and causes them great hardships in their daily

lives. Due to the restricted supply of water, women have to travel long distances for water. Public places such as schools also experience severe water scarcity.

The main thrust of the planners and policy makers today seems to be to introduce water marketing. The implications of such a process of pricing of water could cause unimaginable destruction on lives, livelihoods and the people's potential for effective participation in development.

It is very unfortunate that these changes are being imposed by the WB and TNCs not through any concern for sustainability or food security, but for purposes of market expansion and profit through trade expansion, as though people, communities and their well being did not matter.

A brief history of paddy cultivation in Sri Lanka

Throughout history, Sri Lanka has been a country with an agricultural economy with the major thrust being paddy cultivation. It has been a part of Sri Lankan life since the beginning of the hydraulic civilization. Before the plantation economy was introduced in 1833, rice was the main element in Sri Lankan subsistence economy. The kings always gave their fullest cooperation to its development.

With the advent of the plantation economy, the colonial rulers tried to convert agricultural land into plantations. Although this policy did affect paddy farming it failed to separate paddy farming from Sri Lankan's lives. Colonial rulers nevertheless introduced various taxes on paddy cultivation. This was the first deliberate attempt to destroy paddy cultivation in the island. Taxes such as the Grain Tax, which was introduced in the 1870s were in fact measures designed to complement older pieces of legislation such as the Waste Lands Act of 1840.

However, frequent food shortages forced the colonial rulers to rethink their strategies on paddy cultivation. So they started the Irrigation Department in 1910 and the Land Development Ordinance in 1935 to encourage paddy cultivation. These institutions helped redevelop old paddy fields and re-establish farming as a viable occupation. The severe food shortage that came with the Second World War further encouraged this process.

Post Independence Sri Lanka (after 1948) can be divided into two parts, the period from 1948 to 1977 and the one after 1977. It would not be improper to describe the period before 1977 as the golden era of rural agriculture. During this period a lot of steps were taken to protect and improve paddy cultivation. These included land reform. As a result of the more or less closed economy that prevailed at that time all the governments gave priority to the ideal of "Economic Nationalism".

Present situation of paddy cultivation

The situation changed completely after the introduction of the open economy (in 1977). "Structural Adjustment" conditionalities prompted governments to move away from their responsibilities with respect to paddy farming and allow the private sector to take control. So governments withdrew the majority of the subsidies and services provided for agriculture. Dismantling of the Paddy Marketing Board and agricultural research stations and destroying agricultural extension were among a large set of measures that has seen paddy cultivation face a real threat of complete breakdown over the past 25 years or so.

Today, farmers are compelled to sell their Maha 2002 harvest at prices ranging from Rs.8 to Rs.10/kg in most areas and Rs.11 in only a few areas, when their cost of production is Rs13/kg or more. This is a clear illustration of the reality created by the policies pushed by the IMF/WB and accepted by the Government. When the Government accepted



System of Rice Intensification (SRI)

SRI essentially seeks to rectify what are considered to be faulty practices in paddy cultivation, which include excessive use of water, chemical inputs and inefficient and harmful land preparation methods. It is characterised by the use of organic fertilizer, using straw to line the field, transplanting at wider intervals and then only one plant, and the minimum "cleaning" of the bunds separating each *liyadda* or section.

More specifically, the process begins with the digging of small canals by these bunds. Organic fertilizer is applied one month before planting. In the first seven weeks after transplanting, the fields are irrigated only with just enough water to retain moisture at the time of transplanting. The spaces between the plants are covered with straw. In the next four weeks, the water level is raised to just 2 cms above ground level. A "weeder" easily made locally is used to crush the weeds into the earth, thereby improving fertility and loosening the earth. When harvesting, the stalks are cut just below the grain level and are allowed to remain in the field since it helps in the land preparation for the next season.

The total cost of cultivating an acre of paddy this way is estimated at Rs. 11580, as opposed to the Rs. 19,399 per acre in conventional methods which rely heavily on chemical inputs. The net profit is estimated at Rs.40,420 which is twice the amount yielded by usual methods.



“Nava Kekulama”: A return to organic rice cultivation

A unique system of paddy cultivation is being practiced by farmers in Polonnaruwa, assisted by Mr. Upawansa, retired Principal of the Agriculture School, with the primary intention of reversing the reversals brought about by the blind faith in all the promises of the Green Revolution. It signalled a return to an organic practice that was heavily influenced by traditional knowledge and a spirituality that had been systematically destroyed over the past several decades. Based on the simple logic that higher yields do not necessarily imply larger incomes on account of the high cost of inputs, this system, dubbed *nava kekulama* by those who pioneered it, aimed to minimise inputs, including labour, and to enhance the physical, chemical and biological quality of the soil.

The methods adopted are largely in contravention of “conventional wisdom”. In particular, the bunds on the paddy field are deliberately not cleared of weeds and the use of water has been reduced to half the usual amount. The principle operating here is that water is mainly used to control weeds. Weeds, it has been found, do not invade the paddy field itself due to the action of ants on the bunds. It has also been discovered that weeds attract a lot of pests. However, these include pests that are beneficial as well, and some which effectively control the harmful pests.

There is very little work done on the field itself by way of land preparation, the argument being that this is done mainly to ensure the uniform retention of water for weed control. If weeds are not a problem, then land preparation can be minimal, it is argued. The savings on labour can offset the “losses” incurred in terms of the total yield, which is less than the amount obtainable using Green Revolution technology.

Straw from the previous harvest is spread on the ground immediately after the harvest and the seeds are sown upon this. The straw discourages weeds but does not stop the hardy and determined rice shoots. It also acts to stop soil erosion and slowly rebuilds the fertility of the soil, doing away with the “need” to use chemical fertilizers. Earth worms return, indicating that the land is ready for full scale organic agriculture. The farmers have demonstrated that this method is not only economically viable but is more profitable than conventional methods which require twice the amount of water and moreover are heavily dependent on chemical inputs.

the policy of non-intervention in the marketing of paddy and other agricultural products, it was clearly scripting this tragedy. The Paddy Marketing Board was in fact closed down in 1992 (in spite of the fact that the Bill for closing down the PMB was defeated in Parliament several years later). The Government has had to lie to the people that it was buying paddy at Rs.13.50 or Rs.15/Kg. The suggestions made by World Bank, IMF, ADB, and other international debt facilitators to bind Sri Lanka to global capitalism are clearly responsible for this.

Such international interference concentrates mostly on economic growth but not on economic development. According to their “wisdom”, economic growth can be achieved through the private sector only. Therefore the policy priority had been given almost exclusively to foreign investors throughout the last two decades. Naturally welfare and sustainable development fell by the wayside. Paddy farmers were among those who suffered the most in this process.

Commercialization of agriculture

Although environmental agriculture had already seen certain changes since the Green Revolution, things began to change rapidly after the introduction of the open economy in 1977. Invasion of huge development projects on agriculture destroyed traditional agricultural principles and structures. The Mahaweli Development Project was the first step in this process. Major tanks, major Irrigation, mono culture farms came into being causing large scale environmental disasters and effecting wide ranging changes in weather patterns. These and other processes sharply impacted the incidence of rural poverty in Sri Lanka.

Foreign debts of over Rs 54,000 million were incurred in the Mahaweli project. But it didn't deliver the expected results. The water in the Mahaweli reservoirs is mostly used for hydro-power to benefit the industrial sector and this water is not being issued for paddy cultivation.

World Bank suggestions for paddy farming

By the end of the 1980s, Sri Lankan farmers were facing a tragedy of immense proportions. Input costs had climbed rapidly due to excessive usage of chemical fertilizers and pesticides, which had also ruined soil fertility and brought on all kinds of attendant environmental problems. Apart from all this one of the biggest problem Sri Lankan farmers were facing was their inability to get a reasonable price for their harvest. It was against this background that farmers began to commit suicide *even under major irrigation projects*. Citing these conditions which were directly resultant of their policies, World Bank “experts” showed that paddy farming was not profitable and pressed governments to encourage farmers to give up paddy cultivation. The World Bank forced the Sri Lankan Government to replace paddy farming by the commercial farming. All the services relating to paddy farming were shut down. This is how the Paddy Marketing Board came to be closed, and why the Government exited from seed production, handing it over to the private sector. This was also how a “logic” for transferring the management and maintenance of irrigation schemes to the private sector was developed. The World Bank directly interfered to stop paddy cultivation in 1996. They presented two



documents for this purpose, "Non Plantation Sector Policy Alternatives" and "Sri Lanka in the Year 2000 – An Agenda for Action".

The Agrarian Development Act was presented in the year 2000. All the legal protections for share-croppers were removed by this Act. This further confirmed the land owner's rights and all the legal barriers which had hitherto limited the sale of land were removed.

National land use policy

The present government is trying to introduce a new land use policy. This has been developed with the specific intention of transferring land ownership to the business community for use in commercial purposes simultaneously displacing the people who for centuries had an intimate and cultural relationship with their land. The other important fact about this new land policy is that it is being prepared as a project of the UNDP. This means that it is not coming from the people who know their land but from a completely alien party.

The Draft Policy begins by saying that "Land is one of man's most fundamental resources" and therefore, "a land use policy should provide a framework for the best possible use of land". It further holds that "it should provide a pattern of land use that will best meet the needs of the present generation while safeguarding resources for future generations as well". But the present policy places a very high priority on inviting foreign investment for export agriculture and the budget for the year 2002 also has many provisions to encourage foreign investors to buy land in the country. The 100% tax on non-citizens buying land has been removed and also state land not used at present is being made available to such buyers for purchase.

According to the draft policy there is in Sri Lanka "5,527,300 ha of land available to provide for the needs of 18.6 million people in 2001 which gave a per capita extent of land of 0.29 ha. This had declined from 1.35 ha in 1901. By 2030 with a projected population of 25 million, the per capita extent of land available would be reduced to 0.22ha".

The proposed privatization of land when taken together with other important policy decisions of the Government (as evidenced in the Budget 2002), following recommendations by the World Bank and IMF,

such as the creation of a "free land market" and encouraging (or "compelling through conditions") small farmers to sell their land and exit agricultural livelihoods, is clearly at odds with the objectives of meeting human needs and with the goals of sustainability. What is particularly relevant, though, is the fact that these people do have a tremendous potential to restore sustainability and the regenerative capacity of land and other natural resources.

It is very clearly stated that the rural small holders (nearly 1.8 million families, who are largely farmers producing domestic food such as rice) should be encouraged to sell their land and exit agriculture. The reason for this suggested process is very clear. It is stated that there should be a shift away from the present form of cultivating low value domestic food crops to high value crops (mainly export crops). This is bound to have a huge impact on the country's food security and will cause a rapid rise in the incidence of poverty, hunger and malnutrition. There are countless examples of farmers being left in the lurch due to markets for these high value crops collapsing, leaving them with a harvest they cannot well use to meet their nutritional requirements. Moreover, these formulations have totally ignored the cultural importance of rice among the people.

Multi crop organic home gardening systems and food security

Sri Lanka has had a long history of the ordinary people in the villages making use of the free gifts of nature to feed their families. They were also able to engage in agriculture in a sustainable manner by keeping to the rules of the environment.

Sri Lankans have a tradition of meeting the major component of food needs through paddy farming, other food needs through other cultivation and by gathering complementary miscellaneous food items and medicinal needs from the environment. Shifting cultivation played a major role in food security by providing foods other than rice. This happened as multi crop cultivation and therefore it helped preserve biodiversity and the physical status of the soil. At least 36 crop varieties and more than 54 varieties of leaf vegetables were grown in most of these plots. Due to multi crop cultivation there were particular kinds of food for particular times of the year. So food security was achieved easily. Animal husbandry was another major component of Sri Lankan agriculture. Animals played a major role in farming activities, providing additional food and income.

This capacity and the associated knowledge base has been systematically weakened and destroyed during a period of nearly two centuries when we allowed the international market forces to dominate the economic processes. During the last two decades in particular, when we allowed these same market forces to take complete control over the production and marketing processes, the poorer sections of society, the rural small scale producers and the poorer consumers have been almost completely pushed out of the survival calculus.

What actually happened to basic food security in Sri Lanka? An island wide study done by UNICEF several years ago (in 1993) found that 60% of the children below 5 years of age were malnourished. It is



well known that 40 % of the growth of brain cells of a person takes place before birth and about 85% of the remainder should take place before the age of 5. A victim of malnutrition belonging to this age group will not achieve this growth and it cannot be recovered later on in life. Sixty five percent of mothers giving birth are said to suffer from anemia. Thus they give birth to low birth weight babies.

The per capita energy intake in the country has declined during the last decade according to a Medical Research Institute (MRI) study. In 1979, the average intake was 2,316 K cal/day and this had declined to 1,548 (a 33% reduction). The energy intake levels then are much lower than the amounts recommended by the FAO / WHO, i.e., 2,530 K cal/day for men and 2,200 K cal/day for women.

The following is an interesting statement pertaining to low birth weight children and the general nutritional status of children.

"Statistics show that the prevalence of low birth weight, which is associated with maternal nutrition, is as high as 18.7 %" (recent World Bank reports and the figures quoted recently by some prominent nutritionists say that between 28% to 30% of babies are of low birth weight)"

Rural poverty in Sri Lanka has had the sharpest increase among 114 countries studied by the International Fund for Agricultural Development (IFAD) between 1965 and 1988. In 1965 only 13 % of the rural population in Sri Lanka was below the poverty line and in 1988 the figure had gone up to 46%. The number of rural poor had increased from 1,163,000 to 6,101,000 (IFAD Study "State of World Rural Poverty" 1992).

The fall of rural agriculture (People's Economy) and environmental systems are directly responsible for this situation. Expansion of chemical markets and major development projects were the main sources of hunger and food insecurity in Sri Lanka.

Alternatives

Indigenous knowledge and practices of water consumption and irrigation management

When we consider sustainable irrigation management and water conservation we have to revisit the past. Sustainable methods and

technologies used in the past should be an essential part in any planning of irrigation and water management systems. It is as important to obtain the full participation of local scholars and, most crucially, the majority of the people.

The privatization of watersheds, reservoirs, rivers and canals must be stopped and all the people should have equal access to water resources. Water should be available for their livelihoods including agriculture. Apart from human beings, the right to water of all other species should be accepted and protected.

There has existed a system of harvesting rainwater for use in agriculture in the dry zone. The ancient tank system was used for this purpose. This tank system needs to be restored and can be easily complemented by the introduction of systems such as "Pitcher Irrigation" and "Drip Irrigation".

Similarly it cannot be stressed enough that when preparing water and irrigation management systems justice for all species on earth has to be ensured. As stated in the early parts of this document, ancient and indigenous water management technologies were designed so that such requirements can be met. In short, what is recommended is a return to our ancient knowledge in water management systems which were based on humanity and equality as opposed to those which concentrates on financial profits as such are proposed by "experts" who do not have the national interest at heart nor are equipped with a sense of culture, heritage and history.

A holistic approach towards building permaculture

It is a market myth that agriculture is of low profit and is therefore unimportant. It is very doubtful that Sri Lanka will show any significant achievements by way of industrial capitalism. In a situation where almost 70% of the population are living in rural conditions, refusing to consider agriculture as the main livelihood can lead to a great social catastrophe. So sustainable agriculture holds great importance when eliminate rural poverty, hunger, and malnutrition, as well as subverting social inequality and marginalization.

Several environment friendly methodologies have already been developed and have proved to being capable of keeping paddy cultivation profitable and efficient. Agricultural systems such as Integrated Pest Management (IPM) methodologies, Nawa Kekulama (a traditional paddy plantation system), SRI (System of Rice Intensification) have already scored significant successes.

Over 50,000 farmers in the country have adopted IPM at the moment. They save about 3000 Rs per acre per season over the farmers adopting chemical farming methods. By promoting this all over Sri Lanka all the expenses for chemical pesticides can be saved. There are more than one million small-scale paddy-farming families in Sri Lanka.

This means Sri Lankan farmers can save more than 3000 million per season. All this money can be spent to effect repairs in irrigation works and for other beneficial work for farmers. Apart from financial benefits



Kularatne: organic farmer, patriot and unobtrusive, sentient being

Snug in the perimeter shrub jungles surrounding the Veddah country in Dambana, locked in the permanent gaze of the Mavarala Kanda, a rocky retreat for meditative Buddhist monks, is an enchanting piece of land. It is a piece of land that has been transformed into an organic farm, replete with cattle, paddy fields, bio gas, fruit, vegetables, several species of grain, countless herbs used in native medicine, flowers and thoughtful human beings.

Kularatne, who after completing his secondary education in the Kegalle District came to Mahiyangane in search of greener pastures, spent almost two frustrated decades trying to get a piece of land upon which he could build a life. Finally, in 1986, along with a few other families, he decided to encroach on state land near Dambana. In time they were able to obtain legal title to the land they had taken, which, as event proved, was not for defilement in the pursuit of profit but for the blossoming of a symbiotic relationship with the earth and all her creatures.

Those pioneer farmers had diverted the water of streams that ran through the area, constructed earth dams to gather rainwater, prepared the earth and had started cultivating rice. It had been a hard life with little reward. Things changed dramatically after Kularatne attended a 10-day workshop on organic farming in Nilambe, Kandy.

"I realized that this is what farming is all about. I learnt about compost, nurseries, preparing beds, and more than all this, the fruits of working in harmony with and not against the natural processes. I used natural rock formations to set up a stall for my cattle and to gather and divert the cow dung into a biogas unit. We really didn't know that every plant is valuable. Neither did we know the worth of forests. There is a section which I have allowed to go to jungle."

The results are amazing. Today Kularatne's family own ten cows. His relatively small plot of land yields all the vegetables, fruits, leafy greens, yams, grains and medicinal plants they need. They have used home produced biogas for cooking and lighting purposes since 1992. Over a period of ten years where he has nurtured a land once tortured by pesticides and other chemicals

into a state where his family can engage in do-nothing farming. Mixed plantation methods have engendered a rich diversity of produce from his vegetable garden.

The cows provide the household with milk. The surplus, around 7-8 liters a day, is sold. "We used to think that worms are harmful," he said. "But look at this. It is pure fertilizer, produced by common worms. There are no pebbles, and nothing chemically foreign here. It is the best stuff for nurseries."

He has only 3 acres of paddy land and they yield a harvest of roughly 30 bushels per acre. "Fields under the Mahaweli Project yield around a hundred bushels, but then again, 75% of it goes out of the farmer's hand when the balance sheet is written."

Kularatne pointed out that since he does not use kerosene oil, he is directly helping the country save valuable foreign exchange. Since he uses biogas, he is helping save our trees, thereby indirectly contributing to the general health of the planet.

Their front garden is a riot of colour. Little hedges, flowerbeds and ferns help make tastefully designed garden. "Flowers are beautiful," he said. "Furthermore, they help attract birds."

In all these things, Kularatne and his family, engage in a spiritually wholesome manner. All traditional customs and rituals are observed at key points of the cultivation cycle as well as in their diurnal activities.

In 1996 he hosted an in-situ exhibition of organic agriculture titled *Dahadiyaka Asiriya* (the wonderment of sweat). This had actually helped popularize organic farming in the country. His "visitor's book" is full of entries by people from all over the world, who thank Kularatne and his family for being a living success story of sustainable engagement with the world.

"In this job, there is no need to lie. We are not beholden to anyone. There is nothing to fear. And we don't fall into debt." That observation says it all.



such practices will help stem soil and water poisoning, soil erosion, air pollution, food poisoning, abnormal baby births and various other disasters.

Sustainable agriculture refers to an agricultural system which preserves water resources, protects bio dynamic qualities in the environment, and ensures food security for all species. In ensuring food security, it must not be forgotten that home gardens can play a major role. Especially Sri Lankan women's role in creating food abundance, Household agriculture has always played an integral part in creating food abundance and here much of the credit should go to the women. The use of organic manure, various soil conservation methods, and mixed cropping can facilitate the protection and enhancement of bio-diversity, economic diversity, and income diversity. Methods such as Agro-forestry and Analog forestry can be developed through this and environmental effects such as desertification and harmful climatic changes can be stopped.

Agriculture and animal husbandry cannot be separated from each other. In particular, farm animals have a long and historic relation to people in agricultural activities. As provider of labor, supplier of manure and milk and as a transporter the animal has been providing great support to farmers. In the kind of sustainable agriculture which prevailed in the past, the cow was extremely important. Replacing cows with tractors in the fields has contributed heavily to the present agricultural crisis (the cow is a part of nature and it does not cause any harm to the environment).

Animal husbandry can be a large part of a solution to the problem of unemployment which is caused by the collapse of agriculture. By adopting the above methods most of the educated unemployed youths, housewives, rural farmers etc., can reestablish their livelihoods. Educated young people can get employment opportunities in the agricultural service sector. Entrepreneurs' services can be developed in relation to the dairy and other agro product industries. There will be alternative incomes for the poor farmers.

In a country where monoculture is a veritable disease, to achieve a sustainable future the practical and scientific methods mentioned earlier must be adopted as soon as possible. Thus, the present development processes and international interference are but twin processes which seek to alienate these scientific and sustainable alternatives. If we are to provide sustainable solutions to these problems, we have to look towards nature and agriculture with a more respectable vision.



Jak Fruit: tree of prosperity, tree of tradition

Jak fruit can be considered a historically proven solution to food shortages. Sri Lankans, like those in many other countries, suffered the side effects of the Second World War between 1939-1945. Severe shortage of rice resulted in people even eating animal food such as Bajiri. These were distributed through a coupon system. The main reason for this situation was the almost total breakdown in rice production in the



country. While the management of the estate sector distributed rice under a coupon scheme, the traditional villagers were left to their own means. They received only about 0.25 kilogram of rice for a week, distributed through the cooperative society of the village. This was not even sufficient to feed the children. Therefore they turned to yams, potatoes, sweet potatoes, and of course, Jak.

Today, with dire predictions of an impending famine, various state and non-state agencies are promoting the planting of Jak saplings as an ideal means of preparing for the worst. There are moves to declare Jak as the National Tree. Jak, in fact, is so embedded in the cultural currents of this land and finds mention in countless folk tales and place names not to mention myths and legends that cut across region and ethnicity that it is eminently qualified to be nationally acclaimed. What is

important however is the significance of Jak as a nutritious food source that lends itself to over a hundred preparations as well as easy preservation.

During the Second World War, a person by the name of Arthur V. Dias, affectionately known as Kos Mama (Jak Uncle) went from village to village popularizing Jak and extolling its curative value. A similar drive is being currently envisaged. Jak planting ceremonies are quite the fashion now and it remains to be seen whether the "project" will proceed along fruitful lines. Such a process would necessarily include a comprehensive understanding of Jak's cultural significance, as well as its place in a multi-pronged, diverse and sustainable effort to resolve the vexing questions of food insecurity, poverty and species depletion. ■



6 Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment ,



ENERGY: EVEN DEEPER INTO CRISIS



ENERGY:
EVEN DEEPER INTO CRISIS



Sri Lanka is a tropical country, and as such is laden with conditions that are extremely favourable for human habitation. The volume of food necessary to maintain body temperature and the energy required for maintaining temperatures inside buildings, compared to countries a fair distance from the equator, are relatively low. Therefore it is not appropriate to compare the energy consumption rates of countries such as Sri Lanka with such countries.

Transportation accounts for 21% of the total energy consumption in Sri Lanka, industries consume 25%, while 46% is accounted for by households. The share of various sources in the total production of energy is given below:

Imported oil for industry	6%
Imported oil for lighting	3%
Imported oil for electricity	14%
Imported oil for transport	21%
Trees (biomass) for industry	10%
Trees (biomass) for households	36%
Hydro electricity	10%

There is a general trend in Sri Lanka to move away from renewable sources to non-renewable sources of energy. This is in fact a move in the direction opposite to that which the world in general has deemed to be desirable. What is most unfortunate, from the point of view of the general well being of the people, is that it has been necessary to import these non-renewable energy sources since they cannot be generated within the country.

The past decade or so has seen a general thrust of development in the country that is moving away from the sustainable model. The fact that there have been four different governments ruling the country in this period of time only indicates the lack of creativity and vision among the leadership. And yet, it is not just reflective of the visionary poverty of politicians, but a narrowness in the thinking of the general public as well. However, this is not to say that there have been no innovations or experiments along the lines of sustainability. There have been many initiatives launched at various levels that have actively sought to find solutions to the energy problems in the country. Alternative, and more importantly renewable energy, sources have received a lot of attention and there are many examples of successful practices along these lines. In addition, there have also been innovative initiatives in the field of energy conservation. Wind, solar, micro and mini hydro electric schemes, biogas etc., are among the areas where such innovation has taken place.

Catering to rising demand

Even the minimalistic issue of catering to current demand has generated several problems. This is why the management of demand has become so important. Demand management simply refers to discouraging needless consumption beyond the country's capacity and to energy conservation of energy.

The current strategy for demand management is extremely weak and faulty. The main reason for this is the absence of an authority that can enforce relevant regulations. Demand is directly tied to the development strategies of the country. At the same time, it is imperative that the problems at the supply end of the equation also be addressed when development strategies are mooted. All this has to result from a dialogue between the state, the private sector and people's organisations.

It is natural, under the circumstances, to discourage wasteful energy consumption and to develop relevant regulations and a prohibitive tariff structure. For example, a consideration of appropriate energy conservation could be included when building plans are taken up for approval. When levying fees or service charges, a prohibitive extra charge could be imposed on those using high energy consuming devices such as air conditioners. The entire tariff structure could be reordered so that those who consume large amounts of energy have to pay a at a higher rate. Such strategies, unfortunately, have received nothing by way of attention by the relevant authorities. In fact, what has taken place is the opposite, i.e., the encouraging of wasteful consumption.

Coal-power plants are now touted as the only, long term, economically viable solution to the problem of generating electricity for the central grid. There are two serious flaws associated with this proposition.

First, coal is not found in Sri Lanka. Thus, if coal power is "the long term solution" it necessarily follows that the country will have to import coal from other countries forever. It will not be possible to stop the outflow of foreign exchange in large amounts. If coal is *the* solution, by the year 2008, all the foreign exchange earned by the traditional commercial crops, tea, rubber and coconut, will have to go just for the purchasing of coal. Such factors have not entered the calculus of the Ceylon Electricity Board.



Hydropower is but one source of energy, and then again does not have to generated through large dams.

The other issue associated with coal power is the large amount of carbon dioxide generated in the process. Coal, it must not be forgotten, is largely responsible for global warming. Therefore, even under the current regime of environmental regulation, using a source alternative to coal, would help earn a large sum of money via the carbon trade. It is evident that the Ceylon Electricity Board is not given to including such new world trends when drawing up their plans for the future.

The very fact that the issues pertaining to coal power have not been adequately assessed has also meant that other energy sources have been largely ignored. The claim that we have exhausted almost all of our hydro power resources is patently false. A further 800 MW can be generated via hydropower. It is also possible to produce power using fuelwood. If we can move forward along these lines, it is also likely that this could become our main energy source in the future. Solar power and wave power are also sources that can be tapped. The Ceylon Electricity Board has so far done nothing in terms of exploring these options.

Coal is not the longterm solution to the energy crisis. It is but another of the medium term "solutions" that are periodically proposed by those who have no sense of sustainability or the well being of the people. The country cannot be allowed to suffer on account of their sloth.

The short-term solution to the problem has been oil. We will be forced to look to hydro power once again as the medium term solution. Natural gas and coal have to be considered only as complementary options. Meanwhile, research should begin on solar power, wind power, wave power, and dendro power as the long term, sustainable solution to the energy crisis.

Serving "off-grid" areas

According to the Ceylon Electricity Board, over 40% of the households in the country do not have access to electricity. When one considers the fact that data is not available for much of the north and

east, this figure is probably much higher. The electricity needs of people living in off-grid areas also need to be fulfilled. The high cost of expanding the grid has effectively meant that a solution in this direction will not be forthcoming. The only solution, therefore, is to tap energy sources as appropriate to local conditions. In fact there are many initiatives in the country that have recognised this. Solar power units, micro hydrop projects and small scale wind mills are some examples of this trend.

It has to be mentioned that "alternatives" have to be sustainable as well. A case in point is the ESD (Energy Service Delivery) Credit Program, where 75% of the money was in the form of a loan. The benefits actually went to multinationals such as Shell who made a lucrative business out of selling solar cells. Here again, in the name of promoting alternative, renewable sources, corporations were profiting while forcing the poor to bear an additional debt burden.

