

THIS BOOK is a critical evaluation of the new US\$8 billion plan to save the world's tropical forests. The plan called the Tropical Forests Action Plan is funded by the World Bank, the United Nations Development Programme and the US Agency for International Development.

Although the Plan calls for the protection of what remains of the tropical rainforests worldwide, in reality, this scheme will cause serious negative impact on the forest ecology and the people who depend on it.

The Plan's major emphasis on industrial forestry will only benefit the rich First World countries whilst leading to the further impoverishment of Third World communities and tribal peoples, and the wholesale destruction of the natural tropical forests.

Note on Author:

Dr Vandana Shiva is the Coordinator of the Research Foundation for Science, Technology and Natural Resource Policy based in India.



THE WORLD RAINFOREST MOVEMENT is a grouping of organisations and individuals concerned about the destruction of the rainforests worldwide and involved in activities attempting to reverse this process.

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FORESTRY CRISIS AND FORESTRY MYTHS

A Critical Review of
Tropical Forests :
A Call for Action

VANDANA SHIVA



WORLD RAINFOREST MOVEMENT

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Tropical Forests :
A Call for Action***

** Tropical Forest: A Call for Action*
is a Joint Report of The World Bank, UNDP, and
World Resources Institute.

VANDANA SHIVA



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F O R E W O R D

A new US\$8 billion plan is being initiated by the World Bank and other agencies, to save tropical forests. However a careful study of this plan raises the fear it will cause even more damage to the forests.

To win support for the plan, non-governmental groups are being co-opted to support it. But in reality the plan will probably cause more harm to forest dwellers and tribal peoples, if implemented.

The plan is elaborated in 'Tropical Forests: A Call for Action' a report of an international task force convened by the World Resources Institute in Washington.

The World Bank, the United Nations Development Programme, and the US Agency for International Development have financially supported the project.

The ideas, the data and the money for the Tropical Forests Action Plan (TFAP) all come from the World Bank and its related organisations.

Yet, it is made to 'look like a new initiative borne out of increased awareness of the crises of tropical deforestation and desertification when it is in actual terms, merely fresh legitimisation of old programmes of commercial forests' says Dr Vandana Shiva, Coordinator of the Research Foundation For Science-Technology And Natural Resource

Policy in India.

Dr Vandana Shiva was asked by the World Rainforest Movement (a coalition of environmental and scientific groups involved in rainforest issues) to prepare a critique of the TFAP. The critique is now published as this book. It finds many disturbing features in the TFAP and reaches the conclusion that the US\$8 billion programme being proposed in the report has the potential of causing further disturbance to the forest ecology and having grave negative consequences on the lives of people living in the surrounding environment.

We hope that this critical review of the TFAP will lead to a serious re-evaluation of the action programme and the formulation of an alternative plan which is people-oriented and ecologically sound.

We, therefore, appeal to all concerned individuals and organisations to reject the TFAP for its anti-people, anti-ecology and profit-making bias.

Meanwhile, the World Rainforest Movement will be preparing an alternative People's Action Plan for the rainforests. This will be made available to the public when it is completed.

Khor Kok Peng
Coordinator
World Rainforest Movement

PREFACE

"Tropical Forests: A Call for Action" is a report of an International Task Force convened by the World Resources Institute, the World Bank and the United Nations Development Programme. The World Bank, the United Nations Development Programme, the U.S. Agency for International Development, have financially suggested the project. Under this project US\$8 billion will be spent to 'save' the world's rainforest and out of that sum, US\$1.6 billion would be invested in forestry and related agricultural projects in at least 56 developing countries every year. The proposed actions and investment needs incorporate recommendations of the joint UNDP/World Bank Energy Section Assessments and reflect priorities as described in World Bank staff appraisal reports. The ideas, priorities, data and money for the Tropical Forests Action Plan (TFAP) all come from the World Bank and related organisations. The "successful" forestry projects cited in TFAP are all World Bank financed projects which have been seriously criticised at the local level for increasing the deprivation of the rural poor and increasing the vulnerability of tropical ecosystems. A serious attempt at making a Tropical Forest Action Plan based on local participation should have taken the feedback of these social and ecological impacts of World Bank forestry projects. Instead, the

present plan extends forestry activities in the same disastrous directions that World Bank has initiated and encouraged in the past.

The TFAP has several major flaws. Firstly, it fails to take into account the role of international development financing in the destruction of tropical forests through dams, mining and resettlement projects and puts the blame of destruction exclusively on the poor. It is biased against the poor, in both form and content. Secondly, the Plan is an extension and expansion of ongoing World Bank forestry projects which have had serious negative social and ecological impacts. These projects are based exclusively on the 'returns on investment logic' and prescribe the large-scale transformation of natural forests as well as prime agricultural lands into commercial plantations of industrial wood. The Plan has a commercial and industrial bias and is indifferent to human and ecological concerns. Thirdly, the different projects under the headings of 'agroforestry', 'watershed' and 'industrial plantations' all share this commercial and industrial bias. The Plan is misleading in both nomenclature of projects and investment profiles. It takes forestry away from the control of communities and makes it a capital-intensive, externally-controlled activity. Fourthly, the Plan has no space for the rights of indigenous peoples who have lived in tropical forests since time immemorial. It totally neglects the economics of tribal and peasant life based on natural forests and

food production and focusses exclusively on the economics of production of commercial wood.

Ironically, in July 1987, a drama was enacted in Bellagio, Italy (yes, the Bellagio Study and Conference Centre of Rockefeller fame) at which "local participation and the role of NGOs was a major issue on the agenda". At Bellagio, International NGOs like the World Resource Institute (WRI) and the Environment Liaison Centre (ELC) claiming to represent the whole world's Environment Movements sought endorsement and approval from funding agencies, and governments, for funds to be approved and channelled into the various project proposals contained within the TFAP. The World Bank was requested to endorse World Bank projects and to finance a forestry action plan it had conceived and propagated. "Top down" Planning from Washington was laundered into a "bottom up" plan through the farce at participation in Bellagio.

