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THE GREEN BELT MOVEMENT

**Sharing the Approach
and the Experience**

By Wangari Maathai

**Environment Liaison Centre International
Global Coalition for Environment and Development
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To the children : Muta, Wanjira and Waweru
... they are more precious than gold

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Contents

Foreword

Acknowledgement

Introduction

Chapter 1 The Green Belt Movement

A. What is the Green Belt Movement?

B. History

C. Objectives

Chapter 2 The Reality of Kenya's Green Belt Movement

A. Achievements

B. Why It Works

C. Challenges and Constraints

D. Into the Future

Chapter 3 How to Spread the Conservation Message to Rural Communities in the Developing World

Chapter 4 How to Start and Run a Green Belt Movement

Conclusion

References

Appendices

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Foreword

It is a great pleasure for me to contribute to this book on the Green Belt Movement of Kenya by Professor Wangari Maathai.

The Green Belt Movement of Kenya has obtained a very important position, in particular among those of us who are strongly committed to the issues of environment and development. It represents an example of how grassroot initiatives can lead to change. The Movement has increased the awareness of citizens and decision-makers alike. In particular the efforts of women and young people all over Kenya have helped to make the Movement a success.

In the words of Professor Maathai, the healing of Africa is still a dream. However, that dream may someday become a reality. After all, trees are a symbol of hope. Encouraging developments in some parts of Africa may indicate that a new greening is possible. Local initiatives have yielded concrete results, and many governments are addressing the problems of deforestation in a more responsible manner — often in cooperation with NGOs and grassroot movements.

The World Commission on Environment and Development called for increasing influence and greater resources to be accorded to initiatives such as the Green Belt Movement. I believe that concrete results achieved by the Green Belt Movement will continue to serve as a source of inspiration whose significance will extend far beyond the borders of Kenya. And this book is an important means by which this inspiration will become widely disseminated.

*Dr. Gro Harlem Brundtland
Prime Minister of Norway
and Chairman of the World Commission on
Environment and Development*



Photo: UNEP

Acknowledgements

The privilege of writing about the Green Belt Movement has fallen upon me. So also the responsibility of what is written. But the material on these pages is the product of thousands of Green Belt members, associates, volunteers and donors – all of whom had much commitment and sense of purpose and without whom there would be no Green Belt Movement to write about.

It is always impossible to mention by name all those who lighten the path of an author, and I have had many along my path: friends, colleagues, co-workers and members of my rather extended family. The debt can never be paid.

This edition is sponsored by the Environment Liaison Centre International (ELCI) whose Elaine Douglas and Ravi Sharma had the unenviable role of editing the manuscript. That support and encouragement is greatly appreciated. I must mention Lydia Ambululi who very patiently typed the manuscript many times over.

Sometimes I have come across articles, books and statements which say exactly what I wish to say but in a much better way. I have listed some of these materials at the end of the book, partly as good reading materials but also to give credit to their authors.

Wangari Maathai
1st August 1988

Introduction

We are living in the space age. A time when worldwide communication is instantaneous. A time for the press and the written word. A time when reality is what the written word says it is. And that word says that Africa is a continent in crisis a dying continent.

Headlines on Africa in the world press tell of drought, famine, poverty, violation of human rights, debts. Only bad news from Africa hits the newstands. In this age of the written word and the influential press, one appears to be what the press says they are. And when the people in the stories are persuaded by the press to accept the false image of themselves, it is tragic – psychological and otherwise.

For while the press cannot change reality, it can change people's perception of that reality.

Not that everything written about Africa is false. Some stories are true. There have been true natural disasters. But a number of Africa's calamities have been precipitated by exploitation and by a general neglect of the continent's natural resources – her forests, wildlife, people, land, minerals and water.

The masses of Africans see themselves very differently from the way they are depicted in the written word. Perhaps if they saw themselves as others see them (or prefer to see them) they would

have less faith in others and more faith in themselves. They would appreciate their ability to have survived on this continent long before the experts arrived to "discover" them and then to insinuate that they are a burden.

Africa needs to rediscover herself, know herself and empower herself. If she knew and appreciated herself better, solutions to African problems might be sought in Africa and from Africans.

There is a new consciousness emerging in parts of Africa and of other parts of the world. It is the awareness that every being on this planet shares a common destiny. And all of Africa should be part of this awakening so that, unlike in her recent past, Africa can participate directly in the direction of her destiny. To do this, she cannot afford to ignore inspirations from her own sons and daughters.

We should understand Nature's laws if we expect her to shower us with earthly blessings. We must stop the over-exploitation and the plundering. We must begin to care.

In future, perhaps all our energy should not be spent in reciting litanies of woe or in uncovering and condemning the exploiters and plunderers of Africa (although it is good to know them, lest we forget who they are). We need to understand, but we do not need scapegoats.

One challenge for the future is to use our energy and develop workable strategies that will raise Africa from her economic, political and environmental crisis and propel her toward self-empowerment, self-rediscovery and self-realisation. We should clearly and strongly assist African development efforts.

And what is development? For many leaders and decision-makers in Africa and throughout the world, development means extensive farming of cash crops to earn foreign exchange and huge, expensive programmes like hydro-electric dams, airports, hospitals, luxurious tourist hotels, supermarkets, large, heavily armed armies and imported luxury items. These are the priority items in national budget allocations.

Never mind that they may not reflect the needs of the people, who, if asked, would prefer basic needs like food, shelter, education, clean water, local clinics, information and freedom.

If asked, the people would likely prefer a different type of development – something called "sustainable development". Sustainable development is the utilisation of national resources by

the present generation in such rational manners as would not put the future generations in jeopardy. To quote the World Commission on Environment and Development:



Kenyans march to promote tree-planting.

Photo: UNEP

"Sustainable development requires meeting the basic needs of all and extending to all the opportunity to satisfy their aspirations for a better life... It can be consistent with economic growth, provided the content of growth reflects the broad principles of sustainability and non-exploitation of others. A society may in many ways compromise its ability to meet the essential needs of its people in the future by over-exploiting resources...

"In essence, sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations."

For development which plunders resources like human resourcefulness, forests, land, water, air and food oblivious to the needs of tomorrow is short-sighted and self-eliminating. Sustainable development offers a viable alternative to the type of development which plunders and neglects and which has partly contributed to the African economic and political crises. It presents a challenge. And it is partly in response to that challenge that the Green Belt Movement was born and is being encouraged to become a pan-African environment movement.

Chapter 1

The Green Belt Movement

What is the Green Belt Movement?

The Green Belt Movement is a grassroot movement with tree planting as its basic activity. Although its objectives are many and varied, the tree has been used as the focal point around which other environmental issues are discussed and brought to the attention of the public and decision-makers.

Indeed, trees have become a symbol of hope. They are also a living indicator of the realisation of environmental rehabilitation and conservation and of sustainable development. Tree planting itself is a simple activity. As such, it is an excellent starting point for all environmental activities.

The main objective of the Green Belt Movement is to raise our consciousness to the level which moves us to do the right things for the environment because our hearts have been touched and our minds convinced. To do the right thing because it is the only logical thing to do, popular opinion notwithstanding.

History

The story behind the creation of the Green Belt Movement is a long story inspired by sheer enthusiasm and enriched by



Photo: Green Belt Movement

rewarding experiences. We did not particularly choose to plant trees – we found ourselves deeply engaged in it.

The idea of planting trees in communities was born in 1974 as part of a plan, called Envirocare, to improve the environment of Nairobi's Langata community. It was strengthened during the U.N. Conference on Human Settlements held in Vancouver, Canada in June, 1976. There, I met many people who, like myself, were bound by a desire to work for improved human settlements.

But the idea of Envirocare would have died if it were not for the National Council of Women of Kenya (NCWK). The NCWK is an umbrella organisation representing scores of national women's organisations in Kenya-both urban and rural. In 1977, I was elected to NCWK's Executive Committee and joined the Standing Committee on Environment and Habitat.

After some initial opposition, the committee adopted community tree planting as a project and organised the "Save the Land Harambee". "Harambee" literally means "let's all pull together" and this particular harambee intended to encourage Kenyans to rededicate ourselves to save our country from the threat of desertification.

The first tree planting ceremony took place in Nairobi on World Environment Day – June 5, 1977. Seven trees were planted at Kamukunji grounds in honour of two legendary women and five men who made significant contributions to their communities during their lifetimes. These trees were to be tended by the Nairobi City Council. However, only two trees have survived the neglect and the hostile environment.

During the U.N. Conference on Desertification, held later that year, the NCWK decided to emphasise the practical problems of desertification facing the ordinary rural population. So we organised a tree planting activity in Naivasha and, with the financial support of Mobil Oil of Kenya, planted a green belt on land owned by a cooperative of 800 rural women from Kiambu. Around this time, what had started simply as an NCWK project was gradually developing into a community activity. And we launched a national campaign to inform the public, through the mass media, of the dangers of desertification and the necessary action we could take to fight this process.

Interest in tree planting grew and invitations to plant trees began to trickle into the NCWK office from all over Kenya. We made simple and practical presentations on the Save the Land Harambee and emphasised one activity which everyone could understand – planting trees and food crops. Agroforestry had always been our way of farming and our ideas were well received.