The main obstacle in developing such schemes is the high initial cost, which the poor people living in such areas cannot afford. It is patently unfair to expect the rural poor to pay for such structures while the state steps in to do this for the more affluent in urban areas free of charge. This is why alternative, renewable sources in off-grid areas should receive the same attention as the areas covered by the central grid.

There is an urgent national need to launch a serious discussion on this issue, involving all stakeholders, including state agencies such as the Ceylon Electricity Board, Energy Conservation Fund, National Engineering Research and Development Centre, private companies in the energy sector, academics and NGOs engaged with sustainability issues and in particular renewable energy sources. The Provincial Councils are already setting up relevant policies pertaining to decentralised energy options. It is hoped that this would generate a beneficial discourse and prevent it from degenerating it to the level of a mudslinging match the natural result of which would be to further compound the problem. ■



Hinguralakanda Samanala Village Hydro Project

Hinguralakanda is 15kms from Dehiowita in the Kegalle district, Sabaragamuwa Province and is situated in the Dehiowita DS division. The primary occupation is tea and rubber cultivation. The village is 4km from the main grid.

The Galigamuwa Peoples Foundation, an NGO active in the Kegalle District, initiated the project as a result of the 'innovation solicitation' exercise undertaken by the Energy Service Delivery Project, which targeted capacity building. In May 2001 they had their first meeting with villagers to create awareness about the potential for obtaining electricity by tapping the water resource available within the village, and formed the Samanala Electricity Consumer Society. Work was started in July. Initially they collected Rs 3000 from each member. In August 2001 a feasibility report was submitted to obtain a loan of Rs.709,991 at an interest rate of 19%. When the loan was released in February 2002 the civil works had been completed and the distribution line was being erected. The project was commissioned in mid June 2002.

The total capacity of the project is 8.5kW and it covers 38 households. Each household will get about 200W. The total cost of the project was Rs 1,131,397. Each member has to pay Rs.560 per month over a period of four years to cover the loan and operation and maintenance costs.

The story that K. Somawathi, one of the beneficiaries of the project, related is typical: *"My family consists of 5 members. We have been using kerosene oil lamps for lighting purposes for the last 50 years. We have for a very long time expected electricity to be provided from the main grid. This of course never happened. However in the middle of last year one Mr. Bandara come to our village and had a meeting with us. This was how we realized that we could get electricity from a village*

hydro project. My elder son had seen a similar project in operation. We formed an electricity consumer society and initially collected Rs 3000 from each member and started the civil works. We completed the civil works through shramadana and all the members worked equally hard. Our members contributed approximately 30% in cash and labour to make this project a reality."

Eco Power: the mini-hydro option

There is an optimum level to which the physical landscape of any territory can be tapped for large-scale hydroelectric projects. As we close in on this limit, it is natural that less grand options are considered. Today there are 13 mini-hydro power stations in the country, producing between 1MW and 7.5 MW each. "Eco Power" is one such power station, located in a tea estate in Sapugastenna, Ratnapura. To build this station, the Rat Ganga, which originates in the Peak Wilderness, was dammed at a place called Ekakanda. It is a three foot dam. Seven and a half megawatts are produced using three turbines. Eco Power, which is a private company that owns the power station sells power to the Ceylon Electricity Board. Dr. R.D. Bandaranayake, Chief Executive Officer of Eco Power is convinced that mini hydro projects can contribute a further 50MWs to the National Grid.

There is also wind...

Wind power is an energy source that has been largely neglected in the search for energy alternatives. A community based organization in the Kirinda area decided to solve their energy problems with the use of wind power. They got technical advice from the ITDG (Integrated Technology Development Group) and built themselves a number of windmills with assistance from the GEF/Small Grants Program. The leaders in this



initiative, the Manawa Sampath Saha Parisara Surakum Sanvidanaya (Human Resources and Environmental Protection Society), are women. They met with and overcame a number of technical hitches. They have developed a maintenance and repair fund. Today a large numbers of households have electricity through these windmills- enough to light a few bulbs and operate a small black and white television.

Improved fuel wood stoves

Firewood is still widely used in Sri Lanka. The typical device is the three-bricked stove, whose efficiency is less than 10%. The clay stoves in rural areas are superior to this type of stove. And yet, it was felt that the fuel efficiency of these stoves needed to be improved to suit new conditions including the pressure on the environment. About ten years ago, the Ceylon Electricity Board, along with Sarvodaya and the Industrial Development Board launched a study on this subject. The result was a two-stove, connected clay implement which, through experimentation, was developed to the maximum level of efficiency. IDEA, a development agency in Kandy helped train potters in the art of producing these stoves. Today the "Anagi" stove has a secure market and is used in over a million households all over the country.

Dispelling darkness using biogas

The Intermediate Technology Development Group (ITDG) in 1998 launched a project in the Southern Province to popularize biogas and the use of organic fertilizer. Over 150 biogas units have been set up and they have considerably impacted these households, especially those in off-grid areas by providing an alternative source of energy for lighting purposes. In one case, D.W. Ramanayake has been successful in producing a surplus of biogas, which he sells to four of his neighbors. He earns an extra Rs. 1200 this way. The use of organic fertilizer has increased his yield from 53 to 90 bushels, adding to his gross earnings, especially since he no longer has to purchase chemical fertilizer for his paddy fields.



Stories of the sun

"There are four members in my family. We have been running a family owned bakery since 1994. We always had a problem working at night and were forced to bake bread using kerosene lamps for illumination. On the one hand it is very dangerous and on the other it is quite expensive to use kerosene oil. Therefore we purchased a solar panel worth Rs.36,000 under the easy payment scheme operated by a micro finance institution (MFI). This is enough to light six bulbs, operate a black and white television set and a radio. We made an initial down payment of Rs. 9000 and thereafter we have had to pay Rs 545 every month for a period of six years. This solar panel is a very economical way of getting electricity and the supplier has given a 10-year warranty on the panel. Our quality of life has improved markedly and now we are much happier because we have solar electricity."

— Mr.S.P. Wimalasena (Bakery Owner, Indigolla, Polpithigama, Kurunegala District)

"There are three in my family. Over the past five months, we have been getting electricity from the sun. My late husband was a teacher in our village school. Now we are living on his pension. If we could have got electricity from the main grid we would have been very fortunate, but we have to be satisfied with the SHS (Solar Home Systems), as the only other option is kerosene lamps, which is a headache for us. We bought a SHS from Alpha Thermal, which cost us Rs 46,000, utilizing a micro finance institution credit scheme. Initially we paid Rs.8300 and now we have to pay Rs. 775 a month for a period of five years. So far we have not encountered any problems using this and the light is quite good. My son who is studying for a law exam had a problem reading under kerosene lamps but now he can give more attention to his studies. This is very economical way of getting electricity. The dealer has promised more lights if we have a family function, provided we inform him in advance. This has totally changed our lives."

—Mrs. A.M Muthumenika (Widow-Dekanduwala, Polpithigama, Kurunegala District)



Roads or Super highways?

If the 23,000 villages in the country are to be developed, even within the ambit of the dominant development paradigm, what needs to be done is to construct a network of well-maintained rural roadways with an aggregate length of approximately 10,000 kms. The development of railways can always complement such an effort, especially since it would be far more economical and more easily accessible.

"Development Experts" with the full consent of "people's representatives" meanwhile have opted, as usual, for the grand thrust, the Super Highway. To make this a reality, over 30,000 families living in the districts of Galle, Kurunegala, Puttalam, Anuradhapura and Kandy would lose their land and livelihoods. Over 50,000 acres of paddy land which are part and parcel of our efforts to obtain total food security would be destroyed. The use of sea sand for the construction would lead to the destruction of further paddy land and render whatever is left unusable due to rise in salinity levels in the ground water. Those responsible for this catastrophe, as one would expect, seem to be the least concerned about air pollution and its impact on populations who will neither use the highway nor would benefit from it. Toll charges and other restrictions will in effect deny entry to the highway to over 95% of the vehicles currently in the country.

The main problems associated with the roads under the central government and the provincial councils are inadequate maintenance, poor management and undisciplined use of the roads. Although the current road network is sufficient to bring almost 80% of regional products to the city, the poorly maintained system does not allow this to happen. Even the provincial councils have been incapable of maintaining the roads under their jurisdiction.

Poor management and maintenance of the roads by the Road Development Authority has resulted in millions of rupees being spent with little or nothing to show by way of results. The situation has been made worse because, like everything else, in this too political power weighs over rules and regulations. Super Highways or not, this matter needs to be addressed as a priority concern by the relevant ministries. It



is also important to look for the real reasons for vehicular congestion and seek the advice of technical personnel who have the national interest at heart. Another solution would be to relieve the arterial roads of congestion by facilitating the use of other routes. The use of the considerable network of waterways in the country has not even been looked at in terms of a part solution to transportation problems.

No attempt has been made to expand the road network in such a way that people and homes are not adversely affected. Considering the high costs incurred in the construction of Super Highways it is surprising that no thought has been given to express railways, a proven solution with far less environmental costs. This is well within our capabilities. It won't require large amounts of sea sand to be used. The small hillocks, which help protect groundwater levels, need not be flattened. The houses, kin networks, associations with place and culture of thousands of people will not be destroyed. Thousands upon thousands will not be transformed into development refugees.

The current wisdom on development has it that any development process should be economical, but equally importantly, that

social and cultural justice should not be violated. The affected people's needs should be addressed. Their religious, cultural and other social rights should be safeguarded. They should agree to vacate their premises *of their own accord*. The particular development project should satisfy local, regional and global environmental safeguards.

The question, therefore, is simple. Is such a process taking place in the villages impacted by the proposed highways? In both the Colombo-Katunayake Highway and the Colombo-Matara Highway this did not take place. Transparency, accountability and participation were conspicuously absent. Instead there was political maneuvering, intimidation, blatant lying, and other things that have unfortunately become the norm in this country. If this situation is not quickly reversed, the Super Highway will likely emerge as the project which causes the most amount of social, cultural and environmental damage after the Accelerated Mahaweli Development Project.

The Colombo-Matara Expressway

The Road Development Authority commenced initial construction of the Colombo Matara Express way through paddy fields cultivated by poor rural communities in 1996. Community concern over the impact of the project was supported and voiced by Sri Lankan non-government organizations (NGOs), the Environmental Foundation and the Green Movement. As a result of concern voiced by activists and local communities about the lack of a prior Environmental Impact Assessment, construction was halted in late 1996.

Following this, an EIA process was begun in 1997. Following the ceasing of work on the roadway, NGO activists began dialogue with the ADB and government representatives. A paper on the roadway was presented at a community-organized conference- The People's Forum which ran parallel to the Bank's 2000 Annual General Meeting in Chiang Mai. Following public representation at the people's forum, a letter was sent by the ADB in June 2000 to the activists, acknowledging some of the concerns raised, and proposing some changes in practice.

The issues raised with the Bank are outlined below with reference to key aspects of the Bank's response.

Public consultations

The question of appropriate prior consultation with all impacted communities was raised.

The Bank stated that a series of public consultations were held between the affected beneficiaries and the Bank's but they acknowledged that more consultations were necessary.

Alternative options

The question of alternatives to the large-scale, high-impact road were raised with the Bank, including the exploration of a railway, alternative routes and a smaller-scale project. Rail is often a more accessible form of transport for poor communities.

The Bank stated that other viable options to the six-lane super expressway were explored,



and that the "selected configuration was found to be the most viable alternative, considering technical, environment, social and economic aspects."

Involuntary resettlement

The road cuts across crucial paddy fields and farming districts: a number of concerns were raised about the impact on community rights and livelihoods. Also, as the "trace" of the road is continually changing, largely due to politically-motivated decisions. There is no surety for affected communities, who continue to be left out of vital decisions on the final route.

The ADB stated that their policy on Involuntary Resettlement will be strictly adhered to, for the entire alignment, with all the affected families.

Compensation

The question of compensation for families who lose land and livelihoods was raised.

The ADB stated that appropriate compensation will be provided to affected people in accordance with the ADB's policies. The ADB further stated that in assessing the level of compensation for loss of cultivable land, market prices will be paid for those who cannot be given cultivable land in other locations.

Differential Impacts on women and other minority groups

The ADB stated the special attention will be paid to women and other minority groups.

Severance

The issue of severance of communities, i.e., the road physically dividing their lands and communities was raised.

The ADB stated that all efforts will be taken to reduce the extent of severance via ongoing consultations.

The letter in which the ADB outlined these responses was encouraging at face value.

However very little action has taken place since the letter was received in June 2000. Communities and NGOs are concerned that this case may

will prove to be another example of the Bank's inability to match rhetoric with action.

Outstanding concerns

Serious concerns and questions still remain unresolved and unanswered including:

Finalisation of the route

To date the road's alignment has not been finalized. Thus the affected people remain uncertain about their futures. For many, the process started in 1994. The consultations that are taking place are led by political appointees, whose prime agenda is satisfying the government's needs. Little account is being taken of the needs and rights of those without political and social power.

Work on one section of the Colombo Matara express Highway was started from the Godagama/Matara side. Work began without an EIA and the road cuts across paddy fields which had only recently been planted. This construction was stopped after environmental activists raised issues with the process and the impact on local farmers.

What is appropriate compensation?

Who decides on what is appropriate compensation? On what basis, and when? Who will be consulted in this process and how will it be conducted? It has been suggested that market value will be paid for property lost, and yet amount allocated in the EIA will hardly be sufficient to meet the needs of affected people. In any event, the market is hardly equipped with mechanism to determine the worth of community and other factors associated with place. Also, acceptable areas for the relocation of the 816 families affected by the ADB-funded stretch have not been found although the project is well under way. Nor has alternate cultivable land been identified for the 403 hectares (40 percent of affected lands) of paddy land and the 207 hectares of rubber that will be lost to the roadway.



In Ratmalgaswewa, there is now a community-centered transportation system

Ratmalgaswewa is one of the poorest villages in the Puttlam District. The 58 families who live in this village have to go to Madurankuliya to buy provisions as well as to sell whatever they produce. The eight miles to Madurankuliya has to be undertaken on foot. Sometimes, a villager or two might get a ride from the milk lorry. It is to overcome this principal obstacle to the uplifting of their lives that the community decided to launch a transportation project of their own, with the support of the Intermediate Technology Development Group (ITDG). After almost two years of preparatory work, the project took off in January 2001. It is a project in which each and every household is a shareholder and beneficiary. The villagers have appointed a Transportation Committee to run the bus service. The committee meets once a week and discusses relevant issues and acts accordingly. It is no easy task to operate a transportation service where there are over 50 owners, but despite all difficulties, they have managed to ensure a steady service for more than a year and a half now.

6 National authorities should endeavor to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment. 9



THE COUNTER - SUSTAINABLE INDUSTRIAL SECTOR





Industrialization was the word on the lips of almost all politicians since Independence in 1948. During the first two decades after independence some factories were established to use local raw materials to produce goods for local consumption. The thrust of the period 1970-77 was what came to be known as Import Substitution Industrialization, the logic being that the promotion of local industries would help build up foreign currency reserves. This was the era of state run enterprises. Tires, building materials, textiles, paper, cement, sugar and fertilizer are some of the industries which were exclusively run by the state.

With the adoption of open economic policies in 1977 the then government offered all kinds of incentives for foreign investors to start operations in Sri Lanka. It was the age of the "Free Trade Zones", where investors were wooed with tax holidays, cheap labour, absence of unions and other incentives. At that time there were no environmental laws as such, so these industries could pollute at will. By the end of the eighties, the entire country was declared as a "Free Trade Zone", or, in the political speak of that time, "Investment Promotion Zone".

These packages immediately attracted garment manufacturers. Thousands upon thousands of rural women were drawn into the labor market. One by one local industries closed shop.

Unplanned "development" of the industrial sector had a devastating impact on the environment. Paddy fields and rubber plantations were converted to industrial states and paddy fields and the wetlands became dumping grounds. Streams were turned into sewers. Air pollution and soil pollution became serious issues. The problems were compounded by the absence of comprehensive and meaningful environmental laws in the country. This is the background against which the National Environmental Act was passed and the Central Environmental Authority established to control pollution, protect the environment, and promote environmental conservation. Later the National Environmental Act was amended to ensure that new development projects adhered to environmental standards.



Recycling waste paper: an environment friendly cottage industry

This project began in Kesbewa under the guidance of the National Forum on Community Development in 1986. The initial funding of Rs. 300,000 came from the Netherlands government subsequent to a project proposal submitted to the embassy by Willie Gamage.

The first step was to train four women from low income families in the art of producing recycled paper. The raw material consists of waste paper from printing presses operating in the Kesbewa area. Interestingly there is a greater demand for the product from foreign countries. Three machines are used in the process, most of the processing being done by hand.

The waste paper is soaked in water for 24 hours after tearing it into very small pieces. This is turned into pulp using a machine. Straw, tea residue and flower petals are added to the pulp in order to enhance the appearance of the final product. The pulp is then put into a tank and relevant paper sizes determined. Then the pulp is thinned out using a roller. The sheets that are produced are then pasted onto a piece of white cloth. The moisture of the sheet is removed using a machine. Once the sheet is totally dried, it is ironed, again using a machine. The cloth is removed at this stage and the paper is cut into the required sizes and shapes. The paper is used to make attractive envelopes and file covers.

Impact of industrialization on health and environment

The absence of environmental laws naturally attracted many polluting industries to the island. The results were to be expected. The Lunawa Lagoon which was once a sustainable ecosystem is now black in color due to the effluents from industries located close by. The Bolgoda Ganga, Weras Ganga and the Dehiwala Canal become polluted waterways due to the flow of industrial waste from the same industrial area. The surface and ground water in the area is severely polluted. Diyawanna Oya, on which the Parliament was built, records high Chromium levels due to the waste coming from the Tanneries located around it.



Muthurajawela, which was prime wetland and the largest close to Colombo City, is polluted with the waste from the Ekala/ Ja_Ela industrial park. Research shows that the mercury level has gone up in this wetland. Negombo Lagoon, from which almost three thousand fishermen made their living at one time, has also become severely polluted. The Kelani river, which provides water to Colombo, records high arsenic levels from time to time due to factories in the Biyagama industrial park. The paddy fields and canals around the Supugaskanda Oil refinery and the Kolonnawa oil storage facility have suffered similar fates. The vicinity of the Puttalam cement factory is covered with cement dust.

Shrimp farms and hatcheries located around Mundal and Puttalam (which comprise the largest lagoon system in the country) have virtually killed the dead lagoon. Many fishermen lost their jobs and paddy fields and coconut lands have been converted in to shrimp farms, increasing the salinity in the surface and ground water.

There has been a rise in the incidence of air borne and water borne diseases in Sri Lanka over the last few decades. The lead levels in the blood of traffic policemen have increased up to three times the WHO standards. Lung diseases have increased especially in urban areas. Many have been afflicted with skin diseases due to the pollution of the wetlands around Colombo.

So far there is no toxic waste dump in Sri Lanka and although there are toxic waste regulations they are not being enforced. What is particularly lamentable in relation to maintaining environment standards is that even the existing laws are not being enforced. Although the Central Environmental Authority was established to control pollution, only 7000 industries have obtained Environmental Protection Licenses out of more than 20,000 industries located in the country.

Natural resource utilization and industries

Except for a handful of industries which were established in the early stages of the industrialization drive such as rubber, cement, and tiles, etc; most industries are not based on local raw material. A marked preference for the foreign investor by governments strapped for cash, has seen the virtual demise of the local industrialist. It is now the age of the multinational.

Industries require power and it was partly to address this issue that the Accelerated Mahaweli Development Project was implemented. The project itself has destroyed the lives and lifestyles of more than 107000 families, many of whom are even today development refugees. Bad planning and corruption, among other factors, have today resulted in questions being raised about the very efficacy of the project.



Eppawala: the story of a threatened tragedy, resistance and struggles yet to come

The planned sale of the Eppawala phosphate deposit and the protests against such moves constitute a coming together of key issues pertaining to "Rio + 10". Poverty, environment degradation, multinational profiteering, downright bad governance, transparency or, more correctly, its absence, heritage and cultural survival, people's right to a voice, and the indomitable courage of ordinary people fighting to safeguard tradition and sustainable lifestyles, all play out on the vivid canvas that is Eppawala. It is "globalization" in a nutshell. It is also a banner heralding a different future. In any event, something eminently qualified for the hackneyed term, "a case in point".

It was in 1971 that our scientists discovered the existence of a rare phosphate deposit in Sri Lanka. There is a rocky ridge that begins in the Southern coast and runs through Deniyaya, Rakwana, Ratnapura, Nuwara Eliya, and Matale right up to Anuradhapura. It has been shown that this is a geological feature whose origins go back to the Cambrian Period, i.e. 560 million years ago, at which time it was in the form of quartz. Subject to all kinds of evolutionary transformations over many millennia has led to the creation of the Eppawala phosphate deposits. It has been found that the quality of a large portion of the phosphate found in Eppawala is among the highest found in the world. In fact the phosphate found in Eppawala is said to be superior in quality and more secure than that found in India, Morocco, Nauru, Banaba, Egypt, and the USA.



It has been found that the deposit is located in 300ha of land very close to the town of Eppawala in the North Central Province, among ancient irrigation tanks, villages and other historical sites in System H of the Mahaweli. The deposit extends from the top of seven small hillocks, right down to 100m underground. The extent of the deposit, its quality and its relatively secure character has naturally attracted the attention of many powerful nations.

Mining at the site commenced as a small industry in 1974 and in 1978 operations were taken over by the State Mineral and Mining Corporation. The use of medium scale machinery improved the efficiency of the mining operation. Forty thousand tons were mined annually. The fertilizer produced from the rock phosphate of Eppawala is currently used only in perennial crops such as tea, rubber and coconut. The reason for this is that we lack the technology to produce Signal Super Phosphate (SSP), which is used for short-term crops such as chillie and vegetables, and Tri Super Phosphate (TSP), used for paddy. Our "leaders" claim that we cannot afford this "high-cost technology". This has been the alibi used by them to justify the handing over of the phosphate deposit to multinational corporations who rape the earth in the name of globalization. The foundation for this was laid way back in 1992 when the so-called peoplization process was launched. Multinational corporations were invited to bid for the already identified deposits and the rest of it spread in an area of 56 square kilometers within which are located 28 villages, with the surreptitious amending of the Mines and Mineral Resources Act. The clause, which insisted that the state retain a minimum of 51% of the shares of any such venture, was abolished and the stage was set to facilitate a total transfer to the private sector under the most favorable conditions possible.

Eppawala came to be marked on the map of general discourse in the country when the people in the area realized the threat they were facing and decided to form a committee to protect the phosphate deposits. The villagers came together when they learned that tenders had been called in the world market for foreign investors to purchase rites to exploit the deposits.

Presenting their Fortune 500 "credentials", Freeport-McMoran, a multinational with one of the most horrendous track records in terms of plundering mineral resources with no concern whatsoever for environmental issues, were among the first to forward a bid for Eppawala. Thanks to the political instability of that time and the vehement opposition to this insidious plan, it was defeated, but only temporarily. With the change of government in 1994, this destructive company once again moved to secure rights to plunder Eppawala. The then government, back tracking on election promises to safeguard the nation's resources, was intent on continuing the cardinal principle adopted in 1977, that of bowing low and saluting investors. Before the year was out, steps were taken to expedite the process of selling the phosphate deposits. However, the villagers who, under the leadership of Rev. Mahamankadawala Piyarathana of the ancient Galkanda *Viharaya* (temple), had come together to protect their lands, lives and lifestyles, proceeded with their peaceful campaign.

The obstacles they had to overcome were by no means easy. On the one hand there was the multinational intent on using all means at its disposal to plunder their lands. Then there were various local and foreign interests who came wearing numerous disguises with licenses to prospect for phosphate in the area. Finally, there were the agents of these groups who were not averse to threatening the activists who led the protest campaign.

Meanwhile, as the true murderous face of Freeport-McMoran and its destructive track record of wanton plunder with scant regard for culture or community began to be revealed, and opposition to their activities began to gain momentum, they sought alternative avenues to get to Eppawala. They claimed that all the shares of Freeport-McMoran have been bought up by a company called IMC Agrico, and therefore, the former no longer exists. Thus, IMC Agrico argues that the horrendous history of Freeport-McMoran's adventures is a non-issue. According to them this kind of merger and/or takeover is now a tradition in the developed commercial world. Sadly, they are absolutely right. The point, however, is that such mergers



do not alter the intent and the means to achieve it one bit. Old wine, as the saying goes, in new bottles do not taste any different.

In another attempt to deal with nationalistic opposition and reference to the history of multinational mining disasters, a company called "Sarabhoomi" was registered in Sri Lanka in April 1998. IMC Agrico (Freeport-McMoran's latest *avatar*) owns 65% of its shares, Japan's Toman Corporation 25% and Lanka Phosphate the remaining 10%. Ten out of the fourteen directors are either Japanese or Americans. All that Sri Lanka owns is the 10% shares distributed among employees when the state corporation was privatized.

The total loss of this transaction in simple economic terms is a staggering 1400 billion rupees. It is now accepted wisdom that no mineral resource should be exported as raw material. However, in this thirty-year project, the company has the power to export 3.6 million tons of rock phosphate. The company also has the authority to prospect for phosphate as well as other minerals within the proposed area of 56 square kilometers. In addition, 810 square kilometers of a so-called "buffer zone" will also come under the jurisdiction of the company. Everyone in this zone will be forced to answer to the company.

All the other rare minerals contained in the phosphate deposit will also fall into the hands of the company. In fact, they will be able to do as they please with these minerals which are used in the arms industry, production of nuclear energy, medicines etc.

In addition to these obvious and substantial economic losses, the process has tremendous environmental and cultural costs. The Kala Wewa-Yoda Ela agro-ecological system, earmarked to be named as a World Heritage Site by UNESCO and the rich cultural heritage of the area will certainly be destroyed if this project is implemented. 40,000 acres of System H, the most successful of the various systems under the Mahaweli Development Project, the largest development initiative undertaken in recent times, will also come under threat.

Over 31,000 families were settled in System H more than two decades ago at the cost of Rs. 410,000 per family. These families and their descendants are now facing imminent pollution. Loss of ground water, and the destruction of canals and irrigation tanks will invariably result in turning the once fertile and prosperous lands of the Raja Rata into a veritable desert. Our phosphate will be plundered,

transformed into Di Amonium Phosphate and sold back to us, raising input costs and rendering paddy cultivation untenable. The prospects then for national food security are too obvious to require elaboration.

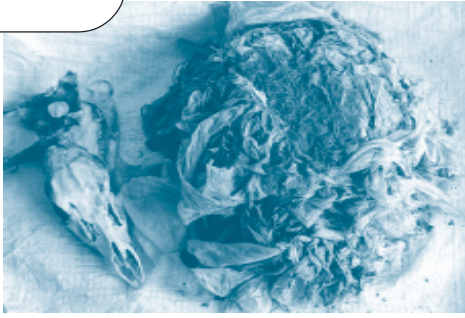
In addition to the settlement villages under the Mahaweli, many traditional villages where the true inheritors of this land and its civilizational heritage have lived for several millennia engaged in traditional occupations which never harmed the environment nor impinged on the survival rights of other peoples or creatures, will be obliterated by the project. A complete study of the cultural heritage and the archaeological remains of the area is yet to be done. Their worth, therefore, is priceless. This plundering corporation is therefore set to destroy the phosphate deposit, which arguably, can be valued, as well as an invaluable cultural heritage. The environmental costs of course will never be fully assessed.

A group of villagers in Eppawala filed a fundamental rights case in the Supreme Court, demanding that their right to life be ensured. The court held that their fundamental rights had been violated. For the first time in history a group of ordinary villagers went to court against the Attorney General, five other state agencies and a powerful multinational corporation, a Fortune 500 company no less, and won, defeating all these evil forces. A gentle people showed the world, and especially those who lament that there is no alternative to Freeport-McMoran type globalization and those willing to succumb at the slightest hint of force, the power of a people committed to a different vision.

Today, once again, Eppawala is under the shadow of multinational invasion. Laws and regulations have been amended to enable this. The people, however, are ready to defend their lands, their heritage, culture and lifestyle. If necessary with their lives.

"We urge the government, yet once again, do not sign any agreement to sell our phosphate deposits. If the government does this, it will be nothing less than a gross violation of democratic norms. The people of this area are not the 'temporary settlers' that the government and corporation make them out to be. Their history goes back several millennia. If the resident of any piece of land is evicted, it is clearly an inhuman act. The people of this area will never allow this. They have pledged to defend these sacred territories with their lives. If the government fails to heed our demands and sign this agreement, a terrible tragedy will take place. There will be much bloodshed. We are duty bound to sacrifice our lives to safeguard this sacred land. We are an innocent, unarmed people. We have to prepare ourselves to be mowed down by the bulldozers of the government and of Freeport-McMoran. We have to prepare ourselves to face the gunfire of the police. When one falls, two should be brave enough to take his place. When this happens, those who use arms against us will be forced to lay them down. This is because of a simple fact; they too are human beings at some level. They too are citizens of this country, inheritors of this tradition and heritage. Therefore we raise our voice and state with firm conviction: 'Victory or Death!'"

