WOMEN, FORESTS AND PLANTATIONS

The Gender Dimension

General Coordination: Ricardo Carrere
WRM Bulletin Research and Editing: Raquel Núñez
Edited by: Hersilia Fonseca
Cover design: Flavio Pazos
Cover photos: ©FAO, Photographers: Roberto Faidutti, CFU000705, CFU000342, CFU000402, CFU000304, CFU000243, CFU000237, CFU000183, CFU000170, CFU000189, CFU000792, CFU000391, CFU000820, CFU000816, CFU000637, CFU000195; Susanne Wymann, FO-0272; FO-0060

International Secretariat
Maldonado 1858, Montevideo, Uruguay
ph: +598 2 413 2989, fax: +598 2 418 0762
e-mail: wrm@wrm.org.uy
web site: http://www.wrm.org.uy

European office
1c Fosseway Business Centre, Stratford Road, Moreton-in-Marsh,
GL56 9NQ, United Kingdom
ph: +44.1608.652.893, fax: +44.1608.652.878
e-mail: info@fppwrm.gn.apc.org

This publication is also available in Spanish and French

Published in August 2005

ISBN: 9974-7920-2-9

The elaboration of this publication contents was made possible with support from NOVIB (The Netherlands) and from the Swedish Society for Nature Conservation. This book has been prepared with the financial support of the Rainforest Programme of the Netherlands Committee for IUCN (NC-IUCN/TRP). The views expressed, the information and material presented, and the geographical and geopolitical designations used in this product only imply the exclusive opinion of the authors.

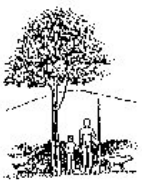
n(o)vib
OXFAM NETHERLANDS

Svenska Naturskyddsföreningen

NETHERLANDS COMMITTEE FOR
IUCN
THE WORLD CONSERVATION UNION

WOMEN, FORESTS AND PLANTATIONS

The Gender Dimension



World Rainforest Movement

CONTENTS

WOMEN AND FORESTS, AN INTRODUCTION

Women's Voices Coming from the Forest 9
International Women's Day: Homage to Women's Struggle in Forests and Plantations 11
An Inspiring Response from an Indigenous Woman 13
Women React to a Male-dominated World Forestry Congress 14

CONSERVING THE FOREST

India: Gender Bias and Disempowerment in World Bank-funded Forestry Projects 16
Seeing the Forests through Women's Eyes 18
Philippines: Lessons on Gender from Community-Based Forest Management 20
Women and Forest Resources: Two Cases from Central America 21
Senegal: Women's Project Restores Nature and Benefits the Community 23
Amazon Women 25
Role and Status of Women in Land Use Control and Management 28
Women's Land Tenure Security and Community-Based Forest Management 31
Women, Forests, and Adaptive Collaborative Management 33
Women and Knowledge of Medicinal Forest Plants 36
India: Women's Knowledge and Power in Forest Societies 39

WOMEN AND PLANTATIONS

Indonesia: Gender Impacts of Commercial Tree Plantations 41

Malaysia: The Plight of Women Workers in Oil Palm Plantations 42
Brazil: Women's Working Conditions in Tree Plantations 45
Tree Plantations Impact Doubly on Women 47
Women Plantation Workers Poisoned and Silenced 49
South Africa: Women Forestry Workers under Outsourcing Schemes 51

IMPACTS OF DEFORESTATION ON WOMEN'S LIVES

India: Women more Affected than Men from Deforestation 54
Sri Lanka: Deforestation, Women and Forestry 55
Papua New Guinea: Malaysian Companies Logging out the Forest 57
Mexico: The Loss of Forests for the Community and for Women 58
Impact of Logging on Women 60

OTHER INDUSTRIAL ACTIVITIES THAT IMPACT ON WOMEN

Senegal: The Hidden Impacts of Charcoal Production 63
The Impacts of Mining on Women 64
Papua New Guinea: Women's Rights Undermined by Placer Dome Gold Mine 67
Mexico: Women Suffer the Effects of Market Opening Doubly 69
Women's Life Devastated by Mining 71
Linkages Between Climate Change and Women 74
The Impact of Dams and Resettlement on Women's Lives 77
Women Victims of Oil and Protagonists of Resistance 80
Large Scale Shrimp Farming and Impacts on Women 83
India: Women's Response to Devastating Mining 85
Ecuador: Women from Sarayaku Against Terrorism Waged by the Army 87

THE APPROPRIATION OF NATURE

The Impact of Protected Areas on Twa Women 90
Pachamama: The Impact of the Commodification of Nature on Women 93
Central Africa: The Twa Alienation from their Forests Impact Doubly on Women 96
Cameroon: Restriction Policies in National Park have Major Impacts on Women 98

REFERENCES 102

WOMEN AND FORESTS, AN INTRODUCTION

"The historical role and positive contribution of women in the governance and nurturing of forests must be recognised and their full participation in decision making must be ensured."

The Mumbai - Porto Alegre Forest Initiative, Principle 4, January 2005.

Women's Voices Coming from the Forest

Forests are home to many peoples, including a substantial population of indigenous peoples. A 1992 European Union-funded study on the situation of indigenous peoples in the tropical rainforests estimated about 12 million of them or 3.5% of the total population of covered areas lived in the rainforest areas of the world. This was apart from those who lived in other types of forest areas.

Forests provide the source and means of survival. Center for International Forestry Research (CIFOR) Director General David Kaimowitz says: “One hundred million people depend on forests to supply key elements needed for their survival, either goods and services or incomes. At least one third of the world’s rural population depends on firewood, medicinal plants, food, and compost for agriculture that come from forests. Forests are also a major source of income for large populations of the rural poor especially in Africa and Asia, and to a more limited extent in Latin America.”

Forests are vital for the healthy state of our global environment. And in the area of forests women play a major and critical role. They are intimately familiar with the forest like the nooks and crannies of their home. In many societies, women have for centuries been the firewood and minor forest product gatherers and water-fetchers. They are the herbalists and ritualists. These are tasks that take time to

accomplish, and must be done on a regular, if not daily, basis. These activities keep them in close touch with the forest and enable them to have a vibrant knowledge of its diversity.

In its work with women in the forestry sector, the Food and Agriculture Organization has come to the conclusion that "throughout the developing world, women make a significant contribution to forestry." It cites lessons learned in the process: [1] Forests are often a major source of paid employment for rural women. [2] Rural women are often the principal caretakers and guardians of the forests. [3] Women have an extensive knowledge of forest resources. [4] In many areas, women have demonstrated that they are not only the primary users but also the most effective protectors of the forests.

Forests are also considered the physical representation of women. The forest-dwelling Amungme of Irian Jaya regard women as central to their society, thus equally entitled to rights and access to land, forests and other natural resources. The mother is a very powerful figure in Amungme beliefs – the living habitat is Mother. The highest elevation of the physical environment represents Her head and is thus a sacred place. Nobody desecrates a mother. Thus when the mining company Freeport McMoRan destroyed their Mother, the Amungme filed a suit in a court in the United States.

The increasing integration of rural communities into the cash economy that has resulted in male migration has further entrenched women in agroforestry work. Like any other income they earn, the women use the cash they get from the gathering and cultivation of forest products to put food on the table and meet their family's other basic needs.

Unfortunately, in the development process, in programs intended for forest dwellers and users, in forest exploitation projects, the voices of women are not heard. Nor are their traditional rights to the forests respected. Yet it is they who bear the costs of forest destruction and forest-use transformation.

The impacts of forest change or loss are not gender neutral. In Papua New Guinea, the money men generate from logging activities has become

a source of problem for the women. The social cost of cash in the hands of the men has increased drunkenness, sexually transmitted diseases, law and order problems, and violence against women.

Women may have to take destiny into their own hands. As mothers who ensure the life of future generations, we have to take concrete affirmative action. We must assert our right to be heard in all processes and stages of development. We must struggle to be heard on our own definition of what development is and how it should be undertaken in our forests. The women of the Chipko Movement in India are famous for this. We need not be dramatic. We are experts in agroforestry, silvihorticulture, and other forest-related works.

Let us harness our indigenous knowledge and our treasure trove of experience: the Javanese women with their centuries-old forest gardens, the Thai hilltribes with their home gardens, the Sahelian women with their drought food, the women traditional healers of the world with their medicinal preparations, the world's women firewood gatherers with their knowledge of trees, the Côte d'Ivoire women's organizations with their forestry cooperatives, the Cameroonian women's organizations' environmental protection work, the Central African Republic women's associations' rehabilitation of urban forests, the Amazonian indigenous women with their rich knowledge of the forest ecosystem and biodiversity.

In this way we ensure not only biological but also cultural diversity, and the respect for rights of all peoples. In this homogenizing world, the forces of dominance can only be thwarted if the marginalized, most of whom are women, link arms, reach out and act. If forests give life, as women also give life, we should ensure that the world is a better place to live in for our children – with equal access, use and ownership of the world's resources without discrimination as to gender. Just like any good homemaker. (By: Bernice A. See, WRM Bulletin N° 79, February 2004).

International Women's Day: Homage to Women's Struggle in Forests and Plantations

On the International Women's Day, the World Rainforest Movement wants to pay homage to the innumerable women that have played and

still play an essential role in the governance and nurturing of forests and other ecosystems.

Forests provide the source and means of survival for millions of people, who find there firewood, medicinal plants, food, compost for agriculture, and a full range of uses. They are also vital for the healthy state of our global environment.

Though the historical contribution of women to forest conservation has often been made "invisible" – as in many other areas – it has been them, the indigenous or peasant women, with an intimate knowledge of the forest, who have been the principal caretakers and guardians of the forests. Femininity is linked to nature, to the origins and to mystery and women are those who make life, suckle the species, communicate oral tradition and are the committed guardians of secrets.

At present, the encroachment of global commerce and "development" projects into the forests – such as oil exploitation, logging, mining, shrimp farming, dams and others – have not only destroyed nature but also distorted ancestral relationships of forest peoples between them and with the forest. Such forest change or loss has not been gender neutral and has had a double and differentiated impact on women, depriving them of their traditional rights to and link with the forests while reinforcing a patriarchal society model.

The corporate greed that has led to the destruction of forests now also imposes the large scale monoculture pattern against the diversity, complexity and interconnectedness of ecosystems. All over the world, pervasive industrial tree plantations of eucalyptus, oil palm, pine, teak and others are spreading erosion and deforestation, dismantling whole ecosystems and livelihoods, poisoning with pesticides water, soil and people, converting women who formerly nurtured forest into exploited plantation workers.