As more people wanted to know where to get tree seedlings, we approached the Department of Forestry in the Ministry of Environment and Natural Resources which had a national network of tree nurseries. The head of the Department of Forestry laughed when we told him that we intended to plant 15



An example of unsustainable resource management: even goats will consume their last tree.

Photo: UNEP

million trees and without hesitation promised us all the seedlings we needed.

Less than a year later, he had to revoke that decision when we distributed more seedlings than he could afford to give away free of charge. From then on, we had to pay for seedlings from government nurseries – fortunately, at low prices and with useful guidance and support from government foresters.

The term, *Green Belt Movement*, surfaced much later with the recognised need to establish community woodlands to serve as demonstration plots. These woodlands were to be planted on the boundaries of public land so they could be easily cared for. They would also enhance the beauty of the compound and create natural windbreaks. The strips of trees consisted of at least 1,000 trees and were called “public green belts”.

During the establishment ceremonies of these green belts, we gave extra seedlings to the people who attended. The response was astounding and we realised that people wanted to establish green belts on their own plots. We called these “mini green belts” and encouraged the use of agroforestry, or the integration of trees with crops and grazing, on the private land.

With the rapidly growing interest in tree planting and green belts, the Green Belt Movement further developed beyond the limits of a community activity to the broad, popular movement it is today.

Objectives

The objectives of the Movement were inspired by the local needs and problems of Kenya, but they apply to many other countries and communities in Africa and around the world. Some of these problems are symptoms of mistakes made in the name of “modern development”. And the mistakes are being paid for dearly – in some countries by life itself.

The Green Belt Movement endeavours to meet the needs of communities by harnessing local capabilities, expertise and resources and engaging the community to be the main driving force. The movement has deliberately discouraged direct participation by high-powered technicians and managers; shying away from imported high technology and solutions, experts and systems.

This has been done to create, encourage and promote local and indigenous expertise, abilities, ideas and resources. It has also been done to create confidence in local people who are often overwhelmed by experts. So much so, indeed, that they begin to believe that they are ignorant, inexperienced, incapable and backward; while others have solutions to all the problems. So, empowering the indigenous people is a major objective of the movement.

The other objectives are many and varied, and each comes from a particular need. The major needs that the Green Belt Movement attempts to address through its objectives are outlined below. These needs, then, provide the Movement’s greatest challenges.

1) The need to provide fuelwood.

In many parts of the less industrialised world, there is a real fuelwood crisis. Up to 90 per cent of our rural populations depend on agricultural residues or cowdung for fuel for cooking and warming their homes. They have no alternatives.

The fuelwood crisis forces women to trek long distances in search of fuel. In some cases, families have been forced to change their diets to adopt foods that require little energy to cook. Eating highly refined foods like bread, tinned vegetables and rice instead of garden-fresh foods is even considered a sign of affluence and progress. In reality, it can culminate in



Women often have to travel long distances to gather firewood.

Photo: UNEP

malnutrition, poor health and low productivity. Then, citizens are asked to pay more taxes or money is borrowed from international sources to expand hospitals, clinics and dispensaries. All this instead of investing in preventive medicine and public education.

2) The need to prevent soil erosion.

Land is one of the most important resources of Kenya and all of Africa. Its fertile topsoil ought to be considered a valuable resource – especially since it is so difficult to create. However, little immediate and economic value is attached to soil per se.

Thousands of tons of topsoil leave Kenya's countryside every year. During the rainy seasons, it flows in red streams down the slopes, into muddy rivers and finally to the Indian Ocean – where it can never be retrieved. Yet we seem unconcerned.

Losing topsoil should be compared to losing territories to an invading enemy. And indeed, if African countries were so threatened, they would mobilise their heavily armed armies, the police, the reserves – even citizens would be called in to fight the advancing enemy.

Consider Kenya's Kikuyu community which mobilised itself to form the Land and Freedom Army (later popularised as the Mau Mau Movement) to regain their occupied lands from the British. Yet the Kikuyu, like other African groups, appear not to recognise that their current enemy is deforestation and consequent soil erosion – that these enemies are worse than the colonisers since the fertile topsoil is lost forever.

While we recognise rain as a blessing, the muddy floods and rivers are signs of a curse. Rain water should fall to feed our



Soil erosion is a serious problem that can be prevented by treating the land in appropriate way.

Photo: UNEP

fields and our underground water sources so that we may have bumper harvests as well as springs and wells.

We now know what causes soil erosion. It is precipitated by, among other things, indiscriminate cutting down of trees and other vegetation; destruction of indigenous forests and catchment areas; cultivation along river beds, slopes and marginal lands; and irresponsible road construction. Subsistence agriculture, without the benefit of alternating crops and fields, is practised throughout poor African countries, and this also adds to soil erosion.

Despite its rapid spread, soil erosion can easily be checked by applying simple, but appropriate, preventive measures like planting the right type of trees, allowing agricultural residues to remain in the fields to decompose, maintaining vegetative cover, creating windbreaks, protecting forests and catchment areas from indiscriminate cutting, and by digging trenches, terraces and cut-off drains. When the ground is sufficiently covered by agricultural residues and other vegetation, the force of falling raindrops is broken, the speed of runoff flow is reduced and water seeps underground.

These simple and inexpensive measures can also improve soil fertility and, therefore, improve crop yield. And they will prevent the water pollution caused by eroded soil in the rivers, wells and streams from which rural people get their drinking water.

High technology is not needed. Nor experts. With a lot of willing bodies and some muscle power, it can be done. But people must understand why they, and not someone else, should do it.

We must inform and train the farmers – who are mostly women and often illiterate. Further, we need motivated and well-informed extension officers. Farmers need to realise that they have to “feed” the soil. Since peasant farmers have always depended on shifting cultivation, it is essential that they appreciate the need to work with Mother Nature and hasten her processes of self-healing and self-rehabilitation.

Lest the blame be placed on the victim, it should be clear that decision-makers and extension officers are some of the least-informed individuals on the topic of soil erosion. They have the professional “know-how” and they believe in development, but they have no idea what the phrase *development without destruction* means.

For example, they cut down every tree that interferes with telephone or electrical wires, even if that is the only tree on a farm.

They make beautiful superhighways and ignore the damage done to surrounding land and farms. They create huge dams and make effort to prevent soil run-off. These are some of the “blind who must see” if we are to create sustainable development.

3) The need to make tree-planting an income-generating activity for women.

In traditional forestry, much money is used to employ labour (usually men) who produce seedlings. But women are the large users of wood. Why not support them to produce and maintain their major source of energy?

As part of the Green Belt Movement, women produce tree seedlings that are subsequently released to small-scale farmers and public institutions such as schools and churches. Thus, women are paid for the tree seedlings and this creates an income-generating activity for them. Ultimately, it improves their economic position.

4) The need to produce enough food.

Food production in Africa has fallen repeatedly in the recent past. In some areas, famine is a recurrent phenomenon. Africans are constantly fighting hunger, and have been forced to import food.

Among the leading causes of poor crop yield is over-exploitation of land and loss of topsoil. Yet farmers have no choice but to continue to grow crops on highly impoverished soils.

To increase their crop yields, farmers need to improve the fertility or regenerative capacity of their soil with simple and inexpensive methods available to them. For example, they can fertilise with animal manure, mulch with agricultural residues (instead of burning them), use compost and apply agroforestry principles. (Agroforestry is a method that was used traditionally but has been ignored in favour of modern farming methods.) The practice of planting, for example, nitrogen-fixing trees with cereals enhances soil fertility, retains soil moisture and reduces erosion. Hence, crop yields increase.

Chemical fertilisers, pesticides, new seed varieties and huge irrigation schemes are some of the solutions being offered to

African farmers. These solutions will not work. They won't work because:

- fertilisers and pesticides cost too much in foreign currency to be sustained,
- the other methods cost too much in local currency and will only be used by large farmers and mostly for cash crops while the subsistence farmers will continue to farm already impoverished soils and hasten desertification, and
- they do not promote the regenerative capacity of the soil, that is, sustainable farming. So they don't offer any long-term solutions.

Assuming that the current world order will not change overnight, African farmers have but one choice – work with Nature to produce as much food as possible. As part of this, they should be reminded that there is wisdom in traditional farming practises.

The increasing amount of land used for cash crops is another factor that keeps Africa from producing enough food. In Central Kenya, for example, malnutrition is partly due to the fact that cash crops are replacing food crops.

Cash crops represent economic power. African farmers who do not earn foreign exchange through cash crops have a low status in their communities. Cash crops are an industry, food crops are not. The challenge is to convince farmers and leaders that farming for food, even for family consumption, is good economics.

This is not to say that cash crops should be abandoned. Far from it. But considering the current world economic order, it is quite possible that people could over-exploit their resources in order to produce raw materials for export, only to earn too little to meet even their basic needs like food. People should be encouraged to grow their own food as much as possible.

Another reason for inadequate food production is the low priority given to agriculture. Food production in Africa is a responsibility relegated to small farmers – mostly women – who are not a priority for Africans. It is part of the “colonial heritage” that our universities and institutes are still producing white collar, laboratory-bound or office-confined decision-makers and extension workers.

A 1975-76 rural survey in Kenya and
failed to focus on food crops of women's agricultural efforts”. The same report notes that “the lower level of education attainment of rural women partly accounts for the low female participation rates in activities other than farming”. Thus, farming (other than farming of cash crops) is a job relegated to the uneducated – those who are unemployable as white-collar workers. These are mostly rural women.