Ven. Mahamankadawala Sri Piyarathana, Chairman, Phosphate Deposit Protection Committee, Eppawala



The Deer at Horton Plains have found a novel way of "committing suicide". The pile of polythene that "helped" this animal die lies next to its carcass.

Rural and traditional industries vs new industries.

Seventy percent of the industries located in Sri Lanka are rural industries. They include tiles, building material, coir, rubber etc. More than seventy percent of these industries use local power sources. These local industries only develop local raw material for local production. They provide jobs to locals. But they cannot expand the scale of operation.

The large-scale industries mainly produce items for the export market, but do not use local raw material. They exploit the cheap labour and environmental space to procure large profit margins. The accountability of these corporate actors are not visible at all. These industries are in no way close to being sustainable.

Cleaner production and compliance with local environmental standards

To bring sustainability to the industrial sector many changes need to be effected. These include cleaner production, compliance with local environmental standards, corporate accountability, satisfactory working environments, provision of proper wages, sustainable use of resources and the promotion of small and medium level industries based on local resources.

Making industries environment friendly, or in other words promoting clean industries is of critical import. Although there exist a number of regulations pertaining to this issue, non-enforcement, political interference and lack of political commitment continue to pose problems.

The implementation of waste regulation and the provision of a proper sanitary toxic waste dump will definitely enhance cleaner production. The following measures, if implemented, would greatly contribute towards a more sustainable industrial sector.

A "reed" products industry in Horana



This was a result of an initiative of a group of young people in Horana who wanted to rejuvenate the traditional reed products industry which was literally facing extinction. Before embarking on this project, this group had formed an organisation called "Podujana Himikam Kamituwa" (People's Rights Committee) and engaged in several community related projects in the area.

They purchased a piece of land in the Ingiriya area 20 acres in extent, put up a building and started developing street dramas on issues of social justice. They had launched a banana cultivation project as well as organic agricultural initiatives before starting the reed project.

Under the guidance of one Surasena, a former agricultural extension officer, they prepared a project report on reeds and submitted it to the Community Environment Development Project of the Environment Ministry. The report contained relevant information on the conservation of reeds, conservation of wetlands, employment generation and generating alternatives to polythene. After the project was approved, they planted a total of 200,000 reeds in 10 plots. They had to expend much energy to find the plants in the first place. After attending to the issue of conserving reeds, they turned their minds to reed products, using both traditional and modern patterns. They were assisted in this by the National Design Centre.

Once the project was on a firm footing, they put up a permanent building in the Gurugoda, Ethgala Kanda area on the Ratnapura-Horana road and formed an organization of reed growers. The building also serves as an outlet for the products of their ever increasing membership. Intent on preserving traditional patterns they started training programmes and expanded their operations by setting up another reed plantation in Keselhena.

Piyasoma Bentota, the Secretary of the organisation, said that under the second stage of the reed project, funded by the Community Environment Initiative Facility (CIEF) in the Environment Ministry, they had set up 80 reed plots and stated that there are now 130 farmers engaged in reed cultivation. Each farmer gets an additional income of Rs. 2000-3000 every two months or so, according to Bentota.

The reed products include bags, mats, wall hangings, and other ornaments and utility items. Their contributions to sustainable livelihoods include conducting research, discovering ways to overcome drying problems in the wet zone, using natural colors in place of chemicals and preserving an ancient tradition through example and training for the younger generation.

1. Proper enforcement of the National Environmental Act and the environmental protection licensing procedure
2. Proper enforcement of the Environmental Impact Assessment procedure
3. Implementation of existing ambient water, ambient air, and ambient noise regulations.
4. Provision of specific standards for industries
5. Implementation of toxic waste regulations and provision of a sanitary toxic waste dump
6. Introduction of green audit and cleaner production mechanisms to cover all industries
7. Implementation of ISO 14000 standards in Sri Lanka or the introduction of better SLS standards.
8. Promoting less energy consumptive industries

Corporate accountability

The corporate sector has an accountability problem all over the world. While many corporation do not comply with environmental regulations and consumer regulations, information related to pollution is hardly ever provided. They also use political power and money to control or shout down affected people. Therefore sustainability of the industrial sector is highly dependent on industries being forced to become more accountable to the public.

Labor and occupational health

Cheap labour is one of the main “comparative advantages” that successive governments could dangle in the face of would-be investors. Disincentives to agriculture and indeed a systematic dismantling of traditional agriculture coupled with job opportunities in industry created the ideal push and pull factors for massive labor migration away from the rural areas.

At the beginning there were no labour laws to cover the free trade zones. When the People's Alliance came to power promising to rectify this situation, there was a mushrooming of strikes in these factories, indicating the level of discontent. Unsatisfactory working conditions, low wages, unsafe handling of chemicals and raw materials, etc., have become permanent features of the industrial sector. Many of the labourers do not have gloves, ear guards, or other protective devices. Due to these reasons they are directly contaminated with toxic material, high noise levels, polluted effluents and polluted air.

Safety standards are hardly ever addressed in industrial settings. Although a number of work-related health issues have been identified, there is a conspicuous absence of remedial measures. It is important to set high safety and other standards in industrial workplaces and formulate relevant enforcing mechanisms in order to protect the worker from falling victim to work related hazards.

The pernicious nature of how industrial safety is viewed is perhaps best illustrated in the myths being circulated about “immunity”. The argument is that continuous exposure helps workers develop immunity to dust and chemicals. It “follows” that whereas visitors and weak people cannot stand dust, workers can stand it for 8 hours or more everyday for many years because their systems are strong and immune.



The rice husk kiln: environment friendly, affordable and efficient

Gunaratne Banda Ekanayake is an innovative baker who hailed from Divulgane in the Kurunegala District. After working in a bakery close to home for about 6 years, he moved to Dehiattakandiya in 1987. He set up a traditional bakery, operating on firewood. Believing that there has to be a more efficient and less time consuming method to fire his kiln, Ekanayake spent about three years of experimentation, using paddy husk as an alternative to firewood. With some help from the Employment, Investment and Project Development Division of the Mahaweli Development Project, Ekanayake was able to affect a full switch over to paddy husk in 1997.

“This method is extremely efficient,” Ekanayake explained. “Earlier, I had to spend a lot of time collecting firewood, which was becoming increasingly difficult to find. Furthermore, the firewood has to be chopped and stacked neatly. Now I save both time and money. In fact the mills that supply me with paddy husks pay me for helping them deal with what they consider to be waste material. All I have to do is to feed the kiln with the paddy husk through a pipe constructed for this purpose.”

In a matter of 4 years, Ekanayake has been able to diversify his business. He has put up a building, which has a clothes boutique and a small tea-shop. He has been able to rent out a section for a communications center. “During certain times of the year, depending on the cycle of rice cultivation, the demand for bread and other bakery products drop,” he explained.

In 1999, his paddy husk kiln won a Presidential Award for the best innovation of the year. In the year 2002 he received a special award from the Energy Forum, a Colombo based group promoting alternative energy sources, for his contributions to the field.

Ever the innovator, Ekanayake is currently exploring the possibility of firing clay bricks using rice husks. His entrepreneurship is complemented by a commitment to transferring technology to other communities. He has conducted several workshops to explain his model and has helped convert firewood kilns into rice husk ones. This genial man is therefore not just an innovator, but a conservationist and a human being who knows the value of community and therefore has a good sense of what sustainable livelihoods mean. He is truly a friend of the earth.



Another myth is that jaggery, milk and toddy can cure respiratory disorders caused by any dust or chemicals. The prevalence of any occupational and environmental disease largely depends upon the period of exposure and the volume of the pollutant. Another reason for the prevalence of myths such as the ones described above is that latent diseases sometimes take a long time to manifest their symptoms.

Provision of proper wages

The key issue as far as industrial labor is concerned is wages. Sri Lanka has a long history of working class struggles. However, a sharp decline in the labor movement has been evident after the general strike of 1980 was crushed by the government of the time. Since then, coercive methods, both legal and extra-legal, have been employed to discipline the workers.

A "Worker's Charter" was mooted around 1996 in order to provide avenues for the worker to obtain relief where injustice was perpetrated. The measures included in this document are the bare minimum when it comes to the matter of guaranteeing labour rights. The corporate lobby was successful in shouting down even this mild set of provisions even before it was presented to parliament. Currently moves are afoot to water down even further the existing laws in order to entice foreign investment. In the name of "growth" and "investment", workers' rights are being systematically dismantled. In a policy environment where sustainability issues are hardly ever considered, and where development in general is measured without factoring in human beings, their well being and the sustainability of their livelihoods, the net result can only be a dissatisfied labor force; and moreover one working in unhealthy conditions in processes that increase overall poverty in the country and worsen pollution levels.



Amitha's story

Amitha has lived in Galkanda all her life but came to the present residence when a fire destroyed the house of her birth and everything her family owned. She is the youngest in a family of five. At present her brothers are all married and have their own homes. Amitha being unmarried has lived with her parents all her life. She left school in 1992 having studied up to her Advanced Level. After several short stints at jobs she didn't really enjoy, Amitha found a ray of hope in the "Sudharma Womens Association".

With the help of the Intermediate Technology Development Group, the Ministry of Industry and Womens Affairs launched a fund for a drying oven for the purpose of dehydrating food. She worked very hard, organizing programs, collecting donations and creating awareness among fellow members. This was all done on a voluntary basis and she had found great satisfaction by giving her time and energy to groups of people who helped the association. In September 1999 she was elected the Vice President of the association.

In December 1999, under the official wage system, she started working for this oven project and earned Rs 40 per day. Around March 2000, she got a rare opportunity of participating in a program organized by the ITDG for members to identify the market for their businesses. During this workshop the members were given the opportunity of visiting certain institutions, identifying their needs and their status, examining their samples and meeting and speaking directly with the officials of these institutions. Among the companies she acquainted herself with were, Damayanthi Export Company, HVA Lanka Exports (Private) Limited, CPC Agri Foods Limited, KC Perera (Equal Electronic Systems), Lanka Organics (Private) Limited and Kalar Saree Mandir.

In April 2000, since Jak was out of season the focus was shifted to dehydrating raw ginger. She was the employee who worked the highest number of days to scrape and dry the ginger. She received Rs 15 per kilo of ginger which enabled her to draw a salary of Rs 1,250.

Her new found self confidence and exposure helped her in tasks such as buying raw material, bargaining effectively, being able to get the best deal for the money when she is able to do the weighing and measuring. In sum it gave her a strong edge in her business transactions. By June/July 2000 she was bold enough to be critical of the managerial measures adopted in the program as well as the shortcomings of the employees within. Highlighting the problems in the administration of the program she played an important role in the management and getting employees to share responsibility.

While sharpening her skills on management and organizational ability she also gained awareness about the technical know how of the working of the oven.

Hers is a story of a lass born and bred in the village who gained experience and new thinking by having involved herself in the dehydration program and through this developing a strong strength of character.

6 All states and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the disparities in standards of living and better meet the needs of the majority of the people of the world 9



POVERTY: ITS DEVELOPMENT IS SUSTAINED



Indira Gandhi once pronounced: "Poverty is the worst form of pollution". She is said to have shocked other world leaders when she made this observation at the 1972 United Nations Conference on Human Environment in Stockholm. Today, thirty years later, the evidence is overwhelmingly in her favour.

Who suffers most from environmental degradation? The poor, of course. They account for an overwhelming proportion of the toll of death and disease from pollution, live nearest to toxic waste sites and polluting factories, are the most effected by desertification and deforestation and are expected to suffer disproportionately from the effects of global warming. All this should be read against a simple fact: the poor contribute relatively little to overall pollution. This is why it is argued that a more equitable world would necessarily be more environmentally sustainable and vice versa. It would follow, then, that eliminating poverty would be one of the best forms of environmental protection.

Globalization, in its current articulation, has a woeful track record in the matter of eliminating income disparities and alleviating poverty. In fact the last ten years have only seen a worsening of the situation. The vast majority of the world's population can neither demand from nor supply to the market. They do not reap any of the alleged "benefits" of globalization. Interestingly, perhaps this is not necessarily a lamentable state of affairs, for this also means that there is a vast potential for alternative strategies. The one problem is that even if such people wish to leave globalization alone, globalization, by definition, will not leave them alone. This is why it is argued that the creation of a sustainable world necessarily involves resistance to such processes.

The eradication of poverty, it has been universally recognized, is an absolute prerequisite for sustainable development. It is no secret that poverty remains the number one killer worldwide. Today more than a billion people are without access to improved water supply and it is estimated that 2.4 billion lack access to improved sanitation. More than 2 million children die from diseases that can be prevented by currently available vaccines. Nearly 30% of the world's population suffer from one or more of the multiple forms of malnutrition. The density of poverty, its causes and its effects are intertwined with issues of development, naturally. The eradication of poverty is therefore part and parcel of sustainable development.

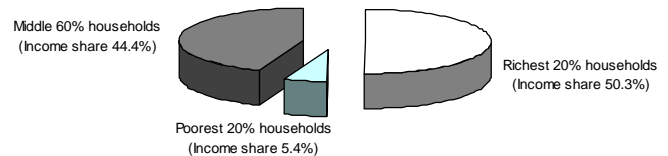
Poverty is not a "sector" in the way "agriculture", "industry", "energy" etc., are. It feeds into all areas and draws from many sources as well. For example, one cannot talk about health ignoring the relationship between health and poverty. In this section, similarly, "poverty" moves easily in and out of key areas of the economy as well as key issues pertaining to sustainable development.

Present state of poverty in Sri Lanka

The most widely used poverty indicator in Sri Lanka is that of consumption. The poverty line is the sum of money necessary to purchase a basket of consumables goods consisting of a selection of food items and essential non-food items.

The Household Income and Expenditure Surveys carried out by the Department of Census and Statistics in 1995/96 gives the lower poverty line as Rs791 per month. According to this lower poverty line there is 25% poverty in the country. A 20 percent higher poverty line of RS 860 person per month gives the poverty in the country at 39 per cent. *The Central Bank Consumer Finance and Socio-Economic survey 1996/97* marks Rs860 as the lower poverty line, thereby giving a poverty estimate of 19%. A higher poverty line at RS 1032, puts poverty at 31%. The DCS figures are the most widely used, but the figures for 2002 can be expected to be slightly different.

Household income inequality - Sri Lanka - 1995/96



Those below the lower poverty line are those in long-term absolute poverty. Those included in the higher poverty line are those who sink into poverty seasonally or due to particular circumstances like drought or market failure. Long-term poverty is said to affect 25% of the population and combined with transitory poverty, 40% of the people are affected, according to the DCS figures.

When compared to the 1990/91 figures of the government, we see that poverty had increased by 1995/96. Using another index, i.e., of a person having a purchasing power of less than one dollar per day as the lower figure and 2 dollars per day as the higher figure, the poverty levels will be 7% and 45% respectively.

The population is divided into three sectors in the survey report. That is, Urban, Rural and Estate sectors. According to the lower poverty line, both rural and estate sectors have the same severity rating, but taking the higher poverty line the estate sector is worse off. However, the largest numbers of poor are found in the rural sector, which contains over 75% of the population.

The DCS survey notes the great inequality in incomes. The poorest 20 percent of the households receive 5.4% of the total income while the richest 20% receive 50.3% of total household income.

The greatest inequality of incomes is seen in the urban sector, which also has the highest mean income levels. Inequality is least in the estate sector which has the lowest average income. These divisions are subject to change as there is no clear definition of where rural ends and urban begins.

At the lower level, 87% of the poor are in the rural sector with 8% in the urban and 4% in the estate sector. A regional differentiation in poverty levels is also evident, with Uva, Sabargamuwa and North Central Provinces having the highest poverty index. These provinces have a high rural population and also the largest estate sector. Due to the rural dependence on weather and the seasonal character of work availability, the state of transient poverty may also vary from year to year.

It must be noted that none of these surveys included the North and the East of the country due to practical difficulties. Should these be included the poverty levels will surely be higher, considering the displacement and destruction caused by war. The number of displaced persons is estimated to be around 600-700,000, while an estimated 60,000 persons have been killed in this war. There is relief provided by foreign remittances which do not appear to go to the uncleared areas.

The UNDP (2000) *National Human Development Report* shows that when it comes to access to safe drinking water, safe sanitation, education, life expectancy etc., the Human Development Index for Sri Lanka (HDI) is higher than other South Asian countries except Maldives. The figure is less in the estate sector and the more remote rural areas. Access to electricity is estimated at less than 50% in the regional areas. The very poor in urban areas have very poor housing and sanitation. Consumption poverty can be somewhat offset by the provision of these social services, but those regions disadvantaged due to lack of these services, also have a high incidence of consumption poverty.

Gender and poverty

The UN notes that the majority of the world's 1.5 billion living on less than \$1 per day were women. Although the official government position is that there are more male-headed households that are poorer than female headed households, the fact is that in any event the woman has the double burden of work to bear. In many of the poor male-headed households the women have to support not only the children but the man as well. Women have the double burden of doing the household work as well as supporting the family. *Feminisation of Poverty* that is "the trend of women representing an increasing proportion of the poor" is in fact a world wide phenomenon. Sri Lanka is not an exception. As in many developing countries, women go out to find some form employment; as migrant labour, garment factory workers or as labourers in stone quarries — anything to keep their families alive.

Female unemployment was much higher than male unemployment, but this is changing fast. By the second quarter of 2000 it was halved from 22.2% in 1992 to 10.1%. Male unemployment was halved to 5.3% during this period, according to government statistics. Unemployment among females with GCE A levels was 30% and among those who had little schooling, 2%. These latter took up work in garment factories or went abroad as migrant workers in order to ease their poverty, often at considerable risk to themselves. This last although a positive



Malani's story

Malani lives in a crowded suburb of Colombo. Two years after she married, her husband decided he did not want to work. The couple first lived with Malani's mother who had a house and a few perches of land. Due to continual bickering with a drinking husband they had to move out into a hut built on the same land. Malani had two children and the hut was near collapse. Seeing no way out of her poverty and in order to build themselves a reasonable house, she went to the Middle East and returned with enough money to improve their house. One thing she concedes, the man looked after the children while she was away. She now works as a housemaid-a daily- and on her return home she makes stringhoppers which are sold to the neighbours or the boutique. The man spends his time lounging about and turns abusive if she does not give him money for drink. Why does she still put up with him? "I have a daughter" she says and "the fact that he is there is protection for us".

statistic in terms of women's employment, is a negative one in relation to the effect it has on families and children, who are often at risk of sexual and other abuse.

The 20 years of internal conflict have caused havoc among families in the north and east and in the areas under threat of terrorist attack where the male members of families have been killed. Driven from their homes many Muslims and Sinhalese from the north and Tamils fleeing the conflict now live in refugee camps with no assets and often no kith and kin. The women in these camps have to support their families, finding work as best as they can. Under the present cease-fire conditions more accurate statistics of these persons will come to light.

Another indicator of feminine poverty is the *nutritional status* of women and children. The figures for low birth weight are around 22%. This is a direct indication of the nutritional status of the women and is related to the heavy work load they have to bear. Iron deficiency and anemia is high among women and more so among pregnant women. It is accepted that in a household where food is limited, women eat last and least. So the fact of it being a poor male-headed household or a poor female-headed household becomes irrelevant if they are poor. The double burden on the women persists.

For small farmers to survive the women must also be empowered and recognised as farmers and entrepreneurs with a voice in rural governance. They should have access to credit and skills training. It has to be recognised that women play a very large role in pulling families out of rural poverty. Conscious efforts must be made by society to stop all types of gender discrimination and violence against women.

Women who go to the Middle East or into garment factories come from very poor homes in rural and urban areas, Both types of employment are not sustainable, but provide relief and upward income mobility to the poorest families. If they come through the Middle East journey without ill effects, the women become empowered and better able to deal with both economic and social setbacks than before.

Although we proudly point out that as far as the Gender Development Index (GDI) is concerned the women in Sri Lanka are much better than their sisters from the South Asian region and the developing world (70%), in terms of the Gender Empowerment Index, which refers to political participation etc., we are worse off than many other developing countries (31%).

Government interventions to alleviate poverty.

The rice ration book was done away with and replaced by food stamps after 1977. Towards the end of the 1980s, the Janasaviya Programme was introduced. This was a poverty alleviation scheme meant for the very poor who were to be assisted over a two year period with finance for consumption needs and a savings component which could be used for borrowing to set up small businesses or self employment schemes. The programme reached only a section of the poor population and was fraught with malpractice. It is alleged that in the end the beneficiaries were mainly those loyal to the party in power and that in many instances the needy were bypassed.



Heenmenike Ten Years ago

Heenmenike's story

Heenmenike lived in the hill country near a small tea plantation. She had a husband and three children, two sons and a daughter, all teenagers. She and the daughter worked on the nearby tea plantation for a daily wage. The husband, who was in good health, did not work and the two sons fitfully as the mood took them. All three males partake of the local kassippu at the end of the day. The women earn and also cook the food for the family. In addition to the daily wage they would also take on contract work, weeding the estate on a Sunday. The extent of their rebellion was this: while sweating it out on the field on the Sunday, while the men lounged about inside, they decided that they were not going to make tea for them mid morning! Heenmenike died in her fifties, the daughter left home for a job in Colombo. This was a male-headed household.

With the change of government in 1994, Jansaviya was replaced by the Samurdhi scheme. The Samurdhi scheme gives financial support for a set of consumables, depending on the amount received, which varies from family to family and there is a social insurance component where the recipient families contribute towards insurance for family events. A third component is a savings scheme.

The Samurdhi scheme, extending to about 2.1 million households, 39.1% of the population, employing about 32,000 'animators' and 1,500 managers who are now permanent government employees. Over Rs 10 billion has been spent on this scheme. But according to studies, some 34.4% of the lowest income decile did not get any benefits while 38.2% of higher income groups received benefits. Again party loyalties are said to have been an important factor in the matter of who really benefitted.

This scheme is in the process of being revised to correct these anomalies but it is again feared that party affiliations will count more than poverty figures if the public is not watchful. The only way to prevent corruption in this social insurance scheme is *absolute* transparency. Let the public view the names of those who receive Samurahi benefits and how much at their local divisional office. This programme is a very necessary social and economic insurance for the very poor and should not be jeopardised because of corruption.

Other interventions

The infant and maternal nutrition programme also gave *triposha* (a nutrient food based on local inputs) to the very poor when it was in operation. Many NGOs and local community based organizations (CBOs) help the poor to cope with financial problems. There are the local death donation societies, the micro credit schemes, the *Sanasa* savings societies, which provide loans and life insurance. The people themselves organise *seettus* (voluntary monthly contributions to get an accumulated sum of money) in their workplaces through which they get some capital when their turn comes to purchase goods or repair a house. All these are efforts by the very poor to meet the challenges and catastrophes in their lives.

Eradicating Poverty or Reducing Poverty

It is accepted that there can be no sustainable development unless poverty is eradicated. However poverty cannot be eradicated within the present world system, which is geared to profit making, globalisation and unequal trade agreements which keep developing countries poor. So the best that developing countries can do is to try to alleviate the poverty of the majority of its citizens.

The World Bank and the ADB sing this theme song of poverty: *alleviation through the private sector development*; in all their loan projects. In keeping with this, the government's Poverty Reduction Strategy as given in the Draft Report for Consultation April 2002 repeats, "one of the main ways in which pro-poor growth will be promoted is by ensuring... private sector led development and Sri Lanka's integration into the global markets." They go on to say how transport (road network) and expansion of ports will be the way to go. A very strange position considering that at the start of the paragraph it is said "While Sri Lanka's economy grew by some five per cent per annum in the 1990s much less progress was registered with poverty reduction". There is nothing to suggest that it will be any different now. In terms of World Bank/IMF recommendations it would suffice to point to the changing slogans: first it was "Structural Adjustment is the way to go"; this was followed by "Structural Adjustment with a human face". Then it was "Structural Adjustment with poverty alleviation!" A symptomatic reading of this evolution would show us how "poverty alleviation" was made an imperative. Today we are told, "It has not worked because not enough was done". In other words, when the bad medicine did not cure the illness, the "doctor" recommends that the dose was not large enough.

The Department of Census and Statistics Survey shows that although there was an increase in GDP during this period there was no decline in poverty levels. This shows that this increase of income due to this private sector led growth did not 'trickle down' to the poor. This growth was not sustainable in that it did not reach all levels of the population.



For private sector involvement and growth the conditions must be stable, but instability is the hallmark of the rural sector, where rainfall and markets are typically prone to failure. The majority of the poor (87%) live in the rural sector. It is therefore here that we have to find solutions for poverty.

The following are the most vulnerable sections of the population: poor farmers; those involved in mining and construction, the self employed, those involved in coastal fisheries, petty traders and craft persons.

Agriculture on small plots of land is not sufficient to maintain farming families for the majority of whom farming is seasonal. Off farm employment is necessary for all farmers. This has been true down the ages. The pyramids of Egypt, the Dagabas of Anuradhapura were built in this way. This must be recognised and a conscious effort made to stimulate other means of seasonal employment. In the wet zone the tea and rubber plantations provide employment but this is not sufficient. Other industries must move into the rural sector. The viability of paddy farming is being questioned by the World Bank and other lending institutions, who are encouraging a shift to "high value crops". This issue is dealt with in the section on agriculture in this report and therefore elaboration is not necessary. Suffice to say that it is in the interest of the country as a whole that we produce our own basic food.

Poverty and the environment

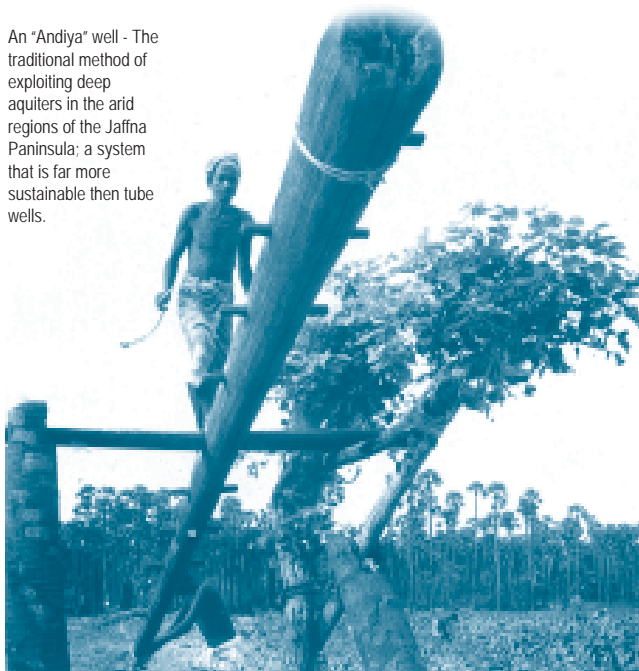
Rural families take much from the natural environment for their survival. This includes water, fuelwood, supplementary foods, medicines and raw material for handicrafts which could form the basis of small home-based industries. It is imperative that authorities should be aware of and take steps to preserve the natural resources around villages. These are the lifelines of the very poor.

There is less than 20% of land area with forest cover now and it is necessary to maintain this if agriculture in the rural areas is to be maintained. The degradation of the surrounding forests which help maintain soils and water are some of the factors which contribute to land degradation as well.

In the colonization schemes the land question for second generation settler families has to be addressed. As it is they move on to state land without water resources and so cannot improve their agriculture or incomes. (e.g. Medirigiriya area next to the Mahaweli settlements). It is here the private sector could provide employment opportunities and government provide the infra structure necessary for industries to develop.

In the estate sector only an increase of wages can get rid of poverty. But this depends on global markets and whether we can get better prices for our plantation produce. Tea plantations depend on a high input of agro-chemicals which poison the soil and which must be purchased from multinational companies, who also buy the made product. We must go towards increasing local organic inputs, which will cut costs and improve the soil. Technology, appropriate to the area must be brought in to increase productivity. Sixty per cent of the tea is today produced in smallholdings, which contribute to poverty alleviation. These appear to be more sustainable than large plantations with a labour force on low

An "Andiya" well - The traditional method of exploiting deep aquifers in the arid regions of the Jaffna Peninsula; a system that is far more sustainable than tube wells.