Yet, women continue resisting both in the forest and in the tree plantations. They are speaking loud telling the world about their knowledge, their wisdom, their own definition of what development is and how it should be undertaken.

On this 8th of March 2005, their struggle should be made visible and supported by all of us and especially by the women's movements sharing a vision of equality, solidarity and gender justice.

To them we pay our homage and render our full support. (WRM Article, March 2005).

An Inspiring Response from an Indigenous Woman

Last March – on International Women's Day – the WRM paid homage to women's struggles in forests and plantations. We then said that, in spite of all the difficulties, "women continue resisting both in the forest and in the tree plantations. They are speaking loud telling the world about their knowledge, their wisdom, their own definition of what development is and how it should be undertaken."

In response, we received the following message from an indigenous woman called Telquaa, which we would like to share with all of you. After thanking us for the statement she said:

"It is such a good story to share with other women of the world. I am an indigenous sovereign Bear Clan mother and grandmother of the western hemisphere, now called British Columbia, Canada. I have been fighting to protect our sacred home lands of Maxan Lake, without any headway. All I have received is brutal beatings from the band councillors and the Royal Canadian Mounted Police who are supposed to protect us. So I now have brutal scars to my body, that will forever remind me of the ugly life I have lived here.

My sacred land is the headwaters of many of the main rivers of this province. Today this area is clear cut logged and there are many mines opened up. In the olden days the leaders were indigenous women such as my mother and grandmother. Since this government came into power, the indigenous women's positions were taken over by men, whom the governments have put into power. So they are now government elected officials and not a peoples' leaders.

Now they are trying to force an illegal treaty process, onto our sacred lands. These treaties are illegal because we do not want treaties

in our territories. The men leaders are trying to make these treaties with the government, so they can clear cut log our territories and open up new mines. So they are railroading this illegal treaty process. As women we now have no say or no voice. I have been a very outspoken indigenous woman, on many of these issues. So I have become a target for the men leaders and for the police and the justice system.

Over the years I have been made disabled by these men, and today I am forced to live in a wheelchair. Even though I have a loud voice, I still use my voice, and get around in my wheelchair. Lately the police have been trying to keep me quiet, by taking away my vehicles and laying trumped up charges against my husband. My husband was also very badly beaten up by the police, and charged for assaulting the police.

Even though we are still getting beaten up we still stand up and speak out. I know our sacred Mother Earth is taking a beating and no one is standing up to protect her. We try our best to speak out for her. Our watersheds are disappearing at an alarming rate. Our weather has changed drastically. More hot weather, no water, no rain, no snow, no animals. Too many human beings taking over too many sacred lands, and not caring for the sacred lands.

I liked your email, very much, as it has inspired me, to stand up and fight more, even though I feel as if I cannot do anything, anymore. Thank you."

Thank YOU Telquaa, both as a person and as an inspiring example of the countless forest women who are standing up to protect the Earth and the future of Humanity. (WRM Bulletin N° 94, May 2005).

Women React to a Male-dominated World Forestry Congress

As we said in our last bulletin "the winds of change blow with increasing strength". One of such winds was felt at the meeting of the "Network for Women in Natural Resources Management", held during the last World Forestry Congress (WFC) in Quebec, September 2003. For the first time in this kind of event a group of women with a diversity of interests gathered together to share their views on gender issues.

Personal interest on women's issues and networking, the urgency to bring gender and equity agenda to the WFC, design projects with focus on women's causes and to see an equity agenda in forestry, among others were some of the issues expressed by the participants as the main interest to be part of the group. It was pointed out that in forestry organizations all over the world, women are marginalized, fact that is also reflected in the organization of the WFC.

Interest for this Network to include women as professionals, women as foresters and women as forest users was discussed. There was an agreement that the Network could serve as a large umbrella under which these and more specific interest groups could be formed and that it should remain as inclusive as possible.

The following statement was read at the Open Forum and presented to the Policy and Drafting Committees of the WFC so as to ensure women voices were heard in a formal manner:

"We are deeply concerned with the neglect of gender issues formally addressed within the international forest community in general and in this WFC in particular. Though references to women's roles and gender issues have surfaced in some plenary statements, theme sessions, side events and ecoregional roundtable discussions, they have not been sufficiently incorporated into the summary statements, and are still ad hoc contributions to the WFC. We were particularly disappointed that Women were not recognised as a stakeholder group during the plenary session as others for youth, indigenous peoples, forest communities, workers and industries. This is not in keeping with FAO's commitments to the Sustainable and Agricultural Rural Development (SARD) Initiative of the Summit on Sustainable Development that recognises women as one of the 9 Major Groups.

Therefore:

We propose that the 13th WFC have gender issues integrated and considered in all aspects related to decision making, programs, participant selection and support, etc.

We propose that we, the women and men participants of this side event and others sharing similar concerns, have a special session to

contribute our perspectives on gender within cultural, social, economic and political aspects of forestry within future WFCs and other forest-related fora.

We propose that women who represent groups of women be in decision making positions of the Policy and Drafting Committees of the next WFC.

We propose that funds be solicited to increase the participation of women from developing countries and others in need.

We propose that funds be solicited for facilitation and translation services for women to hold a forum preceeding the WFC, as was done for the Youth Forum.

We propose that women who can represent both forest users and forestry professionals are provided with a formal space within the WFC, as was provided to Youth, Indigenous Peoples, Forest Workers, and Local Forest Communities."

The WRM fully supports the above demands and believes that the gender issue has not been incorporated fully to the forest debate. Although differentiated impacts of deforestation on women have been well documented – particularly in Asia – as well as the differentiated roles that women play regarding forest conservation and use, neither forest campaigners nor women's networks have sufficiently incorporated the issue to their research, campaigning and lobbying agendas. The creation of this network must therefore be perceived as a positive step in the right direction. (WRM Bulletin N° 75, October 2003).

CONSERVING THE FOREST

India: Gender Bias and Disempowerment in World Bank-funded Forestry Projects

Elected forest councils (Van Panchayats) have been the only existing example of reasonably autonomous legal space for community forest

management in India. After having managed for years demarcated village forests in Uttarakhand, the hill region of Uttar Pradesh, Van Panchayats are being replaced by top-down "participatory" forestry projects pushed by the World Bank.

In the village of Pakhi in Chamoli district, from where the Chipko movement against commercial forest exploitation had begun in the early 70's, neither the women nor the poor – targetted as primary beneficiaries of these new forestry projects – were consulted and their existing management system was not even taken into account.

The village forest is rich in biodiversity, with mixed species dominated by oak and rhododendron, and a sprinkling of deodar (Himalayan cedar). Its primary benefits have been fuelwood, fodder, leaf litter for animal bedding and other non-timber forest products, rather than cash income. These have been critical for sustaining local agro-pastoral livelihoods, still predominantly subsistence based. Collection of fuelwood, fodder and water is almost exclusively women's work in the hills. Decisions about when to open the forest for grass, leaf and firewood collection, the rules for collection, the fines for violation, etc. were taken by the women, ensuring that forest product collection did not conflict with periods of heavy agricultural work. As no external funds were available, the women used to repair the forest boundary wall with voluntary labour.

Although pleased with having appropriated control over the village forest, the women had expressed resentment over the men leaving all the forest protection work to them on the grounds that only women need the forest. However, when important village related decisions are made, the women are often kept in the dark.

This complaint became starkly true with the introduction of "participatory" Village Forest Joint Management (VFJM) under a World Bank funded forestry project in August 1999. The offer of a significant budget for the village forest led to a rapid gender based shift in power and control. The same men, about whom the women complained of leaving all forest protection work to the women, suddenly became over enthusiastic for it. Three watchmen were employed and initially they even monopolised wage work in the project financed nursery. Only after strong protests by the women were some of them employed.

But the men too are losers. They have a similar loss in local decision making control to the Forest Department. According to the president of the council, the new VFJM reduced the villagers' role from being responsible for forest management to providing information for preparation of the microplans and working as paid labour for forestry operations. The microplans are cast in the mould of plantation projects and reinforce the Forest Department's claim to being the monopoly holder of technical forestry knowledge, as well as the pattern of forestry as the best land use even for the remaining commons. This is despite its historical lack of experience in biodiverse forest management for enhancing livelihoods and ecological security.

In the words of one of the worried women, "In their lure for money, the men have made a deal over our village forest with the Forest Department", which has in fact become the only winner. These World Bank-funded projects have thus disempowered local women and men who have protected the forest while empowering a Forest Department with a long history of forest destruction. (WRM Bulletin N° 49, August 2001).

Seeing the Forests through Women's Eyes

Forests are very important for people who live in or close to forest areas and use forests for their livelihood. However, people's use of forests for daily subsistence, provision of food, medicines, shelter and agricultural production and for their social, cultural and spiritual well-being, are commonly undervalued or ignored. The dominant view often reflected in forestry decision-making and policies is to see forests as a physical resource with an economic and commercial value which can contribute to income for the state, private companies and individuals, rather than as being a social resource.

The "state control of land and forests resources" was a concept introduced and imposed during the colonial period, when other traditional resource use and customary ownership management systems already existed. This conflict between people and the state over these different views of land and forests is increasing, especially because it is affecting people or groups whose livelihoods depends on forests. Among them, women have experienced serious impacts due to changes in forest

management, loss of forest resources and changes in livelihoods brought about by those state policies.

These impacts are analyzed in detail in the handbook on Gender, Forestry and Rural Livelihoods, recently published by Vanessa Griffen from APDC (Asian and Pacific Development Centre) "Seeing the Forest for the People". The studies show major changes in livelihood and gender relations when women lose access to or control over forests resources. Women are "becoming even more marginalised and invisible as their traditional rights, knowledge and use of land and forest areas are changed by land legislation and forest policies which reduce women's access to productive resources."

The studies document that changes "have affected women the most, as women have fewer economic options than men in all countries." Women are also losing their traditional status and their decision-making power in the household and community, while their physical and economic dependence on men is increasing. "Women's traditional knowledge and use of forest resources, are being lost as traditional production systems change due to the loss of resources and also through forestry projects in which only men participate, and therefore have access to new knowledge, skills and income."

Globalisation is also impacting on forest communities and men are forced to migrate to find work, "while women are left with productive and reproductive responsibilities for maintaining households. Women have to respond to problems of supply of food, water and fuel, as well as be responsible for childcare and care for the elderly."