Turning "top down" into "bottom up" had been rehearsed in three regional meetings convened by WRI and ELC (financed by World Bank/UNDP??) in Latin America, Africa and Asia. Following the Latin American Meeting, Magda Renner, President of Friends of the Earth (ADFG) Brazil in a letter to the World Resources Institute stated about the TFAP that "this plan - like so many others - was elaborated by persons alien to the reality of the local problems".

In response, Gus Speth, the President of WRI wrote

"We are aware that the report has shortcomings, and we appreciate your comments in this context. Most international environmental programmes originating in the North have tended to be top-down rather than bottom-up. We hope that our follow-up efforts can overcome these deficiencies and reverse that order somewhat in the implementation of the action plan.

A major focus is to help establish a constructive dialogue between governments, development assistance agencies and NGOs. To this end, we are working closely with The Tree Project in the U.N. Governmental Liaison Office. We have been favourably impressed by The Tree Project's work with NGOs in forestry. We are also working hard to encourage the aid agencies, particularly The World Bank, to promote this effort."

At the Bellagio Meeting, World Bank's top-down, capital-intensive plan had been packaged into a decorative folder of a "participatory" model in which NGOs and governments will "request" the Bank to provide them financial assistance for a plan it had conceived and financed in the first place. From the image of being the imposer of capital-intensive, people-displacing, ecologically destructive plans, the World Bank will acquire the new image of a benign money lender "responding" to the requests of Third World Governments and Third World people. Citizens working at making the World Bank more accountable to its human and environmental responsibility will have to develop a new ability to discriminate between international NGOs organised by the World Bank and other international agencies, and NGOs reflecting

the voice of local grassroot movements and struggles. They will have to see the difference between the participation of a peasant of the Third World and the participation of Presidents of pulp and paper factories (the TFAP had a Vice-President of the Paper Industries Corporation of Philippines on its Task Force and he is taken as faithfully representing local reality and local needs.

Environmental groups will have to see that forestry, seen exclusively as a sectoral/industrial/commercial activity can itself be a threat to tropical forests. As Madga Renner has stated:

"The underlying principles of the Call for Action Plan reflect and reinforce the present dominating "Weltanschauung": economic returns are allowed to overrule social and medium or long-term ecological imperatives. What is technically feasible and economically rewarding to the entrepreneurs today, is propagated as progress and development.

If we want to save TRFs (Tropical Rain Forests), the origin of many of our food-stables, medicinal plants and domestic animals, the genebanks for food security in the future, the natural protection against climatic excesses in the North and the South, then we have to join efforts to leave the forests and its native inhabitants in PEACE NOW, from TODAY on!

Only based on a holistic approach and after thorough scientific research

and studies can we think of managing the 'hylea' to our own advantages and profits without irreversibly destroying it.

In the meantime, let us plead for a truce, let us now declare TRFs the 'COMMON HERITAGE OF MANKIND', let us appeal to world leaders and development agencies' representatives for a World Tribunal to judge global ecocrimes.

Those who are, in their own immediate interests, be it in the name of progress and development or in the name of national security, demolishing Tropical Rainforests today, have to be held accountable for the consequences of their actions.

Coming back to the Call for Action Plan, and summing up, the question is: What is the ultimate goal of this or any other similar plan? Is it to preserve the forests and their inhabitants or is it primarily aimed at industrial/economic growth?

Once this point is clearly settled, we can decide on how to act as regards TRF policies and try to overcome the inevitable constraints all independent associations have to face."

Vandana Shiva
Dehradun, India
July 1987

CRITIQUE OF "TROPICAL FORESTS: CALL FOR ACTION"

SUMMARY

1. The Tropical Forest Action Plan fails to take account of the role of international development financing in the destruction of tropical forests through dams, mining and resettlement projects and puts the blame of destruction exclusively on the poor. It is biased against the poor, both in form and content.
2. The Plan is an extension and expansion of ongoing World Bank forestry projects which have had serious negative social and ecological impacts. These projects are based exclusively on the "returns on investment logic" and prescribe the large scale transformation of natural forests as well as prime agricultural lands into commercial plantations of industrial wood. The Plan has a commercial and industrial bias and is indifferent to human and ecological concerns.
3. The different projects under the headings of "agro-forestry", "watershed", "industrial plantations", all share this commercial and industrial bias. The plan is misleading both in nomenclature of projects and investment profiles. It takes forestry away from control of communities and makes it a capital intensive, externally controlled activity.

4. The Plan has no space for the rights of indigenous peoples who have lived in tropical forests since time immemorial. It totally neglects the economics of tribal and peasant life based on natural forests and food production and focuses exclusively on the economics of production of commercial wood.
5. The Plan, if implemented, will be a threat to the survival of natural forests and of tropical farmland and the tribals and peasants who draw their sustenance directly but prudently from forests and land.
6. The Tropical Forest Action Plan should be resisted by all individuals, institutions and movements who are committed to the protection of tropical forests and the rights of tribals and peasants of the Third World. Reflecting and voicing the needs of these marginalised groups, an Alternative People's Action Plan should be prepared urgently.

CHAPTER 1

THE CRISIS IN TROPICAL FORESTRY

The Crisis in tropical forest resources is today recognised as the world's most severe ecological crisis, having long term impact on the potential for economic development. This is so because with the genetic resources of tropical forests is linked the food security of the entire world and with the ecological stability of tropical forests is linked the economic well being of the majority of the world's people who live in the tropics in what is called the Third World. These Third World countries, the erstwhile colonies of the industrialised countries, provided natural resources on which their industrialisation and affluence was based. The reckless exploitation of the tropical forests among other natural resources, provided the material basis for the industrialisation and economic growth in the colonial and post-colonial periods. Today, the cumulative impact of this reckless over-exploitation has created a critical and nearly irreversible situation of ecological degradation. The famine in Africa and other arid regions has turned the world's attention to the high ecological and social costs of tropical deforestation. It has become the central

concern for governments, development agencies and ecology movements all over the world. Yet, the focus on tropical deforestation and the resulting reversal of the process does not automatically translate into the protection of tropical forests and those who depend on them for survival. As long as misconceptions about the nature of tropical forest ecosystems prevail, and as long as the causes of tropical deforestation are wrongly located, the degradation cannot be arrested. As a result, tropical ecosystems will continue to be threatened.