Wilpotha: where self-help shows the way

Wilpotha is an agricultural settlement situated in the Pallama Division of the Puttlam District. The community, established in 1960 has a history of suffering drought and malaria. It was the women who took the lead to find ways to solve the problems of poverty, sanitation etc. In 1978 they formed a savings society under the leadership of Manel Ratnayake. As a means of snapping out of the debt cycle, the initial membership of 19 began saving Rs. 1.00 every month. Today, 24 years later, their savings total over Rs. 3 million and their membership has risen to 85. Through a well orchestrated scheme of small group savings initiatives they have now managed to expand their work to Mundal and Anamaduwa and now count over 3500 women associated with their activities.

The initial thrust of self-employment took the form of rearing livestock, mainly goats, poultry and cattle. Under the leadership of Karunawathie Menike, who has been the President of the organization since 1982, they were able to obtain the help of several NGOs and the membership has developed a wide range of self-employment schemes which include all kinds of handicrafts made out of easily found local material. In addition, they have launched many environmental programs, community development projects such as water supply and sanitation and taken measures to take care for the old and infirm. According to Karunawathie Menike, each member earns an average of Rs.4000-5000 every month. The women of Wilpotha stood up on their own. They used their own resources to improve the life chances of their families. They set an example for all such communities, plagued by poverty, debt and poor environmental conditions.



wages. Education and vocational training of estate populations may see changes to this established structure, if not soon, in the long term.

The need for consumer protection and a consumer movement

It is not possible to foster environment friendly living patterns simply through the use of sustainable farming system and by strengthening the farmer at the governmental level. To complete this process, it is necessary to strengthen the consumer as well. In this direction there should be a food supply, which meets required quality as well as quantity.

Human health depends on the receipt of nutritious food at adequate levels. As the majority of the population is not in receipt of even the basic food requirements, the supply of adequate and nutritious food to the entire population should be guaranteed. Inadequate production is not the cause of insufficient food. The problem comes from people's lack of purchasing power as well as an appalling system of distribution.

Therefore the subsidiary scheme of free distribution of essential food items that existed earlier should be reinstated. This is an investment directed to reduce the expenditure, which would be incurred to build a healthy population as well as to increase the future local production process of the country. By maximizing the use of local agricultural products in the distribution of subsidies, it is possible to guarantee markets for local agricultural products. This must especially be executed at the government level. Strong cooperative movements devoid of corruption are essential for this. A powerful people's campaign should be launched to build a proper culture for cooperatives, accompanied by an action program designed to broaden democratic opportunities within cooperatives.

The quality of food, of course, cannot be ignored. Today there is a conspicuous absence of a strong consumer movement in this country. In a context where the state agencies are complicit in the flooding of markets with low quality and, too often, harmful food products, the absence of mechanisms which educate and empower people to secure the right



Towards solving the problem of urban waste

The Seevalipura "colony" is one of the largest and most densely populated among the more than 5000 shanty communities located within the city of Colombo. It is situated close to Borella. It goes without saying that "city planning" played no part in the "development" of this colony. Ad hoc, temporary, structures that have been put up over the years have now become more permanent dwellings. The Urban Development Authority had at one point distributed two perches each among the families, but clear title to the land is still to be granted. The residents, mostly brought here by urbanization thrusts, have no permanent source of income for the most part. They are remembered only during election time. The Serpentine Canal which runs through this colony is nothing less than an open sewer. It brings disease and mosquitoes. It was to turn things around that the Movement to Safeguard Life and the Environment intervened. The objective was to transform the biodegradable waste into organic fertilizer. After carrying out an awareness campaign among the residents, they were instructed to collect degradable waste. Today "Seevalipura Organic Fertilizer" is sold in 2kg packets. If such "recycling" schemes are carried out systematically, an important step would have been taken towards solving the problem of urban waste.

The degradable part is turned into compost

The National Forum for peoples organizations, with the support of government and non-governmental actors, launched a project to further develop a recycling initiative that had been started in the Piliyandala area with ADB funds. The idea was simple; producing compost using urban waste. A total of 5000 households were educated about the project and their support solicited. Lack of enthusiasm saw the project end in failure, but a second attempt in a nearby area called Madapatha was successful and enjoys the full participation of the community. In order to inculcate the ethics of conservation and recycling, each resident is charged Rs. 30 for garbage. The degradable part is turned into compost. Today three tons of compost is produced every month and the target is to produce up to 8 tons a month.



to healthy food is lamentable. There are no labeling laws which could indicate to the consumer the components of the particular food product, whether or not it includes genetically modified organisms etc. There is also a glaring lacunae with regard to GMO-related legislation.

In a nutshell....

If we wish to reduce poverty in this country in a sustainable way, we should not fall prey to the opinions of the lending institutions whose main aim is to assist the private sector in the guise of helping to alleviate poverty. Up to now, after more than seven years, the private sector growth according to the surveys has had no great impact on poverty in the country. The private sector is necessary in industry but not in services. Privatization of essential services could mean the poor will end up without the human development benefits they now have. Governments could do better to try to rectify the unfair terms of trade which do not give developing countries a fair price for their goods.

The recent pronouncement of the Prime Minister and the Finance Minister showed that our loan and interest payments *were far in excess of the national income*. What chance has a country under those circumstances?

The potential of thrift, credit and cooperation

Low incomes, chronic unemployment and disincentives to paddy cultivation are some of the main problems that beset rural communities. These invariably tend to drag households into the clutches of money lenders and to chronic debt cycles. Thrift and credit cooperatives were first established in the island in the early 20th century and later they were used to disburse food rations during the war. In 1978 there was a rejuvenation in the thrift and credit cooperative movement. Such societies, scattered all over the country were brought together into clusters, district unions and finally an apex body, the Federation of Thrift and Credit Cooperative Societies, better known by its Sinhala acronym, SANASA. The cooperative principle was used to bring the community together, foster self-help and facilitate the retention of money within the community. Today there are over 8000 such primary societies and the movement has expanded to include insurance schemes, children's saving schemes, women's organisations, environmental projects, consumer-producer linkages etc. Most rural credit organizations in Sri Lanka are modeled on SANASA with a few following the Grameen Bank system. In 1997, SANASA took a step in the direction of commercial banking with the establishment of the SANASA Development Bank, with the vision of bridging the gap between the relatively poor and commercial credit facilities. While there is criticism about the efficacy of the Development Bank, the primary societies continue to flourish, nurturing community solidarity and enhancing the capacities of their members to rise out of debt.

For a development which reaches an equilibrium between human needs and wants, and improves the quality of life and dignity of the poor, especially the rural poor, we should protect our forests, our natural resources, our coastline and wetlands, our watersheds and reduce pollution of waterways, as priority measures. We need to find crops that can grow without chemical inputs and find markets for these. The railway should be developed, but not privatized. It is also important to promote the introduction of freshwater fisheries to help rectify nutrition shortfalls. The development of renewable energy sources should also be pursued with vigour. We should empower rural youth and especially women by

siring them skills of different types, *matched with access to financial assistance* to set up small scale or large-scale enterprises.

On no account should the food security in terms of rice production be compromised. Local government bodies should play a role in planning for rural poverty alleviation. Needless to say there can be little sustainable development in a time of War. Peace is necessary for true sustainable development, but not at any price!



Udamaththala: return to an ancient solution to drought and poverty

There are two artifacts that symbolize the systems that our ancestors designed over the centuries to ensure sustainable development and livelihoods, the *wewa* (village tank) and the *dagaba* (temple). The former ensured food security, community and a sustainable environment. The latter offered spiritual relief from the vicissitudes of life. Mega-development, best symbolized by the "multi-purpose" large dam, pounded into the earth the *wewa* as a sustainable idea and often as a physical entity. This is how drought became endemic to certain parts of the country.

The gut response to drought and impending famine has been an unending convoy of relief carrying lorries moving into the effected areas, often distributing "goodies" in return for political loyalty. The poorest, most severely effected are typically by-passed. And when the rains come, the lorries leave, and people are persuaded to forget that drought has been *made* endemic to the region. Last year (2001) there was a severe drought in the Hambantota region. The relief convoy came. Went. This year drought looms once again.

It is in view of these non-solutions of the stop-gap type that the Ruhunu Parisara Padanama (Ruhunu Environmental Foundation) took a page out of the history books to rehabilitate the Udamaththala *wewa*. Under the guidance of Ven. Dodampahala Sirisuguna and Ven. Keeranthidiye Pannasekera, the Foundation sought help from the Sampath Bank and developed a time-tested, sustainable solution to the twin problems of poverty and drought. The long unresolved water problem of the people in Udamaththala, situated in the Lunugamvehera Division of the Hambantota District is now history. The lands fed by the waters are being cultivated after many years. Birds and animals have also benefited from the initiative. What is left to be done is for the relevant lessons to be learnt.

6 In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it 9



NATURAL RESOURCE CONSERVATION, RESTORATION AND MANAGEMENT





Land and Land Use

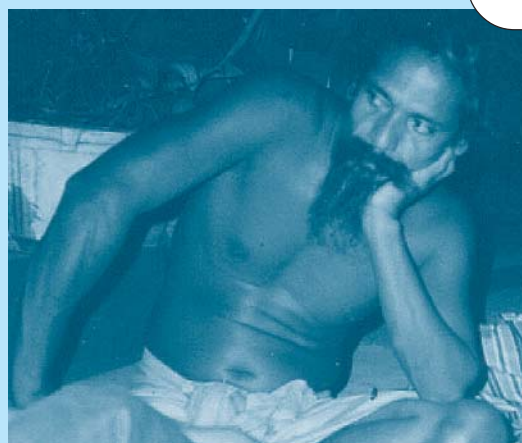
Today, Sri Lanka has less than 8% of its land area under natural forest cover. The pressure on land has reduced forest cover and the resultant loss in habitat has seriously affected biodiversity conservation. While there are several wildlife parks and nature reserves, most of these areas are in the lowland, dry and intermediate zones. These zones enjoy rainfall from the North East monsoon only.

In terms of conservation, however, the greatest density of endemic species is found in the wet and montane zones. These ecozones receive rainfall from both the South West and the North East monsoons. Sri Lanka is now recognized as a biodiversity hotspot but even the controversial legal reforms established to declare 'protected areas', protect areas mostly in the dry zone.

This is specifically important when considering the lowland and sub montane rain forests. While the Singharaja, Kanneliya and Suriyakanda forests enjoy protection, the fragmented patches found in the areas between the montane uplands and the low country, are bereft of any conservation action. It is in these fragmented forests that relict biodiversity remains.

A good example is the case of the two forest patches in Rogersongama, Kotmale. These forest patches are located between 1400 and 1550 metres above sea level and contain extremely high levels of biodiversity. Since this area is located between low country wet zone and the montane uplands, they contain species peculiar to both ecozones like the Mountain chameleon, *Lyriocephalus scuttatus* and the woody tree fern, *Alsophilla crinita*. In addition two of Sri Lanka's rarest orchids are found here namely *Dendrobium bambusifolium* and *Eria tricolor*. The rare Red Doona or *Doona gardineri* that is found on the foothills of Adam's Peak is also found here. Hence, the protection of these two forest patches alone warrants immediate attention.

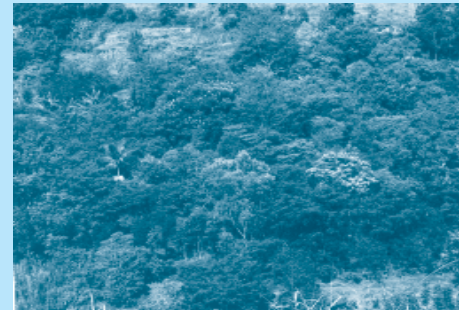
The breeding of the larger animals goes at a pace while no action is being taken to breed the smaller animals. Ex situ conservation and captive breeding of smaller taxa go unattended and with the decrease in habitat, several species are threatened. In situ conservation programmes must be developed at the local level since most often, local communities are very knowledgeable on local conditions.



*"We are the oldest peoples on this land. Today, our numbers have decreased and our four clans, together, count less than a total of 4,000 people, scattered in various parts of the island. This thing called 'development' has since the 1940s posed a grave threat to our existence. Trees were cut, roads were built and we cannot help but think that these things paved the way for this tragedy. We lived in the forest, and from the forest. Then something called 'independence' happened. Our 'national leaders' tried to 'civilize' us and 'develop' us. As a result we lost our livelihoods as well as our culture. Governments tried to bring us to heel using laws and regulations. We never had laws. We only had **sirith** or customs. Laws are made by those who want to violate them. **Sirith**, on the other hand, cannot be 'broken'. They can only be maintained. Both the natural world and our people were protected by these **sirith** or customs. What no one was successful in safeguarding through laws and regulations, we protected through our **sirith**. These laws were used to push us out of the forest. We were in fact asked to leave our forest. And yet, is was proved beyond any shadow of doubt that neither these laws, relevant officials and enforcing agencies, could protect the forest and/or the wild life to whom it is home. We have always wanted only to protect our customs, traditional culture and live. We have told as much to each and every national leader since 'Independence'. They just sought to exploit and hoodwink us, again and again. We will never tire of saying our lives, our forest and all the wild life in it and all the plant life, are intertwined in a unique manner. So please allow us to live freely in this forest."*

Uruvarige Wanniyalletto,
leader of the most ancient people in this land

Mirahawatte: an experiment in analog forestry



The Neo Synthesis Research Centre (NSRC) in Sri Lanka began a series of experiments aimed at halting and reversing the destruction of tropical forest environments. NSRC focused on establishing forests analogous to the native forest in structure and ecological function. The first trials were begun in 1982. A "forest" analogous to the original, with higher levels of biological diversity and productivity than the surrounding monoculture plantations of Pinus and Eucalyptus was created in Mirihawatte. The site was a denuded tea estate with no tree cover, poor soil and no water. Few birds and animals frequented this area.

Ecological Succession is the process by which vegetation on a patch of land progresses towards an increasingly stable and mature eco system. The process of moving from the colonization of bare land through to the growth of a climax ecosystem is called Seral Progression.

While annual crops were grown in open areas, many fast growing trees, both native and exotic, were planted in addition to crop plants like cardamon and coffee. The model on which the planting was executed was based on the closest natural forest in the area. This work demonstrated that if all crops in these new forests were grown organically, many species of animals and birds that were once confined to the original forest could move in and establish populations.

At the beginning of the experiment, no more than 15 species of birds were recorded. Today, 22 years later, almost a hundred species have been recorded. The Barking Deer has come to stay and many butterflies, moths, frogs and lizards have found a home here. What is also significant is the establishment of over 60% shade in the analog forest in Mirahawatte and that the increase in leaf litter has led to greater accumulation of surface water. This has led to a dramatic return of perennial water flows in the streams found on the land.

Another important facet in the conservation of small taxa is the use and abuse of agrochemicals. These poisons have effectively wiped off populations of fish, frogs, reptiles, butterflies and many insects. Laws must be put in place to monitor the use of these agro chemicals and attention must be given to the development of biological controls.

Perhaps the limitation in staff and resources has rendered the Department of Wild Life Protection and the Forest Department incapable of taking effective action. The strengthening of these two institutions will certainly improve the monitoring and protection of our natural forests. In addition, departmental field officers like divisional forest officers and wild life rangers must be empowered to create awareness amongst local communities.

Presently there is no mechanism where local and village level conservation groups can have a hand in decision making at the local level. Mechanisms must be developed to increase local participation. Unnecessary constraints must be removed when local groups or Non Government Organization apply to the Provincial Government when conducting school educational programs.

Local communities must be made aware of the value of natural habitats. Management strategies must be developed whereby the community can gain from their conservation. This is especially pertinent



in combating fires that engulf the countryside during drought. Local vigilance committees need to be encouraged.

However, as stated before, the biggest problem facing conservation is the increase in forest destruction and land degradation. The destruction of tropical forest, in particular, has led to the impoverishment of the world and unless we are able to reverse this trend we certainly face a bleak future. The greatest challenge of this century is the ability to restore or rehabilitate the vast areas of this planet that have been destroyed and degraded by human beings.

Ecological Restoration of landscapes

We in Sri Lanka have much to share with the world in terms of how one could go about this process of ecological restoration. To understand the process it is prudent to examine the background of land management through the passage of time. The people of Sri Lanka have shared a close relationship with their land for over 2,500 years. Through this time they evolved a system of agriculture that has its roots in a strong, spiritual tradition where the farmer was merely a trustee; a custodian of the land that he worked on. Land that he would pass on to future generations or *paramparawa* for them to cherish and nurture. In doing so, he developed an agro-ecological system that has withstood the test of time and had remained sustainable until the advent of the colonials.

Sri Lanka was invaded by the Portugese, the Dutch and the British. It was during the time of the British that tremendous changes in the landscape took place. Until then the dry lowlands were assigned for the cultivation of rice, our staple food. The mountainous areas were covered with forest and served to ensure the flow of river water all through the year to the lowlands. In fact, at that time the destruction of these 'Royal forests' or *Rajaya Mukalanaya* as they were referred to, was punishable by death.

The sustainable management of natural resources should be enshrined in our mandate for the future. All future policies and developmental planning in Sri Lanka should consider carefully the social, economic and ecological value of those natural resources, especially when evaluating land use. This is the basis of evaluation that needs to be applied in the case of natural or human-modified (anthropogenic) ecosystems in the conservation of soil, water and biodiversity.

Land in critical watershed areas and land in sensitive ecosystems should be managed considering the pivotal role they play. All land under natural forest cover must be conserved at once and efforts should be made to restore degraded lands in those environmentally sensitive areas.

All river, stream and tank reservations must be conserved. The use and misuse of agro-chemicals must be given immediate attention and the State has to provide incentives to farmers for the manufacture of compost fertilizer.

Biological diversity: a story of depletion and theft

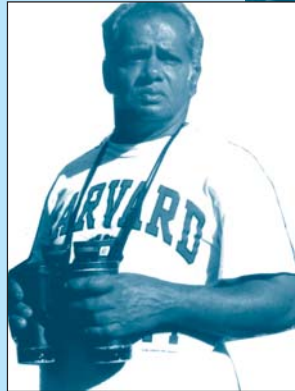
The past decade saw both positive and negative trends in the conservation of biological diversity. Our forest cover has diminished to less than 20%, and an increasing number animal and plant species have



Janahithagama, Deraniyagala: pioneering wormiculture

Wormiculture can be defined as a form of agriculture which uses the the waste discharged by worms with other waste material as organic fertilizer. This methodology is fast gaining popularity among the farmers of Deraniyagala, where in a village called Janahithagama it has been used to improve the fertility and productivity of previously barren land. Anura Prematillake, who had attended a workshop on organic farming where an Indian soil scientist had lectured on wormiculture, had decided to apply the technology in Janahithagama. When the project was launched in 2000 by thirty five families, it was the first time that wormiculture had been adopted in the country. Farmers in Deraniyagala claim that as a result they have managed to cut down input costs vy 60-70%. Some claim that their yields have increased by 45% while others maintain that their incomes have increased 60-70%. What is most important is that the success of the project has led to funds being released from the Global Environmental Facility to replicate the project throughout 10 selected districts.





Martin Wijesinghe: guardian angel of a rain forest

In the current global political economy, representative governments, willingly or unwillingly, have been reduced to mere puppets in the hands of capital interests. The latest in capital's relentless urge to create and protect markets, and its pursuit of people to exploit and resources to plunder has been the nefarious Tropical Forests Conservation Act of the USA. Where states and government officials are powerless to resist such dangerous moves that threaten the natural world, and especially tropical forests, which eminently qualify for the epithet "priceless", the matter of protecting forests, heritage and ensuring futures naturally falls on the shoulders of ordinary people. Like Martin Wijesinghe, generations of whose family have lived and died in the peripheral forests surrounding Sri Lanka's great tropical rain forest Sinharaja.

Poverty saw to it that he could not get a formal education. He was however endowed with an urge to learn, a certain tenacity in grappling with things and an intimate knowledge of Sinharaja, our largest rain forest. He learnt from the various scientists, conservationists and wild life enthusiasts who visited the place. "I never asked for a job, but the Forest Department, upon the recommendation of one of the many professors whom I helped, hired me as a laborer."

Almost thirty-five years later, when Martin retired, he was still a laborer. But in that time, he has been the main resource for countless local and foreign researchers and an invaluable asset to the department on account of him being a vast repository of local knowledge of the forest and all its plant and animal life. In fact, Cambridge University has recognized him as the principal contact person for all research projects in Sinharaja where species identification was concerned

He has mobilized his village to keep poachers and timber merchants at bay. He has also helped organized other villages surrounding the forest so that a concerted effort can be expended to protect this national and indeed world treasure. Once he had caught a Japanese "researcher" collecting butterflies. He had demanded that the man show papers to prove he was actually engaged in research. The man had replied, "this is my hobby". Martin had retorted, "this is

my job" and executed a citizen's arrest, eventually handing him over to the police. At that time Martin Aiya (Older brother Martin) as he is popularly known was retired. But for one whose life is inseparable from the live of the forest, that was a mere technicality.

Upon the recommendation of government agents and a whole host of academics, the state conferred him with the title "Sri Lanka Thilaka" in 1993, an honor which no officer in the Forest Department had received. He lamented the fact that the unscientific and indeed harmful policies of successive governments had discouraged dedicated officials. "There are crooks in the Ministry and there are unscrupulous officials at lower levels of government. There has to be high quality management and a constant vigil has to be maintained. I walk in this area, so I am able to stop the felling of trees around here. There's so much I do not see. Encroachment occurs at the rate of a foot every month. "The relevant Minister should educate himself about the subject and take appropriate action. Competent people should be appointed to look after the forest. Isn't it strange that some people engage in logging and get off scot free while those who have lived in and with the forest for centuries get arrested if they were to cut off a branch to make a broom? We never abused the forest. Those who live in and around forests, i.e. in traditional villages, recognize its benefits and take only what is necessary. We know every tree intimately. We have walked every path. We know all the legends and what they signify. We know we are but a part of the forest."

The fact that anyone who wants to visit Sinharaja, invariably comes looking for Martin Aiya, itself indicates the reputation that has attached itself to the man. He is a legend in his own time. More importantly, he exemplifies the solution to the problem of our disappearing rainforests: communities are critically important. For their knowledge, their love and more than this, because when the forest goes, they lose the most important part of who they are. That such people are still not willing to concede their identity and sense of dignity, is perhaps the bedrock of hope on which the tall and benign pillars of real conservation can be raised.

been threatened with extinction. The unauthorized exportation of biological resources and their piracy has continued. The past decade also saw the passing of new amendments to several laws and the enactment of new laws and regulations purportedly to effectively protect biological diversity. Parallel to this was the forming of special divisions and units to tackle the issue of implementing laws and setting up of management plans. The media played a prominent role in enhancing awareness and in harnessing public support.

Sri Lanka has adopted a two pronged approach in conserving wild bio-diversity. This is the protection of habitats by providing them with special status and affording protection to individual species of plants and animals. The protection of habitats can be achieved by the use of few enactments. They are, the Fauna and Flora Protection Ordinance, the Forest Ordinance, National Heritage Wilderness Areas Act, and the Fisheries and Aquatic Resources Act. The protection of individual species has to be done under the Fauna and Flora Protection Ordinance. However, aquatic species can be protected under the Fisheries and Aquatic Resources Act.

Significant laws and amendments were enacted during this period which are contributive in the matter of conserving both habitats and species. The amendment to the Fauna and Flora Protection Ordinance in 1993 saw the strengthening of provisions and the broadening of scope. The protection afforded to mammals, reptiles and birds is satisfactory. There are many species of plants, invertebrates, amphibians and fishes that need to be protected and the law needs to be suitably amended. The law can effectively implement the obligations under the Ramsar Convention on Wetlands, the Bonn Convention on Migratory Species and the CITES on the trade of threatened species. The provision on export and import of wild species is broader and more effective than what the CITES needs us to implement.

The setting up of the Fauna and Flora Protection Unit at the customs has been a significant step in controlling illegal trade. The number of detections has increased a lot since this unit came into being. However, it is still constrained by a shortage of trained personnel, interference by politicians and shortcomings in other laws. This problem of shortage of personnel is evident in all departments. For instance, the Department of Wildlife Conservation which has about 12% of the land area under its control and has to, in addition, deal with the protection of all wild animals and plants outside such areas, has less than a thousand as staff. Lack of training, little back-up support from other relevant bodies and political interferences have collectively lowered their morale, and therefore hampered the effectiveness of implementing the existing laws and management regimes.

An emerging negative trend is the attempt to amend the existing bio-diversity conservation laws to weaken the enforcement aspect and scope in order to facilitate exploitation under the guise of "access to genetic resources, sustainable utilization, equitable sharing of benefits, and participatory sharing of resources". Pressure has been brought on the government by several developed countries and donor agencies who provide financial assistance and loans to several projects in the sector. Sri Lanka has the highest rate of endemism in South and South East Asia; approximately 25%. The alarmingly increasing trends in bio-theft and bio-piracy and the inability of any multilateral agreement to stem this makes it quite dangerous to opt for such relaxations as such these



agencies demand. At present, donor pressure is on the government to amend the Fauna and Flora Protection Ordinance to facilitate the export of wild biological resources.

At the same time, there are various other inducements to facilitate access. A draft was prepared in 2000 for an act that provides for the access of genetic resources. Both the Convention on Biological Diversity (CBD) and the draft act deals with "genetic resources" and not with the broader "biological materials". The draft law, if it is implemented, and if other laws are relaxed to accommodate it, our native biological material would be open to exploitation without us getting any benefits. Then there is the possibility of these being pirated subsequently, which will deny all our rights over them. Even the CBD is silent on the twin issues of bio-theft and bio-piracy and does not even have a dispute resolution mechanism to address these issues. In the absence of these, we feel that the laws and enforcement need to be enhanced, certainly not relaxed.

The past decade saw a rapid increase in bio-piracy. There are more than fifty traditionally used medicines covered by patents. In addition, four species of plants (three of which are endemic to Sri Lanka) have their different variations covered by patents. Two newly discovered micro-organisms and the medicinally important substances produced by them are also covered by three more patents. The venom produced by the five dangerous snakes found in Sri Lanka are the subject of 37 different patents. Relevant government bodies do not seem to be at all concerned about stemming this dangerous trend. The Department of Wildlife Conservation, the Department of Forests and Ministry of Environment have all taken some positive steps since 1997. Sri Lanka had two patent victories in June when the Japanese company which has got two patents covering the anti-diabetic properties of Kotala Himbutu (*Selacia reticulata*) was forced to abandon them due to lack of raw materials. This victory was due to the praiseworthy and prompt actions by the Customs and Forest Departments.

The agricultural bio-diversity (or agri-diversity) is yet another aspect that had not received the attention it deserves. Sri Lanka is the home to a large diversity of crop varieties developed by traditional farmers. The most significant is the more than 2800 varieties of paddy, making us the owners of the largest number of varieties in relation to the extent of



cultivated land. A minor export crop of which we hold 75% of the world market is cinnamon (*Cinnamomum Zeylaruicum*) which has more than 20 local varieties. Among others are cereals, vegetables, chillies and other spices and legumes. There are no formal efforts to document and cultivate them with conservation in mind. These would be most important in future crop breeding endeavours. There is no legal protection for these and an alarming case in point was the large scale export of Cinnamon plants to Japan in 2000 under the guise of ornamental plants.

Another neglected area is that of wild relatives or plant species that are related to cultivated crops. Sri Lanka has 5 species of wild rice, 3 species of wild relatives of nutmeg, five of cinnamon, and wild relatives of mango, durian, rambutan, and breadfruit to cite a few examples. The majority of these are not only endemic, but are confined to forests of the wet zone. There are no efforts to conserve them, either in-situ or ex-situ, nor are they sufficiently protected by law. The level of awareness and the ability to identify these is also low, increasing the possibility of some being destroyed inadvertently. These wild relatives of crops will be the basis for future crop improvements by supplying valuable traits such as pest and disease resistance, improved quality and hardiness, and need to be protected biologically and legally as a matter of priority.

The rapid advances in genetic engineering technologies cannot be ignored as they provide both a wide range of opportunities as well as serious threats. Sri Lanka still does not have the capacity to make GMOs and there are no administrative, legal and scientific mechanisms to check, regulate and control the influx of GMOs. There is still no bio-safety law. Last year the Ministry of Environment formulated a set of guidelines on GMOs and biosafety. Since guidelines have no legal effect, they do not have any powers to make parties adhere or conform to these guidelines. Therefore, they need to be incorporated into existing laws and be complemented by bringing in new laws and regulations as required. Nevertheless, several existing legislations can help control the inflow of GMOs to Sri Lanka.