As part of the globalisation process, forests are being converted into monoculture plantations aimed at the global market, leading to loss of biodiversity. For women, loss of ecosystems they are familiar with implies the disappearance of productive resources used by them for food, fuel, water and other needs.

The book's concluding remarks are of utmost importance for being addressed within the international debate on forests: "Forestry is not just about trees and physical resources. Forests are a social and cultural environment as well as being vital for rural livelihoods, cultural identity

and sustainability of peoples. Economic, social and cultural inequities as a result of loss of forest resources and rural livelihoods are felt most by women. New forms of gender inequality and male dominance and patriarchy will become more entrenched if this view of forests continues unchanged in the forestry sector." (WRM Bulletin N° 55, February 2002).

Philippines: Lessons on Gender from Community-based Forest Management

Many community-based forest management projects are implemented in the Philippines aiming at increasing community involvement in forest management and at providing employment and livelihood. Although there are many examples of successful cases, we decided to choose a less positive one, as a means to show how the exclusion of women or lack of gender awareness can lead to increasing gender inequalities, both within communities and in households.

An evaluation of a community-based forest management project in Pagkalinawan, Jala-Jala, in effect since 1972, shows that despite several positive impacts on peoples' livelihoods, the project had negative impacts for women.

Its failure was rooted in the fact that it did not recognise women's knowledge and the gender divisions of labour in the community and in the household. The project issued land use certificates and land titles – to improve land tenureship – only to men, who thus became the ones to have access to and control over resources.

The project had the insidious effect of reinforcing patriarchy and establishing gender inequality in the community:

- Men had more opportunities to become representatives of the community and the market and to become powerful leaders in Pagkalinawan.
- Men, and not women, had links to external agencies (e.g., markets) through the credit facilities of the project.
- Men, and not women, had links to other economic and educational opportunities.

Community customary rights, land use and allocations were undermined upon the implementation of a pattern of privatisation of resources. Gender unbalance was thus linked to a hierarchical and male model rooted in dominion and control of nature along the lines of the globalisation "development" goal. From this experience it becomes clear that for a community-based forest management project to succeed, the inclusion of the gender dimension based on acknowledgement of women's knowledge, views and participation is a must. (WRM Bulletin N° 58, May 2002).

Women and Forest Resources: Two Cases from Central America

In Guatemala, in spite of the fact that 20% of the forest regions are under systems of protected areas, the continuous advance of the agricultural frontier, a result of the unequal distribution of means of production – articularly land – has left a trail of poverty and social exclusion. This situation is more serious in rural zones where most of the population depends on forests.

Indigenous and peasant groups are among the most affected, obliged to settle and inhabit fragile ecosystems lacking basic services. However, groups of women have sought alternative organisational forms to manage natural resources in forest systems. In this article we will present two cases, one set in a coniferous ecosystem in the West of the country (in the Department of Huehuetenango) and the other in the North of the country in one of the most important tropical forest ecosystems of the Central American region, in the Maya Biosphere Reserve, Department of Petén.

The information submitted comes from two case studies carried out by the Environmental Area of the Latin American Faculty of Social Sciences (FLACSO) at its Guatemala Academic Centre, as part of its research activities on community-based forestry and local institutionality. In the Huehuetenango region, groups of Kanjobal indigenous women have organised themselves to manage their forests through a programme of forestry incentives supported by the Government through the National Forestry Institute (Instituto Nacional de Bosques - INAB). Starting with a project to improve the social

conditions of Kanjobal women affected by the internal armed conflict, the women organised themselves through the Association of Eulalen Women for Comprehensive Development Pixan Konob (AMEDIK) Corazón del Pueblo. Since they launched the project, 143 hectares have been reforested already and 246 hectares are managed under natural regeneration systems. The forests are jointly managed with three municipalities, as they are located in communal areas and on municipal lands. In this case, the municipalities report to INAB and receive approximately 1.5 to 2.0% on the total accrued from the forestry incentives. This synergy has made it possible for groups of women to have access to the incentives, as without deed titles they were unable to do so. Close on 500 families are presently participating in the project and over the past four years, AMEDIK has received nearly US$100,000 as part of the incentives.

In the Maya Biosphere Reserve there are community concessions representing rental contracts for 25 years, for organised groups to manage forests in a comprehensive manner. This amounts to approximately 400,000 hectares that are divided into 15 community concessions. This is considered to be one of the most important regions in the world under indigenous and peasant community management.

However, the process involving the women of the region has been slow, and has been marked by generalised opposition by the men, who alleged that economic profit sharing is not fair when two members of the same family are in the organisation. Therefore, there are organised groups with no women members and others where wives and daughters can obtain the right to be member only if the husband is dead or there are no male children. Presently, women participating in the concessions amount to approximately 15%. The groups of women carrying out tasks in the forest are focused on the extraction of non-timber products such as wicker (*Monstera* sp), berries (*Desmuncus* sp) and xate (*Chamaedorea* sp), mainly for handicrafts or to make furniture, while others prefer to participate in the eco-tourism projects. Forestry-management activities are classed as needing hard labour and correspond to men.

Summing up, although it is true that the gender issue and involvement of women have been promoted by foreign development

bodies, there are certain factors that prevent women becoming involved in forestry-management activities. Firstly, the system for land distribution used in the past did not allow women to have access to land deeds. Other variables, such as education and health show that the most vulnerable groups are indigenous women. In spite of the fact that some groups such as AMEDIK have achieved access to forestry management under forestry incentives, this has not been possible without being accompanied by the municipalities. Furthermore, while forest management changes from timber use to comprehensive management, women participating in community concessions will have to face a long road towards recognition and participation in alternative management of non-timber resources and handicrafts. (By: Iliana Monterroso, WRM Bulletin N° 63, October 2002).

Senegal: Women's Project Restores Nature and Benefits the Community

Two different natural ecosystems go to make up the Popenguine-Guéréo natural reserve, located 45 km to the south of Dakar, capital of Senegal: a continental part with rugged hills covered by a primary forest and a maritime part, mainly consisting of a rocky habitat where fish come to spawn.

The zone was classified in 1986 as a natural reserve with a view to reversing degradation from deforestation, depletion of meadows and successive droughts that had led to a considerable loss of biodiversity.

In 1987 and as a community response, 116 women voluntarily and spontaneously set up the Popenguine Women's Gathering for the Protection of Nature (RFPPN, its French acronym) as a way of contributing to the conservation and restoration of the zone's biodiversity. These women have risked their reputation and even their marriages, because they have used their time and energy in establishing a natural reserve for the community when, in the eyes of their neighbours, they should have stayed at home and devoted themselves to the domestic tasks of Senegalese wives and mothers. But the dynamic women of the village of Popenguine and its surroundings have finally convinced those who were against them. Slowly, they have shown that they can regenerate and conserve their environment, encourage

eco-tourism, ensure forest restoration and survival of the flora and fauna, while benefitting the community as a whole.

Year after year, they have introduced thousands of trees from the indigenous flora. Slowly the fauna was reconstructed and thus 195 species of birds, gerogryphic antelopes, duikers or small grey antelopes, striped jackals, mongooses, algalia cats, and monkeys of the *callithrix* family (titis or tamarins) have reappeared.

With time, strictly environmental objectives have evolved and now the socio-economic demands of the women involved (*inter alia,* generation of income, solving the demand for cereals and fuel) have also been integrated. A programme for sustainable development has thus been created, ignoring models imposed from the outside and on the contrary, basing itself on the conservation of the local environment from a grass-roots, empiric approach.

Since 1995, the group has extended its action and joined efforts to restore a vital space of some 100km2, known as the Ker Cupaam Community Space, in homage to the feminine spirit protecting the site. This space includes the whole Popenguine-Guéréo Reserve and the territories of eight villages surrounding the reserve. The villages are represented by the Women's Economic Interest Groups (GIE), integrating the 1555 member strong COPRONAT cooperative for the protection of nature.

The present RFPPN programme is linked around:

a) Management of forest restoration: establishment in each village of nurseries for timber tree indigenous species as a source of fuel, and fruit trees and ornamental plants for sale; management of the village forest, creation of a network for the distribution of fuel to avoid logging timber tree species.

b) Health management: organisation of the collection and classification of domestic waste, treatment and transformation into compost, construction of latrines.

c) Food management: establishment of cereal banks and family vegetable plots.

d) Training in community management of protected zones: training on waste treatment, horticulture and management of natural spaces, initiation in computer science, the catering trade, construction of a training centre, computer and audiovisual equipment with a view to training young people.

e) Tourist management: extension and equipming of the tourist camping zone.

To reverse erosion, stone barriers and contention dams were built to lessen the speed of rainwater. Another objective is the rehabilitation of the mangroves on Lake Somone, at the southern limit of the territory.

The women of Popenguine proudly show off their work: the shiny mangroves and the full lagoon in spite of the scant rainfall. A decade ago, regeneration of Lake Somone and the Popenguine region was a dream. Woulimata Thiaw, president of the women's cooperative is proud of the results of their work. She smilingly repeats that success has had its price: hard work and that sustainable development means "to be conscious all the time of the effects of our actions on the future and on the future of our children and grandchildren. This is sustainability: the decisions we take. We have to be sure that there is continuity." (WRM Bulletin N° 67, February 2003).

Amazon Women

It is not by chance that femininity is linked to nature, to the origins and to mystery. Women are those who make life, suckle the species, communicate oral tradition and are the jealous guardians of secrets.

When the conquest of El Dorado started, the great boa woman meandered from the memory of time through the Amazon forest. She was the cosmic serpent, the great river with her long and enormous arms of water, with her quiet havens and warm and fertile lagoons.

She told her stories to another great Lady, the Jaguar. To the mistress of lands and trees, of monkeys, tapirs and elks. The Powerful One, the one who gave birth to yopo, to ayahuasca and curare [native plants

with special attributes], the mistress of the smell of cinnamon. Together they sent out the message to conceal the splendid cities imagined by Pizarro or Orellana, the golden thrones dreamt of by Vasco Da Gama, the precious stones sought by any other wealth-thirsty Spaniard. They disguised the ispingo [precious wood tree] with mantles of moss and orchids, they hid their children and with the sound of the manguare [drum], they called for the way to be closed to strangers.