Normally forests are identified only with the economy associated with commercial industrial use of forests. The crisis of tropical forestry needs to be understood in the light of all the three fundamental economies associated with the forests described as follows:

- (a) The Nature's Economy of the essential ecological processes,
- (b) The Market Economy of industrial-commercial demands.

The Nature's Economy of the essential ecological processes generates a demand on the products of the forests in terms of the maintenance of the stability of the soil systems and hydrological balance of the forest ecosystems. For example, the production of humus is essential for conserving soil and water. In the ecologically sensitive

ecosystems like the upland watersheds, this economy becomes the most important one and should get the necessary priority in forest management. Neglect of this economy in upland watersheds will mean a huge amount of negative externalities to the national exchequer as relief for regular floods and drought, which are easily described as nature's fury, pushing the ecological basis of such developments to the background.

The Survival Economy of basic needs satisfaction reflects the requirement of forest biomass of the people living inside and in the vicinity of the forests in terms of fuelwood, fodder, fruits, nuts, green manure, small timber etc. In forest areas where human settlements have existed or exist in the vicinity, the requirement of the survival economy has been satisfied all along without major ecological damage. In regions where forests no longer exist and land has been under the plough for centuries, farm trees and agro-forestry systems have provided forest inputs to the farm economy. Under certain situations, the pressure of the survival economy can be substantial and its neglect in development policy can lead to unexpected and quick degradation of forest resources.

The Market Economy of industrial-commercial demands constitute of the forest biomass demand of the total market system in the formal market economy. It includes the demand for pulpwood, plywood, furnitures, construction timber, etc. as well as fuelwood for the urban consumers.

The demand for biomass from the urban-industrial sector as well as the survival requirements of the people have increased dramatically in the last century in countries like India. There are many examples to show that the growth of forest based industries seems to be disproportionately beyond the ecological limit of renewal productivity of nature under the present system of management. The growth in population has added another significant biomass demand for domestic needs. It has however, not been recognised, quantified and internalised in the formal forest management. In the perspective of the increasing demand from the survival and the market economies, the biomass requirement for the Nature's Economy have remained neglected and totally unfulfilled and in due course have resulted in ecological destabilisation of the forest and agro-ecosystems. Again, the conflict between the survival economy and the market economy assume big proportions when most of the biomass produced is concerned by the economically powerful through the formal official mechanisms while the basic needs of fuel, fodder and small timber for the economically weak remain unsatisfied even when forestry programmes are legitimised as being for the poor. These three diverse economies have different needs for different kinds of biomass and organic matter production. Nature needs humus, the poor need fodder and small twigs and branches for fuel, and paper factories need pulpwood. Ignoring the diversity of needs can make pulpwood plantations pass for conservation forestry and basic needs forestry, even when ecologically such plantations undermine ecological

processes basic needs satisfaction. It is particularly critical to perceive the diversity in the needs of nature's economy, the survival economy and the market economy.

Because now the Tropical Forestry Crisis is at the top of the agenda not just of the ecology movement but also of the international financial institutions like World Bank which have been a major source of tropical deforestation and environmental destabilisation in the Third World.

There are 4 pervasive myths backing international forestry programmes created by international 'aid' which militate against their becoming strategies of ecological and economic recovery of marginalised communities.

The 4 myths are:

- (a) people, not profits, are the primary cause of tropical deforestation
- (b) the "developed" world has protected its forests and must teach conservation to the third world in the tropics
- (c) commercial forestry based on privatisation can solve the scarcity problem of the poor
- (d) commercial afforestation can guarantee ecological recovery.

These myths are revived in the recently published World Resources Institute (WRI) report on "Tropical Forests:

A Call for Action" - published for the World Bank and UNDP. We in the Third World in general, and India in particular are familiar with these myths. They were the political tools used for the colonisation of common forest resources by the British. The centres of exploitation and planned destruction might have shifted from the East India Company and the Crown in London a century ago to the World Bank in Washington in contemporary times, but the logic of colonisation has not changed. The British too, talked of "forest conservation" while creating a policy for deforestation. The World Bank, in the same pattern, is talking of conservation of tropical ecosystems while financing projects that will destroy tropical ecosystems.

The World Bank's call of action for tropical forests is inconsistent with the socio-ecological imperative of sustainability and survival in the tropics. It threatens to create new forms of poverty for the poor, and new forms of ecological destabilisation in the tropics, even while the World Bank's forestry projects are legitimised on environmental grounds and grounds of poverty alleviation. But legitimisation and packaging is not the same as content. In content, all forestry programmes, all the tropical forestry action plans are created in World Bank's vision of the theology of the market in which neither the poor nor nature have a role-except as victims.

The theology of the market cannot liberate us from the tropical forestry crisis. On the contrary, the tropical

forestry crisis has emerged from the expansion of commercial exploitation of tropical forests and resources. It is important to keep the history of forest management in mind to ensure that new prescriptions of afforestation are not worse than the disease of deforestation.

CHAPTER 2

WHO DESTROYED TROPICAL FORESTS - PROFITS OR PEOPLE?

The WRI report revives the myth that it is local people who destroy tropical forests. It states that "it is the rural poor themselves who are the primary agents of destruction as they clear forests for agricultural land, fuelwood and other necessities. Lacking other means to meet their daily survival needs, rural people are forced to steadily erode the capacity of the natural environment to support them".¹

The reality of deforestation is however quite different. The tribals of Bastar for example had protected their forests over centuries. A World Bank project for 'forest development' became a major cause for deforestation in the region. This project came to India as the Bank Group's first intervention in Forestry, the Madhya Pradesh Forestry Technical Assistance Project (Credit 608-IN, December 1975) and was directed primarily towards the development of plantations for the pulp and paper industry.