The genetic engineering techniques and the resulting organisms have the potential to play a prominent part in future crop improvement. However, the lack of technological capacity and the fact that all genetic engineering technologies and the necessary genetic material are being patented by private ventures in the developed countries

does not make it possible for Sri Lanka to conduct independent research. The only alternative is to rely on the GMOs, especially the GM crops that have been developed by others. It is seen that there had been no satisfactory research being carried out about the safety of the products, nor about the possible problems that arise from planting these. The problem of GMO contamination needs special attention because of our rich biological diversity and especially because there are a lot of wild crop relatives. The other important point is that none of the currently available GM crop plants have the traits that meet our requirements. They are designed to have input traits and most are confined to four major crops. Therefore there is no need to get any available GM crop plants to Sri Lanka.

Another important area that needs to be addressed is those genetically engineered crops that have genetic trait control mechanisms. These, popularly known as terminator and traitor technologies, either prevent farmers from saving seed for the next generation or keep them permanently dependent on a particular chemical that is essential for the crop and which is produced by the same company. There are now more than 110 such technologies patented. The Patent Co-operation Treaty (PCT) applicants of 36 of these have Sri Lanka as a designated state, meaning that they intend to patent these technologies here and create new plants using these. If this ever happens it will certainly endanger the practice of saving seeds, a practice continuously carried out by farmers for more than 16,000 years.

The other potentially serious threat faced by Sri Lanka is the bio piracy of genetic material. This has become quite serious, because the development of genetic engineering has created a new value and market for genetic material which are the basic raw materials. It is seen that companies seek out and then patent all valuable and potentially valuable genetic material. Those at risk include crops, wild relatives, other plants, all animals and even microbes. The genes responsible for particular traits in several crops grown in Sri Lanka are already patented. A few of these are nutmeg, cocoa, rice, sweet potato and camphor. These would deny us the gains and would also be used to prevent research and development of new and more useful crop varieties. The development of genetic engineering has, while bringing new types of opportunities and gains for developed countries, brought about a new series of threats to developing countries, including Sri Lanka.



ENVIRONMENTAL LAW AND EDUCATION

There are more than one hundred laws and regulations to guarantee the maintenance of the ecosystem and to regulate social life but various difficulties have been confronted in their implementation. On different occasions these rules and regulations have been revised to suit immediate requirements. In particular on a number of occasions, laws have been passed solely to suit the designs of investors. It is essential that all sectors of the population be properly informed of existing environmental laws. While removing certain shortcomings whin in these laws, other should be further strengthened and subjected to regular revision. New laws should be introduced as required.

The country is being flooded with industries and enterprises under present economic policies. As a result, we have to serious environmental problems and disruptions to social life. Doubts have been expressed that, together with the recent changes made in the composition of the National Environment Advisory Council, the people friendly section of current environmental legislation may be removed. That economic planners, deliberately block public awareness of environmental degradation can be seen as a unique feature of the recent past.

There has been continued allegation from environmentalists and the public that environmental impact assessment reports on large-scale project are both biased and flawed. It often happens that these reports are produced according to the requirements of private enterprise. As a result, supervisory control systems remain inactive and public inquiry undermined. This situation does not augur well for the future of the country. It is therefore essential that environmental impact assessment reports be produced impartially. Not only should the reporting process be properly supervised, but public accessibility and feedback should also be ensured.

It is a necessity that local authorities remain informed of the powers vested in them to safeguard the environment. People must be equipped with knowledge to enable them to activate their rights and powers. People should be educated in order to design their lives not only for the well being of the present generation, but for future generations as well. They should be educated to lead eco-friendly lives and be informed of the provincial, national, and international obstacles to the protection of our ecosystem.

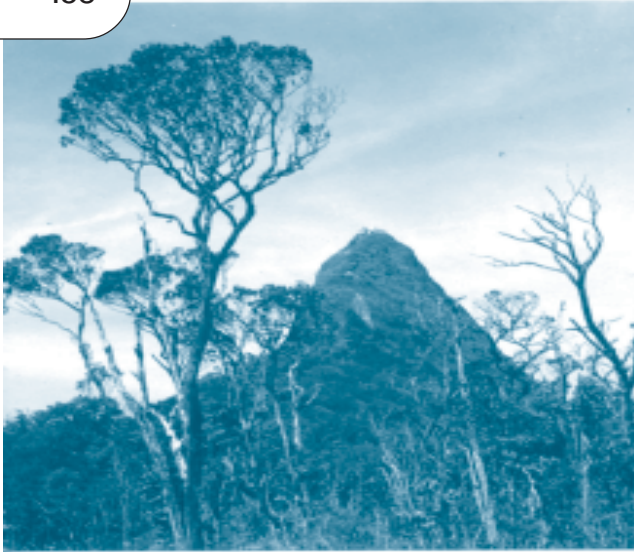


It is important to continue to safeguard the legal cover that ensures protection of the ecosystem, achieved through the efforts of environmentalists and public activists. For this purpose, it is important that diverse NGOs, people's organizations, and the public unite. It is also essential that the legal and research branches of the non-state sector be further strengthened. It is a timely requirement that action programs are launched to update knowledge and understanding and improve the efficiency of these sectors among NGOs and people's organizations.

It is important that all these matters be considered in the decision making process of the country's development, and that ordinary people and officials be kept informed through programs designed to bring together all sectors from the highest administrative levels to the general public. It is possible to strive for conservation friendly development through participatory processes, rather than the dominant model of top down executive orders.

As environmental education is an essential component to be added to national education, it is important that specialist knowledge is gathered and disseminated to the people. The following subjects should be made compulsory in the curricula of school and adult education:

- Environmental legislation
- Law and regulations that fail to prevent public harassment



- International declarations
- Environmental assessment reports
- Environmental responsibilities of the provincial councils, urban councils, and pradeshiya sabhas
- Responsibilities of the police in relation to environmental conservation
- Environmentally friendly, appropriate technology
- Conservation friendly farming
- Natural resource utilization and management
- Alternative life patterns
- Consumer rights

The extension of environmental awareness to rural communities, through formal and non-formal education programs is also important for the well-being future generations.

It is also important that such educational efforts are complemented by the improvement of the psycho-environment, with particular stress laid on spiritual awakening and a drawing of inspiration from traditions and traditional knowledge systems.

The cultivation of spiritual qualities has declined, thus hastening the destruction of the social environment. Society has unknowingly deteriorated into this condition as a result of the fiercely competitive and stressful lifestyles that people have adopted.

Sri Lanka has lost its way amongst diverse subcultures borne from the fierce competitiveness that has spread throughout the dominant economic system. The war, drug addiction, murder, sex, crime child sex abuse, rape, and various cult observances have grown into maturity within this context and have engulfed modern Sri Lanka society.

The same economic system sustains a 'high tech' communication system to propagate all such destructive engagements. It is children, and male and female youth, who have become victims of trendy and destructive activities. Because of their inability to attain the dream world painted by the modern development model, they become frustrated. It is through this frustration that they embrace in various social



evils. The principal cause for the destruction of the future work force in this manner is the lack of sufficiently powerful programs designed to nurture personalities and altruistic values which are powerful enough to respond to the current situation. An educational system that recognizes the current social context, is geared to personality building, and inculcates participatory work ethics should be launched from preschool through to all school levels. Community pride and an understanding of our cultural values and country heritage should be developed among children and youth.

The requisite background to understand and appreciate the nature of the environmental factors that surround us should be inculcated instead of riding the wave of consumerism. Instead of allowing children to gape at implements like the television which increase stress, fear, dishonesty, horror, and enmity, they should be directed towards the uniqueness of nature from which they can learn lessons of altruism, participatory work, and liberation. Parents should motivate their children to develop informed concepts and inspired minds with regard to the earth, sea, wind, sky, waterfalls, tanks, rivers, trees, and animal life. The beauty of simple and cooperative living should be infused into children and youth to foster the knowledge, the knack and the training required for stable life patterns. Inspirational and entertaining programs should also be launched to prevent the turn to drugs or suicide as a last resort after the collapse of the modern dream world. Service personnel of all religious centres, rural organizations, youth organizations, young men and women, farmers, and non-state sectors covering all social strata should be utilized for this purpose. State assistance as well as the dedication of independent power groups will be essential. It is necessary that Sri Lanka, as a country that has received international attention for its increasing drug use and suicide rates, devotes greater attention to the development of its psycho-environment.



Illegal extraction of soil in Gampaha

The people of thirteen villages (Uggalboda, Batapotha, Madelgamuwa, Kaluwelgoda, Opatha, Siyambalapitiya, Nedagamuwa, Yagodamulla, Maduruwita, Batagama, Heewandam and Niwandama) in the Gampaha District (the most densely populated and fastest urbanizing district) are critically affected due to the heavy destruction of hillocks in the district. This particular hilly area is the highest area in the district and constitutes therefore the most important watershed. The hilly land being flattened in the process of removing the red soil which contains hard gravel for the construction of a super highway linking Colombo and the International Airport. The highway is being constructed through the historical marshy land of Muthurajawela reclaiming the land using sea sand and the red soil obtained from the above hilly villages. Last year three fishermen who participated in a protest against the large scale removing of sea sand were shot dead while 15 more were injured.

Existing rules and regulation pertaining to such activities are being openly flouted. As a result of this serious and grave activity the day to day life of the people of the area is seriously affected:

- The drinking wells, which have been used for generations, started drying up
- The women are additionally burdened having to go long distances to collect water for domestic purposes such as drinking, cooking and washing.
- Due to the drying up of the water sources, bathing has become a problem particularly for the aged and children.
- Houses close to the sites from which soil is removed are cracked.
- The roads are full of dust during the dry season and filled with mud during the rainy season, rendering them unsafe for use.

- The dusty atmosphere makes the children sick; they are beginning to suffer many respiration disorders.
- Cultivation has been severely affected (there are large number of traditional farmers whose main livelihood is agriculture)
- Rural roads constructed for only light vehicles are damaged due to frequent use of these roads by heavy vehicles to transport soil.
- These heavy vehicles, driven on narrow roads, loaded with soil, caused the death of two persons.

The contractors who engage in the business of removing soil are powerful characters with sinister records and have the support and backing of the local politicians. They use thuggery and instill fear in the villagers who protest these activities. However a group of women, who have even received death threats from these thugs, have on several occasions fearlessly confronted them and prevented heavy vehicles from passing their villages. On the request of the victims the Human Rights Organization of Gampaha District facilitated the formation of the "Peoples Organization for the Protection of Environment". This organization was officially established on the 4th of February 2002, the National Day of Sri Lanka, with the active cooperation of the two Buddhist monks at Uggalboda and Batapotha temples.

On a decision taken at one of the meetings, pressure was brought on police to stop the destructive removing of soil. As a result the police filed a case in the Magistrates Courts at Gampaha and got a temporary restriction order for one of the sites where soil was removed in a most ruthless manner. It was clearly revealed that at all other sites soil cutting and removal is done illegally. However, in spite of such an order, the flattening and digging of the hilly villages and large scale of land destruction continues because this business has the support of the politicians and other government officials. State agencies empowered to implement the court order are too weak and their officials surrender to bribery and corruption. The above case has been taken up for hearing on five occasions up to now. About 200 people from the effected villages were present to fill up the court hall at the first two hearings. A senior lawyer appeared for the victims free of charge. On two occasions people held successful picket demonstrations and distributed handbills in the Gampaha town to make the public aware of this destructive activity.

At the last hearing on the case, the contractor/land owner who engaged in the soil cutting business agreed to rehabilitate the degraded land in accordance with the instructions given by the Geological Survey and Mining Department. But this is only the story of one particular site. In many other sites, located all over the district, this grave environmental destruction goes unchecked. Selling the earth to state sponsored construction and for many other land reclamation projects is a lucrative business in the District of Gampaha, an enterprise that is slowly turning the beautiful green rural areas of the district into deserts.

6 Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided 9



GOOD GOVERNANCE: THE NEED TO CHANGE POLITICAL AND ADMINISTRATIVE PATTERNS



Real participation in matters of governance has been one of the most serious problems in the country, especially after a new constitution was adopted in 1978, giving wide powers to an executive president, while seriously compromising legislative powers and the independence of the judiciary. A system of proportional representation has produced a succession of minority governments with no single party being capable of obtaining an absolute majority. This has led to the creation of instable governments. The past two decades have been fraught with fraudulent elections with widespread malpractices and voter intimidation. While mandates are hijacked as a matter of course, even those who are "elected" are unable to get on with their jobs due to constitutional crises. The constitution was amended last year in order to set up independent commissions covering elections, the judiciary, the media, the public service, and the police. These commissions, it is expected, will go a long way in restoring confidence in the democratic process. However, bickering between the two main political parties have resulted in the 17th Amendment remaining a powerless document, for the commissions are still to be appointed, almost a year since the act was passed in parliament.

The present political decision making and administrative patterns running from the president to the Grama Niladhari (grassroots level government officer in the village) are not conducive to environmental protection and the maintenance of proper lifestyles. People allege that officials and authoritative structures have subjected them to severe problems. Due to a lack of public participation and consultation during the fifty years of development that followed independence, appropriate development that fulfils people's expectations has not taken place.



People must be intelligent enough to strengthen their right to elect parliamentarians who are capable of making correct decisions relevant to the needs of the agricultural, fisheries, and labour sectors. People must further elect provincial councilors capable of making decisions against those who pollute the environment. New strategies to devolve bureaucratic control and to safeguard people's participation need to be formulated if environmental degradation and destructive development processes are to be turned back. An active program to initiate a national political dialogue that can be directed to sustainable development strategies that will ensure the well-being of future generations is an urgent necessity.

Good governance is a necessary precondition for the development process in the current global political economy. Even if sustainability issues were put aside, some basic degree of good governance is necessary for the very existence of globalization, destructive and over-exploitative though it may be. In Sri Lanka, however, the combined exploitative regime of the political, commercial and bureaucratic machinery, good governance even in this minimalist sense is absent. The entirety of the development process has been heavily politicized. This is why transparency, accountability and participation, the triad upon which good governance rests, need to be restored, strengthened and maintained.

The World Bank, Asian Development Bank and other lending institutions provide no end of expert advice to the Sri Lankan government about how necessary such things are for any kind of development, large-scale, medium-scale or small-scale, and yet the decision making process is still heavily centered around the politician. The general public and other stake-holders are kept out through very subtle means by relevant officials. Since a façade of "participation" has to be maintained, a few carefully selected number of people are co-opted. The world is then told that the entire process upheld the principle of democracy.

Lending institutions themselves, ostensibly with good governance in mind, have developed a certain set of principles. These are set out in flowery language perhaps so as to make us believe that



there can be no creature more honestly committed to these values. These statements would make us believe that development will be a corruption-free process, that the security and sustenance of all those involved will be ensured and that they will without fail receive the benefits of the particular project(s). Such documents are full of terms such as “gender,” “anti-corruption,” “inspection,” “information,” “resettlement,” “indigenous,” etc. The reality, sadly, is a totally different picture. While implementing agencies openly violate such ethics, lending institutions take refuge in the easily available “out”, viz “That you will have to take up with your government”.

This is the situation in the vast majority of projects funded by international lending institutions and being implemented in the country. With this bitter taste of a vast number of social, environmental, and cultural projects still fresh on our tongues, we are being forced to swallow large-scale projects that are similarly destined to failure.

Protests in this regard is becoming commonplace now. The Upper Kotmale Hydro-electric Project and the Colombo-Matara Super Highway can be sited as classic examples of sustainable development is undermined and the rights of the people are being openly violated. The ordinary people adversely effected by these projects have joined hands with various people’s organizations to launch a protest campaign, questioning the integrity and high-handedness of the politicians, officials and aid agencies. Both these projects have been temporarily halted because relevant officials are simply incapable of offering straight answers or take firm and defensible decisions. The government as well as aid agencies led by the Asian Development Bank (all of whom, by the way, pass around the term “good governance” as though it was sacrament) are doing their best to either suppress or bypass these protests. Today they have been pushed to the point where they are willing to throw “good governance” to the winds and adopt a “by hook or by crook” strategy. Such experiences have considerably damaged any hopes that people may have entertained about good governance or sustainable development in the country. In fact the concept is totally foreign to the farmers, fisher folk, workers and other communities who constitute the vast majority of the country’s population in that it has no relevance to them.



One of the main reasons for this lamentable state of affairs is that many of the key documents that directly impact them are in English. For example, the National Water Resources Policy and Institutional Arrangements, National Land Use Policy, Wild Life and Protected Area Management Project, Tropical Forest Conservation Act of the USA, which together cover the entire country are documents that can be accessed only by a small minority of the population since the relevant documents are in English. These measures seek to hand over whatever is left of our natural resources to the private sector. If allowed to be implemented they will go beyond mere privatization and facilitate the open plunder by multinationals of all that is left for the ordinary people to secure their survival; their lands, the water, genetic resources and traditional knowledge. The vast majority of the people have effectively been denied access to all information with respect to these insidious processes.

Women and children are fast being turned into refugees of development due to the short-sighted decisions made without adhering to the fundamental principles of good governance. This has been the story of the past two decades. It is because of a patently fraudulent and oppressive system of governance sans participation, and sans social justice, that the country has fallen victim to an unending spate of violence, compounded by a rising incidence of rape, theft, frustration and youthful insurrection.

At the Rio Summit and all subsequent international gatherings, it has been repeated *ad nauseam* that multi stake holder dialogue is critical for good governance. Practically, this is but another dream. Strong states, along with multinationals are virtually controlling the entire planet. Our leaders seem content in succumbing to the various pressures exerted on them by these same agencies. The fact that the government is yet to appoint the much talked of “Independent Commissions” is indeed indicative of the extent of the crisis. Politicians simply do not wish to run the risk of scrutiny. They would not give up their instruments of control for nothing.

All this calls for an urgent public debate on the subject of good governance, if not anything else. And of course concerted political action



A new framework for decision making

The World Commission on Dams was established in 1998 as an independent body whose twelve prominent members represented different perspectives in the Large Dams debate. The commission conducted the first ever comprehensive evaluation of the impacts of large Dams, publishing its consensus report in November 2000.

In its report, the commission has made far-reaching recommendations for the future of water management decision-making processes around the world. Central to its recommendations is that all decision to build dams should be based on agreement of affected communities.

The commission recommends that all water development decisions must be underpinned by five key principles or values.

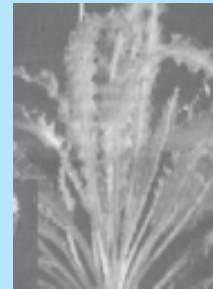
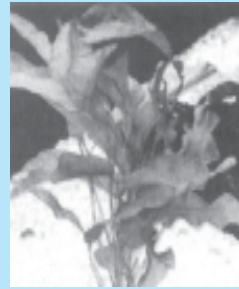
- Equity
- Efficiency
- Participatory decision making
- Sustainability, and
- Accountability

The commission further proposes a new framework for dam construction decision-making, which would bring a broader analysis

of rights and risks to the table. Most important, all those whose legitimate rights may be affected by dam building decisions must be identified and involved in the decision-making processes that will directly or indirectly-affect them.

There must also be far more rigorous approach to assessing risks during water use decision making processes. In the past, many groups-such as communities whose lands have been inundated by dams, and communities downstream and upstream of dams-have not had the opportunity to participate in decisions about dam building. This, despite major risks posed to their lives and livelihoods: it denies them stake in decision-making commensurate with their exposure to risk.

Those who ultimate bear the social and environmental costs of dams are often not the same people who receive such projects' social and economic benefits. As the commission points out, an approach underpinned by the above core values, based on the recognition of legitimate rights and a rigorous assessment of risk can be the basis for greatly improving decision-making processes. It offers a way to determine who has a legitimate place at the negotiating table, and what issues-beyond the purely economic-must be on the agenda.



Government complicity in bio-piracy an ominous sign

On the request of aquatic resource exporters, the government was hard pressed to present a cabinet paper permitting the export of aquatic water plants in July 2002. Due to opposition that attempt failed, yet immediately afterwards the Department of Customs detected an exporter with a consignment of 1.5 tons of wild collected dry bulbs of *Aponogeton* sp. (a water plant known locally as *kekatiya*), contravening the protective laws afforded by the Forest Ordinance of Sri Lanka.

However, despite this detection, the aforesaid exporter succeeded in exporting 2 tons, note, half a ton more, of the same species with undue government intervention. The matter was even taken up in Parliament. It has been recorded that this is the largest consignment of water plants exported to date, but the exploitation of Sri Lanka's aquatic resources by a handful of ruthless exporters has been continuing for many years. Most exporters refuse to use viable alternatives for the sustained use of this rare resource such as cultivation in ponds and/or tissue culture.

Sri Lanka's aquatic plants are in high demand as ornamental plants, for the purpose of decorating ponds and tanks in the USA and Europe. The principle method of acquiring these plants for export is by removing pockets of such plants from natural water bodies, streams and tanks. Three main groups of plants have been targeted from Sri Lanka's aquatic plant collection, i.e., four species of *Aponogeton*, eight species of *Laginandra* and ten species of *Cryptocoryne*. Of these plants, two species of *Aponogeton*, seven species of *Laginandra* and all ten species of *Cryptocoryne* are limited in their distribution to Sri Lanka. All ten species of *Cryptocoryne*, three species of *Aponogeton* and six species of *Laginandra* are included in the 1999 IUCN (World Conservation Union) National Red List on the Fauna and Flora of Sri Lanka as threatened or highly threatened plants.

Ironically, in an economic sense as well the losses are high, since the income that the exporters obtain is extremely low. While exporters trade 1000 bulbs for a mere sum of eight US \$, in other countries, these plants are cultivated and sold at an international market price of 3-23 US \$ per plant, as stated in the following websites: www.aquamail.com and www.aquabotnic.com. In the above case if the plants had been cultivated and sold for 0.50

US cents each, Sri Lanka would have received a sum of 47.5 million rupees of foreign exchange.

A Gazette Extraordinary was released on 2000/12/05 bearing No. 1161/6 (under the Forest Ordinance), declaring a law that 'no forest produce can be exported without the granting of a permit by the Forest Conservator'. Yet, at the request of exporters, on 2001/08/08 a circular was released in which fifty-nine species of plants were exempted from the above law and eight species were permitted for export, on the certification that they were cultivated. Incidentally, the fifty-nine species exempted are not found in Sri Lanka naturally, yet exporters attempt to falsely declare large consignments of the naturally found species collected from the wild, using one of those species names, to export.

The above issue is one such example. The exporter had declared it as *Aponogeton ulvaces*, a species found in Madagascar and not included in any of the country's checklists. A minimum of 1,000,000 (one million) bulbs had been extracted and it can be appraised, that at least 100-150 acres of natural habitats of the *Aponogeton* species has been destroyed by this rapacious exporter.

According to statistics, the number of persons involved in exporting local plants is less than ten, and inclusive of marine fish exporters, the total number of exporters does not exceed twenty-five. Therefore it is clear that our invaluable resources, restricted in their distribution in Sri Lanka, are exported by a handful of people who are exploiting them in an unprecedented manner.

Sri Lanka has to promote the more sustainable cultivation for export concept. The plants can be cultivated easily as demonstrated by one person who is successfully cultivating them for export, and the export of rhizomes, bulbs, stalks etc. must be prohibited. Instead, exporting only the whole plant for a minimum, fixed price would be a more viable foreign exchange earner for the country.

Instead of selling our rare resources for a few cents, an organized and sustainable method of utilizing them should be introduced immediately. Otherwise, we will soon see the complete elimination from the wild of species once found only in Sri Lanka.

6 Women have a vital role to play in environmental management and development. Their full participation is therefore essential to achieve sustainable development. Similarly, the creativity, ideals and courage of youth should be mobilized to forge a global partnership in order to achieve sustainable development and ensure a better future for all 9



WOMEN, YOUTH, CHILDREN AND SUSTAINABILITY





As an eastern agricultural country, Sri Lankan women have a high degree of participation in development and conservation activities. All managerial activities within the family unit are handled by women. Because a major portion of the population is constituted of rural people, the female contribution to village level cultivation or fishing life patterns cannot be underestimated. Therefore it is women who suffer most from the environmental destruction at village level. They undergo great stress and difficulty to supply water, firewood, and food. Even the women who live within urban, peri urban and industrial complexes suffer from environmental pollution in these areas. It is the women employed in industrial towns who are subject to regular labour and sexual exploitation. The fact that the responsibility of moulding conservation friendly future generations is vested in women living under such distressing conditions points to a special feature of Sri Lankan society.

It is therefore essential to increase women's exposure to action based programmes to support their environmental management skills. Rural conservation programmes that recognize women's role as the primary link between the rural environment, home and society should be strengthened. It is through women that the most important national duty of guiding younger generations toward proper management of material and spiritual ecosystems is practiced. This should receive social recognition.

All obstacles that prevent women from assuming leadership to strengthen the family's economic and social values must be removed. A national action programme to increase women's nutritional knowledge, in addition to strengthening their firewood and electricity conservation skills, should be launched through the mediation of state and public sectors. Implementation of action programmes which ensure the future well-being of society such as home garden cultivation, soil conservation, systematic energy conservation, use of nutrients obtained from the immediate environment, preventive health care methods and adherence to moderate food habits that ensure healthy living can be more fruitful if implemented through the leadership of women.

It should not be forgotten that it is easy and fashionable to link environmental protection with women and then, in the guise of progressive gender-related strategies, to place all burdens on the women. If men have hitherto been less sensitive to these issues, for whatever reasons, it is important to develop methods whereby they share equally the task of preserving the environment and engaging in sustainable practices. Having women protect the environment and restore degraded areas while men continue destruction is not sustainable and certainly violate environmental ethics as well as notions of gender equality.



Women's solidarity empowers

The Formation of Women's Help Groups launched in 1989 by Praja Sahayaka Sewaya (PSS) has achieved excellent progress and developed into an alternative socio - economic and financial institution of the poor in Sri Lanka.

During the implementation of the Women's Help Groups Programme throughout the past decade, a specific methodology evolved for self-reliance through Community Banking.

The women centered saving and credit programme for Women's Groups was amalgamated and registered as the Colombo District Women's Thrift and Credit Cooperative Society LTD in 1991. This gave the initiative a formal and legal status.

The Women's Group programme increased the activities of the programme indicating the need for establishing a national organization. With the expansion of the Women's Bank programme and the growing need for a National level legal entity, the PSS and Women's Bank began the registration process in 1998.

The PSS's intention since its inception was to assist women leaders to continue the centralized district level organization for the Colombo district, but before long it was felt that a more practical solution was the establishment of urban settlement and village level Community Bank Branches. These tiny structures are more easily managed by women community leaders. These Bank Branches are legally called 'Pradeshikas'. 'Sri Lanka Women's Developmental Services Cooperative Society [Women's Bank] LTD; is the registered legal name of the Women's Bank.



Youth, children and sustainability

There are many definitions for the word "youth". In Sri Lanka, those between the ages of 18 and 30 are considered to be the young. They comprise 21% of the population or approximately 3.9 million people. Such a proportion of "youth" is a rough indicator of the potentiality of a country. At the same time, according to official statistics unemployment stands at 19%, with the real figure probably much higher. When one adds those who are under employed we arrive at a scandalous figure; the capacities of almost half the labour force are not being fully utilized. In any event it is a clear indicator that development has by and large ignored or bypassed youth.

For a variety of reasons a large part of one's youth is spent in pursuing education. It is said that this is the case for almost 70% of the youth. Thus their potential is not released for meaningful, sustainable development drives. An education system which generates great aspirations, a socio-economic system which constantly fails to deliver this promise and a marked absence of a drive to inculcate in the young the values associated with sustainability, are key to this situation. The productive energies of the youth are therefore either untapped or, even when they are employed, are directed in directions that are harmful to life and environment.

Another significant indicator of where we are heading is that the "preferred" form of employment for 60% of the youth is in the armed forces or the police. The outlook for "sustainability" therefore is anything but rosy. Add to all this the fact that 90% of those who commit suicide in this country (mind you, Sri Lanka has the highest suicide rate in the world) and there is need for alarm.

The 21st Principle of the Rio Declaration has it that "The creativity, ideals and courage of the youth of the world should be mobilized to forge a global partnership in order to achieve sustainable development and ensure a better future for all". And yet, youth is hardly represented in higher decision-making bodies, with youth comprising just 3% of the parliament. Combined with rising expectations and frustrations, we have nothing less than a volatile mix which can easily be fired by a deepening economic crisis. During the last such explosion, over 60,000 people, mostly young men and women, were butchered. This was in the late eighties. All the signs indicate that we are sitting on a volcano once



again, and one whose temper is far worse than that which erupted a little over a decade ago.