Orellana and his men told about tall and strong women, armed with bows and arrows, with massive stone maces and thorny trunks that threatened them from the banks of the great river. These women commanded – so they say – many warrior men. One of them was taken prisoner by the Spaniards, and after questioning him (?) they learnt of the power of these fearful women. They came from over sixty villages, where men were their servants and slaves and they were only allowed to approach them to fecundate them. The man also told them that in their vagina inhabited the many sharp-toothed piranha and if they possessed a women without her consent, this meant the most effective and painful castration.

The hallucinations and weariness of the Conquistadores, after weeks of terror, mosquitoes and fevers, within the unknown world of the jungle, was linked to the stories and threats of the indigenous man who, to keep them away from his village and the Indian women, did not spare imagination in his stories, told in an unknown language and receiving the creative input of the translator.

Thus was born the myth of the Amazon Women, very similar to Greek mythology but with the “savageness” attributed to the Indigenous people. The myth gave a name to the enormous river and to the surrounding forest.

Beyond the myth and the legend, the Amazons, the women who live in the basin, have been warriors, defenders of the malocas [round houses], and those mainly responsible for conserving the descendents of a people condemned to genocide and systematic disregard. In lullabies and in parsimonious stories to calm fear, they whispered in the ears of their children the history of their people, their origins and

values. They taught their descendents to love the great spirit of the forest, while making the thin clay vessels or crushing yucca to make cassava. They showed them the difference between the leaf with serrated edges that kills and the one that is almost exactly like it, that cures. They instructed their sons on how to guard the fire on their long walks and their daughters to hide the seeds in the folds of their bodies, to plant them in propitious ground when they had finished running away from the usurpers and were deep in the forest.

Thin, small and smiling, only armed with a malicious grin, they disarmed the friars and missionaries with their cross and dressed the cosmic serpent with Mary's mantle. And when it was time to fight cruelly or to poison the water, they did so. When it was time to leave their children in safer hands they did so, shedding no tears, in the hope of saving what was left of their ethnic group.

They were easy prey to slave traffic, to the dogs trained to leave them with no faces, to the lascivious Conquistadores, priests and settlers, to flu and smallpox, but even so, they continued singing to their gods and to their avenging spirits. They lost their husbands, their grandfathers and grandchildren, but continued giving birth to remain in the memory.

They also bled the rubber tree so that the milk – turned into tokens to buy at the rubber-tappers shop – would feed their children. They washed gold and broke rocks looking for onyx and diamonds to fill the chests of the great miners. They planted coca and chose the best leaves to swell the bank accounts of the Capos.

Today their skin is sore from the contact of the mist from crop spraying and the water contaminated by oil and gold exploitation poisons their body; they continue bearing children to resist usurpation.

Today they are the organizers, the teachers, the Indigenous leaders. Today they continue to be the mothers of knowledge, life, continuity, the guardians of the past. The great Amazons. (By: Tania Roura, WRM Bulletin N° 79, February 2004).

Role and Status of Women in Land Use Control and Management

The role of indigenous peoples and traditional knowledge systems in the conservation of biodiversity is so well known as a general fact that it needs no further assertion. The particular role of women however is less acknowledged and even where such acknowledgement is offered, is not accompanied by the concomitant offer of space on related platforms of discussion and decision making particularly by mainstream processes. North-Eastern India is a region with rich forests and wetlands, inhabited by over 250 indigenous peoples. This region of India has historically been contiguous with the northern region of Burma and of Bangladesh. Since villages of numerous peoples co-habit the same territory, interlaced in an intricate mosaic, self-governance and village level autonomy with tribal alignments extending over non-exclusive and geographically un-integrated territories is a typical political configuration.

The cultures however different in many ways share the characteristic hunting gathering economic base that has led to the development of intricate codes of land use and harvesting of natural resources, within village populations, among villages and between different tribes. The only agriculture traditionally practiced is of staple cereals, cotton, small kitchen gardens and poultry.

A broad range of traditional land and water rights and use practices, all of them community or clan rather than individually controlled, adapted to the specificities of the variable terrain of the region exist among the different indigenous peoples. While actual legislation of the Indian system recognizes little of these systems, the peoples still adhere to customary practice wherever not actually obstructed or prevented from doing so. This is usually effective in matters internal to the community, but is problematic when the collective rights of the community require interfacing with state processes such as land acquisition for development or military bases or in re-settlement programmes.

Wet rice cultivation is practiced in the small valleys interspersing the hills and in the lower hill slopes. Swidden or slash and burn cultivation is practiced in higher slopes, usually for cotton, other cereals such as

maize and legumes. The water, rivers, lakes and ponds and the forests are harvested for insects, vegetables, herbs, game and fish. Extensive lands are traditionally maintained by religious and cultural practice as bio-diversity preserves. Sacred groves, forests and water bodies have been preserved for millennia by powerful taboos against contamination and harvesting of produce.

With the advent of the State structures of resource control and management, the traditional control and practices have eroded. Partly due to greatly increased population pressures of migration into the region of mainstream populations and the discreditation of swidden cultivation practices, even marginal lands are brought under wet rice cultivation. Lands once protected by religious taboo against intensive exploitation are a bonanza for lumber, wood and bamboo industry, for monoculture plantations, for wildlife and environment conservation projects and even for mining. Indigenous control over these lands has been de-legitimized with the State expropriating all lands within its territorial boundaries under various laws and policies based on the principal of terra nullius characterizing colonial practice.

While each of these numerous peoples of the region has its unique social and cultural gender attributes, from the matriarchal to distinct patriarchy, the women commonly are responsible for a great deal of the economy, subsistence, cottage industry and indigenous market. Their activities include agriculture but also harvesting of produce from non-cultivated sources such as waterways, marsh and forest and also the management of buffer stocks and seed stocks. Women have inalienable rights by community laws over the harvesting of produce for consumption and sale. Single adult women, whether unmarried, widowed or divorced, also have customary rights to homestead and agricultural land from clan, tribe or village holdings. Every woman can claim land and resources to construct traditional shelters on community holdings of clan or village lands. She can also claim a share of the agricultural or other revenue generating lands and resources owned by the family, clan or tribe.

Based on kinship and village alignments, women have powerful traditional institutions and networks, which facilitate and support their

responsibilities towards family and community. These networks are the main agency in organizing access to and distribution of resources and for support to individuals and sections affected by some kind of temporary dysfunction or problem such as illness or crop failure, which disable them from providing for themselves and their dependents. These associations, whether of kinship or friendship, whether formal or institutional also hold, share and transfer the information regarding agricultural diversity, the knowledge and stocks of traditional seeds and plantation methods.

With substantial access and control over land and water use, it is not surprising that indigenous women of this region have developed both formal and informal institutions and networks for protection of biodiversity. As most harvesting of vegetables and herbs is done by women, they are also naturally the authorities on the subject of the various species and their characteristics, their use and value. This knowledge is passed down through generations in those communities without formal systems by word of mouth among kin and by the apprenticeship of younger women to elders. Some few peoples have evolved formal systems of women's trusteeship of knowledge and natural resources, such as the Meitei of the Imphal valley. Among this people there is a formal institution of priestesses known as the Maibi Loisang who have custody of such traditional knowledge and are also responsible for transmission in different formal methods and situations to different sectors of the community. The Maibi Loisang is also responsible for maintenance and preservation of the shrines of the numerous deities of land and water, natural shrines at what are evidently biodiversity conserves. Similar if less formal associations of female shamans, healers and elders exist among many other peoples of the region.

The relationship between fertility and regeneration, between female spirituality and the sacredness of the earth and its diversity, between sustainability and trusteeship rather than ownership and exploitation is the essence of indigenous culture, the essence of the significance of womanhood and women in indigenous society. It may also be the only ethic that can preserve and conserve our world for the future, any future at all. (By: Anna Pinto, WRM Bulletin N° 79, February 2004).

Women's Land Tenure Security and Community-Based Forest Management

In Indonesia, the western part of Java – Halimun – is well known by its high biodiversity and cultural richness. In terms of community-based forest resource management systems, indigenous and local peoples of Halimun possess centuries of farming and knowledge about the tropical rainforests. They utilize the surrounding forest and land for various uses in models of swidden cultivation (huma), rice field (sawah), garden (kebon), mixed tree garden (talun) and various types of forests (such as Leuweung Titipan, Leuweung Tutupan and Leuweung Bukaan). These models are managed as one integrated system by men and women. It is well noticed that men and women contribute to their family's welfare, often in complementary ways, and each type of contribution is indispensable, especially within poor families. With regards to food security, women make a bigger contribution to their families as a whole than men, because they are more involved in swidden cultivation and rice production.

Since 1924, during the Dutch colonial time, a part of the Halimun ecosystem area was set up as protected forest area to be changed in 1979 into nature reserve, and again in 1992 into national park up to nowadays. On the other hand, Halimun is also a big source of state income. Government tree plantations (since 1978); large scale estates of tea, cacao, rubber (1970s); and gold and other mineral mining (1990s), have been disrupting the ecosystem. Moreover, all those "development projects" have restricted and even more ended peoples' access to and control over livelihood resources (land and other forest resources), entailing the disappearance of traditional knowledge, particularly that of local and indigenous women.

"Since the forest was cut down and converted into pine garden, the water quality for sawah [rice field] is no longer good. Apparently , this kind of water quality is not suitable for growing the local variety of paddy." (Mrs. Annah). "Formerly, we could easily find ki beling [medicinal plant] surrounding here, but now, we should walk far to the Cibareno river to look for it." (Mrs. Surni, a midwife).

In response to the many external pressures, environmental damages, constriction or even loss of local access to and control over the land, women from Malasari and Mekarsari villages work harder than before to provide food for their families by, among other:

- Becoming daily poorly paid agricultural-wage laborers (buruh tani), earning US$ 0.7 - 1.4 a day;
- Doing ngepak (arrangement between landless peasant women and land-owners for planting and harvesting paddy, earning two bundles of rice for each ten that they plant);
- Doing maro (local share-cropping, by keeping 50% of the harvest);
- "Illegally" cultivating small parcels of the "state" land managed by the State Forestry Company Perum Perhutani;
- Carrying out women's "voluntary" day-care to support other women who would like to do ngepak or buruh agricultural works;

Whichever the combination of women's and their family members' efforts, however, the food supply often still does not meet the families' yearly requirements: "I never sell the paddy that I cultivate. It is not enough even for my family," said Mrs. Arti. "If there is no land, there is no food. If there is little land, there is little food," expressed Mrs. Minarsih.