The World Bank project in Bastar was part of the trend to convert natural forests to commercial plantations so that the biomass produced can no longer benefit the original forest dwellers. The tribal sustenance base in cane and

bamboo for basket weaving, mangoes, tamarind, jackfruit, mahua and edible berries are all destroyed when natural forests are replaced by monoculture plantations of eucalyptus or tropical pine. The WRI report cites the worldwide distribution of tropical pine as a 'success', an example of scientific achievements of forestry research by the Commonwealth Institute.² The Bastar Tropical Pine Project was planned at Rs. 96,000,000 to convert 8,000 ha of natural forests in Bastar Hills to pine plantations to feed the paper and pulp industry. It was finally shelved due to serious resistance because for local tribals this was an example of a forestry disaster, not a success. It was based not on scientific knowledge but on ecological ignorance, of the forest ecosystem, and of the tribals integration with that ecosystem. It was the ultimate erosion of tribal rights to forests as survival systems. It was a prescription for the destruction of tropical forests, not their development. It was a project aimed at changing the character of the forests in such a manner that they exclusively serve commercial interests, and not the indigenous peoples.³ The commercialisation of forests, is the primary cause for most largescale and rapid deforestation. Forest dwellers are the victims, not the agents, of deforestation - in Bastar in Central India, in Andaman and Nicobar Islands, in the North East and in the Himalaya. Blaming the people has been an old strategy used by a commercially oriented bureaucracy to usurp control and management of forests from the local

communities.

While the destruction of forests throughout the nineteenth century in India, was rooted in British commercial interest, the reservation of forests through the Forest Acts was legitimised by blaming local people for forest destruction and by denying their ancient forest rights. As Pant observed for the Himalayan tracts "The tale about the denudation of forests by the hillman was repeated *ad nauseum* in season and out of season by those in power so much so that it came to be regarded as an article of faith ...".⁴

In the Kumaon region there is evidence that it was the needs of the empire not of the local people that led to rapid forest denudation. According to Atkinson's

Gazeteer:

"The forests were denuded of good trees in all places. The destruction of trees of all species appears to have continued steadily and reached its climax between 1855 and 1861 when the demands of the Railway authorities induced numerous speculators to enter into contracts for sleepers, and these men were allowed, unchecked, to cut down old trees very far in excess of what they could possibly export, so that for some years after the regular forest operations commenced the department was chiefly busy cutting up and bringing to the depot the timber left behind by the contractors."⁵

In contrast the local people had conserved their forests over generations.

"A natural system of conservancy was in vogue, almost every hill top is dedicated to some local deity and the trees on or about the spot are regarded with great respect so that nobody dare touch them. There is also a general impression among the people that every one cutting a₆ tree should plant another in its place".

The new wave of blaming the people for environmental destruction in general, and deforestation in particular, arises from agencies like WRI and World Bank and FAO to legitimise and facilitate the transfer of resource control and forest management from local people to the state, from Third World countries to pseudo-experts in international aid agencies in the North. As Lloyd Timberlake has pointed out, Africa is not dying because Africans were ignorant. "Africa is dying because in its ill-planned, ill advised attempt to 'modernise' itself it has cut itself into pieces."⁷

The WRI report, however, prefers to perpetuate the myth that Africa's crisis is created by the poor in Africa. Referring to the degradation of the Ethiopian Highlands it states:

"The Central Highlands Plateau in Ethiopia supports 22 million farmers (70% of the population) and contains 59% of the country's cultivate land. Exhaustive

farming practices, overgrazing, and fuelwood collection have severely eroded the plateau and destroyed most forest. Loss of soil fertility is widespread and the use of fertiliser is so limited that food production has not kept pace with population growth. Drought has precipitated a major famine."⁸

What the WRI report fails to mention is that it is profits, not people, that are ultimately responsible for the degradation of the Ethiopian highlands. Under the Third Five Year Plan (1968 - 73), Ethiopia spent only 1% of the total expenditures on peasant agriculture and instead emphasised the rapid development of large-scale commercial farms producing crops for export. Tractors, pesticides, fertilizers were exempted from import duty. Multinationals making agrarian investments of \$200,000 or more were given a 3 to 5 year income tax holiday. Commercial development of the Awash Valley was part of the plan. By 1970, 60% of the land brought under cultivation in the Awash Valley had been devoted to cotton production, while sugar plantations claimed another 22% of the cultivated area. To make way for these multinational managed commercial firms, the government had forcibly evicted Afar pastoralists from their traditional low-land pastures. The Afars were thus pushed into the fragile uplands which were rapidly overgrazed and degraded.⁹ The degradation of the Ethiopian highlands needs to be viewed in this context of the introduction of commercial export agriculture in the low lands, and the consequent displacement of nomads and

peasants. It is not local ignorance but global control and exploitation of land and forests that is catalysing the tropical forest crisis.

It is not just World Bank forestry projects which have destroyed Tropical Forests. In India, the World Bank has financed the destruction of tropical forests through the Dams on the Narmada River, through mining and energy generation at Singrauli in Central India. In Brazil, the World Bank has financed the destruction of the Amazonian rainforests through the Big Carajas project which makes up 10% of the Amazon. The project involves mining and about 30 large dams like the Tucurni and Balbina. The Friends of the Earth, Brazil have observed that "The Tropical Forests Call for Action plan unfortunately does not go to the roots of the problem, whereas it makes almost no reference to the economic/political power that rules our civilization, that plans, decides and put into practice the projects which demolish whole tracts of TRFs, the plan states that "tragically it is the poor themselves who are the major agents of destruction". In fact they become very often the instruments of destruction as they are used to open the way for the wealthy or when they are forced due to completely misguided policies. When after cleaning the forest, the soil is exhausted in three years, the small settlers just move further into the forest. But who is to be blamed for this situation? Clearly it can't be the poor who never had any participation in the decision

making. It is the fault of development planners and policymakers.

We would expect that a global plan to save TRFs would put in evidence WHO is destroying the forests, that it would claim for the halt of the terribly destructive mega-projects already underway, that it would put limits to the ruthless exploitation and plundering of life supporting systems, that it would spread the new ethical values our civilization so badly needs if we don't want to be the last generation on this planet. And the WRI is in privileged position to do so.

Reverence towards nature and life - the miracles no human being is able to re-create - will have to be the basis of these new political ethics, capable not only to save the remaining TRFs but mankind, today and tomorrow.