Contrary to the rhetoric of obtaining the participation of youth in development, recognizing their priorities, and guiding them along well defined programs and making them active partners in the process, there is no forum in Sri Lanka where the ideas, ideals and aspirations of the youth can be voiced. Nor is there a system which can incorporate whatever ideas that do seep into the vicinity of the high seats of power.

Similarly, the proportion of dependents in this country is rising. "Children" can be discussed in terms of three age groups, 0-5, 6-14 and 15-17; who correspond to total populations of 1.3 million, 3.3 million and 1.2 million respectively. Sri Lanka's infant mortality stands at 13.4. Malnutrition among children under 5 is at an alarming 56% (again, official statistics, the real figure probably higher). Poverty no doubt is a factor that contributes heavily to this situation. Cuts in education and health have certainly exacerbated the problem. The fact that malnutrition severely hampers the development of children can only cast a long shadow into the future. Increasing school drop out rates and an increasing incidence of drug abuse among school children indicate that things are going in a dangerous direction. Rising incidence of child abuse including the sexual abuse of children should also be taken as a serious indicator of the status of children in the country. Sadly, nothing is being done to arrest this trend.

If children and youth are the future, our future is malnourished, frustrated, abused and ill-educated. This is an indictment not just of the national policy on youth and education, but on policy in general. They call not for piecemeal solutions for "youth", "children" or "education" for example, but a complete reconsideration of policy logic and indeed demand a paradigm shift in our thinking.

6 Human beings are at the center of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature 9



HEALTH: NOT A SECONDARY ISSUE





Health is much more than a mere absence of disease; it refers to a complete set of physical, mental and social well-being. "Health" is also an ecological characteristic of a given population, reflecting the wider concerns of social and natural environments. It has been argued that the sustained good health of a given population requires a stable and productive natural environment that yields assured amounts of food and fresh water, a relatively stable climate, and retains biological diversity.

Again, like other things, good health goes hand in hand with sustainable development, and poor health standards are invariably linked at some level with issues such as poverty and inequity. The World Health Organization itself admits, "the goals of sustainable development cannot be achieved when there is a high prevalence of debilitating diseases; population health cannot be maintained without ecologically sustainable development." In short, a healthy planet with an unhealthy population is as grotesque as a healthy population living in a toxic waster dump. Both are clearly untenable propositions.

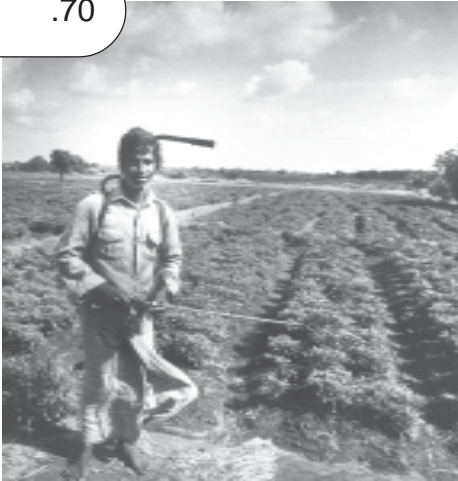
Ideally, ten years since "Rio", we would have walked quite a distance away from both an unsustainable world as well as an unhealthy population. We have not. Neither the health of the planet nor the health of the population can be bragged about. Instead, we see a rise in a number of preventable diseases, an alarming increase in the number of trauma patients, an AIDS epidemic that is waiting to happen, an absence of healthy environments, an increasing incidence of work-related accidents

etc., all of which indicates that quite apart from the issue of poverty, there is a serious breakdown in the system, either through neglect or helplessness in the face of marauding globalizing processes

The section on poverty in this report indicates that there is more reason to despair than to hope. Briefly, income disparities are getting worse, malnutrition among children is on the rise and the issue of proper water supply and sanitation is not being adequately addressed. "Restructuring," that cute word which is used to sugar-coat the facilitation of capital expansion, has taken the form of getting rid of whatever social safety nets that were in place to protect the poor. Education and health are among the sectors that have suffered the most.

Sri Lanka was for a long time the pin-up story when it came to indicators of social well being, comparatively speaking. Literacy rates, access to free health facilities etc., have been bragged about for as long as we can remember. This is not possible any longer. Two and a half decades of the so-called "open economy" has all but reversed the social gains achieved over the previous forty years or so.

Key government officials in the health sector openly admit that dwindling resources for healthcare coupled with wastage and a mushrooming of health related issues previously absent paint a dismal story. The government, strapped for cash and aware of the potential fall out if the sector is allowed to collapse totally, seems to be concentrating



on aspects such as overcoming the issue of underutilizing existing resources. Like in other sectors, the panacea has been simply, "let the private sector do it". The lack of proper facilities, the unavailability of drug and other treatment, and a community of medical practitioners who have realized that their sustainable development, so to speak, necessitates that they too engage in private practice, has virtually privatized the entire healthcare system. There is one option for the poor. Stay at home and die.

Lack of infrastructure, deficiencies in human resources, and a veritable open season for pharmaceutical companies naturally put the poor at a great disadvantage when it comes to accessing health care.

In the case of occupational health, a weakened political climate for organized labor has meant that companies can be lax on safety standards. The rights of workers to a safe work environment can be ignored with impunity. Industries, furthermore, are also feeling the heat of an economic crisis that doesn't seem to be going away. Not even the demands of productivity and efficiency are persuading to consider the health of the worker as being in their interest. The "realities" of a large reserve of unemployed people and flexible capital, coupled with the full knowledge that the government does not have the political will (and in most instances the enforcing mechanisms) to crack down on errant industries, have together worked to the detriment of the workers' interests. In short, there is no such thing as occupational health services in Sri Lanka.

It is now a well-known fact that our ancestors were healthier than us. As has been pointed out, we can neither find people who are healthy, nor do we know what healthy means!

Ancient and time-proven ethics in the medical profession

Today, medicine is an enterprise. Just as an industrialist does not concern himself/herself about the trials and tribulations of his/her employee, today's medical profession, typically, has no compulsion to inquire into the social, economical and other factors that impact on the particular patient. In the traditional system of medicine, the physician paid as much attention to the patient's background, lifestyle and occupational concerns as he did to the matter of physical diagnosis. Where root causes are not addressed, any phenomenon, good or bad, will tend to recur. The same principle is applicable to the treatment of illnesses. The native practice, therefore, was sustainable, for it recognized the importance of ensuring that the patient will not suffer a relapse. This was possible because the profit motive did not exist.

Even today, some native physicians do not charge "consultation fees" in cash or kind. They take whatever is offered and do not complain even if they get nothing in return for services rendered. It was the obligation of the physician to cure the sick. Perhaps this is why we never had the equivalent of "health insurance" in our society. In short, the practitioners were motivated by a higher ethical universe: they were pure in thought and intention and did not have to plug the products of pharmaceutical companies for commissions. This was possible only in a sustainable system. The native physician was also a farmer. He had his own herbarium or knew where to find the ingredients for his medicinal decoctions. The biological diversity was never plundered. The entire system was a self-regenerating whole. The lesson is that even the simple matter of ethical medical practice is interlinked with a sustainable mode of existence. Where poverty is "normal" ill-health will be endemic. Where plant diversity is compromised, the pool of genetic resources that have treatment potential will dwindle. And if the physician's life chances are undermined, his ability to treat patients will be limited.

The first stage of native medicine dates back to the period of sages. Rishi Pulathisi lived 4600 years ago. The Rishi himself, it is said, had practiced medicine for a period ranging from 100-150 years. The Rishi thinking represented the hopes and aspirations of sages who had followed the transcendental path to self-realization. They possessed the power of higher concentration and advanced mental states. Such noblemen are credited with truthfulness and self-purification with a vow to help others.

The second stage had no sage influence, but the follows adhered to the letter techniques brought down by sages, maintaining the identity of the tradition and continuing to serve all. The second stage existed for about 1000 years. The third stage can be classified as the period which existed immediately prior to foreign invasion in Sri Lanka. Although some material changes had taken place, the native medicine system survived during the period with certain drawbacks.

The fourth stage of native medicine in Sri Lanka saw a dramatic change due to the country coming under foreign domination. When Europeans secured a footing in Asia they entrenched themselves by forcing unsophisticated natives to imitate their modes of living by unscrupulous and corrupt methods. Even native medicine became a lucrative business and the tradition lost some of its values.

According to Sri Lanka's culture and tradition, the high priest of the village temple and the native physician (or "Veda Mahaththaya") are the two most important personalities in society. "Physician" or Veda in Sinhala denoted "age" or "Viya" "Da" denotes "give". Hence, one who "gives age" becomes Veda, Physician. The physician's function then is to make a person live long (up to the maximum age). Medicine, or *Osu*, in the same way denotes "raising". By giving medicine a man can be raised from his deathbed. Whatever can save a man from death is a medicine. It can take several forms. It can be intellectual strength that heals or some herbal medicine.

There is a traditional healing center where ailments are treated in all villages. The native physician or Veda Mahaththaya maintains a clinic either in his house or in a separate dwelling in his garden. This place is called the "Veda Gedara".

Native Medicine is the science of a man should possess qualities such as loving kindness, compassion and love and aspire well-being in others. The practice of sympathetic feelings for the suffering of others should be cultivated. The aim of Native Medicine education is to help others. Such people are recognized world-over, and it is said that the five elements of the world will not be hostile to such person. We can elaborate on this with a classic example. We see the most powerful star, the sun, glittering and radiating enormous heat from a distance in the sky. Although it radiates burning heat, all tender, subtle plants turn towards the sun absorbing its light. Like the sun all these plant and animal kingdom exist in harmony with those who foster Native Medicine. It is this confidence placed on the healer that cures diseases.

As physicians we should possess the ability to radiate loving kindness without any reservation. We show loving kindness to plants as much as we love our mother. This will generate great strength. The strength so

acquired can be used for others' welfare. Only a person with power of perfection of "Parami Balaya" can be a successful Native Medicine physician.

People are afflicted with diseases due to various reasons. But the most important factor for such afflictions is due to the unbalanced state of air, bile, and phlegm (*Vata, Pitta, Kapha*) in the body. Losing equilibrium of the body functions is the cause of bad thoughts. Physical illness due to low spiritualism will result in afflictions to the body.

Action as a result of a thought perception may be either good or bad, as the case may be. Due to ignorance sense perception becomes weak and corrupting thoughts ensue influencing cells of the body and making the equilibrium of the body unstable. As a result this process will make the body sick. This is the reason why we referred earlier to the fact that those who pioneered Native Medical Practices were noble persons of the highest integrity who followed the transcendental path. Sage Pulathisi was one such exemplary individual. It is therefore imperative that people who take to Native Medical possess such higher humane qualities.

Towards a charter for sustainable medicine

Depletion of natural resources and environmental degradation

All life on this planet is dependent on nature. It is no secret that the current rate of resource depletion and degradation will have serious implications for the health of the planet and in fact the very survival of species. Poor management, excessive consumption, wastage, and the uncritical use of modern technology have resulted in a sharp rise in pollution levels. The resultant damage to the balance of natural cycles has generated many problems, chief among which is the threat to the health of the planet and all its many organisms.

Unbalanced development

Using poverty and "underdevelopment" as alibis, the developed world continues to plunder the resources and exploit the labor in countries such as ours, directly or indirectly. While the poor get poorer, in the name of "development", aid and loans are offered in order to turn us into "civilized slaves". Poverty makes people swallow pride. It also forces them to sell their labor and work in hazardous environments, hastening the aging process and inviting ill health.

Decline in values and moral order

It is clearly evident that we have from generation to generation declined in a spiritual sense. Our life practices have correspondingly tended towards destruction as opposed to nurturing. It is perhaps in accordance with the laws of nature that this destruction has boomeranged upon us today. There is a sharp increase in hitherto unknown or rare diseases and science is finding it increasingly difficult to come up with remedies for these. What is most tragic is that the greatest price for excessive lifestyles, which necessitate massive environmental destruction and are fed by lifestyles devoid of spiritual concerns, is being exacted from the most vulnerable sections of the population.

Drug abuse

The advances in science and technology have resulted in a greater preponderance of harmful drugs. The victims, tragically, are usually youth.

The frustrations that naturally arise out of unbalanced lifestyles have become veritable gold mines for those engaged in hallucinating drugs, for they offer the frustrated salve of some sort, albeit temporary. The result is that our youth, the inheritors of this polluted world we have bequeathed to them, will not have the benefit of their faculties so necessary to face and overcome the challenges that lie ahead.

Workplace ethics

The dominant ethic of the age is the accumulation of wealth. The medical profession has not been spared this vile and destructive understanding of the world. Medical practitioners care less about offering relief to the sick than they do about increasing their profits. In many cases they have been reduced to sales representatives of pharmaceutical companies. The prescription of largely unnecessary medicines and recommendation of laboratory tests have ensured that many doctors enjoy extravagant lifestyles. The poor, meanwhile, are dying, not so much out of wrong prescription, as out of hunger.

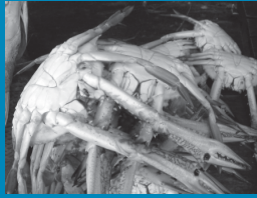
Malnutrition

More than half the population of the world is suffering from one of the many forms of malnutrition. And it is against this reality that we are told that we are living in a "modern", "developed" world. Unless developmental drives address the issue of the possible enhancing of these conditions through such processes, we will only see these numbers becoming worse.

War

War is one of the things that cause the most damage to the environment. It also displaces people, turns them into refugees, facilitates poverty and malnutrition, maims and kills. It also leads to a high incidence of mental disorders. The current modes of development and the disparities they generate are the key promoters of conflict situations. A fundamental change needs to occur so that these disparities are narrowed, thereby lessening the propensity for destructive altercation.

‘ National authorities should endeavor to ensure that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest ’



WE CANNOT FORGET OUR SEAS AND
INLAND WATERS

WE CANNOT FORGET OUR SEAS AND INLAND WATERS





In accordance with the latest trends of the globalization process, steps are being taken to privatize our coastal resources including territorial waters. To this end relevant legislative enactments are currently being formulated. Traditional fishing families who have for centuries survived from whatever the seas yielded are being systematically pushed off the industry and indeed their traditional villages. Multinationals are in the process of physically taking over these areas. They are engaged in gross over exploitation of fisheries resources using destructive methods and generally usurping the rights traditionally enjoyed by the local fisherfolk. Meanwhile, under cover of intellectual property laws there is a concerted effort to pirate our aqua biodiversity. Although laws and regulations need to be formulated to ensure their protection, they are being designed with the opposite in mind, that is, the facilitation of these kinds of exploitative practices.

Sri Lanka is endowed with an ecosystem ideally suited for the fishing industry. With proper management of aquatic resources it is possible to gain substantial economic, environmental, and social benefits. All oceanic and fresh water sources (lakes, tanks, rivers, and lagoons) are replete with fish. Many inland fishers operate in an area of 180,000 hectares of water, while many ocean fishers work as far as 40 kilometers from the shore.

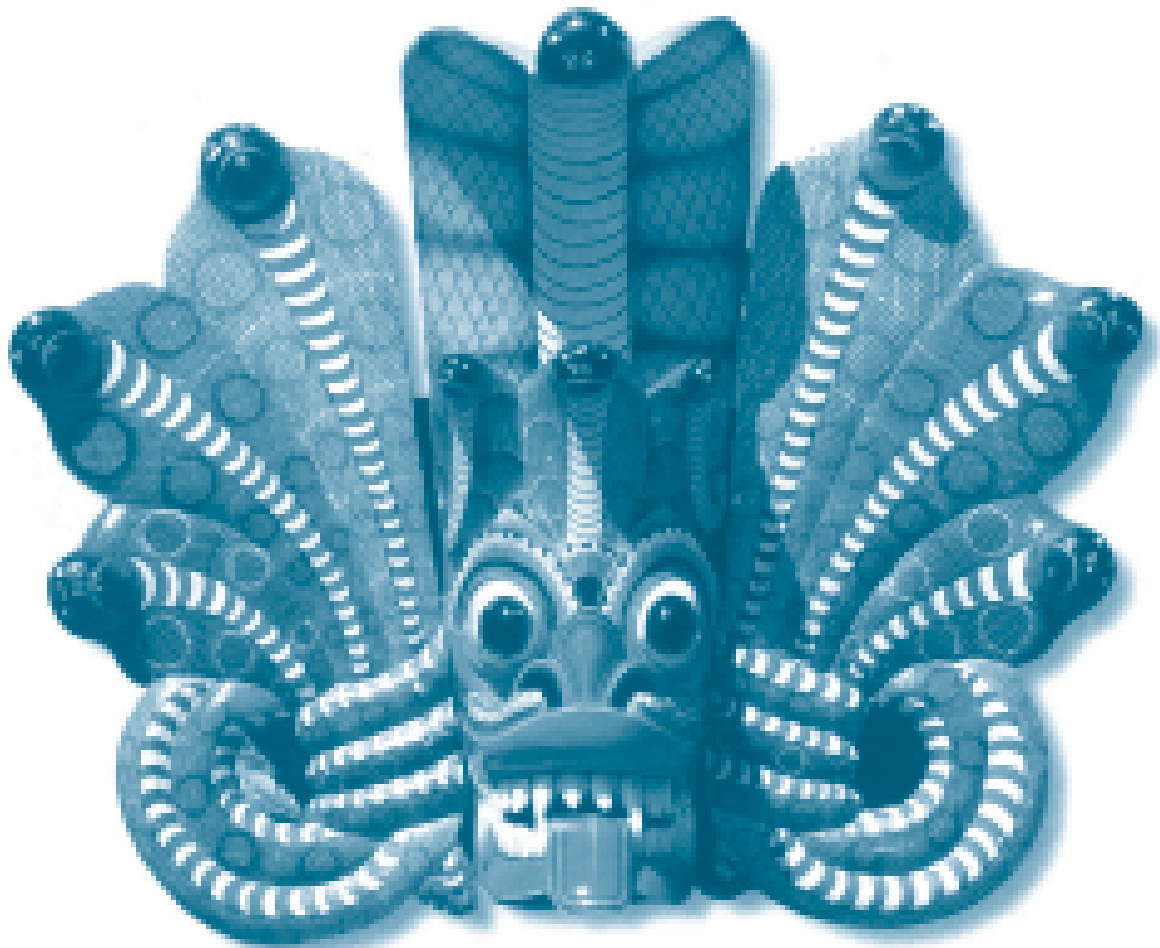
Sixty-five percent of the country's protein requirements come from fish and fish products. The number of fisher folk involved in inland and seawater fishing amounts to approximately one hundred thousand families. However, with environmental destruction and the increasing costs of modern fishing equipment, the fishing industry faces a grave crisis. In particular over-exploitation, pollution of lagoons including dumping of toxic waste, have seriously undermined the sustainability of the industry. It is again the duty of the government to mediate in the formulation of a code of conduct and a long-term strategy to safeguard and develop these ecosystems. Policies need to be formulated to streamline the industry and ensure that sustainable methods are used and sure that the lagoons, mangroves, aquatic plants, and coral reefs are protected. In so doing, the following should be emphasized:

- Any alternation of plans for the management of fishery resources or for small scale fishers involved in salt and fresh water fishing should be given highest priority.
- The formulation and implementation of a comprehensive national program to safeguard specific marine ecosystem industries such as seaweeds, aquatic life, and corals presently facing the danger of extinction.
- Enforcement of legal acts that make the damage and destruction of ecosystems, coral reefs, mangroves, and fish breeding grounds a punishable offence.
- Prawn breeding farms, often established with political backing, are currently causing the destruction of very important ecosystems, particularly in the Northwestern and Southern lagoons. This must be stopped immediately. Under no circumstances should the construction of artificial lakes and the mutation of land be allowed.
- Steps should be taken to stabilize fresh water fish farming. Special types of fish that can fulfill protein requirements should be bred in these resorts, rivers, and reservoirs.
- Fishing techniques such as light course and olagodu course, which relentlessly exploit shallow water fish resources, should be banned. An awareness program to educate fishers of the ways these kind of fishing techniques affect aquatic resources and the fishers themselves should be launched. Task forces to combat these kinds of malpractices should be established.
- Appropriate technologies should be introduced while conserving traditional fishing methods and considering the protein requirements of the increasing population. These should be simple technologies that small scale fishers can afford.
- The release into fishing sites of waste from industrial sites, housing complexes, and holiday resorts should be prohibited. If this is unavoidable, all waste matter should be subject to acceptable levels of treatment prior to their release in to the natural environment. Committees comprising fisher representatives should be appointed to supervise this process.
- Legal action should be taken against foreign fishermen from neighboring countries who exploit the deep and shallow waters around Sri Lanka. Developing regional cooperation and international pressure groups would be helpful in this regard.
- All construction work along coastal belts, tanks bunds, river valleys, and other ecosystems around fisheries should be gradually removed. Until such time the construction and environmental standards at such sites should be closely monitored.
- Steps should be taken to revise the social and environmental conditions of fisher folk, while securing the conservation of aquatic resources and the surrounding ecosystems. In order to achieve this, bodies, research groups, non-governmental organizations, and fishery associations.

6 In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, cost-effective measures to prevent environmental degradation shall not be postponed 9



TOURISM: TEARING THE SOCIAL FABRIC AND HARMING THE ENVIRONMENT





It was during the 1960s that an organised tourist industry was established in Sri Lanka. It expanded along the coastal belt, an area of scenic beauty and historical importance, in the form of an industry that could bring foreign exchange needed to develop the country. During this initial period it was known as 'mass tourism'. Along with the changing demands of the country, the tourist industry also underwent transformation. Accordingly, tourism for specific purposes began to expand as it did in many developed countries. Today, this has developed into the exploration of cultural and environmental values. These changes have contributed to a massive social, health, and cultural decline in Sri Lankan society.

The tourist industry of the 1970s focused on sea, sunlight, and beautiful beaches. It was during the 1980s that sex tourism was added to the equation. Thereafter, a sea of tourists started to flow into the country. This destructive tourist trend, which spread from Marawila in Colombo, to Kalutara on the Western coast, and to Bentota, Hikkaduwa, and Tangalle in the South, has devastated cultural value systems in those areas. Originally it was mainly women and young girls that were caught in this catastrophe. This coastal belt has now produced 30,000 boy prostitutes under the age of eighteen. In addition, the use of heroine, hashish, and opium has begun to thrive in these areas. The running of brothels, molestation of young girls, sex crimes, clandestine abortion centres, and venereal diseases have shown a sharp increase in this region and swept inland with the advent of tourism. Hotels that do not conform to construction standards were illegally erected. This destroyed the natural scenic beauty of the beaches and coral reefs. This in turn has led to sea erosion. Massive amounts of waste emitted by these hotels continue to pollute the beaches and the oceanic ecosystem. The notion that the beach was common property has vanished; local fishers and ordinary people now have no access to the beach.

During the 1990s, these tourism trends took a new turn. With the advent of eco tourism / green tourism, tourists have now begun to move inland. In addition to the coastal areas, tourist itineraries now include the island's interior river valleys, tanks, wetlands, and forests. The realities make a mockery of the rhetoric of eco-tourism. It is benefiting the country. Even though the beginning looked promising, the tragedy that befell the coastal



areas seems set to fall on the newly exploited inland areas too. This trend could be harmful to farming lifestyles, villages, fields, tanks, the forest, and the cultural basis of all these things. Furthermore, the resources invested in the tourist industry during the past two decades have yet to bring reasonable financial and social returns.

Taking these facts into consideration, there are several changes that need to be made. These should include severe forms of punishment and a strict monitoring process. The following principles and suggestions should be followed:

- A comprehensive evaluation and a proper estimate of the tourist industry and its destructive social impact in the country since the 1960s should be carried out.
- All obstacles that prevent people from using beaches as common property should be removed.
- All forms of child employment in the tourist industry should be abolished, and all existing regulations amended so that life imprisonment can be meted out to those who violate such laws.
- Government should conduct a survey on all child prostitutes and rehabilitate them without impairing their personalities.
- Steps should be taken to stop the harassment of women and children.
- Awareness programmes should be initiated in areas where parents allow their children to have sex with tourists for financial gain. Strict laws should be enforced to punish those who fail to comply.
- Severe punishment should be meted out for people who indulge in the sex trade, and a special unit established to carry out raids of such institutions.



- All activities that make the beach inaccessible to fishers should be prohibited and all laws and regulations regarding beach conservation should be enforced.
- Most of the tourist hotels have not adhered to relevant construction laws and regulations. Those that have not followed the relevant regulations should be removed and environmental conservation activities be enhanced.
- Laws against beach and sea pollution should be strengthened and their strict implementation ensured.
- The construction of tourist hotels in any location that will become a hindrance to agriculture should be prohibited.
- Tourist hotels should not be allowed in river valleys, in the vicinity of lakes, and in conserved forests.
- Visits by local and foreign tourists to protected forests should be controlled, and mechanisms set up to enable large fines to be imposed on people who violate such laws.
- There should be cooperation with international networks to fight child sex abuse and to expose such criminals at the international level, thereby exerting pressure on other countries to prosecute their citizens who engage in sex tourism.

Catering to local tourists

At present, all tourist support and facilities are aimed at the foreign visitor market. Annually, however, large numbers of Sri Lankans tour the country for environment, leisure or pilgrimage. This local tourism, which covers places of archeological importance, sanctuaries, holy shrines, rare and fascinating places, waterfalls and beaches, is not properly organized. This causes environmental hazards. The Ministry of Tourism, Ministry of environment and Forest Resources, Department of Coast Conservation, and Department of Wild Life should work together in order to change this situation for the better. Common facilities should be improved in areas where local tourism thrives. The planning of such work should be entrusted to people who are sensitive to issues of nature so that they plan in a manner appropriate to the ecosystem. Properly organized programs should be followed in places newly introduced to the tourist industry.

Awareness programs on areas, such as visitor conduct should also be given prominence and publicity through media. Vehicle use, trading, and waste disposal in areas with sensitive ecosystems should all be thoroughly investigated. A well-planned program should be followed in order to conserve these places and minimize pollution. The number of visitors admitted to highly sensitive resorts should be limited. Proper permission should be granted from relevant authorities at least a week prior to a visit, and consultant guide services should be made available. Plastic articles, polythene bags, alcohol, and cigarettes should be banned from these areas. Visitors must be made aware of activities that can damage plants, trees, wildlife or the overall environment. Tourism in highly sensitive environmental areas can have harmful effects. Therefore it is the duty of the government, with the assistance of experts and specialists, to educate the public on responsible tourism. It is also the duty of the government to formulate regional tourist authorities comprised of representatives from governmental, non-governmental and people's organizations, and local councils.

Peace, development and environmental protection are interdependent and indivisible



THERE IS NOTHING THAT DESTROYS MORE VIOLENTLY THAN WAR

THERE IS NOTHING THAT DESTROYS MORE VIOLENTLY THAN WAR





The ongoing conflict has become the greatest calamity of contemporary Sri Lanka in terms of its impact on the environment and the general well being of the people. An unbearable proportion of the country's resources (approximately 25 %) is devoted for military expenditure. While thousands of young lives are being destroyed, still thousands more are subject to permanent disability. It has caused insecurity to all lives in both the north and south. Millions have become refugees. Within the concept of war, where the powerful dominate the weak, women and children are subject to the greatest stress. Ordinary people have to pay economic compensation to the war from the smallest item consumed, in addition to all the fear, suspicion, and stress they endure. We are called upon to sacrifice all natural and human resources for a war that strengthens the trade in arms, pharmaceuticals, and drugs, which prop up the economies of the so-called 'developed' countries.

The regions where most of the actual fighting has occurred contain rich mineral deposits, which are beach-based and deep-sea based, like silica sand and uranium. The country is deprived of all of these due to war.

These areas are polluted by excessive noise, as well as by poisonous gases. Clearance of forests for the construction of army camps and refugee camps has destroyed the forest and water resources of the area. Because of the impossibility of cultivating hundreds of thousands of acres in the war areas, the people of the country have been deprived of bountiful harvests.

A major portion of the dry zone forests has suffered from the war. Animals such as elephants, bears, elk, and deer, in addition to various indigenous and migrant bird species are disappearing from the local environment because of the war.