Malasari and Mekarsari women's access to and control over land and other forest resources are insecure, and their families have no legal rights, protection and guarantees regarding the future use of the land. The general consequence is that, since the people are forced to cultivate in this "legal vacuum", it is indeed very difficult for them to receive support and assistance. As a result, women and their children suffer most under hunger, malnutrition, domestic violence, and violations of other rights including the right to health, education, the freedom of speech and gathering.

In order to guarantee the sustainability and development of community-based forest resources management system, the certainty of independent rights in which that system is developed by Indigenous Peoples and local communities is required. The certainty of peoples' – especially women's – independent rights should be adopted in natural

resources related policies which acknowledge that the main actors in the natural resources management consist of women and men, with their different respective needs, interests, priorities and restrictions. The voice of Mrs. Uun as one of women elders in Malasari village: "We have defended our land before, and we will defend it again" should be heeded!

In wrapping up this paper, in terms of manifested women's independent rights on land and other forest resources, it is very important for us to define and bring into reality the issue of how women could improve their own life – for instance, their own prosperity level in terms of food quality, clothing, health (especially their reproductive health), education, security and safety feelings as well as leisure time for taking a rest and doing other private activities – as a consequence of their participation in the many efforts to achieve a better life (welfare condition). These are basic and important conditions which should be highly considered by us as outsiders, such as governments (including policy makers), local NGOs and international cooperation agencies (including international NGOs) as well, when we plan to design "community-based" forest or other natural resource management projects in a participatory manner. Who exactly gets direct benefits from the project? Is it the women? Or, does the project even create overburdens for women? It is crucial to further analyze critical questions about how access to (and control over?) the land and other production factors provides direct positive impacts on the whole of women's lives both in domestic and public domains. (WRM Bulletin N° 79, February 2004).

Women, Forests, and Adaptive Collaborative Management

The Center for International Forestry Research has implemented a program called Adaptive Collaborative Management of Forests (ACM) for more than five years. At its most extensive, we worked in 11 countries (Nepal, Indonesia, Philippines, Kyrgyzstan, Malawi, Cameroon, Zimbabwe, Ghana, Madagascar, Bolivia and Brazil); and activities continue in eight. One of the striking elements of this work has been our success at involving women (and other marginalized groups) in our work with communities.

Our central method is participatory action research; and we have made an effort to attend to equity issues from the start. On each site there was at least one ACM facilitator whose role involved both action with communities and other stakeholders, and research on that action. It was a challenging task, to which most facilitators rose. Indeed, the more demanding the context and the problems, the more motivated and successful the facilitators appeared to be.

Although there is not space to describe the entire effort, I would like to provide some sense of the kinds of involvement and change that occurred.

In the area of Mafungautsi forest reserve, in Zimbabwe, women had been uninvolved in formal forest management. Activities pertaining to forests were deemed men's sphere. After representatives from the communities were invited to participate in "training for transformation" (building on the empowerment work of Paulo Freire), women's attendance and participation in formal meetings went up dramatically. The women also became involved in user groups, focused on particular natural resources. One of the most successful was a broom grass user group, which examined their experience with two harvesting methods (using participatory systems modeling techniques), looked at the implications for sustainability, and developed a new broom design that would favor the more sustainable method. These women have been able to improve sustainability, income generation, and their own empowerment in community affairs.

In several villages in Nepal, forest user groups that manage community forests met to consider their visions for their forests. In this process they identified a number of problems, including elite domination of decision-making and benefit sharing, lack of transparency in management, and gender inequities; and they made plans to address these problems. They also developed indicators that would help them determine how well they were meeting their goals. Since many people, particularly women, were illiterate, it was important to use visual symbols to record progress. The phases of the moon were used, with a new moon meaning little progress, a full moon, full accomplishment of the goal. The structure of meetings was also changed, so that more decision-making took place in smaller, neighbourhood meetings

composed of people of similar caste and ethnic group, where women felt freer to speak their minds. During the course of this process, women became more willing to speak out and more regular attendees at community meetings. In short, they became more involved in decision-making and actions pertaining to community forests.

In Guarayo, Bolivia, a large forest management project was underway in the indigenous territory where ACM was operating. This project had paid little attention to gender in its efforts to train villagers to manage their forests for timber, considering women somewhat irrelevant for timber management. However, with careful analysis, three interesting issues emerged. First, "modern" timber management was as alien to men as it was to women. Neither sex was familiar with doing inventories, keeping records, or administration. Only wielding a chainsaw was beyond women's capabilities. Second, the withdrawing of men's labour from household work for logging and other timber management tasks had the potential to seriously and adversely affect women's lives. All the tasks that men normally did would fall to the women. And finally, women's views of the value of the forest differed from men's. Women were interested less in the forest as a source of timber; more in it as a habitat for the animals that formed a significant part of family nutrition – making an intriguing link with the concerns of environmentalists.

Other intriguing results came from Zimbabwe, where women's preference for behind the scenes influence rather than explicit power made researchers reconsider their assumptions; or where the involvement of NGOs in community action resulted in women's gaining access to land, something that had not been theirs traditionally; from Brazil, where the diversity of women's roles – and the inappropriateness of one-size-fits-all "development" – was vividly portrayed through contrasting Acre and Maranhao; from Campo Ma'an National Park, in Cameroon, where enforcement of rules against hunting, a male activity, had serious adverse effects on the women who had sold the game.

This body of research has produced a rich treasure trove of material on women's roles and on ways that women and other marginalized groups have been seriously involved in externally facilitated collective action. Our book elaborates on the examples presented above (see Colfer, Carol J. Pierce, Ed., "The Equitable Forest: Diversity, Community

and Resource Management", scheduled for publication in April 2004). This approach is an effective way to involve women meaningfully in formal management efforts; and to recognize the traditional roles they have always had in informal management of forests. (By: Carol J. Pierce Colfer, WRM Bulletin N° 79, February 2004).

Women and Knowledge of Medicinal Forest Plants

In the framework of the South American Medicinal Plants Network, the Uruguayan Centre for the Study of Appropriate Technologies (CEUTA) is coordinating a collective activity for the recovery of traditional knowledge on the use of plants as medicine and as food.

We want to tell you about the experience of a group of women, gathered together since November 2002, when we held the first meeting on Women's Cycles and Natural Medicine. At this first meeting, we shared visions and knowledge of plants that help us to keep healthy, considering the various stages of our feminine cycles.

We carried out an awareness-raising activity centred on our relationship with food and with our power to heal. We personally experienced the diversity and respectful dialogue of knowledge because women from the various corners of the country were gathered, having different occupations and situations (rural women, midwives, sexologists, herbalists, members of community groups).

Nelly Curbelo, one of the participants recalls: "We started in November 2002. Previously each one of us in our locations had worked with plants collected in our areas, remembering knowledge that has existed for a very long time: which were the uses for health and the important food input. At the first meeting the theme was feminine health in all its phases, folk knowledge, very deeply rooted traditions – some perhaps erroneous, but no doubt containing much wisdom – transmitted to us by our grandmothers and those before them, old women, herb doctors, and women who know how to live better and more healthily, using plants.

We reflected on the cycles of the moon and all the physical and spiritual harmony that we have in us and that surrounds us, that can make our existence a sacred temple to be cared for.

Closer in time, all this wealth has been set aside in the name of conventional medicine. It is for this reason that we want to restore that wise knowledge that is sometimes hard to reach because the people who have it are wary of 'opening up' until they are sure of our good intentions and also because they have been devalued or, what is also sad, people have taken the knowledge of humble and ordinary people and made a profit out of it."

At the second meeting in May 2003, we worked on the relationship we have with folk, traditional and university knowledge, the way in which each type of knowledge is received, the privileged opportunities for each knowledge, their own rationale and the relationship among them all. We had in-depth conversations on the relationship between the official health system in the region and the use of medicinal plants, community and folk experience, research and experience of folk knowledge in Uruguay and Argentina, their implications and results.

In December 2003, our third meeting was held in the forest along a river. The forest was our shelter and our inspiration to share both personal and group research on our native plants, to work on folk botanical descriptions, on traditional recipes and to exchange experiences on restoration and recovery of the opportunity to use indigenous flora.

Nelly continues with the story: "We met around the fire. The canopy of coronilla *(Scutia buxifolia)*, rama negra *(Senna corymbosa),* guayabo colorado *(Myrcianthes cisplatensis)* and tala *(Celtis spinosa)* did what it could to protect us from the fine rain that from time to time was accompanied by the wind. There was a feeling, indecipherable to me, a mixture of spiritual grandeur and earthly safety. We enjoyed the silence full of messages, the nearby crystalline and untiring river, the silenced night elves, also the frogs and crickets leaving time and space to us.

At each of the meetings we learnt more, not only because of the subject that we were addressing, but also because intuitively and instinctively we captured feelings, knowledge, conclusions, that enrich, strengthening values, opening doors and leaving it clear that we are all at the same time teachers and students.

We started the first activity of the second day: before breakfast, inhaling that special forest aroma in the quiet morning, each one of us in silence, walking alone, choosing a route, observing suspended in time, going back too, until you feel chosen or you choose a grass, a shrub or a tree, and using your senses with all the love Mother Nature gives us.

Once I found 'my plant' I sat next to it, feeling its texture, its smell, its taste if it lets me, the form of its stems, its leaves, if it has flowers, fruit, what its surroundings are like, which way it is oriented, if it is alone or has offspring, what other species accompany it and if they are complementary, the type of soil, seeing whether it prefers the sun, half shade or very shady spots or the caress of water. Perhaps I try to feel a bit like the plant, to share its knowledge and how much I can take of its life for my existence and health. I know I can only offer it care, respect and admiration, and if its contribution or message to me is silence: respect it with all the tenderness that led me to choose it.

This was a beautiful task. Once concluded we met to share our experience.

When we talked and shared this personal experience, such rich and valuable contributions were made by the other companions that they greatly enriched our previous knowledge.

When we are in syntony with our surroundings, living these meetings so intensely, we always feel moved and the time goes by and there is no time to be measured."

This meeting was yet another input to the reactivation of the memory of the forest, which many of our ordinary country people hold, sharing their profound love for the places that they endeavour to shelter from depredating attacks. Thus, we gather the different contributions of women and men regarding knowledge and practices related with the good use and conservation of our ecosystems and environments. Thus, we are building up a folk pharmacopoeia on the forest. (By: Monica Litovsky, WRM Bulletin N° 79, February 2004).