Agriculture for food production must become a priority for Africa if famine is to end. It has to become economically attractive to have well-trained farmers. Africans need to appreciate that while they are dying of hunger, some countries have too much food. And if they cannot find the funds to import this food, the only alternative to starvation is for Africans to produce their own food.

Food security can become a reality for Africa if Africans made agriculture a priority. Root crops and drought-resistant crops had always been Africa's hope for hard times. Coupled with improved food-processing and storage facilities, they could ease the burden of famine. But these crops are ignored by Africa's elite, and it is these people who sit in the Ministries of Agriculture and of Economic Planning and make decisions.

Small farmers, particularly women farmers, should be supported if food production is to increase in Africa. Unfortunately, these are the farmers that are the most minimised. They receive little tangible support and are ignored and considered peripheral in national economics. And they have neither the political power nor the economic power needed to demand better compensation for their labour or to prevent subsidised food imports.

Ironically, while they have been pushed to the periphery of the economy, they are central to food production. This must change if famine is to end.

We must prioritise and empower the small farmers. Then, perhaps, agriculture in Africa will attract educated, dedicated and resourceful Africans who will be willing to produce enough food to feed Africans.

If not, African elites will have to spend more foreign exchange purchasing arms to protect themselves and their interests. For when citizens become poor and hungry, they become politically

unstable and difficult to govern. The enemy, then, comes from within and not from across borders. If current trends continue, political instabilities and military coups d'etat can only increase.

5) The need to address the population question.

It is important to understand the population issue and how it interrelates with under-development, poverty and environmental degradation.

At four per cent and rising, Kenya's population growth is among the highest in the world. It is a trend that can be seen throughout Africa. However, the more affluent are the ones who are concerned about the rapid increase in population. And they blame the poor for it. But why are there so many poor people?

Some of the world's poverty is caused by injustices created by the current world economic order. To call upon the poor to improve their situation within the current economic order is unrealistic. Hence the call for a new economic order, especially by governments of the less industrialised world.

Rapid population growth has also to do with the rights of women. Some communities oppose any efforts by women to acquire basic human rights and freedom regarding population issues. They deny women the rights of self-determination and self-fulfillment. As long as this prevails, it will be difficult to control the population growth and realise sustainable development. Indeed, we will be even more entangled in vicious circles which cause regression, instability and even more widespread poverty.

This is because suppressed, poverty-stricken and hungry people do not plan their families and they are not concerned with environmental conservation, even though they are the first victims of environmental degradation. They do not take their destiny into their own hands.

Instead, they place all their hope in God. They seem to pray, "Since you are God, work miracles so that I may survive. Make it possible for me to satisfy my basic needs." They are not aware that they have not used all the wonderful talents and resources that they already have. They are asking God to be a magician, a miracle worker.

Many Africans have abandoned their traditional concept of God and embraced a new and foreign concept. And it is from this

power that they expect magic. For if calamities like poverty, hunger and drought are perceived of as natural and, therefore, acts of God, Africans have every reason to doubt the power of their traditional God and expect miracles from a God who seems to protect foreigners from such calamities.

But there is growing evidence that these calamities are not acts of God but of humans. If that is so, Africans have to examine where they, rather than God, went wrong. Having more children than one can take care of, being poor, preventing the earth from bearing fruit... these and other adversities should not be blamed on God. They are the acts of men and women. And it is up to us to turn things around.

Time has shown that those who do not work with Mother Earth are punished or eliminated by Her. She blesses us only if we are wise and work with Her, if we learn to be Her custodians.

6) The need to encourage self-employment.

Unemployment denies a human being the right to support oneself and one's family with dignity. It disarms. It is poverty. And poverty promotes environmental degradation at the same time that it is a direct result of it. Unemployment renders people helpless, makes them lose self-respect and makes them easy victims of injustice and exploitation.

Creating employment, therefore raising the standard of living of rural populations, could help to curb further over-exploitation of the environment. Employment can be created in rural areas by helping the people employ themselves.

The Movement promotes self-employment. It works to assist thousands of unemployed and underemployed to employ themselves in the promotion of tree planting and environmental conservation in their areas.

As a Green Belt member, a person compiles a report at the end of each month and on the basis of the reports, she or he receives a small allowance as a token of appreciation. Members do not receive regular monthly allowances. Neither are they fired. When reports stop coming in from a member, the Movement assumes they have fired themselves.

This method promotes a sense of responsibility and accountability. It promotes self-esteem and higher productivity. But it is unpopular with those who lack self-discipline and require

constant supervision. These are the people who cannot be self-employed.

People who require constant supervision in order to work are considered lazy, disloyal, unmotivated and unreliable. And they become easy victims of exploitation and injustice. It appears that they can only be liberated if they can become resourceful, creative, loyal, motivated, hard-working and self-disciplined.

In the context of employment, it is important to remember that work for money was introduced in the process of colonisation. Before that time, Africans had always worked their land or attended their livestock. But the newcomers did not consider that work.

Colonisers confiscated the natives' land, then employed them as labourers on the new, commercial farms. Taxes were introduced and money was needed to pay taxes. An education system was created to teach the natives to read and write so they could be employable, then receive salaries and purchase newly introduced commodities like cotton clothing, sugar, books and cooking utensils. And unless one was employable, and able to purchase these commodities and join the ranks of the advanced and modern, they were considered useless.

Even in developed countries, workers are persuaded to work more in order to earn more money so they can accumulate commodities which they hardly need and rarely use.

In Africa today, people who do not find salaried jobs roam the streets looking for others to hire them. They are unable to employ themselves. They consider employment for pay the only reasonably way of making a living. And if nobody employs them, they become useless even to themselves.

The Movement is trying to encourage people to self-engage themselves so they will become useful to themselves.

7) The need to raise public awareness of environment and development issues.

Many concerns about environment and development in Africa are raised from outside. Africans have been slow to recognise environmental problems, even in their own backyards. But by the time an outsider draws attention to the problems, the damage has already been done. Africans must educate themselves and become more conscious about environmental issues on both the

local and global level – but especially on the local level.

Environmental degradation should be a major issue in Africa. But apart from occasional political statements and documents presented for national and international conferences and publications, it isn't. And except for those who prepare the documents, few people appreciate the implications.

Political leaders, research institutions and the public need to be conscious of the impact the environment has in the daily life of nation. Without a sound appreciation, national policies which are counter-productive are initiated and implemented only to precipitate vicious circles characterised by widespread poverty, underdevelopment, malnutrition, famine, drought and further environmental degradation.

It is not as if decision-makers are not warned. But many warnings go unheeded. And illiteracy and poverty frustrate efforts to inform those who could benefit from the experience of others. For example, few Africans knew that many of their brothers and sisters across the continent were starving to death during the drought of 1983-85. Meanwhile, the Western press was flashing faces of dying African children on newspapers and TV screens throughout the world.

In many African countries, the environment is treated with neglect, destruction and over-exploitation. And while some of the needs being met by these practices are quite real, the way the environment is plundered to satisfy short-term needs is counter-productive and even suicidal.

Consider the man installing poles in a rural electrification project. He cuts down all trees and vegetation that are in his way. He destroys food crops, agroforestry trees, windbreaks in order to give a family electricity. And he adamantly refuses to detour his lines to avoid destroying even as he "develops".

Why does the Ministry of Agriculture and Health stand back and allow the Ministry of Power and Transport to destroy their work? There is a clear need for some liaison between government development projects so that we can have truly sustainable development.

African scientists understand a lot about environment-related changes taking place in Africa and throughout the world. But most Africans will only feel the impact of those changes when they become the victims. When they must buy water in the

markets (which some Kenyans already do), when their children die of starvation, or when they emigrate to a neighbouring country as environmental refugees.

African environmentalists and scientists have a responsibility to translate their knowledge into a language which people can understand. Then, they can begin to appreciate what the complex environmental changes taking place mean in their daily lives... now and in the future. This consciousness eliminates fear and desperation and replaces it with courage and action. Knowledge is power. Ignorance is not.

Awareness in the political and civil servant arena is also important. For even the most wonderful idea can only be translated into productive action by an enlightened government.

In the course of history, scientists and great thinkers alike have lost their heads to various guillotines or wasted away in jails because the power of day did not understand their new ideas. Everybody should have the freedom to exploit his/her potential for the common good. That's what liberation movements are all about. Whether they are freedom wars waged by guerillas or the liberation movement advocated by women, the aim is the same. They seek justice and freedom so that each person can realise his/her full potential.

Such freedom struggles do not seek equality of persons, which is impossible, but equality of opportunity. We each have a different set of abilities and qualities that make us unequal – but not inferior or available for exploitation.

Unless African talents are given a chance, Africa will only be able to utilise a small section of her brain power to solve her many problems. Can Africa learn from history? Do African political systems encourage new thoughts, ideas, initiatives, discoveries and inventions? When they don't, the price Africa must pay is too costly.

8) The need to involve the youth.

Young people, too, must become sensitive to the state of the environment. For this is what they will inherit. They must work to protect the environment, to fight against its total destruction. They are the ones who lose if the current development model is not sustainable. If it is not, they will have little to exploit and develop when they are adults.