The social harassment caused by the war continues to increase. The creation of war towns and their associated activities such

drug use, prostitution, sexually transmitted diseases, rape, robbery, and sexual abuse have challenged the very existence of society. Although there is a ceasefire in place at present, all indications show that serious preparation is underfoot for renewed conflagration. Politicians on both sides have time and again used the war and the sporadic periods of peace for purposes of political expedience. The vast majority of the population has been divested of the power to express opinions, one way or the other. Until such time that the will of the people is recognized and trust is placed on them to find solutions to the outstanding problems associated with the conflict, war will remain as a destructive and tragic reality. As long as violent people are allowed to usurp our franchise at gunpoint, we will continue to suffer all the deprivations of war.

Thus have we suffered....

Wars invariably have economic, social, cultural and environmental impacts.

- More than 60,000 people have been killed
- Over 800,000 people have been rendered homeless and suffer all the usual deprivations of being displaced
- 21% of total governmental expenditure goes for military purposes
- Militarization of the seas has disrupted the fisheries industry.
- Large swathes of natural vegetation has been destroyed causing species depletion.
- The incidence of mental disorders has increased
- The vast majority of those killed are civilians, either caught in cross-fire or fallen victim to terrorist attacks
- Even during the current ceasefire, there is mounting evidence to the effect that massive preparation is underway for renewed hostilities

THEY ARE AMONG THE BLESSED OF THE EARTH...

For having dedicated themselves to make the vision of sustainable development a reality, the following fifteen persons were honored with the Mihidaru Prasadini Award 5th June. "Mihidaru Prasadini" refers to those who are deserving the veneration of earth's children. They received their awards from winners of an essay and painting competition for school children on June 5, 2002, World Environment Day. And this is how their courage, commitment and labor were appreciated....



Ven. Mahamankadawala Piyarathana Thero

When short sighted politicians, well fed by commissions and motivated by political expediency, ganged together to pawn the future of the nation and its children, Rev. Mahamankadawala Piyarathana Thero came forward to protect a heritage in the manner in which our ancients, Kings included, defended the people and their resources. He demonstrated yet once again the true role of the Bikkhu and moreover the power that a Bikkhu, beholden to the community that sustains him, wields when he stands with the people, organizes and leads them, regardless of the forces arrayed against them. For everything that Ven. Piyarathana Thero has done to save the phosphate deposits in Eppawala from the jaws of multinationals and local political racketeers, for safeguarding a way of life, a cultural heritage, for his faith in the people and his uncompromising resolve, we are proud to honor him with the MIHIDARU PRASADINI Award.



Ven. Keeranthidiya Pannaseka Thero

In the mid nineteen seventies, Keeranthidiya Thero launched a project centered around the Buddhist temple in the village to raise people's awareness about human environmental rights. The entire project was founded on Buddhist philosophical tenets pertaining to nature and human involvement with natural surroundings. The project naturally involved active protection of forest cover and took on all injustices pertaining to the environment. He is the founder of Sri Lanka's first modern environmental village, namely, *Galahitiya Mahameuna Parisaragama*. He won the Global 500 Award offered by the United Nation's Environment Program (UNEP) for his efforts. He is a founder member of several national level environmental organizations. In addition to his environmental work, the Ven Thero has consistently concerned himself with the problems faced by ordinary people on account of development and conflict situations. In recognition of all that he has done over the years to protect our natural heritage in congruence with Buddhist philosophy, and all the services rendered to protect the most vulnerable sections of society, we honor him with the MIHIDARU PRASADINI AWARD.

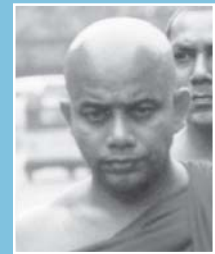


Uru Varige Wanniyalletto

At a time when everything falls prey to the myth called "development" and is duly destroyed, Uru Varige Wanniyalletto, having understood the empty promise of these grand paradigms, steadfastly refuses to compromise the heritage and way of life of his people. Leader of the most ancient of our relations, Wanniyalletto fights to protect the traditional homelands of his people where his ancestors perfected the art of living in harmony with the natural world. Standing firm on the fertile soil of the knowledge passed from generation to generation, deeply rooted in a way of life whose commerce was not marked by destruction or over indulgence, Wanniyalletto easily sees through the wiles of the countless politicians who with promises of prosperity attempt to erase their every trace and thereby remove from the face of the earth an example of a working paradigm whose lessons we would all do well to learn. For breathing life into a sustainable and wholesome engagement with the natural world, for being a voice that celebrates and teaches, and for his tremendous strength of character, we are proud to honor Uru Varige Wanniyalletto with the MIHIDARU PRASADINI Award.

Ven. Dodampahala Siri Suguna Nayaka Thero

It was not soft breezes that caressed the Southern coastal area of the country in the latter half of the nineteen eighties. Unknown to all except surreptitiously operating politicians and government officials persuaded only by profit motives, blueprints for the setting up a coal-fired power plant in Mawella were being developed. Ven. Siri Suguna Thero took the lead in organizing the people and relentlessly exerting pressure until the project was called off. From then on it was from one struggle to another that the Thero traveled, always on the side of the people, always to protect their heritage, resources and sense of identity. When a severe drought hit the South East Dry Zone last year, instead of jumping on the aid/charity bandwagon, Rev. Suguna proposed and implemented a sustainable solution to the problem. He helped construct a village tank, the archetypical feature of our ancient system of water management, sustenance and harmony with nature. It was also Rev. Suguna who came up with a plan to use the flowers offered at the Kalutara temple (tons of them) into compost once they wilt and are cast aside. Whereas it is fashionable for environmentalists to talk about a "green" world and their love for nature, and make speech after speech about conservation, Rev. Suguna demonstrated the worth of the famous dictum, "An ounce of practice is worth a ton of theory". For all this and much more besides, not least of all the unassuming manner in which Rev. Suguna goes about changing the world, one grain of sand at a time, we are honored to present this path-breaking bikkhu who is an example and a torchbearer for the Buddhist Order in changing times, with the MIHIDARU PRASADINI Award.



Dr. Thangamuttu Jayasingham

Born in the Eastern Province, Thangamuttu Jayasingham read for a special degree in Botany at the University of Peradeniya. He began his academic career as an assistant lecturer. Thereafter he went on to obtain his doctorate from the University of Wales. As someone who from his childhood days had a special love for the world around him and in particular its plant and animal life, Dr. Jayasingham did not allow his academic work to distract him from the growing concerns he had about what was happening to the natural resources of his country. In fact, this love for the environment was always the heart of his professional work. He has over the years worked as an advisor/consultant on environmental issues to a number of international organizations. His primary focus has been to make these organizations become more aware of and sensitive to environmental concerns. For the role he has played as an educator and for expanding our understanding of the environment through his scholarly work, we are proud to honor Dr. Thangamuttu Jayasingham with the MIHIDARU PRASADINI Award.



Nihal Fernando

Nihal Fernando is widely recognized as the foremost photographer of our wild life and our archaeological heritage. His work has indeed been a documentation of our rich biological diversity, forest resources and in fact our way of life, exemplified by the twin symbols of the tank and the temple around which rural life revolves. In addition to capturing in photographs the civilizational essence of our society and offering us a rich record of our flora and fauna in all ecological zones of the island, Nihal Fernando has been a tireless crusader, in his own words, of lost causes. He has used both his photographic and literary skills to protest our forests and our wild life from those who would in their zeal for profit destroy them. He was one of the key activists in the successful movement to safeguard our phosphate deposits from multinationals and has been in the forefront of the ongoing struggles to turn back dubious agreements signed with the Asian Development Bank pertaining to wild life and nature conservation. He is also a founder member of Ruk Rekaganno – Tree Protectors. He has published eight books on historical and archaeological ruins in Sri Lanka, the values associated with rural, agricultural lifestyles, organic farming, flora and fauna. For his undying love for our country, his unparalleled skills with the camera, his farsightedness that peers through a lens to capture for posterity the true wealth of this country, and for the passionate voice that he lends to the political struggle to protect our people and our forests, we are proud to honor Mr. Nihal Fernando with the MIHIDARU PRASADINI Award.





Prof. H. Sriyananda

By profession he is an electronic engineer. He is a human being who has focused more on electrons and other building blocks pertaining to the natural world and our engagement with it. Prof. Sriyananda has been a lone voice among the intellectual community for several decades in the matter of pointing out the fault lines of mindless, human-centered development. He raised his concerns long before it became fashionable for people to talk about the environment. He was not just a prophet; he was first and foremost an activist. He has been a pioneer fighter and an educationist without peer, his efforts being all the more important because he was able to see far into the future and moreover act according to the dictates of his conscience. For his pioneering work to open our eyes, for his steady voice in the struggle and for his uncompromising spirit, we are proud to honor Prof. H. Sriyananda with the MIHIDARU PRASADINI Award.



Ranatunga Prera

He is proud of the fact that his ancestors arrived in the island over two millennia ago with the Jaya Siri Maha Bodhi, as evidenced by his ancestral name, "Bodhiya Baduge". Bodhiya Baduge Ranatunga Prera, reflects on the *sathara satipattana* and lives unobtrusively among the plant and animal life around him. In an island at the confluence of three rivers among whose feeder streams frolicked the young Veediye Bandara the great hero who fought the Portugese, Ranatunga Prera lives a life of contentment, a lifestyle that few know about, alas. He lives in the middle of an idyllic grove of fruit trees and vegetables nurtured by his hand and an earth consciously maintained untainted by chemicals. He is the epitome of the country gentleman. An intellectual in his own right, a poet, a leader, healer and most importantly, one who abhors "one-finger things" (i.e. things that can be worked with a single finger, like switches), he was an active contributor to the Citizen's Report for the Rio Summit in 1992. He is a prophet who gives us a glimpse of a sustainable tomorrow. We are proud to honor him with the MIHIDARU PRASADINI Award.



Lalith Gamage

In a difficult period where untold violence and destruction was caused to our forest resources, the Forest Department formed a special investigation unit to protect the forest cover of the island from illegal felling. Lalith Gamage was the first person put in charge of that special unit. When the sandalwood and ebony woods in the North Central and the North Western Provinces were being ravaged by illicit felling, as was the Peak Wilderness, one man stood like a colossus to protect these invaluable natural wealth of the country. Lalith Gamage was one of the few who decided to put his life on line, going far beyond the call of duty to defy political pressure, intimidation and even gunfire. He was moreover instrumental in adding ecological rights and the concepts of conservation to the notion of employee right of the Forest Department Employees' Union. For his love for our natural heritage, for his courage against all odds to protect our forests, for his enlightened approach to conservation and for showing us all what it takes to ensure a sustainable future, we are proud to honor Lalith Gamage with the MIHIDARU PRASADINI Award.



Samantha Gunasekera

The smuggling of genetic resources began in Sri Lanka with Leopard skins, pregnant lobsters, ivory and ebony. Local herbs such as Kotala Himbutu were pirated and patents obtained for their extracts. Endemic flora and fauna, some facing extinction, were also taken overseas. Samantha Gunasekera is a customs officer who went beyond the call of duty, without considerations for his safety, to prevent gene piracy. For his commitment to protect our natural resources, his fearlessness in the face of numerous threats to his life, and his shining patriotism, we are proud to honor him with the MIHIDARU PRASADINI Award.

A.S.Pillai

Born in Galaha, in the Kandy District, A.S. Pillai, after finishing his schooling devoted his time to agriculture. He was particularly interested in livestock development, and joining the Gami Seva Sevana, helped Ranjith de Silva develop a dairy cooperative. It was his tireless efforts that saw the Game Seva Sevana develop into a comprehensive training center for organic agriculture. He was endowed with the rare gift to explain, in both Sinhala and Tamil, the basic concepts of sustainable agricultural practices to ordinary farmers who knew and lived the idioms of the earth. For his love for the earth, for his giving and his being, we are proud to honor him with the MIHIDARU PRASADINI Award.



Sarath Fernando

Sarath Fernando is a household name among all those who are involved in the fields of social activism, hunger, farmers' struggles, child rights, shelters, youths, lands, agriculture, economy, development and environment. Indeed he hails from a family which has dedicated their lives to uplift the lives and livelihoods of the people. Sarath Fernando's activist terrain goes beyond the shores of the island, for he is a friend of struggles all over the world to ensure a better future for all peoples. He got his baptism of fire, in a literal sense as well, when as a young man he participated in the aborted insurrection of 1971. Later he found other ways to release his considerable energy to the benefit of the people. He helped founded the Movement for National Land and Agricultural Reform (MONLAR). He has been a long fighter against the World Bank, Asian Development Bank, International Monetary Fund, and the multinationals whose agendas these agencies protect and promote to the detriment of local populations. For his writings, his speeches, his organizing skills and his unrelenting resolve, we honor him with the MIHIDARU PRASADINI AWARD.



Karunawathi Manike

During the eighties, under the guidance of IRED, the Wilpotha Women's Saving Effort was set up in the Anamaduwa Division of the Puttalam District. That effort has now expanded into an organization that renders a variety of services to the people in the area. This is a success story that owes not a little to true leadership. Karunawathi Manike is the forthright and innovative woman. Karunawathi Menike and her group poured poverty into a palmyrah palm leaf and the coconut shell and discovered the many pathways out of poverty. This basic reliance on available material, coupled with a shrewd understanding of the political economy of a rapidly changing world and the limits to "development" (as defined by the grandmasters of globalization), Karunawathi Menike has developed what started as a savings project into something that engages in small industry, sanitation and even alternative energy sources. For her commitment to self-reliance, her unsurpassed leadership qualities and pragmatic approach to using available resources, and for her pioneering work among women, we are proud to honor Karunawathi Menike with the MIHIDARU PRASASINI Award.



Martin Wijesinghe: guardian angel of a rain forest
(see page 54)



G. Kularatne: organic farmer, patriot and unobtrusive, sentient being
(see page 22)



They made the long journey possible.....

Three Day Work Shop On Best Practices Relating To Sustainable Development In Sri Lanka

Place-Community Education Centre – Malabe
26,27,28, October 2001



Nation Builders Association - Kundasale
National Fisheries Solidarity – no.299/8, St.Josephs street, Negambo
Future In Our Hand Development Foundation – 325/A/3 Kanupella, Badulla
Isura Development Centre –Anawa, Awlegama
Nirmanee Development Foundation – Kankeeriya , Hettimulla
Savisthri – C2 Araliya Place ,Thalahena , Malabe
Mas Foundation – Ragala
National Organisation For Indigenous Seeds and Agro Resources
Cetre for Development Alternative – 582/10, Peradeniya rd, Kandy
Human Environment Link Progressive Organisation –Galle
Organisation For Producer Of Indigenous Seeds – Visaka Plant Nursery, Opanayaka.
Young Environmentalist Forum – no.217, Matara rd, Kaburupitiya
Environmental Foundation Limited – no.3 , Campbell terrace, Colombo 10
National Council For Damma School Teachers –Pulinathalaramaya , Kalutara-North
Environmental and Natural Resource Development Centre –no.65, Kotuwe Gedara, Matale
Movement For Land and Agriculture Reform –926/2/A, Kotte rd, Etul Kotte
Ruk Rakagannoo
(Sangrama) Centre For Rural Development - Nikaweratiya
Sarath Fernando - MONLAR
Asoka Abegunawardana – Energy Forum
Pandula Adagama
Education And Community Centre – 117, Thalanena, Malabe.
Monaragala District NGO Forum – Monaragala
Community For The Farmers Rights Protection –516, Kawdulla, Higurakgoda.
National Forum For Peoples Organisation
Sevanatha Organisation
Sri Lanka Open University - Nawala
Institute Of Tropical Studies and Conservation
Herman Kumara - Fisheries Solidarity
Organisation Of Environment And Children's Rights Preservation
Monaragala District Green Committee
Samurdi Authority – Sethsiripaya
Ven. Kiranthidiye Pangghasekara
Rohan Liyanage
Suriya Gunasekara
OSLEN (Organisation To Safe Guard Life And Environment.)
Nishantha Padmakumara

Two Day Work Shop for media personnel Sustainable Development

Place – Wild Life Centre – Randenigala
Date- 2001- November 4 to 6



Name

Amal Udawatta
Bandula Darmathilaka
Shan Bandu Weerasinghe
M. Weerapperuma
Duminda Sanjeewa Balasooriya
Deeptha Leelarathna
Nihal P. Abesinghe
Florence Wicramage
Chandrasena Marasinghe
Vimukthi Fernando
Amal Samantha
P.V. Saman Priyanka
Saman Vithanage
Ravindra Gunasekara
Thissa Jayawardana

Media Institute

Vidusara – Upali News Papers
Lakbima – Sumathi News papers
Lankadeepa – Wijaya News Papers
Sunday Observer – Lake House
Wijaya , Lankadeepa – Wijaya News Papers
Sri Lanka Express –USA
Silumina – Lake House
Daily News – Lake House
Diwaina – Upali
Observer – Lake House
Lakbima – Sumathi News Papers
Independence Television Net Work (ITN)
Independence Television Net Work (ITN)
Sri Lanka Broad Casting Coperation(SLBC)
Sri Lanka Broad Casting Coperation(SLBC)

District level awareness programme on sustainable development activities for community based organisations and NGO's

Ampara District

1. Inspector Eattam Pottuvil (Sarvodaya)
2. Vishnu Community Centre- Periya neelavanai-2 Kalmunai
3. Methodist girls Home –Kalmunai
4. Sarvodaya Centre –Rest House road, Kalmunai
5. Siva-Vasa – Akkarapattu
6. SEEDS(gtd)ltd- Rest House Road-Kalmunai
7. Environment Committee –km/ Carmel Fatima College, Kalmunai
8. MANDOR-02
9. Divisional Secretariat –Kalmunai
10. SWERT- Main Street , Karaitiva
11. Environmental Committee, k/m Pandiruppu m.v.
12. Sarvothayam
13. Lions Club – Kalmunai
14. NERTRA

Nuwara –Eliya District

1. Isuru Jeevithodaya Foundation - Malulla Road, Haguranketa
2. Youth Exploration Society Of Sri Lanka
c/o sos Children village, Nuwara Eliya.
3. Sinhala Tamil Rural Womens Net Work - 72, Shanthipura
,Nuwara-eliya
4. Navayugam Social Development forum - no.143/3, Main Street,
Norwood
5. Social Welfare Foundation - Main Street, Norwood.
6. Mas Foundation - Ragala
7. Grama Sanwardana Foundation - Newtwn, Kothmale.
8. Electricity Consumer Association -
Pandithayakubura, Halgranoya.
9. Rural Fellowship Programme - Walapane
10. Friends Foundation - Nuwara-eliya
11. Avadi Lanka -19, Mount Mery Mw, Nuwara-eliya.

Gampaha District

1. Arunodaya Environmentalists -Mabodala
2. Southern Fisheries Organisation- Galle Rd, Dodanduwa, Galle.
2. Kalutara District Deewara Sahayogeethawa-Pulinathalaramaya
kalutara-North
3. The Community Of Environmental and Consumer Problems-
35/36,Galwatta ekala –Ja-ela
4. National Fisheries solidarity –299/8,
st. Josephs street, Negambo.
5. Vimukthi Fisheries Women Organisation- 73/33,
Siriwardana Place, Negambo.



6. Negambo Lagoon Fisheries Organisation
7. Puttalam District Fisheries Solidarity-Barudalpolu, Thoduwa.
8. Savisthri – C2 , Araliya Place, Talahena, Malabe.

Batticaloa District

1. W.W.D.F –no.11, Mamangam Rd, Batticalor
2. DSMEO – Kirankulam .06.
3. SEEDA -Kaluvanchikudy
4. AEICO
5. Center for Human Development
6. K.R. –Batticaloa
7. CDF
8. Nerthra- Kirankulam, Batticaloa
9. Divisional Secretariat –Eravur
10. Sareeram –Thalankudah, Arayampathy
11. Development Coordinator –Katthankudy
12. Inayam
13. Mandru
14. Safe
15. Thumbiluril
16. Kind Heart
17. Ghandir sewa Wasam
18. C.D.O

Kurunegala District

1. Kurunegala Pradeshiya Saba-Malpitiya, Boyagane.
2. Siriparakum Farming Organisation Herathgama, Moragolagama.
3. Kuliypitiya Co-Operative Council Limited Kurunegala rd, Kuliypitiya.
4. Kurunegala Animal Breeding Co-operative Govijana Kendraya, Udawalpola rd, Kurunegala.
5. Wayaba Farming Development Foundation 375, Paduwasnuwara.
6. Samagi Community Development Society –Kudalgamuwa.
7. Sangrama- 203/1, jayanthi mw, Nikawaratiya.
8. Missaka Foundation – Karangamuwa, Katupatha.
9. Balayawa Samurdhi Task Force
10. Rabukkana Samurdhi Task Force
11. Kuliypitiya District Co-Operative Board Kurunegala rd, Kuliypitiya.
12. Community Environmental Development Organisation. no.15, Janajapura, Mahawa.
13. Wana Arana Environmental and Social Development Foundation- Weralla , padeniya.
14. Thorayaya
15. Panduka Organisation – Mavee –ela , Moragane.
16. Farming Information Center – Yakalla Ebbagamuwa,
17. Arthacharya Foundation – Bandaranayaka mw, Nikawaratiya.
18. Center for Rural Development 203/1 , Jayanthi mw, Nikawaratiya.
19. Rural Women Alliance
20. Dairy Development Produces And Breeder's Co-Operative Society Limited

Hambantota District

1. Friend Of Nation Hevana – Debara wava , Thissamaharamaya.
2. "Peace" Environmental Library – Kapuwatta, Mirigawila, Hambantota.
3. Rural Women Development Society – Samodagama , Hambantota
4. Galweva Community Project – Weragama Ambaltota.
5. Arunalu Community Project – Ranna
6. Human Resource and Environmental Protect Organisation. Kirinda
7. Idipanna Women Society – No.09 Jathika Nivasa , Hambantota
8. Idipanna Women society – No. 19/4, Idipanna Cemetery rd, Hambantota.
9. Municipal Society – No.26, Municipal House, Hambantota
10. Lewaya-Egodaha Rural Women Development Society Hambantota
11. Rural Women Development Society – Siribopura, Kapuwatta, Hambantota
12. Mihirasa Foundation – divisional Secretariat – Hambantota.
13. Turtle Conservation Project – no.73, Hambantota rd, Tangalle.
14. Arunalu Nirmana Sansadaya – Siri Wajiragiri Vihaya - Tangalle
15. FON Diriya Foundation – Hevana, Debarawawa, Tissamaharamaya.
16. Hambantota Women Development Society
17. Sippikulama - no. 30, Hambantota.

18. Rakawa Development Society – Tissa rd, Netolpitiya
19. Sarana Foundation – Beliatta
20. Janasakthi Bank and Comity – Badagiriya.
21. District Vocasional Training Centre – Mirijawila, Hambantota.
22. Arunalu Community Development Foundation Weerakatiya rd, Tangalle
23. Diriya Foundation- Debarawawe , Tissamaharamaya.

Puttalam District

1. Sanasa Limited – Addipala
2. Kantha Karya Samajaya – Karukkuliya.
3. Shema Shakthi Women Society –Puttalama.
4. Visaka Women Society – Welusumanapura , Madurankuliya.
5. Agromart Society - Pathirendawa
6. YMBA – Thabagalla Watta, Pathirendawa.
7. Wilpotha Kantha Ethurum Parissamaya – No.527, Wilpotha , Chillow.
8. Jana Setha – Pallan Desiya , Maspotha , Kurunegala.
9. Water and Sanitation Association –Sinnapaduwa.
10. Water and Sanitation Association - Punapitiya
11. Resource Development and Environmental Organisation - No.193 , Weliwawe, Nawagathegama
12. Community Trust Fund – p.o. box 05, Puttalam
13. Diriya Farming Organisation – Maradankadawalayaya, Adigama.
14. Coconut Cultivation Board –Marawila
15. SEDEK – Old Town ,Madampe.
16. Sarvodaya – District Centre , Marawila.
17. Vinivida Integrated Volunteer Organisation
18. Justice Peace and Human Development Center – Sethsarana Josephs vas Center , Colombo 08
19. SEDEK – Kingcy rd, Colombo – 08
20. Sanasa

Kalutara District

1. Human Environmental Conservation society - Horana
2. Dharmma Shakthi Foundation – Mahavila , Panadura
3. Community and Environmental Development Foundation No. 88, Gonaguwa, Moronthuduwa.
4. Women and Children Development Foundation No.433, Rathanaajothi Mw, Vaskaduwa.
5. Janashakthi Development Foundation No.243, Navinna , Vadduwa.
6. Co-Operative Society for Womens Development Services in Sri Lanka pvt.ltd –"Sampath", Kirimatiwala, Nahinna, Dodangoda.
7. Sustainable Agriculturing development Institute – Agalawatta.
8. Integrated Social Development Foundation – Pulinathalaramaya, Kalutara-North.
9. Community and Rural Development Co-Operation – no.09, Galle rd, Molligoda, Vadduwa.
10. Environmental and Community Development Foundation – no.59, Sri Jayawardanapura rd, Moronthuduwa.
11. Ruhunu Environmental Foundation
12. Sobadaham Sewrasiya

Anuradapura District

1. Rajarata Environmental Community Foundation Randuwa , Pemaduwa.
2. Negampaha Farmers Produces Development Co-Operative Society – Isuru Uyana , Negampaha.
3. Integrated Agriculture Association – Ipaloga, Ipalogama.
4. National Youth Council – Eppawela
5. Samasewaya – Thalawa
6. Mision Youth Society – thalawa
7. IDA –Anuradapura, Thalawa
8. Sewa Lanka Foundation
9. Human and Community Development youth Organisation – Maradankadawala.
10. Integrated Environmental Development Organisation No.895, Preeman Mw, Anuradapura.
11. Surekuma Organisation – Anuradapura rd, Horowpathana.
12. Rural Community Development Society – Nabadawewa.
13. Rajarata Janodaya Organisation Thelhiriyawa , Thabuththegama.
14. Community Self-Relience Development Foundation – Rajamaha Viharaya, Thanthrimalaya.
15. Local Government Development Officer Pradesiya Saba ,Aleyapattuwa

Monaragala District

1. Uva Association For Social Justice No.44, Jayasengama , monaragala.
2. Sugar Cane Farmers Organisation – Pelawatta Sugar ,Buttala.
3. Vahilihini Development Centre – Siyabalanduwa
4. Divisional Secretariat – Monaragala.
5. Ricard Institute limited – Sri Dammappala mw, Mathugama, Bibila.
6. Farming Association For Independence Agroproductivities Samanala Badda , Kandaudapanguwa.
7. Janashakthi Development Centre – Siyabalanduwa
8. Integrated Journalists society – Madulla , Siyabalanduwa.
9. Sewa Lanka Foundation – 65/1, Vallawaya rd, monaragala.
10. Education and Social Development Foundation Samadi Nikethanaya, Bibila.
11. Muthukandiya Aquaculture Fisheries Co-operative Society
12. National Farmers Federation – Monaragala.
13. Vellassa Development Foundation
14. Self Study For Development Centre – Buttala
15. Community Resource Conservation Centre No.91, poythuvil rd, Monaragala.
16. Janashakthi Development centre No.15, Manabaranagama, Siyabalanduwa.
17. Alliance For Neo Natural Resource
18. Mayura Community Programme
19. Society For Indigenous Seeds – Monaragala

20. United Fisheries Society
21. Centre For Development in Pahala Uva
22. Sir Lanka Red Cross Society – District Office , Monaragala.
23. Children Rights Protection Foundation 144, In front Of the Courts ,Monaragala.
24. Gami Shakthi Youth Society – Uyanabadda, Uva Gangodagama.
25. Individual Agro- produces Farming Association – Kandauda Panguwa , Monaragala.
26. Monaragala district NGO Consortium

Badulla District

1. Uva Education Development Foundation – Badulla
2. B.I.R.T. – Badulla
3. Women Development Foundation – Badulla
4. Future In Our Hand – Badulla
5. Uva – Community Development Centre No.15, Jananala mw, Pinarawa ,Badulla.
6. Uva – Community Economic Development Project 42/1, Pilipenagama, Badulla.
7. UWDF –Kanupelalla, Badulla.
8. Sanasa – Hidagoda, Badulla.
9. Uva Paranagama Foram – Pannalawela , Lunuwatta.
10. Sath Mal Foundation , Preja Shakthi Parshadaya – Guruthalawa
11. Boburu- Ella Bio Conservation Forum – Division Centre , Perawella.
12. Future in our Hand – Velimada
13. Future in our Hand – Rahupola
14. Future in Our Hand – Uva Paranagama.
15. Future in Our Hand – Zone 52
16. Future in Our Hand – Mahiyanganaya
17. Uva Farming Centre – 64, Senanayake mw, Bandarawela.
18. Future in Our Hand – Monaragala
19. Mihira Media Centre
20. Dewaina –Journalist
21. Daily News - Journalist