India: Women's Knowledge and Power in Forest Societies

Regarding women's indigenous knowledge, apart from a few ethnographic and anthropological studies, little consideration had been given by early androcentric-biased anthropologists, ecologists and environmentalists to the gender dimension of indigenous knowledge systems.

It was not until the mid-seventies, when the myths associated with such stereotypical thinking were unmasked, that feminist scholarship turned its attention to the knowledge systems of women. Now, acknowledgment is increasingly being given to the role played by women in many communities as the primary natural resource managers due to their intimate knowledge of the environment that enables them to maintain livelihoods, cultural continuity and community cohesion.

Before the advent of state pressure on matrilineal societies, gender relations were relatively equal. Based on women's role in production, their special knowledge of forests, and their place in the cultural and religious life of matrilineal communities, women enjoyed considerable space within the household and the community to make decisions about resource use.

In the Chota Nagpur villages of Central India, present day practices socially acknowledge women's knowledge of forests and agriculture. When the Munda (the headmen) go from one village to another, their wives lead them. Women's knowledge of seeds, herbs, and plants is considered precious both in the family and community. Their knowledge of the roots of a particular plant is used to brew rice beer, the most sacred and popular drink of the people.

Their role in the preparation of cultivable land is also very important; they are seen working with men in field preparation and reclamation of forest land. Women's contribution to the development of agriculture is further confirmed by the 'myth of the preparation of the first plough.' The Supreme Being's wife is described as the real inventor of the technology of ploughmaking. Thus women's right to land and its produce received a permanent place in the customary law of the Munda people.

Unfortunately, maintaining this position of power has been difficult for women, particularly in the face of pressures from the state in favor of centralizing forest management, weakening an important source of women's power in matrilineal societies.

While women certainly continued to use forests after centralization, they often had to do so clandestinely and in short visits. In addition, many forests were changed into monocrops that provided few of the resources that women controlled historically. With limited access to a much altered forest, women's ability to fend off forces of patriarchy was much reduced.

State efforts to centralize forest management did not go unopposed. Yet these movements did not often reassert women's equal rights with respect to forest management, or any other aspect of social life for that matter. A shift in gender power from women to men was already well underway when such movements got started, and local men used the moment to further consolidate patriarchy. In the process of changing forest use, from swidden systems to settled, privately-owned fields, and the change from community access to private access to forest products, women had lost the source of their power and status. Men were fighting for the return of forests, not gender equality.

However, that situation is changing and women's inclusion in committees is becoming more a policy norm. In many places, all-women groups have come up for forest management and protection. Women are seen to perform better in many management and production tasks. But these new norms of women's inclusion, though still limited in space both vertically and horizontally, have also come about through a process of struggle by women, often supported by various external actors. (WRM Bulletin N° 96, June 2005).

WOMEN AND PLANTATIONS

Indonesia: Gender Impacts of Commercial Tree Plantations

The loss of access to forest resources does not only occur with deforestation of primary forest, but also where commercial tree plantations replace primary forests. It is a well known fact that tree plantations of introduced species planted for commercial purposes for local and international markets, do not have the non-timber forest products of primary forests, particularly resources used for housing, household items, food, fuel, handicraft and medicines.

Less well-known are the specific impacts that commercial tree plantations have on women, particularly those related to changes in the availability of resources commonly found in forests and scarce or absent in plantations. A study carried out in Indonesia shows that, among other, these types of impacts on women include:

- Food scarcity. Women are traditional collectors of vegetables found in forests. As primary forests are cleared to give way to plantations, food is no longer available, except in "deep forest" areas where only men can go (and not the periphery or edges of the forest where women have access). As a result, women find it more hard to collect the necessary food resources and become more dependent on men to collect vegetables from the forest:

- Firewood scarcity. Firewood is scarce in tree plantations and collection is restricted in some areas, thereby increasing the hours spent by women to collect less wood than before. As a consequence, women now also rely on men to collect firewood, as men have access to larger areas of forest, which are further away.

- Water scarcity. Some introduced species (e.g. eucalyptus) require large amounts of water and can cause the lowering of the water table and loss of water resources for consumption and agriculture. The same is applicable to commercial teak plantations, that have similar impacts on water resources. As a result, during the dry season women can

spend 10-12 hours a day making two trips for water due to the depletion of water resources by plantations, thus resulting in added work burdens for women.

- Medicine scarcity. Forests provide a broad array of medicinal plants, which are usually collected by women. These plants disappear after the plantations are put in place, thus increasing the time spent by women in collecting such plants at longer distances.

In sum, less food, less firewood, less medicine and diminishing water resources result in increasing women's work burden while at the same time reducing the amount of resources collected. Additionally, more reliance on men will tend to diminish women's roles and generate further imbalances in decision-making. (WRM Bulletin N° 59, June 2002).

Malaysia: The Plight of Women Workers in Oil Palm Plantations

Women are more than half – around 30.000 – of the workforce in Malaysian plantations, and have been historically employed as unskilled, temporary contract workers doing the most menial and underpaid jobs. Urbanisation and industrialisation has pushed men and the young to work in the new industrial zones while women stay on and continue to take on any job so that they can have a house and basic amenities provided by the plantation company, which are otherwise beyond their reach. Thus, women have played the dual role of providing cheap labour and social stability.

In the early sixties, when synthetic rubber consumption controlled by industrialised countries rose to more than 60 per cent globally, rubber prices dropped sharply. Malaysia rubber plantations could not compete so the plantation sector was under pressure to diversify and introduced oil palm as the alternative crop. The country later became the world's top producer and exporter of palm oil, in a push which has encountered – and still is encountering – strong opposition from indigenous peoples like those of Sarawak, who defend their traditional lands and forests from the devastating monoculture schemes that allow

the country to insert in the global economy but at the cost of depriving the people from their livelihood.

The oil palm crops required more intensive 'care' from pests and the use of pesticides became a major requirement. Women were recruited as sprayers of pesticides and fertilisers – 30,000 women are estimated to be working as such in the country, most of them Indian. The organisation Tenaganita – or Women's Force – has been working with plantation workers since 1991. The compiled information about the work and life of plantation workers and the case studies of their exploitation as women and as workers has allowed the organisation to voice the plight of those women "poisoned and silenced", in a report produced together with Pesticide Action Network (PAN) Asia and the Pacific.

The study reveals poor maintenance and leaks in the sprays, poor medical care and first aid facilities on the estate, and in some cases lack of protective equipment. Especially for women, the absence of medical monitoring and a total lack of understanding of how they are affected by these chemicals, make it difficult to assess the extent of the impact of pesticides and chemicals on them, on their reproductive health and on their unborn children. But the impacts are very real.

The skin is the body's largest organ; 90 per cent of exposure to pesticides occurs through the skin, and women have a thin skin which predisposes them to a high level of absorption of chemicals into the body. Very few women know that the highest absorption point is the genital area. They experience severe vaginal burning sensations after spraying but suffer in silence since they are ashamed to state this problem to the hospital assistants that usually are men, so the problem goes unchecked. The common symptoms of fatigue, back pain, very bad headaches, nausea, giddiness, tightness of the chest, chest pains, swelling breasts, are indicative of exposure to organophosphate and carbamate type of pesticides.

Pointing at the accountable players, the report underlines that the owners and the management of the plantations make the decisions on the tasks, the method of spraying, the type of pesticides used, the health care services and the actions taken when a complaint is lodged.

The plantation industry has failed to set up safety committees and adhere to the Occupational and Safety Act. And worse, it has not given the workers appropriate information on the poisons they would have to handle and use. Though it is aware of the dangers that these poisons pose, it still continues to use very highly toxic pesticides. However, it has developed strategies so that it will not be made accountable. The industry has structured the task of spraying into the 'sub-contractual work' category. As such, the workers come directly under the supervision of the sub contractor. Many remain as temporary workers, and in this way the industry has abdicated its responsibility. Its concern is only profits and not the lives of the workers who bring in the wealth to the industry.

As for the pesticide industry, though it works closely with the plantation industry without coming directly in contact with the workers, it is responsible to ensure that the pesticides it manufactures and distributes do not poison workers, the public and the environment. However, the industry has not, or has been very slow, in taking action to address these issues, and has often been more vocal in denying that poisoning has taken place.

The Pesticide Board and the Department of Occupational Safety and Health are responsible to ensure protection and safety of the workers from poisons. Overall, there is a lack of monitoring of the sale, use and impact of the poisons in the plantations. The weak implementation of the regulations in the plantation sector has led to women workers being poisoned daily. Besides this, health or medical personnel have not been trained effectively to deal with pesticide poisoning and health. Thus the government is equally accountable for the current health crisis of plantation women sprayers.

The National Union of Plantation Workers (NUPW) though comprised by 60% of women, has failed to address the frightening reality of women workers and their daily exposure to poisons. The leadership has bargained for slightly higher wages for sprayers as a 'high-risk' job. The lack of gender perspective is reflected in the absence of programs for women and lack of women leaders in the Union itself.

The hiring of migrant workers, most of them employed as contract labour, is an emerging issue. Activities are often sub-contracted to

businesses or agents who supply these contract workers to undertake various jobs on the plantation without becoming employees. They are unprotected by all the labour regulations, are highly mobile and face the high risk of being arrested, detained and deported. Thus these workers are also highly vulnerable and face acute risks to their health with no access to medical care or treatment.

Eventually, the reduction or prevention of toxicity related to pesticide usage in the country would entail, among other actions, that the use of hazardous compounds such as pesticides is banned and/or severely restricted, alternatives to chemical pest control are promoted in the country, and the gender perspective is integrated in the analysis of the occupational hazards of pesticides.

A women organisation has spoken loud. It has given voice to the "silenced" in an effort to counterbalance the harmful effects of a failed production pattern of large scale monoculture plantations which is artificial, insecure, and reinforces women exclusion with no benefit for the people at large. (WRM Bulletin N° 69, April 2003).

Brazil: Women's Working Conditions in Tree Plantations

In many regions of Brazil, woodlands and areas previously used for agriculture are now substituted by large-scale monoculture tree plantations, recruiting their work force among men, women and children. In the case of Minas Gerais, plantation implies a series of activities carried out by women on a par with men, except logging which is a masculine activity par excellence.

Hiring of women workers was based on their greater aptitude to carry out certain tasks, such as growing plants in nurseries, which requires greater dexterity. In some cases too, women are entrusted with the application of ant-killers to the land planted with eucalyptus.

While the plantations expanded and the work rationale changed, given the technical specificities of tree production, in some cases female labour simply became a form of direct incorporation of cheap labour, contributing to lower the salaries of men workers.