Young people must not allow the economics of today to destroy their future. It is in their best interest to be actively involved in understanding and promoting sustainable development and new economic ideas that take people into consideration.

9) The need to save indigenous trees, shrubs and other flora.

Forests, and vegetation in general, are valuable resources that provide firewood, animal fodder, fruits, honey, timber, herbal medicines, building and fencing materials. We need to prevent extinction of our indigenous trees, shrubs, flora and fauna. We must conserve our genetic resources for their immense value in the area of medicine, food, water balance, and maintenance of the natural ecological balance.

Promotion of imported species such as eucalyptus and evergreens purely for reasons of rapid economic returns demonstrates short-sightedness and a certain amount of greed and selfishness. Many African wild fruits and berries, root crops and traditional grains have almost disappeared from our midst as we adopt imported crops. By doing this, we have made ourselves more willing victims of disasters like drought.

Indiscriminate cutting of trees, regardless how noble the reasons, jeopardises the future. And when indigenous forests and vegetative cover disappear, other parts of that biological system, like water and animal species, also disappear. And yet, most people think only of plants and animals they can use or exploit today. They do not think in terms of the entire ecological systems. It is time we did.

Kenyans, for example, continue to encroach on indigenous forests and catchment areas. And yet, Kenya has already reduced its forest cover to about 2.9 percent, even though much of the country is either arid, semi-arid or desert.

We tend to think that protecting our forests is the responsibility of the government and the foresters. It is not. The responsibility is ours individually. To fulfill this responsibility, we should start planting and protecting every indigenous tree and shrub within our reach – on our home compound, on our farm, in our village. There are millions of such trees and they would soon make woodlots everywhere.

Our forefathers and mothers knew how to live with their environment. We seem to have lost that wisdom. Our ancestors

offered their sacrifices to God under huge fig trees, but we have uprooted these trees to make way for tea and coffee plantations.

It seems as though God had created living cathedrals when He created the mighty fig trees, and guided His people to worship Him under them. But in modern times, we have built churches and cathedrals of stone and chose to worship Him there. We have even gone further and fully destroyed God's natural cathedrals with swift axe strokes.

Is it a wonder that Mother Earth has subsequently refused to bless us with her earthly blessings? Our fields are gradually becoming barren, our springs and swamps are drying up, our livestock have started to die, and we, ourselves, are but shadows of what we used to be... God-fearing, wise, just and prosperous.

10) The need to conserve water.

Kenya is a dry country as more than two-thirds of its territory is either arid, semi-arid or desert. And yet, on average about 500 mm of rain falls during most wet years, amounting to about 300,000 billion litres of water. According to a recent study by Dr. Gordon W. Brown, a Senior Consultant with Coratafrica (1988), 80 to 90 percent of this water runs off as floods or is evaporated and is lost to the atmosphere and oceans. Water should be conserved at the family level, using water tanks, small dams, cut-off drains, bench terraces and general vegetation.

11) The need to prevent desertification.

Some people imagine that desertification is an explosive phenomenon: one day, we will wake up to find the Sahara or the Kalahari desert advancing towards us like a huge flood. They also imagine that it can be stopped by a belt of trees. So they suggest that we plant trees in areas through which the desert will pass.

This is an over-simplification. Deserts will not descend on us. They are continuously being made wherever the ecological balance is upset and local biomass is reduced below a certain critical point. Once desertification begins, in our backyard for example, it propels itself and precipitates a vicious circle.

The Sahara will not come pouring over us. It is being created a little bit at a time by each household. This is why we must fight desertification at the family level.

For example, every observant Kenyan can identify this process either in his or her neighbourhood or in some part of the country. We all know of times when the rains have failed, we see the lakes in the Rift Valley drying up, we remember swamps, springs and streams that no longer flow. This is how desertification has crept into our country. It is no longer saying, "Hodi ! Hodi !" ("May I come in?"). It is already in and the big question is whether we are strong enough to force it out and keep it out.

12) The need to promote community participation in tree planting.

Third World countries share a common recent history of colonisation. In parts of Africa, they also share an equally recent history of Christianisation and cultural Westernisation. These events have brought about a lot of dynamism. They have also generated apathy and inertia among Africans who have learned to expect the "foreigner" to take care of everything and solve all the problems.

That may have been convenient during colonial days when development was meant for others. But now, Africans must participate in the shaping of their future and their destiny. It should be possible to empower people, encourage them to rediscover their age-old independence, self-governing systems and problem-solving ability. Development must be by the people rather than for the people. Development must support people, not infrastructures.

13) The need to make tree farming economically attractive.

Trees make money. Tree farmers can sell trees for fuelwood, fencing, charcoal production, and especially for timber. In the future, small-scale tree farmers should play a major role in the timber trade. Now, timber businesses harvest trees from indigenous forests, catchment areas or government-owned plantations. They are over-exploiting these resources.

Timber businesses should establish their own plantations on leased land. Tax money should go into rehabilitating and reclaiming marginal lands which are rapidly desertifying. And farmers should be encouraged to provide much-needed timber from their own farms.

It is time for tree farming to become a serious rural industry that makes economic sense to more farmers. Fortunately, farmforestry techniques are well-known and easy to transfer to

farmers. No technology will need to be imported for tree farmers.

14) The need to empower people and encourage them to discover their own wisdom.

Africans have survived for millions of years. Isn't it ironic that this "primitive", technologically backward group survived all these years, only to be threatened after they were discovered by "civilised" groups? Since it was not our technological backwardness that ensured our past survival, and technological advancement does not appear to be the answer to our future survival; there must be some old wisdom which needs rediscovering.

Before foreigners arrived on our continent, we knew something. What was it? What did we know of sustainable agriculture, of balanced diets to avoid malnutrition, of childrearing, of commerce, of politics? What was our attitude towards work, family, society, interpersonal relationships?

Africans need to go back to their roots with a new awareness and confidence and rediscover our old wisdom. We need to draw from our past experience and build on it. But we can only do this if we have the courage to rediscover ourselves and to liberate our minds from centuries of indoctrination.

15) The need to address the problem of poverty.

The current economic order encourages exportation of natural resources by poor, developing countries to international markets where they have no control of prices. It also encourage the exportation of finished goods by developed countries to international markets where they have virtually total control of prices. This puts an incredible pressure on developing countries which must import finished goods as well as service their debts with hard currencies.

Unless developing countries are allowed greater price control of their raw export materials and lower interest rates for repayment of debts, unless there is genuine technology transfer and empowerment of indigenous people, there is little chance that the economic order will change for the better. And it is this type of change that political leaders from developing countries are calling for. They realise, as the developed countries must realise, that without significant change in the economic structure, the environment cannot be saved.

The Reality of Kenya's Green Belt Movement

Now, more than ten years since it was officially launched, the Green Belt Movement of Kenya has realised many of its objectives. In many ways, the Movement is a success. It has created more than 600 tree nurseries in communities throughout the country. About seven million trees currently growing in Kenya were planted by Movement members. More than 50,000 Kenyans, mostly women, have been or still are actually involved members of the Green Belt Movement.

The Movement has never imposed itself on any community. Rather, it encourages participation. It relies partly on the radio and national newspapers to spread its message and responds to communities and individuals who show an interest.

There are some areas of Kenya, most notably in the dry, desert regions in the north and northeast, that the Movement has not yet reached. Limited resources and a lack of a strong interest from Kenyans in the area has kept us from these communities. Without the participation of the local community, a project will most certainly fail.

And it was probably wise that the Movement did not begin in the most difficult areas. No one supports failures. The Green Belt Movement has been able to gather support and provide hope precisely because it has been a successful campaign. With the

strength we've developed, we now have a better chance of succeeding in the more challenging areas.

The Movement is not run by professional foresters or agriculturalists but by self-taught, "barefoot" foresters. This has, perhaps, been a blessing in disguise. As Mnzava of Tanzania noted in his study, these field workers "went to the field without preconceived ideas". And they started with a certain frame of reference – their lives had always revolved around the natural world.

Maybe the success of the Movement is related to its flexibility. The Movement in Kenya has evolved along a trial-and-error track – adapting and adopting methods and ideas as we learned more. It developed around the needs, aspirations and abilities of the people involved.

Or maybe the Movement's success is simply because it was a good idea at the right time. But whatever the origins of its success, the Movement's achievements, challenges and constraints present more of the whole picture of the Green Belt Movement.

Achievements

1) Millions of tree seedlings have been produced by women's groups.

Through the 600 tree nurseries supported by the Movement, it has issued tree seedlings to over 30,000 households for private mini green belts and to over 3,000 public institutions for public green belts. The seven million trees planted have certainly benefited Kenya.

2) Many jobs have been created.

Hundreds of people – including handicapped and poor people and unemployed youth – have found jobs with the Green Belt Movement in both urban and rural areas. They have become advisors, nursery attendants and promoter/follow-ups. They receive small monthly allowances for their work of facilitating active participation by their communities. If not for the constraints, thousands of additional jobs could be created.



The *Acacia albida* is a good example of a species of indigenous trees that beneficial to the soil and sustainable.

Photo: UNEP

3) Indigenous trees have been introduced successfully.