For Brazil the plan foresees investments of 400 million US\$ for fuelwood and agroforestry; 325 million for forest management for industrial uses; and 50 million for the conservation of TRF ecosystems. So the bulk of the money will come for industrial development and to strengthen official departments. What can be the credibility of a government that has already proved to ignore ecological imperatives, indigenous rights and democratic principles? And the World Bank has already made its experience in the case of the Polonoroeste when the Brazilian government did not at all accomplish what had been established in

the plan. Today there is no reason whatsoever in positive changes.

The plan gives special emphasis to fuelwood and energy plantations, which the country needs and which we certainly want to see implemented. But the success story the plan describes, the Aracruz Florestal project, should not be taken as a model. It occupies a continuous area of 85,000 ha, including some valuable agricultural spots of land and remainders of native forest and vegetation, which should always be preserved. Converted into a sea of highly productive eucalypti it gave spectacular gains to the Aracruz pulp mill. It employs 6 professionals and 70 technicians, less than one job for every thousand ha. Nobody ever asked how many people lived on and from this land before, nor where they have gone.

This project obeys exactly the patterns of the capital intensive and capital concentrating projects, which much too often are at the origin of social injustice and ecological imbalances. We recognize the importance of these fast growing eucalypti, one more scientific advancement but the fuelwood and energy plantations for sustainable development - which includes social justice - will have to obey different patterns.

In the chapter "Forestry Management for Industrial Uses", Part III, pg. 12, proposal 4, the Call for Action plan says the following, "Bring under control and management

5 million ha of Amazon forest". What *does* this mean? Who *knows* how to manage this forest? Who is expected and will be able to control this management on 5 million ha, and who will be the beneficiaries? Where are the studies underlying this project? Will it be a continuous area, one whole tract of 5 million ha? Who is living there today?

Until this moment the only people who have succeeded in developing an economic activity based on the products of the forest *without* destroying it, were the local rubber tappers and the "castanheiros", who collect the Castanhado Para. But they are modest people, they "live lightly on the resources of the Earth", they are alien to the greed that marks our present western society."¹⁰

CHAPTER 3

WHO WILL CONSERVE TROPICAL FORESTS? - THE PEOPLE OR THE WORLD BANK?

The World Resources Institute report on tropical forests states that "developed and developing countries differ sharply in the conditions of their forests and the status of forest conservation and management. The forest area of many developed countries has stabilized and, in some cases, has increased during this century."¹¹ The report suggests that this was achieved exclusively through scientific and technical superiority of the developed countries. What it fails to highlight is that the regeneration of forest resources of the north was made possible by shifting the burden of deforestation to the tropics through colonialism. The myth that 'experts from Washington are needed for saving tropical forests is a renewal of an old myth that the British would 'conserve' India's forests while they had in fact depleted them at home and in the colony.

As Stebbing reports, in 1805 a despatch was received from the Court of Directors of the East India Company enquiring to what extent the King's Navy might in view of the growing deficiency of oak in England, depend on a permanent supply of teak timber from Malabar. Thus the first real interest aroused in the Forests of India ori-

ginated from the colonial centre and the cause was the same which had kept Forestry in the forefront in England through a period of three centuries - the safety of the empire, which depended upon its "wooden walls" - its supremacy at sea.

"When the British started exploiting Indian timber for military purposes, they did it rapaciously, because the great continent appeared to hold inexhaustible tracts convered with dense jungles."¹²

To the British Government and their officials the important part which forests play in nature's economy and the great influence they exercise on the physical well being of a country through the survival economy was unrecognised.

The military needs for Indian teak led to an immediate proclamation usurping the royalty right in teak trees from the former government in the South and vesting it in the East India Company. Under further pressure from the Home Government to ensure the maintenance of the future strength of the King's Navy, the decision was taken to appoint a special officer to supervise the forest exploitation. Since this was a policing job, Captain Watson of the police was the officer selected, and he was appointed the first Conservator of Forests in India on 10th November 1806. Under the proclamation of April 1807, he wielded great powers, and interfered seriously in people's rights. "Conservation" of forests thus began in total divorce from Conservation needs, in total violation

of people's traditional rights.

The Conservator soon established a timber monopoly throughout Malabar and Travancore and furnished Government, as did his immediate successors, with a plentiful supply of cheap timber. But the methods by which this was done were intolerable and gradually gave rise to seething discontent which rose to such a point that the Conservatorship was abolished in 1823.

The introduction of colonial forestry was therefore not associated with superior forestry knowledge or scientific management, but through a dominant military need and power and usurpation of rights. It was only after more than half a century of uncontrolled destruction of forests by British commercial interests that an attempt was made to control exploitation. In 1865 the first Indian Forest Act (VII of 1865) was passed by the supreme Legislative Council, which authorised the Government to declare forests and wastelands (*benap* or unmeasured lands) as reserved forests. This was repealed later by the Forest Act of 1878.

The introduction of this legislation marks the beginning of what is called "scientific management" and which basically amounted to the erosion of traditional rights of the people to forests and the erosion of the rich scientific tradition of forest conservation in the subcontinent. The new "scientific" tradition of commercial forestry that

was developed by the British a century later became in effect, a policy for deforestation.

The World Resource Institute report is a contemporary example of Orwellian double speak in which ecological destruction is called environmental protection. It is a revival of the myth that destroyers of tropical forests would protect them, that peoples alienated from and ignorant of tropical forests would prescribe to those who have generations of forestry knowledge about local forest ecosystems. The arrogant ignorance of Washington experts becomes evident when the report states that "solutions are known" and fails to accept that project after project which has originated in Washington has been shown to be socio-ecologically flawed. World Bank definitions of 'productivity' and 'development' have been systematically found to be in direct contradiction with concepts of 'productivity' and 'development' from the perspective of local basic needs and sustainability.

Under the theology of the market that the World Bank spreads, it is the commercialisation of forestry and land use that is the objective. The commercial interest has the primary objective of maximising profitability on the market through the extraction of commercially valuable species. Forest ecosystems are therefore reduced to the timber mines of commercially valuable species.