The labour conditions of women workers have much in common with those of men, but some degree of differentiation may be established with relation to their work in the tree nurseries. In the plantations of two large forestry companies (V&M and Plantar), a large quantity of reiterated injuries caused by making great efforts have been observed, in spite of which women continue to work, many of them with swollen or bandaged hands. They also suffer from rheumatic diseases, probably caused by their constant exposure to cold water in the nurseries and to a generally cold environment in the wintertime.

In these two plantations there are no specific gender policies, which is detrimental to them and to their children. As there are no day-care centres near the place of work, it is almost impossible for women to breastfeed their babies after their 4 months maternity leave, established by law, thus increasing malnutrition. They usually leave their homes at 5.30 in the morning and return late in the afternoon. Added to the workday, they are obliged to return home in the company transport, which takes an hour or more as it goes around, picking up all the workers at the plantations.

In interviews held in Curvelo, Minas Gerias, to women working in plantations, one of the main complaints they made was the basic need for drinking water. One of the women interviewed reported that there were days when the water came out of the watering places very cloudy and reddish, which makes one suspect contamination from the agrochemicals used by these companies, some of which are prohibited on international lists. Perhaps this data should be related with the numerous cases of cerebral diseases of workers that have been discharged and the high incidence of cancer in the zone.

All this takes place in a context of unemployment, misinformation regarding workers rights and loss of access to the natural resources that previously satisfied their needs. Thus, many women workers do not receive medical care, and do not know how to bring their case to court. To this is added that they are made to feel guilty for work-related accidents or diseases. Furthermore, they fear loosing their jobs or not receiving the basic food basket that the Collective Agreement ensures them and that they count on for their family's basic food.

The plantation companies arrived in the region promising development. They substituted the "cerrado" vegetation by monoculture tree plantations, thus eliminating all the goods and services that this ecosystem provided to its inhabitants and in particular to women. In exchange, they received the "benefit" of jobs such as those described. Is this what they call development? (WRM Bulletin N° 74, September 2003).

Tree Plantations Impact Doubly on Women

The invisibility of women is perhaps nowhere greater than in timber plantations. Few women are ever seen working within the endless rows of eucalyptus or pine trees. But plantations are very visible to women, who are in fact greatly impacted by them in different ways.

No wonder then that one of the first documented demonstrations against monoculture tree plantations was led by women. This happened in August 1983 in Karnataka, India, when a large group of women and small peasants of the Barha and Holahalli villages marched on the local eucalyptus nursery. The women protested the commercial eucalyptus trees as being destructive to the water, soil and food systems. They pulled out millions of eucalyptus seedlings and planted tamarind and mango seeds in place. They were all arrested, but their action became a symbol of a struggle that continues today.

In forest-dependent communities, women have no doubt that plantations are not forests, because the former do not provide them with any of the non-timber forest products provided by the latter, particularly food, fuel, material for handicrafts, resources used for housing, household items and medicines. Additionally, they deplete the water resources they depend on. Large-scale tree plantations result in food, firewood, water and medicine scarcity. (*see article* Indonesia: Gender impacts of commercial tree plantations).

Even in the few cases where plantations provide women with some employment opportunities, not only do they not compensate for losses such as those mentioned above, but they add new problems to women's livelihoods.

In Brazil, for instance, in the state of Minas Gerais, women are hired to carry out a number of activities on a par with men – except logging which is a masculine activity par excellence. Hiring of women workers is based on their greater aptitude to carry out certain tasks, such as growing plants in nurseries, which requires greater dexterity. In some cases too, women are entrusted with the application of ant-killers to the land planted with eucalyptus. It must be said, however, that in some cases female labour simply becomes a form of direct incorporation of cheap labour, contributing to lower the salaries of men workers. Because, as usual, women's salaries are lower than men's for equal types of work.

The labour conditions of women workers have much in common with those of men – low salaries, bad working and living conditions, seasonal work, outsourcing – but some degree of differentiation may be established with relation to their work in tree nurseries. In the nurseries of two large forestry companies in Minas Gerais, a large quantity of reiterated injuries caused by making great efforts have been observed, in spite of which women continue to work, many of them with swollen or bandaged hands. They also suffer from rheumatic diseases, probably caused by their constant exposure to cold water in the nurseries and to a generally cold environment in the wintertime.

As the vast majority of plantation companies, those of Minas Gerais have no specific gender policies, which is detrimental to women and their children. It is almost impossible for women to breastfeed their babies after their maternity leave, thus increasing malnutrition, due to the lack of day-care centres near the place of work. They usually leave their homes at 5:30 in the morning and return late in the afternoon, having to return home in the company transport, which takes an hour or more as it goes around, picking up all the workers at the plantations. Many women workers do not receive medical care and they are even made to feel guilty for work-related accidents or diseases. Furthermore, they are afraid to complain because they fear loosing their jobs or not receiving the basic food basket that the Collective Agreement ensures them and that they count on for their family's basic food.

In sum, the substitution of local ecosystems by monoculture tree plantations result in impacts on local people by eliminating most of the

goods and services previously available and impacting more on women through an increase in their work burden and a reduction in the amount of resources collected. At the same time, the scarce jobs provided to women by plantation companies do not compensate for those losses, while adding new problems to their health and livelihoods. (WRM Bulletin N° 79, February 2004).

Women Plantation Workers Poisoned and Silenced

In 2002, the Malaysian organization Tenaganita, together with Pesticide Action Network-Asia Pacific launched a study that confirmed that women plantation workers were being poisoned by the use of highly toxic pesticides, especially Paraquat.

At the launching of the "Study of Pesticides Poisoning in the Plantations", Tenaganita Director, Dr. Irene Fernández said that "if the Malaysian government had, through its enforcement agencies the Department of Occupational Safety and Health and the Pesticides Board, effectively implemented the laws the women would not have suffered."

What the Malaysian state actually did do in October 2003 was to imprison Irene Fernández in relation with a previous study carried out by her organization: "Abuse, Torture and Dehumanized Treatment of Migrant Workers in Detention Centres". Accused of "maliciously publishing false news", she is still in prison serving a 12 month sentence.

When she is eventually released, will she be again accused of "maliciously publishing false news" in relation with the more recent study on the condition of women plantation workers which are "poisoned and silenced" by the oil palm industry? The possibility is very real, given the powerful economic interests involved in the Malaysian oil palm sector.

However, the study's findings can in no way be considered as "false", and they are totally consistent with the information on working conditions in oil palm plantation in both Malaysia and elsewhere. The peculiarity in this case is the strong presence of women affected by standard operations of these companies regarding pesticide use.

The study proves that women sprayers working in plantations in Malaysia are poisoned by the pesticides they spray daily. It also reaffirms that the living conditions in plantations are poor, medical care is inadequate and that estate management is oblivious and often unsympathetic towards the social and health problems faced by workers.

The common symptoms noted among women plantation workers were fatigue, vomiting, back pain, giddiness, difficulty in breathing, skin problems, nausea, eye irritation, headache, tight feeling in the chest, and swelling, which are indicative of exposure to organophosphate and carbamate type of pesticides. Blood samples revealed a depression in the acetyl cholinesterase enzyme activity, which is confirmation of pesticide poisoning. The study also confirmed that the sample population was spraying organophosphate-type pesticides, indicated by a lowering of the acetyl cholinesterase levels in plasma and blood. After a one-month break in spraying, enzyme levels of selected sprayers were elevated, reconfirming that they were poisoned by organophosphate when the readings were taken a month earlier.

The study confirmed that a major pesticide used in the plantations is Paraquat (a herbicide). Poisoning due to Paraquat is clearly demonstrated in the surveys and interviews with workers, and indicated in the medical examinations. The women suffered nose bleeds, tearing of the eyes, contact dermatitis, skin irritation and sores, nail discolouration, dropping of the nails, swelling of the joints, and abdominal ulcerations. This in spite of the fact that Malaysia has classified Paraquat as Class I (extremely hazardous) pesticide. To make matters worse, the study noted that the area planted to oil palm is expected to rise from 2.7 million ha (1998) to 4.3 million ha in 2020, with a subsequent rise in the use of agrochemicals. Paraquat use is expected to rise from 5 million litres (2000) to 7.4 million litres in 2020.

The study found that women working in the plantations could not read the labels in English and Malay, and could not read labels on the pesticide containers if these were present. In the majority of cases labels are removed. It was commonly seen that pesticides were used in concentrations in excess of requirements; in 'cocktails' whose ingredients were not known; and often the estate management chose not to divulge the names of pesticides used, to the sprayers.

Additionally, the spraying equipment was sometimes leaking, and posed additional dangers of spillage and toxicity to the sprayers. Further, the equipment was stored in workers homes, adding risk to the whole family.

The study also found that estate management did not provide training on safety precautions and procedures to be followed while handling pesticides. There were no training materials available in local languages for workers and medical professionals. The protective gear provided, if any, was inappropriate to the local hot and humid conditions and is thus not used by most sprayers. These factors aggravated the risk factor for working in plantations.

To make matters worse, the study noted that medical professionals were not adequately trained to recognize symptoms of pesticide exposure and often disregarded these as minor complaints of cough, headaches etc. This further underestimated the real picture regarding poisoning attributable to pesticide exposure. There was an alarming lack of sensitivity among medical staff, paramedics and Hospital Assistants, which compounded their inability to deal with the women's problems. Since the majority of the medical staff were male, the women were unable to express and share their condition and ailments.

Will all the above be considered as "maliciously publishing false news"? Shouldn't the Malaysian government and its enforcement agencies – the Department of Occupational Safety and Health and the Pesticides Board – be instead accused of "maliciously silencing true allegations"? (WRM Bulletin N° 79, February 2004).

South Africa: Women Forestry Workers under Outsourcing Schemes

A recent study carried out in the South African tree plantation sector analyses the impacts of outsourcing on forestry – mostly women – workers. The report points out that outsourcing in the forestry industry is in line with global business trends and serves to increase flexible employment terms for the benefit of the industry. Outsourcing also saves on cost of capital equipment and fixed costs associated with full-time employees, and avoids having to deal with labour legislation brought in by the Government.

In South Africa, the forestry sector employs thousands of contract workers, the majority of whom are poor black rural women with few alternative sources of income. A group of women working for forestry harvesting contractors on company owned plantations in KwaMbonambi were interviewed to assess the extent to which contract jobs in forestry contribute to poverty reduction.