As a result of an education system which has promoted exotic species for rapid economic return, Kenyan farmers have been in favour of imported tree species such as the eucalyptus (from the southern hemisphere) and the evergreens (from the temperate zones of the northern hemisphere). These species have been attractive because they produce fuelwood, timber and fencing material within a relatively short period of time.

But the economic and broader values of indigenous trees and other vegetation have remained unexplored. African scientists and foresters should enhance research and promotion of indigenous species in order to make our forests economically productive and sustainable.

In the meantime, the Green Belt Movement encourages deliberate reintroduction of indigenous tree species. It encourages

community groups to collect seeds and cuttings from indigenous trees and shrubs in their ecological zones. This helps these local species propagate and may save them from extinction.

When farmers come to community tree nurseries to collect trees, they have little choice but to accept the indigenous species. With some persuasion and constant education, farmers soon began to appreciate the short and long-term economic value of the indigenous trees and even begin to search for these species themselves.

The protection of indigenous trees and shrubs is a major part of the Movement's continuous effort to protect the genetic resources of Kenya's various ecological zones. These resources include plants as well as birds, insects and other animals. The Movement supports education on the interdependence of all life forms, including humans, in an ecological system. This interdependence is beginning to be appreciated by farmers and other Kenyans.

4) School children have established many public green belts.

From the very beginning, it was clear that the next generation must be better informed so that they make minimal mistakes. Consequently, the campaign was initiated through schools and the very first green belts were on school compounds. Since schools are public, the compounds served as demonstration plots.

It was the children who took the message home to their parents and eventually got women's groups interested. Thus, the approach through the schools served not only to inform the next generation but also to arouse the interest at home.

The children were involved directly: they dug holes, walked to the tree nursery to collect trees, planted them and took care of them for as long as they were in school. Upon leaving, the next generation of children took over. Today, some children are taking care of trees which were planted long before they came to school.

There are altogether about 3,000 schools which have responded to the green belt campaign. With an average of 500 children per school, this means that over one million children are involved in the campaign.

School children have been more involved in establishing woodlands (public green belts) than in establishing tree nurseries. In the next phase, the emphasis will be in tree nurseries so that they can also learn the process of seed collecting, tree nursery

management and care of small seedlings. They also need to be taught tree husbandry so that trees planted on school compounds can remain standing for many years.



Women and school children have been successfully involved in the establishment of green belts.

Photo: UNEP

5) Women continue to cultivate a more positive image of themselves.

It is difficult to know how the Green Belt Movement has specifically helped the status of women in Kenya. But the impact of the Movement in communities, where the efforts are most visible, has generally been positive. And because women have done the work, they certainly have not passed completely unnoticed. The success of the Green Belt Movement, therefore, is the success of the women of Kenya.

While these women may not be publicly recognised or rewarded appropriately, as usual, they are proud of their work and know it is for the common good of their community. Through the movement, they have been able to feel and to demonstrate their positive creativity and their ability to be assertive and effective leaders.

This awareness, by women and the rest of society, has taken place within the context of passing an important development and conservation message to the grassroots. It is an approach which has denied the opponents of women's liberation, per se, a forum for ridicule.

6) The public is more aware of the need to protect the environment.

As a result of a public awareness campaign, the environment is emerging in Kenya as a subject worth the efforts of academic institutions. Recently, President Moi ordered Moi University to introduce environmental studies in the university. Primary schools, secondary schools and teacher training colleges are incorporating environmental education into their curriculum – though not yet as a distinct course. These are all good signs for the future.

Similarly, many NGOs have taken up environmental issues, especially tree planting, and this has increased national interest in these areas. If the growing enthusiasm can be captured and properly utilised, Kenya could soon be on its way to recovery.

7) The Movement is spreading to other African countries.

Individuals from countries throughout Africa have contacted the Green Belt Movement about starting a similar movement in their own countries. The Kenya Movement has

developed training courses for these interested people. The one-month courses include both classroom and field work.

Thirty-five people from twelve African countries (Tanzania, Somalia, Sudan, Ethiopia, Zimbabwe, Botswana, Burundi, Uganda, Swaziland, Zambia, Malawi and Lesotho) have already attended the courses. The courses were financially sponsored by the United Nations Environment Programme (UNEP), based in Nairobi, and the African Development Foundation, based in Washington, DC.

8) The Movement is a successful example of a development project by the people, not for the people.

The Green Belt Movement of Kenya was conceived and is executed by local people. It was structured this way because experts and high-powered professionals tend to work for the people, rather than to allow the people to work for themselves.

While it's easier to do things for others, it does not empower people or encourage them to be masters of their own destiny. Instead, it disarms them – making them dependent and apathetic. They easily place their destiny in the hands of the experts and, when the experts leave, in the hands of God.

The Movement is a successful example of a truly community-based project. Although it was conceived by and is directed by women, both men and children have enthusiastically participated. And it is the participation of people that has made it work.

Why it Works

It is easier to describe the Movement's strategy, even to show how it works, than to explain *why* it works. People want to understand it as they would understand a foolproof recipe for a delicious dish. But there is no recipe.

The general design of the Green Belt Movement is based on sound judgment. It is simple, easy to explain and easy to demonstrate. But many things contributed to its success. Some of these are listed and explained below.

1) The Movement recognises the importance of immediate benefits.

Early on in its development, the Movement realised that most

people want to see economic return or another example of the success of a project within a short period of time. People will not work hard unless they can see immediate benefits. And that applies to rich and poor alike.

So the Movement identified short-term objectives – all of which are easy to realise wherever a successful tree nursery is established.

A challenge ahead of the Movement is to ensure that the realisation of immediate benefits does not become the end in itself. It must encourage people to continue to work towards the long-term objectives. Already, Green Belt leaders endeavour to motivate themselves and others to such ideals. They try to set an example and they publicly reward those who play an exemplary role in their community.

2) Kenya has a great demand for trees.

Communities need trees – and all the materials and benefits that come from trees. Therefore, the Movement has been concerned with, not whether trees would actually be planted, but whether they would be planted properly to ensure their survival.

3) The Movement has had adequate finances.

Although it has never had an excess of funds at its disposal, the Movement has managed to maintain its steady growth. Donations have ensured continuity and created confidence in the project. When the short and long-term rewards are certain, it is easier to have dedicated and honest participants.

And because the funds were given to the Movement in large sums, staff were able to concentrate on their work instead of on fundraising.

4) It has enjoyed freedom of operation.

The Green Belt Movement of Kenya is a NGO and has no bureaucracy. It keeps the things that work, and discards immediately the things that don't. This freedom is extended to the groups in the field. They can adapt and adopt their own methods with maximum flexibility. While they operate according to a guideline, they are free to work in ways they find productive. They know when their work is good because they get the rewards. When rewards fail to come, training and re-training opportunities are available.

5) The initiators have been committed.

Since its very beginning, the Movement has been run by very dedicated volunteers and staff. Their motivation, devotion, selflessness and desire to serve, even against many odds, has contributed ideas and management expertise that would have been impossible to buy, even if the Movement could have found the funds.

The public relations role – dealing effectively with so many people of different backgrounds and social and economic status, winning their confidence, persuading them, then maintaining contact – calls for much patience and personal restraint. And while this role is often ignored by those who evaluate the Movement it is a critical one. The Movement would not have survived without it.

Challenges and Constraints

Challenges are constraints, and vice versa. But they are both sources of dynamism within the Green Belt Movement of Kenya. The Movement would be boring without challenges. It is the rigours and the sweat that bring about overwhelming joy when difficult goals are attained. Without the pain of challenges, we would miss the joy of success.

Some of the major challenges and constraints facing the Movement today are discussed below:

1) Whether the Movement should continue to purchase seedlings from women's groups or encourage the groups to sell seedlings directly to the public?

Some critics argue that by purchasing seedlings from women's groups, the Movement creates expectations which may not be met in the future. Because the Movement relies on grants, most of which are foreign, these people worry that seedling production will not continue if the grants cease. They argue that it is more appropriate to encourage women to produce seedlings and sell them to the community. Then, the project will continue even after the foreign funds have stopped. Further, critics worry that if members of the public are given tree seedlings free, they will not value them and, therefore, will not ensure their survival.

The Movement sees things differently. We believe that the people who produce seedlings deserve compensation and that this is unlikely to come from the public. Much work is needed to properly prepare a nursery and it is mostly done

by poor, rural women – who are already over-burdened and can ill-afford extra work. They deserve compensation, even if the Movement is not able to afford as big an incentive as they deserve.

The people targeted to receive seedlings are small-scale farmers. In the past, they have not bought even the heavily subsidised seedlings offered by government nurseries. We cannot assume that they would be willing and able to pay a fair price to Movement nurseries.

Further, we have found that it is important to follow-up the farmers and institutions that receive seedlings and to encourage them to plant and care for them properly in order to ensure their survival. This cannot be done when seedlings are sold. And, unfortunately, sold trees have not done nearly as well as those given and followed by the Movement. The Movement makes sure that people don't forget the trees, that they plant them as soon as possible and continue giving them adequate care.

2) Whether the Movement should approach communities or wait to be invited?

To some, the Movement must be in every district and village or it is nowhere. But while being in all parts of Kenya is one of our objectives, achieving such a presence will take time. It is impossible to force participation from those who have yet to hear the call or are not sufficiently motivated. The community must participate if the Movement is to be successful in their area.