'Scientific forestry' in its present form is a reductionist

system of knowledge which ignores the complex relationships within the forest community and between plant life and other resources like soil and water. Its pattern of resource utilisation is based on increasing 'productivity' on these reductionist foundations. By ignoring the systems linkages within the forest ecosystem, this pattern of resource use generates instabilities in the ecosystem and leads to counterproductive use of natural resources at the ecosystem level. The destruction of the forest ecosystem and the multiple functions of forest resources in turn hurts the economic interest of those groups of society which depend on the diverse resource functions of the forests for their survival. These include soil and water stabilisation and the provision of food, fodder, fuel, fertilizer, etc. Forest movements like Chipko are simultaneously a critique of reductionist 'scientific' forestry and an articulation of a framework for an alternative forestry science which is ecological and can safeguard the people's interest. In this alternative forestry science, forest resources are not viewed as isolated from other resources of the ecosystem. Nor is the economic value of a forest reduced to the commercial value of timber. 'Productivity', 'yield' and 'economic value' are defined for the integrated ecosystem and for multi-purpose utilisation. Their meaning and measure is therefore entirely different from the meaning and measure employed in reductionist forestry. Thus while for tribals and other forest communities a complex ecosystem is productive in terms of herbs, tubers, fibre and

genepool, etc., for the forester, these components of the forest ecosystem are useless, unproductive, dispensable. Two economic perspectives lead to two notions of 'productivity' and 'value'. As far as overall productivity goes, the natural tropical forest is a highly productive ecosystem. Examining the forests of the humid tropics from the ecological view, Golley has noted:

"A large biomass is generally characteristic of tropical forests. The quantities of wood especially are large in tropical forests and average about 300 tons per ha. compared with about 150 tons per ha. for temperate forests."¹³

However, in the partisan forestry, the overall productivity is not important. It looks only for the industrially useful species and measures productivity in terms of industrial biomass alone. As Bethel states, referring to the large biomass typical of the forests of the humid tropics:

"It must be said that from a standpoint of industrial material supply, this is relatively unimportant. The important question is how much of this biomass represents trees and parts of trees of preferred species that can be profitably marketed ... *By today's utilisation standards, most of the trees, in these humid tropical forests are, from an industrial materials standpoint, clearly weeds.*"¹⁴

With these assumptions of partisan forestry science wedded to forest industry, large tracts of natural tropical forests are being destroyed across the Third World. The

justification is increased 'productivity' but the productivity is actually decreased because genetic wealth is destroyed as "weeds". The replacement of natural forests in India for eucalyptus plantations has been justified on the grounds of improving the productivity of the site. However, it has been a partisan view of productivity in the context of pulpwood alone that has been projected as a universally applicable measure or productivity. What has been called the 'eucalyptus controversy' is in reality a paradigmatic conflict between an ecological peoples forestry and a reductionist partisan forestry which only responds to commercial industrial requirements. While natural forests and many indigenous tree species are more productive than eucalyptus in the ecological paradigm, the reverse is true in the reductionist paradigm of forestry. The scientific conflict is an economic conflict over which needs and whose needs are more important. It is time to reverse the domination of Third World Development by the North so that people's needs and their knowledge of local ecosystems can become the basis of a sustainable development.

CHAPTER 4

CAN COMMERCIALISATION GUARANTEE BASIC NEEDS SATISFACTION?

The World Resources Institute cites World Bank 'Social Forestry' projects in India as a success story.¹⁵ These projects have been launched ostensibly primarily for social objectives, to correct the one-dimensional commercial forestry that has made forest resources more scarce for the poor. The aim has supposedly been to enhance the availability of organic fertilizer, food, fodder and fuel for local populations. The result, however, is further erosion of rights and resources. More than 90 percent of tree planting under social forestry has been of eucalyptus,¹⁶ nearly all of it has been on fertile agricultural land, and all of it has been marketed to urban industrial centres especially the pulp industry. New enterprises have emerged to produce Green gold on farmlands with the promise that "money grows on trees". The result has been a serious reduction of food availability, a decline in agricultural employment, and an accentuation of the fuel, fodder, fertilizer scarcity in rural areas. It is critical to remember the distinction between two kinds of biomass economies,

- (a) the survival or sustenance economy
- (b) the commercial or market economy.

Production and distribution in the first is based on the organisation of rights and entitlements that ensure that forest and tree produce reaches Gandhi's proverbial last man. Production and distribution in the second is based on the strength of purchasing power, which more than 70 percent Indians living below the poverty line do not have. Commercial forestry cannot provide justice to the 70 percent peasants and forest dwellers who depend on rights and entitlements not on purchasing power, to satisfy their basic sustenance needs.

The wrong organisational assumption that is at the root of afforestation projects not reaching the poor is about the *organisational equivalence* of different management structures. It is assumed that the outcome is the same whether a resource is managed collectively or privatised, whether it is managed by multinational corporations or local tribals. This assumption of organisational equivalence then allows the growth of organisational structures which lend themselves more easily to serving the interests of the economically more powerful groups.

However, as the ecological audit of different afforestation programmes has shown, the organisational structures which are effective tools in a market economy run primarily on commercial objectives, can actually be inconsistent with the needs of the survival economy. Large scale even aged monocultures match the saw-material needs for pulpwood or the plantation industry. However, for local needs, multi-

purpose tree planting is needed for food, fuel, fibre, fodder, fertilizer, oilseeds and medicines. In biomass production, as any other form of production, the relations of production determine the relations of distribution. How production is organised determines how the produce is distributed. If production is organised in accordance with the logic of the market economy it will get distributed according to that logic. Purchasing power, not need, will determine access and entitlement. The poor who have no purchasing power but whose needs are the greatest cannot register their demands through the organisational structures of the market.¹⁷ Tree planting success in the commercial economy does not automatically translate into successful tree-planting for the survival economy. Further, at a historical point in the evolution of markets, when plantations bring 16 times higher a return on investment than food production, tree-planting for "green gold" can disastrously aggravate the real energy crisis of food scarcity. The World Bank, of course, recommends the creation of food scarcity in the Third World in its hunger and poverty report, stating that food security does not mean food self-sufficiency. Afforestation on farmlands is just one among the Bank's many other suggestions to the Government of India to move away from growing foodcrops altogether. It is in the light of these conflicting demands on land, that the social impact of tree-planting schemes and projects need to be evaluated.