Galle District

1. Deeharam Organisation – 354, Dangedara , Galle
2. Ever Shine Foundation – Horangalla , Talgaswala
3. Participated Development Foundation – Devinigoda , Rathgama
4. Praja Sakthi Development Foundation Gamahewaya , Talgampala
5. Mihikatha — (Sahajeevana) Development Foundation- Gonapala Watta , Paragoda Imaduwa.
6. Organic, Environmental And Rural Farming System Foundation – Bataganwila
7. Sustainable Development Foundation – 18, Samagi mw, Elpitiya
8. Sri Lanka Development Foundation –East Habarakada , Thawalama
9. HELP-O - no.311, Dangedara Street , Galle
10. Sri Lanka Jana Shakthi Development Foundation – Gammaddegama , Nagoda , Galle

11. Independent Television Net Work (ITN)
12. Lakbima / Suwarnnavahini
13. Divisional Education Office – Elpitiya
14. Sihala Bodu Environmental Foundation
Kahawa Handiya , Kahawa.
15. Womens Bank - Katuhempala , Akmeemana
16. Habaraduwa Participated Development Foundation –
Katukurunda rd, Habaraduwa.
17. Bio- Diversity preservation Organisation – Batapola
18. Sath Wijaya Foundation – Plligoda , Ihalakeebiya
19. Sadaham Sewana Shrine (Asapuwa)
Wattegoda , Porawagama, Via Elpitiya
20. Lankadeepa – Journalist

Kegalle District

1. Participated Development Centre
31, Karunarathnagama, Rabukkana.
2. Ranvali Fellow Ship Development Centre
Aguruwalla, Ruwanwalla.
3. Dangampala Small Tea Farmers Society
4. Yatiyanthota Fellow Ship Foundation – Parusalla rd, Yatiyanthota.
5. Sri Lanka Environmental Exploration Society – Ranwala Kegalle
6. Development Communication Foundation
Ganithapura , warakapola
7. United Welfare Society
8. Thunkorale Medicinal and Exotic Planters Association
9. Nirmani Development Foundation – Kankeriya , Hettimulla
10. Dinikara Paper
11. Media Organisation in Kegalle District
12. Mal Maduwa Vanasarani Organisation
13. Human and Environmental Development Organisation –
Nakkawita, Daraniyagala.
14. Community Development Centre – no.50 Kalwana, Aranayaka
15. Galigamuwa Peoples Foundation
Olapanthawa, Galigamuwa Twon
16. Human Resource Centre – Mavanalla
17. Parakum Farming Organisation – Pitawela, Mawanalla
18. Peoples Development Foundation- Daraniyagala rd, Dehiowita.
19. Youth Society in Daraniyagala South – Deraniyagala
20. Imso Development Foundation
264/1 b, Dikkohupitiya, Hettimulla.
21. Sabaragamu Rural Development Centre
Ardiyahena, Malwatta rd, Galle
22. Journalist Community Developmnt Service – Pindeniya, Atala
23. Kinigama Farmers Organisation – Harigala , Atala
24. Sanasa- Galigamuwa
25. Indigenous Banana Conservation Farmers Association
Puwakmote, Yatagama, Rabukkana.
26. Collaborate Development Organisation – Malmaduwa
27. Plantation Workers Union Representative – Milanswatta, Atala
28. Aranayaka Centre For Development Community
29. Human Development Centre
30. Implementing Agency –Mawanalle
31. Sanasa Education Council - Hettimulla

Rathnapura District

1. Sabaragamu Peoples Foundation – 267, Parawatta, Nivithigala
2. Peoples Participatory Foundation
Ebulamura, Mahawalathanna, Balangoda.
3. Organization Of Environment And Children's Rights Reservation
92, Panawala rd, Ehaliyagoda
4. Sri Lanka Temperance Youth Society – Millawitiya, Kuruwita.
5. Gamijana Pubuduwa – Arupola , Ehaliyagoda
6. Participatory development Centre – 3rd Floor, KTS Building ,
Manana, Kalawana
7. UNDP-Prajashakthi General Association - Kollonna ,
Divisional Secretariat
8. Environmental Forum in Balangoda
20/339, Akkaradahaata, Balangoda.
9. Mithuru Mithuro Forum Limited – Rilhena, Palmadulla
10. Munwattayaya United Farming Organisation
11. Arthacharya Foundation – Balapanna, Pallebadda.
12. Soba- Parakaduwa
13. Sathsetha Community Organisation –
14. Rural Samurdi Task Force – Helaudakanda, Halvinna,
Godakawela
15. Women's Society – Weligepola, Balangoda
16. "Madara" Environmental Reservation Service – Baduwatta ,
Eheliyagoda
17. Divisional Board Of Youth Society – Divisional secretariat ,
Eheliyagoda
18. Youth Development Research Institute – Wilgoda , Eheliyagoda
19. Samurdi Association – Eheliyagoda
20. Peoples Development Foundation

Matale District

1. Municipal Council - Matale
2. Shanthy Nikethanaya – Udathanna
3. Environmental Forum – Integrated Rural Development Forum
4. Sithuwama Organisation – Matale
5. Naula Rural Development Society – no.3 , Naula
6. Natural Resources and Environmental Centre
7. "Dumbara Mithuro" Environmental Farming Garden
Rathninda, Etanwala
8. "Arunalu" Community development Centre
No.20, Agalawatta rd, Matale
9. Agriculture Union (Employers) Society - Dabulla
10. Sri Lanka National Environment Organisation- Matale
11. Medicinal Plant Conservation Project – Kohuwala
12. Dammavasa – Dabulioya Junction , Dabulla
13. Sri Krishna Association

Kandy District

1. Movement Of Sustainable Development Environment And Peace
94/12, Banabas rd, Watapaluwa, Kandy.
2. S.C.I. – 18/a/4, Deveni Rajasingha mw, Kandy.

3. Upcountry Environment Development Centre
4. Youth Exploration Society Of Sri Lanka
5. Environment And Natural Resources Development Centre
No.65, Kotuwegedara rd, Matale.
6. Praja Shakthi Development foundation – Bolape, Kapuliyadda
7. Service Civil International
18/A/4, Deveni Rajasinghe mw,Kandy.
8. Environment Conservation And Science
Exploration Association – 44/4, Gampola rd, Nawalapitiya.
9. Rural Development Affiliated For Environment Society
Gonawalapathana , Nawalapitiya.
10. Laksetha Sahana Seva- no.109, Meegawa Watta, Wattegama.
11. Human Resources Development Centre
No.600/13,tannekubura,Kanday
12. Community Participate Development Organisation / Sathsewa –
Pahurugolla , Theldeniya.
13. Centre For Development Alternative
582/10, Peradriya rd, Kandy.
14. Y.M.B.A – Kandy
15. Nation Builders Association –New Town, Kundasale.
16. Ever Green Environment Friend's Association
C57, Pallegama, Nawalapitiya.
17. Samadana – no.2, Thekkawatta rd, Tannekubura, Kandy
18. Anthodaya Community Development Foundation – Hospital rd,
Kuruduwatta New town , Meetalawa, Gampola.
7. Kantha Sahaya Kandayam Pradeshikaya
Gajaba rd, Colombo 08
8. Bosevana Pradeshikaya –(bank of women)
9. Women's Bank – 181/13, area-E, Seewalipura, Boralla.
10. I.T.D.G. South Asia – no.5 Layanal Edirisinghe mw. Colombo-05
11. Women's Bank - 41/10, Mangala rd, Boralla.
12. Bio-Diversity Protection Organisation – Polwatta rd, Batapola.
13. LHRD- 225/1, Kota rd, Colombo 08
14. Dharmapala Vidyalaya –Pannipitiya
15. Wild Life and Environmental Information Centre
454, Old rd, Kottawa ,Pannipitiya.
16. Mihithala Methuro – 209 A, Raigama, Bandaragama.
17. Seth Sevana Fondation
18. OSLEN

Tricomalee District

1. TDGSA
2. OXFAM GB
3. CHADIO
4. ERO
5. Sarvodayam
6. CFDO
7. Sri Lanka Red Cross Society
8. Save The Children
9. IFSP . GTZ
10. Solyyadi (C.B.O)
11. Kinnya Vision
12. SDA
13. TDYMDA
14. T.D.G.S.A
15. Wanatha Organisation
16. Gandhi Seva Association
17. YMCA

Matara District

1. Walakanda Gamunu Rural Development Society –
Walakanda, Puhulwalla.
2. Environment Society – Mara/ Thelijjawila Central Collage ,
Thelijjawila
3. Youth Environmentalist Forum- Kaburupitiya.
4. Sarwodaya Shanthisena Unit ,Bio Diversity Committee-
Palawatta, Narandeniya, Kaburupitiya.
5. Suhadawanthaende Samajaya – no.17, Vilpita
6. Kenbima Environment Foundation – Hakmana
7. Thilina Rural Water And Sanitation Society – Udahawatta,
Beruwela, Hakmana.
8. Environment Conservation Society – Matara
9. Community Development Forum – 155/1/2, Rahula rd, Matara.
10. Youth Organisation (S.L.I.P)- Kaburupitiya.

Colombo District

1. Pavithra Nagara Institute- no.09, st.Anthonys rd, colombo 03
2. Women Bank of Co-Operative Development service
3. Mihithala Mithuro – Pinnakola Watta ,
Thalagala, Gonapola handiya
4. Mihithala Mithuro –68, 5th floor, Laki Plaza , Colomo 03
5. Midoree Foundation – 78, Galwala Rd,Mirihana, Nugegoda.
6. Society For People Centered Development
140/26, Nawala rd, Nugegoda.

GRAMA CHARIKA PROGRAM (200 VILLAGE CARAVAN) AND MOBILE EXHIBITION

The villages and communities where the caravan paused



Anuradapura	Edagala	Edagala Weve Sanwardana (Development) Foundation
Anuradapura	Koongollewa(talawa)	Disabled Women's Association
Anuradapura	Nabadaweva	Janodaya
Anuradapura	Sadagirigama	Sadagirigama Community Development Society
Anuradapura	Nabadaweva Vidyalaya	Janodaya
Anuradapura	Nallamuduwa	Nallamuduwa Community Based Organization
Anuradapura	MahapothanaKohobagaskadaVidyalaya	Janodaya
Anuradapura	Turuwila	Turuwila Weva Protection Association
Anuradapura	Kadulugamuwa Maha Vidyalaya	Janodaya
Matale	Walmoruwa	Human and Environment Development Foundation
Matale	Ambokka	Human and Environment Development Foundation
Matale	Koongahawela6 th post	"Sithuwama" Training, Education, and Development Organisation
Matale	Sigiriya	Shanthi Nikethanaya
Matale	Rattota Pradesiya Saba	Rattota Pradesiya Saba
Matale	Hilton Colony	Janasarana and Gemunu Welfare Society
Matale	Koongahawela c.m.v.	Sithuwama
Matale	Jubbiliya Vidyalaya	Sithuwama
Matale	Rawanagama	Sri Rawana Environment Protection Organisation
Matale	Guruwela	Sri Rawana Environment Protection Organisation
Gampaha	Ekala- Galwatta	The Protection Committee of Environment and Consumer Problems
Gampaha	Ekala Maha Vidyalaya	The Protection Committee of Environment and Consumer Problems
Gampaha	Duelapitiya Sri gnanodaya c.m.v	Arunodaya Environmentalists
Colombo	Kiriwaththuduwa Junior School	Mihitala Mithuro
Colombo	Pitipana m.v	Mihithala Mithuro
Kalutara	Warakagoda Sri Sucharithodaya D: School	Gallena Vihara Environment Foundation
Kalutara	Katuhena	Gallena Vihara Environment Foundation
Kalutara	Tissa Damma School	Integrated Social Development Foundation
Kalutara	Horana - Wevala	Human Environment Development Association
Kalutara	Sirimewan m.v Pokunuwita	Mihitala Mithuro
Kalutara	Tissa c.m.v	Environmental Society of Tissa Vidyalaya
Kalutara	Dodamgoda - Nehinna	Nehinna Women's Bank
Colombo	BMICH	Green Net Work
Anuradapura	Anuradapura Bastien Hall	MONLAR
Kalutara	Sri Saddarmodaya Damma School	Mihitala Mithuro

Gampaha	Werahera Bandaranayake m.v.	Social Mobilisation Association
Colombo	Viharamaha Devi Park	Ruk Rakaganoo
Kalutara	Pallannoruwa c.m.v.	Mihitala Mithuro
Polonnaruwa	Medirigiriya-Kaudulugama	Kaudulugama Life guard Organisation
Polonnaruwa	Atabaoya Sri Sudarmaramaya	Arunodaya Society
Polonnaruwa	Kaudulla Etiyalpothana Junior School	Higurakgoda Gemisarana Society
Polonnaruwa	HigurakgodaAkkara 70	Higurakgoda Gemisarana Society
Polonnaruwa	Sudunelumgama (thamankaduwa)	National Youth council - Polonnaruwa
Polonnaruwa	Sri Gemunu Damma School -Sinhapura	Women's Development Society
Polonnaruwa	sinhapura	Women's Development Society
Badulla	Arawatta Vidyalaya-Mahiyanganaya	Future in Our Hand Organisation - Mahiyanganaya
Badulla	Serupitiya Mahiyanganaya	Serupitiya Community Based Organisation
Badulla	Yahal Arawa m.v.	Yahal Arawa Community Based Organisation
Badulla	Nedungamuwa	Nedungamuwa Community Based Organisation
Badulla	Miyanakadura Vidyalaya	Bio-Diversity Research Centre
Badulla	Namunukula-Kotigahatanna	Namunukula Community Based Organisation
Badulla	Galwelagama	Galwelagama Community Based Organisation
Badulla	Ethpattiya	Ethpattiya Community Based Organisation
Monaragala	Badalkubura-Puwak Araba	Future in Our Hand - Monaragala
Monaragala	Wedikubura Vidyalaya	Future in Our Hand - Monaragala
Monaragala	Horabokka Siddartha m.v.	Future in Our Hand - Monaragala
Monaragala	Weve Wela	Weve Wela Community Based Organisation
Monaragala	Bulupitiya m.v.	Wellassa Development Foundation
Ampara	Ramakrishna m.v. Akkarapattuwa	Shareeram Organisation/ Hariitha Committee -Kalmunai
Ampara	Thambalawil -Akkarapattuwa	Sarvodaya- Akkarapattuwa
Ampara	Kanakanathar-Thillankuli-Akkarapattuwa	Sarvodaya- Akkarapattuwa
Galle	Habaraduwa	Habaraduwa Participatory Development Foundation
Galle	Talgampala Sri Dharmalankara Joiner School	Help-o
Galle	Polpagoda m.v.Yakkalamulla	Help-o
Galle	Nagoda Royal College	Help-o
Galle	Niyagama Wigitha m.v.	Help-o
Galle	Mahamodara	Help-o
Galle	Narawala m.v.	Mihithala Mithuro - Galle
Galle	Dodanduwa Rohana Balika m.v.	Fisheries Organisation -Galle / Help-o
Galle	Kottawa Junior School	Help-o
Galle	Kottawa	Praja Shakthi Development Foundation / Help-o
Matara	Ullala-Kaburupitiya	Young Environmental Forum
Matara	Weurukannala Siri Saddathissa Damma School	Fisheries Organisation
Matara	Nilwella	Fisheries Organisation
Matara	Deniyaya Tamil School	YEF
Matara	Viharahena Junior School	YEF
Matara	Diyadawa-Deniyaya	Diyadawa Rural Development Organisation
Matara	Urubokka National School	YEF
Matara	Deiyandara c.m.v.	YEF
Matara	Karagoda Uyangoda m.v.	YEF
Matara	Ehala Witiyala	YEF
Matara	Wilpita Maha Vidyalaya	YEF
Hambantota	Magama Maha Vidyalaya	Human Development and Environment Protection Organisation
Hambantota	Kirinda Muslim Maha Vidyalaya	Human Development and Environment Protection Organisation
Hambantota	Andara Weva	Human Development and Environment Protection Organisation
Ratnapura	Siri Siduhath Damma School-Parakaduwa	SOBA
Ratnapura	Chathiyarama Damma School	HUDEC
Ratnapura	Vidyakara m.v.- Opanayake	Indigenous Seeds Produces Society
Ratnapura	Malmeeekanda Opanayake	Green Explores
Ratnapura	Balangoda Wikiliya m.v.	Environment Society Of Balangoda
Ratnapura	Bowatta Rajawaka	Environment Society Of Balangoda

Ratnapura	Dandeniya m.v. Opanayake	Indigenous Seeds Produces Society
Ratnapura	Gageyaya Ebilipitiya	Arthacharya Foundation- Balawinna
Kegalle	Kankeeriya	Nirmani Development Forum
Gampaha	Udugampola	Environmental Conservation Society
Kandy	Pilimatalawa Abilmeegama	Environmental Forum Of Neelawana
Kandy	Dodamwela	Prajashakthi Development Foundation
Kandy	Dharmawikrama G.m.v.	Centre for Development Alternative
Kandy	Uduwelawatta v.	Earth Conservation Trust
Kandy	Wevathanna m.v.	Environmental Development Forum- Kadurata
Kandy	Naranwita k.v.	Forum- Kadurata
Kandy	Warakawa k.v.	Society for Environmental Conservation
Kandy	Parameshwara tamil School panwila	Society For State Women's Welfare
Kandy	Sri Damruwan Damma School -Gadamunna	Gemisewa Foundation
Kandy	Heel Oya	Gemisewa Foundation
Kandy	Wedaruwa	Wedaruwa Rural Service Group
Trincomalee	Arthimote	Gandisewa
Trincomalee	Ardampodai Nelaweli	CBO-Ardampodai
Trincomalee	Technical College	CBO-Ardampodai
Trincomalee	Periyakulama	CBO-Ardampodai
Trincomalee	Kinnya Kakkamunai	Kinnya Vision
Trincomalee	St. Mary's Girls School - Trinco	Gandi Seva
Trincomalee	Nilaweli Refugee's Camp	Gandi Seva
Batticaloa	Mamangam	Women's Development Foundation
Batticaloa	Talankuda-Vedarkudiyaruppu	Women's Development Foundation
Batticaloa	Semannodai -	Sim Sri Lanka
Batticaloa	Chenkaladi-Karidiyanara	Agricultural Education Technology and Cultural Organisation
Batticaloa	Mamagam	WWDF
Batticaloa	PuliyanthiveJeewajothi Orphanage	Jeewajothi
Batticaloa	Pattipolai - Konkadicholai	PADRO
Batticaloa	PuthukudiyaruppuKannehi M.V.	Desmeio
Batticaloa	Thirupperumkurai	Social Welfare Society

NGO Consultative Workshop to critically evaluate the National Report for the World Summit on Sustainable Development

26th July 2002



Resource Persons

Prof. Mohan Munasinghe, Chairman, National Energy Commission
 Mr. A.H.M. Jayasekara, Acting Secretary and Additional Secretary, Ministry of Environment
 Dr. Suren Batagoda, Director, Environmental Economics and Global Affairs, Ministry of Environment

Participants

- | | |
|------------------------------------|---------------------------------------|
| 1. P.A. Tissa Kumara | NFPO |
| 2. Sujanee Premawardana Pilapitiya | Eco-Friendly Volunteers |
| 3. Kanchana Ranasinghe | Eco Friendly Volunteers |
| 4. Ramitha Wijethunga | ITDG |
| 5. Chamila Hemmathagama | South Asian Partnership International |
| 6. Manal Jayamanna | INSTCOM |
| 7. Nirosanee Liyanage | SLEJF |
| 8. Lahiru Perera | CARE Institute |
| 9. Wasantha Wijewardena | SOBA |
| 10. J. Alwis | Ministry of Environment |
| 11. S. Samarasooriya | UNDP |
| 12. Chathura Weliwiliya | HELP – O |
| 13. Hemantha Abeyawardana | Indigence Seeds Product |
| 14. Bandula Chandrasekara | Energy Forum |
| 15. S.Visvalingam | MOSDEP |
| 16. Namal Premawardana | EFL |
| 17. Lionel Thilakarathna | Rural Center for Development |
| 18. Ashoka Abeygunawardana | Energy Forum |
| 19. Sampath Ariyasena | MONLAR |
| 20. Ven. K.Pagngnasekara | MONLAR |
| 21. M.A. Farook | ICRO |
| 22. K. Priyantha | ICRO |
| 23. Roshan Menels | LEADS |
| 24. Sonali De Silva | Public Interest Law Foundation |
| 25. Pandula Endagama | CED |
| 26. Padmini Rathnayaka | "Wilpotha" Women Savings Centre |
| 27. Hemantha Withanage | EFL |

28. Uditha Wijesinghe	Uva Net
29. Saman Amarasinghe	National NGO Council
30. G.A. Prabath Kumara	FIOH
31. C. Aththanayaka	Uva Net
32. D.B. Wijethunga	Uva Net
33. Jagath Gunawardane	SEEC
34. Laliith Walisundara	HRDC
35. Nandana P. Perera	DFP
36. Kapila Kumara De Silva	Mithuru Mithuro
37. D.D.S. Damayanthi	Intergrated Sociaty Development Foundtaion
38. Jezima N. Nalim	
39. J.Rathnasiri	SLAAS
40. W.H.S.Nandragith	Sakura Development Foundation
41. Piyasoma Bentota	PRC
42. Uchitha De Silva	Center for Environment development
43. Rohana Weregoda	SLEES
44. Dioma J. De Alvis	R.A MENR
45. Kamal Kumara Kakulandara	CDA
46. D.A.D.N.C Wimalarathna	Rural Community Development Cooperation
47. H.M.A.U.K. Herath	M.ELNR
48. Kamini M.Vitharana	Ruk Rakaganno
49. Ronithi Ratnakara	ITDG
50. Udaya Liyanage	ITDG
51. Ranjan Karunanayake	OSLEN
52. K. Melvani	NSRC
53. Ashoka Liyanaarchchi	
54. S. Abeyarathna	HELPAGE
55. G. Piyadasa	SLAAS
56. S. Udayakumara	SLAAS
57. C. Nadeesha	Green
58. Rasika Perera	Green
59. Janaka Withanage	Green
60. Subashinee Jayasekara	Green
61. Thilak Kariyawasam	Green Network
62. Suranjan Kodithuwakku	Green
63. S. Abeyarathna	HELPAGE
64.W.D. Dhammika	Gami Sewa Foundation
65. D. Wisumperuma	Green
66. S. Ranasinghe	Green Network
67. Bandu Ranga Kariyawasam	EFL
68. Douglas C. Kumara	Green
69. Ruwan Weerasuriya	Ministry of Environment
70. Dayana Jayasundara	Ministry of Environment
71. Anoja Herath	Ministry of Environment

Regional Seminar on Best Practices and Empowerment Success Stories on Sustainable Development

July 28 and 29 at HARTI

Participants name List

Ms. Champa Senevirathne, Sri Lanka Environmental Journalists Forum (SLEJF)
 Mr. Jayaweera Hataatowatte, Center for Human Development (CfHD)
 Mr. Atula Piyantha, Neo Synthesis Research Center (NSRC)
 Mr. Ajantha Palihawadane, Neo Synthesis Research Center (NSRC)
 Mr. V. Nagendran, Future in Our Hands (FIOH)
 Mr. G. A. Prabath Kumara, (FIOH)
 Mr. K. A. J. Kahandawa, (FIOH)
 Mr. Sampath Ariyasena, Movement of National Land and Agriculture Reform (MONLAR)
 Wathsala Herath, Energy Forum
 Miss. Dhanushi Senaratne, Intermediate Technology Development Group (ITDG)
 Mr. Namal Premawardena, Environmental Foundation Limited (EFL)
 Ms. Mary Tonder, Norway, Volunteer - FIOH
 Mr. Ove Vold, Norway, Volunteer - FIOH
 Ms. Subashini Jayasekara, Green Movement of Sri Lanka (GMSL)
 Mr. Dhanesh Wesumperuma, Green Movement of Sri Lanka (GMSL)
 Mr. A. Selvendran, INAYAM, NGO Consortium - Batticaloa
 Mr. Wasantha Wijewardene, SOBA
 Mr. Jaya Murugan, Gandhi Sevei Association - Trincomalee
 Mr. S. Vishwalingam, MOSDEP
 Mr. Chatura Welivitiya, Help - O
 Mr. K. Jayarasai, CDF - Kalmunai
 Mr. S. Amarasooriam, Tamil Youths Organisation - Kalmunai
 Mr. V. Vimalendra Kumar, Tamil Youths Organisation - Kalmunai
 Mr. Kamal Kekulandara, Center for Development Alternatives
 Mr. Lalith Walisundara, Human Resource Development Center
 Ms. C. Simithraarachchi, Ruk Rekaganno
 Mr. Sujani Pilapitiya, Eco Friendly Volunteers
 Mr. S. O Sivaraj, Friends of Lanka (FoL)
 Ms. Renuka Peramuna, Friends of Lanka (FoL)
 Mr. K. Munagama, Mihitala Mituro

Overseas Participants

Dr. Ramasamy Dhanasekara Pandian, RIDO, India.
 Mr. Varun Vidyarthi, MANAVODAYA, India.
 Mr. Hitman Gurung, MDO, Nepal.
 Prakash Nepal, NCDC, Nepal.
 Dikendra Kandel, Nepal.
 Loreto Palmaera JR, SEARICE, Philippines
 Franco S. Esdrelon JR, CBDC - SEARICE, Philippines
 Elinita Dano, SEARICE, Philippines



Seminar on Challenges for the Health Sector in the 21st Century in view of the World Summit on Sustainable Development

08th August 2002- Sausiripaya Auditorium, Colombo –7



P.W. Somapala
 Dinesh Kulaweera
 T.A.C.S. Wasanthadeva
 Wilson Pathirana
 Rajapaksa
 S.A.K. Jayasena
 P.Saliya c.k. De Silva
 W.M. Kamal Wijetilaka
 W.V. Senavirathna
 L.P.Gunathilake
 Dr. H.R.U. Indrasiri
 Dr. Sarath Amunugama
 Dr. A.M.L. Beligaswatta
 Dr. J. Vidanapathirana
 Dr. S. Munasinghe
 W.H.S. Nandajith
 E.V.P. Piyatissa
 Ashoka Ekanayake
 Dr.Dudly Disanayake
 Sampath Areyasena
 K.S. Jayatissa
 Dr. A.K.S.B. De Alwis
 Anusha Eapa Senaviratna
 Wasantha Wijewardana
 Dr. C. Weerasekara
 Dr. C. Vinigara00000
 Chathura weliwita
 W. Roes Pernando
 D. Kalansooriya
 S.W.M.Y. Wejasinghe
 Namal Premawardana
 R.Karunanayake

Assistant Field Office's Union of PHI

O/die of the P.D.H.S. / sp Galle
 GDTH Union – Secretary
 Health Education Officer
 PHI Union of Sri Lanka- Ratmalana
 Health Ministry
 NISH - Kalutara
 D.P.D.H.S Office Kandy
 D.P.H.S. Western Province
 National Institute of Health Education
 Ministry of Health
 Health Education Bureau
 Family Health Bureau
 Sakura Development Foundation
 Sri Lankan Government Health Workers Society
 SLAVSE - Kandy
 G.W. Ayurveda Institute -Yakkala
 MONLAR
 PDHS Office - Badulla
 PDHS Office / NWP
 Youth Service Council
 SOBA
 Homeopathy Medical Council
 Ministry of Health
 HELP-O
 Net Work for People's Health Policy

PHI Society
 EFL
 OSLEN

Dr. Gayanthi Abwikrama
D.M. Werasinghe
Kanthi Perera
R.K. Batuwita
Ven. Dodampahala Siri Suguna
Dr. Nimal Jayathilake
K.M. Vitharana
Saman Perera
Kamal Kumara Kekulandara
Suranjan Kodithuwakku
Thilak Kariyawasam
M. Senewirathna
Rasika Perera
Subashini Jayasekara
Sujeewa Ranasinghe
Channa Ratnasiri
Nihal p. Abasinha
Sampath Dharmapriya
Florans Wickrama
Dilini Lanka

STD - Badulla
CDA - Kandy
Child Rights
PSUNU
Integrated Social Development Foundation
B.M. Ayurveda Research Institute - Navinna
Ruk Rakaganoo
Sadisa Development Net Work
CDA Kandy
Green Movment of sri Lanka
Green Network
The Iland
Green movment
Green movment
Green Network
Green movment
Silumina
Lakbima
Daly News
Dina Mina