We have created a simple and persuasive procedure (described in Chapter 3) that interested people can use to encourage community involvement in their area. But, both the spirit and the body must be willing and able.

3) How can more handicapped people be involved in the Movement?

Initially, the Movement tried to engage handicapped people to assist school children in taking care of tree seedlings on school

compounds. However, when school communities were asked to recommend a handicapped person, they instead often recommended a poor parent who had failed to pay school fees and who looked upon the job as a great opportunity.

When a handicapped person was identified, he or she was often so withdrawn that he/she was unable to exert him/herself in front of the school children – who, unfortunately, were not kind. To effectively integrate handicapped people, the Movement must design and seek funding for a training program that will encourage and empower the handicapped and increase public awareness about their abilities.

4) How can the sense of accountability be improved?

By far the most challenging constraint is the lack of such social values as honesty, loyalty and accountability. The Green Belt Movement relies on the field staff to answer questions such as "How many holes were dug?" and "How many seedlings were planted?". These answers allow the Movement to keep track of and to evaluate tree planting campaigns, and they determine if the field staff will be paid their allowance.

We have found that the temptation to cheat on these answers is great. This may be partly explainable by looking at the society. Kenyans assume that every boss administering public funds is involved in some form of embezzlement. They assume that nobody is accountable. This thinking is reinforced by repeated media reports of Kenyans involved in embezzlement or other corruption. Unfortunately, a good number of these people are neither taken to court nor required to return the embezzled funds. This seems to suggest societal endorsement of such activities.

In February, 1986, the local newspapers reported that 20 Kenyan women were appointed to top executive positions in parastatal organisations because "men were embezzling public funds". While it was good news for women, it seemed to endorse what people already believed. And would women prove to be different?

Another misleading assumption in Kenya is that one's only loyalty is to one's tribe. This can be very discouraging for a person who is trying to be accountable and loyal to the Kenyan society.

On a hopeful note, the Green Belt Movement has created a checking system that has already reduced the amount of cheating. It also provides a more accurate figure on the rate of afforestation, which is, after all, the important thing.

However, the Movement prefers to work toward increasing people's understanding of the importance of afforestation through training and re-training, consultations, frequent visits and, eventually, a change of heart. When people accept the challenge to be accurate and honest with their records, it may be possible to pay more for seedlings and make tree-planting an effective income-generating activity. On the other hand, if false reports are sent in, payments are delayed and frustrations follow. These issues are emphasised and discussed with the field staff during training sessions.

5) Should the Movement involve large-scale farmers?

The Green Belt Movement has not made any efforts to reach large-scale farmers. This is because many of them do not use wood for their domestic needs. They use electricity for energy (except for a luxury fire from firewood or charcoal), their houses are permanent, and they use wire to fence their fields. Of course, their farm servants need firewood and building materials and may have to buy them from the landlords.

Still, some large-scale farmers engage in the timber trade and exploit the natural forests. Since many of these so-called "telephone farmers" are influential politicians, businessmen and decision-makers and enjoy special privileges, dealing with the negative impact of their activities on the environment is better left to governments and intergovernmental organisations. A small, local NGO can only work with the grassroots and try to make the best of the situation.

One day, perhaps the rich and the poor will agree that, even though they do so for very different reasons, they both destroy the environment. The poor farmer may cut his last tree to cook his food, sow his last seeds in over-cultivated, sterile marginal land, overgraze his area to the last tree and bush. Indeed he may "dig his own grave". On the other hand, the rich indulge in lifestyles characterised by over-development and over-consumption of the world's resources both in their own countries and in the rest of the world. The only difference between them is that the

rich have a forum upon which they can blame the poor for rapid environmental degradation.

6) Will the Movement become self sustaining in the near future?

Some people feel that the Movement should become self-sustaining, for example by selling seedlings to the public. We believe, however, that the Green Belt Movement should not be expected to sustain itself.

Africans still see the environment as a luxury issue for academicians and environmentalists. They have not seen the relationship between Africa's crises (i.e. widespread poverty, the food shortage and political instability) and the degraded environment. The concept of sustainable development, or development without destruction, still sounds foreign.

The Green Belt Movement envisages that Africans will, as individuals and as governments, decide to invest in the rehabilitation and protection of the environment through community efforts like the Green Belt Movement. The very successful reforestation campaign in South Korea was largely

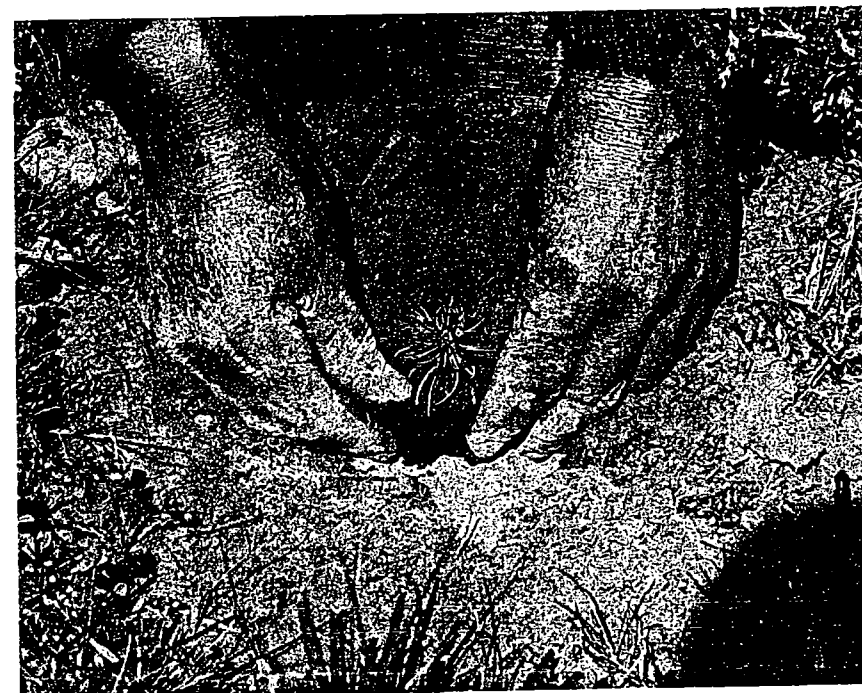


Photo: UNEP

dependent on government funds, incentives for the peasants and rapid electrification of the rural areas to cut down on the use of fuelwood. This and other projects have shown that people must be willing to spend their tax money on reforestation, reclamation, and rehabilitation of the environment in order for them to work.

Community reforestation projects can be carried out cheaply – especially if supplemented with human resources. And Africans ought to understand their problems well enough to utilise all available resources. But government and donor agencies should be willing to support such efforts with money since they are economically viable, that is, they offer employment and ensure sustainable development. While projects like these will not generate income enough to please classical economists, they can be seen as long-term investments of national importance. They are economics “as if people matter”.

7) How can the Movement respond to those who say they don't have enough land on which to plant trees?

People often complain that they don't have enough land. However, each family plot or compound has a higher capacity for trees than most people think. Trees can be planted along the compound's boundaries and along walkways and highways. Crops can be intercropped with fruit trees. By applying more efficient management, most small-scale farmers can plant many more trees on their land before reaching the maximum carrying capacity for trees.

People who live in urban areas or who have no land of their own should also plant trees, as well as shrubs and flowers, on the compounds where they live. Wherever one lives, even if only for a day, is one's home. Throughout the country, there are pieces of land lying idle. They should be planted with more trees, shrubs and food crops to improve the general environment and to enhance food production.

Planting even a single tree or flower is a good start. Thanks to those who went before us, many of us today enjoy a beautiful environment which provides shade, windbreaks, birds, butterflies and other wonders of creation. What shall we, in turn, leave for others? If everyone plays their part and cares for the environment of our countrysides, towns and cities, we will one day live in the type of country which most of us wish for but are not willing to work for.

8) How do we deal with the question of ownership of trees?

In Kenya, most small-scale farmers own their own land and therefore they own the trees they plant on that land. The same should be true for trees planted on public land such as school or church compounds. These trees should belong to the public. Trees on communal land should be owned under the same rules and regulations which govern communal ownership of property in communities where land is owned communally.

The basic principle to remember is that while development should be *by* the people, rather than *for* the people, few people, if any, will work for nothing so that others benefit. Therefore, people should feel that they own the trees they plant.

Although women work on the land, and even accept that it is their responsibility to do so, they do not own it. Since the introduction of land consolidation and registration, land ownership shifted so that instead of a piece of land being a family estate, it now belongs to one man who was issued a title deed. Many women are not fully aware of the significance of this until they have to seek legal justice.

Suddenly, these women realise that the new law (based on English law) recognises their husbands as the sole landowners. But the majority of rural women work on the land, produce food and carry on with their traditional roles without being bothered by the inherent injustice imposed on them by the new law. So they do not consider that the trees they plant on “their” land do not actually belong to them, any more than the food crops they plant on the same land.

Most of these women still live under the shadow of the traditional law and sense of justice and as long as they do not need the new law, it is irrelevant.

Into the Future:

Replication of the Green Belt Movement in other parts of Africa

As the Movement continues to develop, it has begun to spread. A new phase was launched in November, 1986 that offers training courses for interested people in other countries of Africa.