The World Bank model of forestry results in undermining

food production not just at the site of the plantations, but throughout the country. A forestry investment of \$1220 m as outlined in the WRI report involves borrowing, and debt repayment involves higher and higher production of primary commodities for exports, so that land everywhere is diverted from basic food production for local consumption to cash crops for the global market. This exaggerated investment, is in fact, based on not recognising that peasants everywhere, have always planted and protected trees under economic and legal conditions that allow them to do so. The social imperative in forestry is not higher foreign debts for tree planting but a revival of people's rights so that they are not alienated from their life support base.

CHAPTER 5

CAN COMMERCIAL TREE PLANTING ENSURE ECOLOGICAL RECOVERY?

In recognition of the ecological crisis generated by deforestation India has launched massive afforestation projects. Besides the social forestry projects in each state, World Bank has financed Watershed projects in the Himalaya and a national wasteland development project has also been launched.

The World Bank Watershed projects are not projects for ecological recovery of watersheds. They are instead projects for transforming the survival economy and nature's economy in watershed regions into a market economy. The Nayar Watershed project with funding of \$69.12 m is an example. While the cause for the introduction of the project is to reverse ecological decline, i.e. to strengthen nature's economy and the survival economy, the project itself is largely a prescription for introducing commercial activities in the watershed. The sophistication of agricultural practices in hill areas, including ancient techniques of soil conservation through terracing and mulching are not noticed in the project although it is being recognised globally. Instead, the introduction of intensive chemical farming is recommended with total indifference to how practices of

chemical farming are a significant cause in soil and water degradation. There is also a policy prescription for genetic erosion in agricultural crops.

It is an established fact that indigenous mixed and rotation cropping systems are the best mechanisms for soil and water conservation. While flood control and catchment stability is the main objective of watershed development, the success of the project is measured only in terms of increased cash flows. From being a project for nature's economy and the survival economy, the watershed development is reduced exclusively to an activity in the commercial economy. The World Bank appraisal makes this shift in evaluation criteria explicit.

"The direct production effects generated by project actions provide sufficient economic justification for the project. The project is a pilot scheme leading to a long term program for control of erosion within upper watersheds of the Himalayas, aimed at reducing run-off and decreasing the silt load of the rivers. Little data is, however, at present available to evaluate the economic effects of controlling erosion and flooding".

A project aimed primarily at conservation and rebuilding nature's economy in degraded catchments is not even being evaluated in accordance with conservation criteria. On the contrary, by interpreting watershed development merely as the development of the market economy in the

watershed, land use shifts are introduced which further threaten to destabilise soil and water systems. Such impacts, moreover, are not even anticipated or monitored, leaving the further erosion of nature's economy as an invisible factor in catchment degradation.

World Bank's Panar Watershed project in Almora District similarly threatens to be an ecological and economic disaster. Eighty percent of the finances of the project are for planting pine, converting the watershed into a mine of timber and resin, not a stable source of water. The local population is seriously resisting the pine plantations on grounds that they will destroy water resources and fodder resources. The people want mixed planting of indigenous species like oak, *bhimal*, *timid*, *buras*, which conserve soil and water and provide rich fodder. The strengthening of nature's economy and the survival economy is however not in accordance with World Bank logic of development which equates it with commercialisation.

The WRI report also ignores ecological criteria for measuring success in afforestation of upland watersheds. Ignoring the role of profits from cash-crop farming in Ethiopia's ecological destruction, the WRI report cites the largest soil conservation program in Africa in the Ethiopian Highlands as a successful upland watershed project.¹⁸ Most tree planting in Ethiopia was based on eucalyptus. After a decade, there has been no building

up of ecological insurance inspite of large-scale planting of eucalyptus in Ethiopia. In India, the district in Karnataka which tops the list in "successful" Social Forestry also tops the list in drought - in water scarcity, in food and fodder scarcity. Planting on commercial criteria and planting with ecological ignorance has often worsened ecological conditions instead of improving them, because there is a distinction between

- (a) nature's economy of sustainable production through the maintenance of essential ecological processes
- (b) the market economy of non-sustainable production and exploitation.

In the former, the successful development is a strengthening of nature's processes. In the latter, evaluation is based on financial resource flows. What might look "un-productive" from the perspective of the market can be very "productive" from the view of nature's productivity. This explains why so called primitive societies have often been, in terms of natural resources and basic needs, the "original affluent society". On the other hand, highly productive projects in the market context can be unproductive and destructive at the level of nature's economy.

The ecological ignorance and indifference of agencies like World Bank and WRI becomes apparent in the investment profiles for the Tropical Forest Action Plan.

Firstly, India is shown as needing a total of \$1222 m for 5 years, which is far in excess of the investment of *all* of Africa, suggesting that it is not ecological survival, but market growth, that the Bank is interested in. And while survival might be more at stake in Africa, India's markets for wood products are far more promising. Secondly in India \$500 m is for fuelwood and agroforestry, \$500 m for upland watersheds, \$190 m for industrial forestry and only \$32 m for ecosystem conservation. The problem with this categorisation is that:

- (a) it does not reveal that most "agro-forestry", "watershed development" or "social forestry" is anyway commercial industrial plantations.
- (b) It does reveal that the World Bank sees agro-forestry and upland watershed management as *not* being ecosystem conservation.

It is therefore natural that these projects fail to meet ecological criteria.

The World Bank's plan for Tropical Forests is not a plan for the conservation of tropical forests - it is a plan to expand and deepen nature's exploitation for the production of industrial/commercial wood. The report is misleading in its categorisation of forestry projects under the three headings of "Fuelwood and agroforestry", "Landuse on upland watersheds" and "Forest Management for

Industrial Uses". All three categories of afforestation include large scale, capital intensive planting of commercial species like pines and eucalyptus which have no positive contribution to the local ecology and economy. There is no organisational or ecological difference in the successful case studies of "farm and community forestry" in India and industrial forestry in Philippines. Only the names are different. While World Bank has financed production of industrial pulpwood by farmers as "social forestry" projects in Karnataka, India, it calls the same project "industrial" forestry in Mindanao in Philippines.

Since May 1974, the World Bank has provided US\$2 million to the Development Bank of the Philippines to supply 284,000 cubic meters of pulpwood to the Paper Industries Corporation of the Philippines (PICOP) which was formed within the Soriano group of companies for manufacturing pulp and paper. The loan is used to finance farmers shift from food production to production of fast-growing pulpwood trees on an 8-year rotation on 80% of the land holding. PICOP supplies seedlings at cost in exchange for first rights to the mature pulpwood.¹⁹

The World Bank is thus subsidizing the rich industrialists of the Third World, while the poor lose livelihoods on land and are further burdened with social and economic costs of paying back debts and interests on World Bank loans. The Third World poor are thus bearing a double burden of costs while the World Bank makes it easier for the rich

to get new access to the land, forest lands, village commons and even farmlands - for the production of commercial wood. The names of projects vary from country to country, but the pattern is the same - more land for increased production of commercial wood, through destruction of natural forests, through destruction of watersheds, through destruction of cropland.

The Tropical Forestry Action Plan is a recommendation of the expansion of these destructive activities. In India it recommends the expansion of World Bank's "Social" Forestry Programme for commercial wood production which has desertified farmlands and displaced peasants at the rate of 200 man-days per hectare per year at the cost of US\$500 million. At the cost of another US\$190 million it recommends the exploitation of 30 million hectares of natural forest and the establishment of industrial plantations at the rate of 240,000 hectares per year. In Brazil, it recommends an investment of US\$400 million to convert natural forests into plantations as a "Fuelwood and Agroforestry" Project and another US\$325 million for managing 5 million hectares of Amazon forests for industrial wood production, and establishing 320,000 hectares of industrial plantations over a five year period. If the Action Plan is operationalised in India and Brazil alone, the people will have to bear the burden of US\$1,415 million of loans to destroy millions of hectares of natural forests and prime farmlands. This does not include destruction of watersheds through commercial tree planting (US\$500

million for India). The Tropical Forest Action Plan should more appropriately be called the Action Plan for Tropical Forest Destruction.

The new afforestation programmes of watershed development, social forestry and wasteland development have had primarily social and ecological objectives. However, an ecological audit of the tree planting strategies reveals that they have not been successful in either ecological recovery, or the recovery of the marginal communities for whom they were aimed. Success in tree planting has not been consonant with success in rehabilitating destabilised hydrological cycles and nutrient cycles or with success in enhancing the access and entitlement of the poor to biomass for survival needs.

The systemic inability of forestry projects to meet ecological and social needs, arises, in our view from wrong scientific and organisational assumptions. Scientifically, it is assumed that all trees and all forest ecosystems are ecologically equivalent. This assumption of the *ecological equivalence* of different tree species and silvicultural systems misses the difference between the imperatives of temperate zone and tropical zone forest management, between commercial and conservation forestry and also the difference in the ecology of different tree species. The assumptions that temperate zone practices are suitable for tropical eco-zones has been identified as a significant cause for the erosion of forest resources even when

"scientifically" managed. It also misses the physiological, and architectural diversity in tree species which is matched to local eco-system diversity. Trees have their own water relations, nutrient relations, and patterns of partitioning of organic matter which are determined by their native habitat. The wrong species in the wrong place can undermine essential ecological processes and basic needs satisfaction. Different species have different ecological and social impact, and different silvicultural practices have different ecological and social impact. All tree-planting is not rebuilding nature's economy. Some plantations cause major dislocations in nature's processes like other "development" activity. To subsume all tree planting under a uniform category of "green cover" under a false assumption of ecological equivalence is to ignore the diversity in nature and the diverse human needs that nature's diversity supports. In Bihar and Madhya Pradesh, for example teak and pine have become the embodiment of a political and technological structure which takes resources away from the local populations while *sal* is the embodiment of a structure which allows the survival of the local population with local resources and local control.

The socio-ecological crisis arising from deforestation can be solved only if the processes from which it arises are reversed. The spread of commercialisation of forestry and the logic of the market in forest management have been the main causes for deprivation of forest dwellers and rural

communities, and for the destabilisation of the water cycle and the nutrient cycle, the two cycles of life. The further spread of the theology of the market cannot but deepen social deprivation and ecological destabilisation. The protection of nature, and of the poor who depend critically on it for sustenance, needs a socio-ecological thinking and action which put the imperatives of nature's economy and people's sustenance economy above the imperatives of the market.

The WRI action plan based on the market is a plan for increased destruction of tropical ecosystems and increased destitution of local communities. It is inherent to the logic of globalisation to destroy diversity, and hence the ecological stability to which diversity gives rise. The contemporary food crisis and famine conditions arise from the globalisation of agriculture through the Green Revolution. The future aggravation of the ecological destruction of the tropical countries will arise from the Second Green Revolution - the globalisation and total commercialisation of forestry including its genetic base. Conservation presupposes maintenance of diversity, and diversity can only be maintained locally. The people's action plan for saving tropical forests and tropical people's has to be based not on the rule of the market, but on respect for nature, and respect for people's survival needs. It has to be based not on viewing trees as "green gold" to be exploited and felled, but as life support systems which must be protected. In particular, it has to build on the

little traditions of little people which ensure the protection of nature and local communities and do not allow them to become victims of global markets and global plans originating in Washington.

THE FOREST RESOURCE: TWO VIEWPOINTS

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	The view from Washington	The view from the people
Who destroys the Forests?	People Destroy Forests	Profits Destroy Forests
Who is a tropical Forest Expert?	Scientific Knowledge of tropical forestry exists only with experts in the aid-giving countries of the North.	Women, Peasants, Forest Dwellers are the best experts in tropical forestry and ecology. Expatriate Experts are trained only in partisan forestry science which caters to markets and works against people and nature
What is the most effective means for solving the biomass crisis of the poor?	Privatisation is the most efficient mechanism for providing biomass to the poor.	Privatisation erodes the access and entitlements of the poorest to land and biomass.
What is the most effective mechanism for ecological recovery?	Profitability Criteria can be an exclusive and effective guide to ecological rehabilitation.	Exclusive concern with profitability has caused ecological destruction and therefore cannot reverse it. Afforestation programmes based on profitability alone can become ecological hazards in themselves.

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