Africans involved in similar efforts in their own countries, who wish to initiate Green Belts can now learn from our experience. The training project is conducted both in the classroom and in the field. The first week is spent on the "academic" and theoretical aspect of the environment. During this period, lecturers discuss such issues as desertification and its causes, how to identify priority needs and implement a project to overcome those needs, environment education and development issues which are related to a degraded environment.

During the second week, participants are sent to rural areas to work with women's groups who operate Green Belt tree nurseries, so that they can experience the procedures and techniques used in the actual implementation of the Movement.

During the third week, the participants combine lectures and demonstrations, visits to education centres, etc. They meet people working with other NGOs for the sake of sharing the experience and approaches.

During the fourth week, the participants conceive their own tree-planting projects, plan them, set their goals and describe how they would implement them when they are back in their own countries.

The initial three sessions of Green Belt training courses were sponsored by UNEP bases in Nairobi, Kenya and the African Development Foundation (ADF) based in Washington DC, USA. The cost was US\$1,500 per person (excluding travel costs). Thirty-five people from 12 African countries – Tanzania, Uganda, Ethiopia, Botswana, Somalia, Burundi, Sudan, Zimbabwe, Malawi, Lesotho, Swaziland and Zambia – participated in these courses.

The courses were carried out in 1986 and 1987 and the reception was excellent. The participants were highly motivated at the end of the course. A follow-up evaluation will soon be conducted by UNEP. Depending on the success of this first initiative, more courses will be conducted in the future.

How to Spread the Conservation Message to Rural Communities in the Developing World

In our ten years of field experience in Kenya, we have developed a procedure for spreading the conservation message that has produced good results. The elements of this procedure, listed below, may also work in other developing countries.

1) The message should respond to a local need.

The majority of people in developing countries are poor and concerned about basic needs like food, water, firewood, and clothing. Conservation, then, cannot be presented as a luxury issue. The Green Belt Movement introduces the idea of environmental conservation through trees because trees meet many basic needs of rural communities. So we encourage small-scale farmers to plant trees to meet their own needs. As we work with them, we try to help them appreciate that trees also do a lot for their communities and country.

2) The message must make good common sense.

A conservation project such as protection of genetic resources is

very important to conservationists. But how do you explain its value to members of a women's group, the majority of whom are illiterate?

We explain that trees which have survived in a certain part of the country since time immemorial are better suited for our environment than foreign trees recently introduced by foreigners because they did not appreciate the value of our indigenous trees. We often ask, for instance, members of a women's group to list the various ways they or their parents use the local trees – perhaps as medicine, for pest-resistant wood, for traditional ceremonies, etc. This type of discussion brings indigenous trees back into the women's daily lives and helps to make the environment seem a real and living part of their communal life.

Often, the discussion expands to consider birds and other animals they no longer see because the trees they used to rely on for food or shelter have disappeared. They begin to appreciate the fact that their children may never see those trees, animals and birds. With the re-discovery of the importance of trees and plants, the women and eventually the rest of the community will agree to re-introduce indigenous trees and shrubs on their plots.

3) The project must be honest.

Many rural communities have noticed how fast individuals accumulate wealth once they are put in charge of a project. There is little trust, then, in projects run by governments or "aid" groups. But if a community feels that a given project is honestly run and designed to specifically benefit them, they will support it. The less exposed a rural population is to modern lifestyles and values, the more they appreciate and expect a high sense of moral justice and fair play.

4) The project should patiently work to motivate communities.

Working with rural communities and trying to spread a message like conservation can be very frustrating. It calls for much patience. The message must be presented slowly, simply and repeatedly. This is not easy because many of us are impatient and very conscious of time. We want results now. We believe that we have many other important things to do and we feel the rural communities are too slow in understanding and producing



A successful tree nursery in Congo.

Photo: UNEP

tangible results.

Spreading the conservation message is a slow process – it is not easy to motivate rural communities. Motivation is nourished by a strong commitment to the message, rather than to financial or other rewards. But if they eventually believe in your own motivation, community members will begin to walk along with you and, subsequently, to work on their own for the message. And when enough people are working for the message rather than for the primary benefits, success is realised.

5) Ensure that the project will offer some short-term successes.

It is important for people to see some success stories within a reasonable period of time. Developing both short-term and long-term objectives will create momentum for a project. When a

Green Belt nursery is set up, for example, the first crop of tree seedlings are released to the community within three to six months. The women's group responsible for the nursery receives compliments and gains respect from the community. While members of the community are paying attention to the short-term objectives, the long-term objectives are realised, almost by chance.

6) Try to reach the decision-makers and the powerful while you reach the rural communities.

Politicians and decision-makers in the developing world are the rich, the elite and the powerful. Their lifestyle is expensive and in many instances the plundering of the environment is either being done by them or for them. Many pay only lip service to conservation. However, it is impossible to effectively take the message of conservation to the rural communities without the support of the decision-makers. They must realise that it is to their benefit if the masses work to prevent desertification.

The message should be taken to the powerful and to the communities almost simultaneously. Even though it may take the decision-makers a long time before their support is more than rhetoric, a verbal commitment to the project is essential. The rural community, too, will be even more enthusiastic about the project if their leaders are supportive.

7) Create a forum for continuous dialogue.

In taking the message to rural communities, the teachers must also become the pupils. We all, whether leading a project or participating in one, have much to learn from each other. The conservation message should start with providing basic needs and slowly become personalised so that each member of the community accepts it. The dialogue must continue, therefore, until we all believe that the protection of our world is for the benefit of all.

How to Start and Run a Green Belt Movement

Many people have asked how they can start a Green Belt Movement in their country or region. That is not an easy question to answer. To achieve its objectives, the Green Belt Movement developed, over time, a strategy which appears both simple and complicated. The simplicity is misleading – as anyone who has tried to establish a green belt will admit. The secret is the blending of all the “spices that go into the pot” and the perfect mix comes with experience.

However, this chapter attempts to explain how the Green Belt Movement in Kenya operates and offers the steps that individuals or groups in Kenya take to create a green belt. The procedure outlined here is not a blueprint that can be fully applied in other situations. It is an explanation of a system that works in Kenya and, with adaptations, it can serve as a guideline for other areas.

It is a step-by-step procedure that is addressed to the potential initiator of a green belt. An initiator is assumed to understand the Movement. This person may have participated in the Green Belt Movement training workshops or may just have heard about the

Movement and wishes to initiate green belt-like tree planting activities.

Step 1

Information Dissemination to Raise Public Awareness and Establish Contact With a Group

The majority of people you, the initiator, will work with are probably ignorant about issues like environmental degradation and conservation, sustainable development, tree nursery management and even tree planting. They may have experienced *symptoms* of environmental degradation like desertification gulleys, malnutrition, diseases and drought: but they are likely to be ignorant of the causes.

Many people consider environmental calamities to be the work of God and believe they are powerless to affect them. Such calamities, however, are not acts of God, but of humans... of those very powerless victims. People invite calamities when they make decisions based on bad development practices. Some of the agricultural systems adopted by farmers are forerunners to desertification and famine. When pastoral people continue to dig wells in dry areas, they encourage overgrazing which leads to death. But these people are not aware of these connections between their actions and the problems.

People are used to recognising the symptoms, not the causes of a problem. Indeed, many national and international development efforts are directed toward the symptoms of a given problem rather than the primary causes. The people you work with need to differentiate causes from symptoms. They need to learn that prevention is better than cure.

Your challenge is to raise their awareness and help them recognise their role in harmful environmental practices. Subsequently, you need to empower them and move them to act to rectify the situation.

Before the Green Belt Movement can be introduced into an area, therefore, you need to organise an information dissemination campaign to raise public awareness of the primary causes of known deprivations. This campaign can be carried out using popular media – newspapers, television, radio. It can also

be spread through word of mouth. It should be to translate environmental concerns into a language the target group can understand. The initiator should convince these people that they should at least establish a tree nursery as starting point toward breaking the vicious circles which entangle them.

Step 2

Forming a Group

During the period of information dissemination, it is necessary to encourage the interested people to form a group. Some individuals will be tempted to work on their own so that they can derive the most benefits. But there is strength in number. Besides, it is more tenuous to work with thousands of individuals at the production level.

Nevertheless, groups should be formed freely – without coercion. This is absolutely essential to the cohesion and endurance of the group. In Kenya, women commonly form groups and this reduces some of the work in initially establishing a Movement. Groups also ensure greater community participation.

It is important for the group to appreciate that it has a lot of work in front of it – preparing the nursery, searching for seeds and cuttings, transplanting seedlings, supervising work at the nursery site, completing forms and returning them to the headquarters office, carrying out follow-ups.

One of the members, and this could be a teacher or a child, should be able to read to help translate the information and forms sent from headquarters. This way, the educated members of the community share their expertise with others.

Step 3

Locating a Tree Nursery Site and Registering the Nursery

Once a group is formed, it needs to look for an appropriate piece of land for its green belt. Preferably, this should be public land. It is advisable to work closely with community leaders such as the

local chief, a councilor, member of Parliament, church pastor or other local leaders. The group should approach the leader who can assist it in getting a piece of public land such as a school or church compound or a marketplace.

If it fails to find public plot for the nursery, the group may have to accept an offer from one of its members. However, if you use a member's plot, the work may not be as successful since the land is private and people will not be free to work on the nursery or to use the trees. Also, a conflict may arise if the group receives tools. The owners of the land may think the tools belong to the homestead and not to the group.

After a piece of land is located, the group contacts the Green Belt Movement headquarters, indicating that it is ready to establish a community tree nursery. The group will receive a registration form which it completes and returns to the headquarters office.

At this stage, the group needs seeds. The Kenyan Movement does not give seeds away because one of our objectives is to make tree planting as common as food crop planting. Therefore, we encourage groups to harvest and collect seeds from available trees. This empowers the group by helping it develop its own techniques of seed selection, processing and sowing.

The group should plant trees which farmers in their area are willing to plant, but it needs to educate its members and others about the value of both indigenous and fruit trees. Unfortunately, the heavy promotion of exotic (imported) types of trees has been effective and farmers now prefer these species to indigenous trees. Farmers should be encouraged by the group to return to the traditional practice of intercropping indigenous and fruit trees with food crops.

Step 4

Physical Establishment of a Tree Nursery

Preparing the nursery site could take a lot of work – digging trenches, making terraces, laying seedbeds and building fences. The group can do the work itself or, preferably, encourage cooperation by the entire community. This cooperation can be facilitated by local leaders.



Green Belt Member checks the progress of her seedlings.

Photo: Green Belt Movement

Before starting, the group should seek the advice of a local expert such as a forester or agricultural officer who should explain the best way to prepare a nursery and, if possible, be around when the preparation is done. It is very important for the

group to learn how to prepare the nursery properly because this will influence the success of the entire project. Without burdening the group with unnecessarily complex procedures, the officer/s should teach basic tree nursery techniques which the group members can quickly adapt to their abilities and needs.

The nursery may receive plastic bags to hold the seedlings, but in the meantime, the group should collect cans, milk packets and any other container they can use. Members should recycle containers by carefully removing the seedlings without destroying the containers.

At this stage, group members should be informed that the Movement might engage trained facilitators to assist them at a later stage. Facilitators are occasionally called upon for consultations, training and retraining. These people include supervisors/advisors, nursery attendants, promoters and follow-up people. They are trained in Green Belt procedures and objectives and are subsequently attached to specific tree nurseries.

They are an important link but they can also be a constraint if they are not diligent, motivated and honest. These assistants are expected to facilitate operations and maximise production. They are paid an allowance in appreciation of their work, but they must be seen as assistants and advisors rather than employees and/or bosses.

If these people are efficient and honest, the group will succeed in most areas. Otherwise, there will be many frustrations and disappointments which may lead to the failure of the tree nursery. These facilitators maintain a lifeline between the field and the main office.

When the nursery is finished, the group is ready to start planting so they can sell seedlings to the Green Belt Movement. The Movement buys the seedlings to encourage groups to produce healthy seedlings and to help make tree production an income-generating activity. In the future, the groups may have to sell the seedlings directly to other members of the community. For now, payment is a token of appreciation to those people working so hard to green the countryside.

After all, the major objective of the Movement is not to generate cash, but to educate communities on proper and effective strategies for environmental conservation in general and reforestation in particular. The Movement is facilitating self-education and raising consciousness on environmentally-sound

lifestyles. In the meantime, the small amount of cash is a significant motivating factor.

Step 5

Reporting on the Progress of the Nursery

Once the nursery is operating, the group is ready to report to headquarters on the status of their nursery and, if necessary, seek assistance. Using Form V, members report on the number and types (indigenous, fruit or imported) of trees at the nursery and how many seedlings are ready to be issued to the public.

This form is intended to strengthen the work of the tree nursery group. Staff members at headquarters study the completed form and are thus able to monitor the progress at the nursery and to recognise actual or potential constraints the group may face. They can then offer any needed advice or assistance.

Step 6

Promotion of Tree Planting to the Community

Group members and any Green Belt Movement Staff attached to the group should promote tree planting in the community. They should discuss different needs of the community – like firewood, building materials and prevention of soil erosion – and explain how trees can be used to fill these needs.

A list of those community members who have agreed to plant trees or to dig holes in preparation for trees is sent to headquarters. These people will receive information on ways to plant seedlings to increase their chances for survival. We discourage them to plant trees for the purpose of trimmed hedges. The practice of trimming trees after only three meters is uneconomical, especially at this stage in the Green Belt Movement. As efforts to improve the environment spread to all members of the community, hedges will become another important way of improving the countryside or neighborhood. Now, however, the major objective is to make sure the ground is properly prepared and people are willing to do all that is necessary to ensure that each tree will survive and provide vital services to the community.



The author, centre, assists a group establish a green belt.

Photo. Green Belt Movement

Step 7

Establishment of Public and Private Green Belts

"Green belts" are woodlots established by planting trees on a piece of land. If the woodlot is on a school or church compound, in a marketplace or along public pathways and roads, it is regarded as public. If it is on a private farm or compound, it is private.

Public Green Belts

Any school, church or public institution that wishes to join the Movement by creating a green belt, writes to the headquarters office or contacts the local Green Belt Movement staff. They will then receive a form they can use to collect tree seedlings from the nearest nursery. The completed form is returned to the office so the green belt is registered and can be monitored. Further reports will periodically be sent to the institution and further support will be based on completion of these forms. When green belts are established on school compounds, the organisers are encouraged to fully involve the students. This supports one of the Movement's major objectives, to involve children in environmental conservation through the practical activity of tree planting. Each child should attend to a tree or two – providing

water, building shelter and generally taking care of their tree/s.

To improve its chances for success, organisers should form a green belt committee. Members should be elected by the community. They should be competent people who can convince others of the need to promote sustainable development in the community on a *harambee* basis. The committee will supervise work, funds, tools and workers as well as provide the necessary leadership. A strong committee is vital to the success of the green belt. We have found that wherever the committee was weak, the green belt project has failed.

When at least 1000 trees have been planted, the woodlot is considered a public green belt. The committee then identifies a person, preferably a handicapped person, from the community to assist them in caring for the green belt. This person is the Green Belt Ranger.

Once a public green belt is established, the Movement provide garden tools and water tanks. These serve as a token of appreciation for the work done and a symbol of the mutual commitment. The tools are initially used by the rangers but eventually become the property of the school or other public institution.

Possible Problems for Public Green Belts and How Communities Can Deal With Them

Livestock eating trees – inform your Chief or sub-Chief and ask them to deal with the owners.

People uprooting seedlings – inform Chief or other community leaders to intervene.

White ants eating seedlings – contact your local forester or agricultural extension officer for their advice.

Moles damaging trees – trap the animals and release them in the wild (if someone in the community knows how to trap) or contact the forester or extension officer.

Children playing nearby – protect the trees with shelters so games will not destroy the trees.

Once people see the importance of trees, they will be willing to protect them and give them a chance to grow and serve humankind. And when they realise that trees on public land belong to the entire community, they will feel the need to take part in their protection.

Private Green Belts

A private farmer who wishes to join the Movement by planting trees, writes to the office or contacts the local promoter. As in the case of a public green belt, the farmer gets a form and then gets his seedlings from the nursery. The farmer must arrange transport from the nursery to the farm. This is sometimes easier if a few farmers get together. Unlike groups who organise public green belts, individual farmers do not get tools from the Movement. But we have found that farmers are satisfied with the free seedlings.

Individual farmers have generally been appreciative of the work of the Green Belt Movement and very concerned for trees. However, in our effort to be self-sustaining, we may not be able to continue to give seedlings to farmers free-of-charge. This is under consideration.

Step 9

Planting Trees and Follow-up

Now the seedlings can be placed in the earth. When they have been planted, another form is sent to headquarters. Now, the follow-up part begins. Individuals and groups keep track of the seedlings and send the information to the main office. Within two to three months after planting, information on survival of the trees should be gathered.

Step 10

Payment by the Green Belt Movement

From all the forms sent to the Green Belt headquarters so far, staff will compare and evaluate the information and prepare a cheque for the surviving seedlings. The Green Belt group should either have a bank account or consult with their Chief on how to get the cheque cashed. From the first step to the last, the process will take at least six months.

Of course, it isn't finished at this point. To continue their success, the community group must provide education and training throughout the life of the project. Much care is needed for the tree, not only at the nursery site but also in transportation and finally in planting and caring for the seedling.

Conclusion

Only time will tell if the Green Belt Movement has made a difference. But while so many dark images of Africa are presented to the world, while development strategies, national organisations and leaders are presented as inadequate: the Movement is at the least a positive effort coming from the people to affect their world.

The Movement will continue its activities in pursuit of both local and regional objectives. It will follow the same strategy, which is continuously adapting and evolving with our experience. We know that while the results to date are impressive, the challenges are still enormous.

The healing of Africa is still only a dream. But, like others before us who have faced huge challenges, we believe that we shall overcome.

It is in that faith we wrote this booklet. We hope it will inspire others to accept the challenges and join us in taking action.

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you at your convenience.

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The Environment Liaison Centre International (ELCI) is a coalition of over 250 NGOs worldwide working for sustainable development. Since its establishment in 1974, the ELCI has been working to strengthen the linkages between environment and development NGOs, between Northern and Southern NGOs and between NGOs and UN Agencies – especially UNEP. The ELCI publishes the bi-monthly magazine, ECOFORUM as well as other publications. It also has a unique database of NGOs and their activities around the world.

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