The interview took place in the plantation company's "forest" village, where they were accommodated. The village comprises solidly built brick houses and communal cooking and washing facilities, set in well maintained and attractive grounds. However, inside these houses you get a feeling that it is more of a sleeping than living space, as the only items you find inside is mattresses or pieces of cardboard on the floor with a blanket or cloth to cover them. It seems that home to these women is where their children are back in the rural village with their extended family. Children are allowed to visit but not live in the village. All the women are single, aged between 19-40 years, with an average of four children each. They are the sole breadwinners providing support for their children and other members of the extended family back in the rural areas.

The women are all "strippers"; their job is to strip the bark off felled trees. Stripping is physically demanding and carries a high risk of injury. They begin work at six in the morning, and return at around three or four in the afternoon. The daily wage rate currently is at R42.50 (R=rand), but from this R6.50 is deducted for housing, leaving a daily rate of R36.00. To earn the day wage, they must complete their task, which is to strip 35 trees. If they do not complete their task, it is carried over to the next day. Most of the women said they do not complete their tasks and they use the four Saturdays in the months to do so. At month end, their salary slips reflect the day-equivalent of work done, rather than the actual number of days worked. The women interviewed said they earn between R500 and R700 per month. After buying provisions for the family, there is very little left over to buy food or clothing for themselves. Most rely on credit from the local general dealer to feed themselves. They eat only one cooked meal a day, at night.

Monthly expenses include a basic food list, transport home at month end, transport to school for their children, other expenses are annual

school fees and school uniforms. The women spend an average of 60% of their earnings on food, approximately R400 per month.

The women are not union members and there are no worker representation structures in place. They do not have access to pension funds, credit or medical care. If they fall ill, they need to produce a doctor's certificate to access paid sick leave. A visit to the doctor costs R100, which most are unable to afford. If they are injured on duty the contractor pays a limited number of leave days and thereafter the injured worker must rely on payout from the Unemployment Insurance Fund. If a worker is consistently underperforming and falling considerably behind in tasks, or is absent from work for a week, s/he is dismissed. Dismissed workers are given 10 days to vacate their accommodation. With HIV/Aids infections rates running at an estimated 45% amongst forestry workers, a distressing picture emerges of scores of penniless, ill, and malnourished workers being sent back to die in rural areas, without any benefits from their years of employment.

Prior to outsourcing, the majority of forestry workers belonged to recognised trade unions which were responsible for taking up workers grievances', ensuring compensation for injuries on duty, and engaged in annual wage negotiations. The shift to outsourcing effectively destroyed forestry trade unions. When workers were retrenched, unions lost members, membership fees declined, and unions became more and more cash strapped. Contract workers are much more difficult to organise than full-time employees, as they are scattered amongst many employees, many of whom have no fixed workplace.

Forestry labour today is disempowered and demoralised. Workers have no channels for raising concerns or for redress. They have no channels for collective bargaining regarding wage levels or conditions of service. The only power they have is their labour. They can work and be paid for the work they do, or they can leave and rejoin the pool of unemployed.

The study concluded that the forestry industry is not able to lift the vast majority of forestry workers, mainly women, out of chronic poverty, or prevent them from falling further into poverty. Incomes are insecure and inadequate, there are no financial safety nets in the form of health

insurance or pensions, and workers are exposed to risk of permanent injury that could further impair their ability to secure a livelihood in future. (WRM Bulletin N° 96, June 2005).

IMPACTS OF DEFORESTATION ON WOMEN'S LIVES

India: Women more Affected than Men from Deforestation

It is common for people living far away from the forests to perceive deforestation as an exclusively environmental problem. However, for people whose livelihoods depend directly on them, forest loss is more a social than an environmental tragedy. And what is seldom perceived is that women suffer the consequences more than men. The following extracts from a case study on community forest management in India can be useful to begin to understand the issue:

"Deforestation affects women much more than men, and the poorer they are the worse it is for them. Although in traditional forest communities, particularly tribal ones, there has often been a greater degree of equality between men and women than in mainstream Indian society, there still has been an unequal division of labour.

Thus, in the late 1980s a study found that tribal women in Orissa played a major role in the economy, working on average three hours a day longer than men, a workload that significantly increased with deforestation. Tribal women have been traditionally involved in collecting water, fodder, fuel and other non timber forest products, while the men have done most of the cultivating and hunting. With deforestation, women's work of fetching and carrying becomes more difficult, since they have to go farther and farther from their villages to reach the receding tree line.

One study in Orissa found that, over a twenty-year period from the mid-1960s to the mid-1980s, the average distance that people (mainly

women) had to walk to collect firewood, bamboo, fodder, and other products increased from 1.7 to 7.0 km. Other studies have shown that the situation deteriorates over time: while working longer (often up to 14 hours a day), they collect less, and their lives become even more difficult. A study in one area of South Bihar in the early 1980s, describes how every day 300 women went into the forests to collect firewood from illegally cut timber. They earned Rs.120/month, an amount so paltry that half of them were permanently in debt. To reach the forest, they walked as far as 12 km and then, when they had finished collecting wood, travelled by train with their head-loads to town. During the whole process they were obliged to bribe the village headman to allow them to do it, the forest guard to look the other way, and railway staff to allow them to travel 'free' on the train. Hardly surprisingly, they were not left with much profit at the end of it.

One obvious outcome of all this is that women have less time to take care of themselves, even when they are ill. Several studies in India and elsewhere have shown that, in situations of social and economic disintegration, the proportion of men to women attending primary health centres is five to one. This is in spite of the fact that women are likely to be less healthy than men, because they are less well-nourished and are working so hard. They are also less likely to have to hand the pharmacopeia of herbal medicines that was available before forest destruction." (WRM Bulletin N° 48, July 2001).

Sri Lanka: Deforestation, Women and Forestry

When we say that forest loss is increasing across the globe we are not talking only about trees. We are losing not only the physical resources – plants, animals and insects – but an irretrievable treasure of local knowledge, that in Sri Lanka – as in many other countries – has been preserved mainly by women. However, women's contribution to forestry is concealed behind their domestic tasks as their forestry-related activities are directly related to home maintenance activities. Forests provide the vital three F's for women: food, fuel and fodder.

Women have learned and taught for ages which are the edible species of the forests, which medicinal, which fast or slow burning and so on. In their involvement in day to day survival, women in rural areas

are knowledgeable in the multiple uses of natural resources. As such, they are potential planners and designers, with the capability of changing the present negative situation.

However, "development" policies and increasing formalisation of land ownership, usually through the male line, has done much to worsen the economic situation for women. Because men are far more likely to be acting within the cash economy, their involvement with forests is almost exclusively in the production of saleable timber. Government policies are focused primarily on timber production and tree plantations. The paradigm from which they operate is overwhelmingly technological, and their aim has been to fulfil the requirements of the state rather than individual communities. Market-oriented compartmentalised crop production systems have been formed on land once used by those communities, creating an opposition between the forestry establishment and the people.

The informal work of women that is essential to household survival goes unrecognised. For example, deforestation has meant that the time and energy spent gathering firewood has increased enormously. Not only do women have to walk further to find less, but they carry heavy weights for long distances (up to 35kg for 10km), damaging their health. The need to conserve firewood then affects the family diet, decreasing variety and nutritional content, with a further deleterious effect on health. This is just one of a range of tasks made more difficult by encroaching deforestation.

Increasingly women are having to perform additional paid work outside the home, working on tobacco or tea plantations. The plantations operate in direct competition with the women for fuel-wood, for the curing of tobacco, for example. Men are responsible for getting industrial fuel-wood, while domestic fuel-wood gathering is left to women.

In this situation, women's home gardens, practically the only area in which they retain autonomy, take on increasing importance and women are reacting to changing circumstances by increasing the diversity of plants and trees they grow themselves, thus making a further contribution to biodiversity conservation.

However, as the legal owners of the land, men can choose to sell the trees as a cash crop, and men are taken as the focal point for receiving subsidies and services. Development policies thus need to change and must include women's needs and knowledge within a holistic strategy. Not only because this would be more equitable, but because it would be much better to ensure sustainable forest use. (WRM Bulletin N° 50, September 2001).

Papua New Guinea: Malaysian Companies Logging out the Forest

Official figures from the PNG Forest Authority show that between 1993 and 2001 a total of 20 million cubic meters of logs were exported from PNG. If all those logs were laid side by side they would stretch for over 1,000 kilometres. If they were laid end to end they would stretch for 7,000 kilometres.

In the last 10 years most of the logs have been taken from West New Britain but now those forests are almost gone. Now the logging companies in PNG – most of them Malaysian – are getting most of their logs from Western and Gulf Provinces.

The clear-felling of large forest areas and the ensuing erosion and environmental damage have been decried by PNG Minister for Welfare and Social Development, Lady Carol Kidu. She said that under the guise of inevitable globalisation, logging companies from countries that have themselves imposed environmental restrictions on the industry, were pushing their way further into the forests exploiting the need of impoverished traditional landowners.

The Minister also raised the negative impact of logging on women. “Women have not been visible at the negotiating table and yet it is the women carrying the burden of the negative social and environmental effects.

Working conditions in the logging industry have been exposed by Western Province Governor Bob Danaya. After a visit to the logging operations of Concord Pacific and Rimbunam Hijau, he declared: “When you look around in the villages there are no tangible benefits that one

can witness. And the workers on the barges are virtually working like slaves in very poor conditions."

Western Province has seen a lot of controversy in recent months with allegations of illegal logging by Concord Pacific and Rimbunam Hijau. The Ombudsman Commission has also recommended the dismissal of the National Board Chairperson Dr. Wari Iamo, following an investigation into his attempts to give the huge Kamula Dosa logging permit in Western Province to Rimbunam Hijau in 1999, avoiding public tendering.

As Lady Kidu has warned: "It is estimated that PNG will be completely logged out in the next decade if we do not take control of the industry in a sustainable way." (WRM Bulletin N° 69, April 2003).

Mexico: The Loss of Forests for the Community and for Women

Chiapas is a zone that is very rich in natural resources, where water and forests are abundant, and who says forests, says diversity, fruit, seeds, flowers, wild animals, fish, medicinal plants, materials for various uses – for firewood, building, crafts, implements, etc.

Who benefits from all of this? The region is now suffering from the brunt of "development" policies, for which development is synonymous with incorporation into the international market. Usually the South has the function of producing raw material or food, providing natural resources – among which, oil, water, minerals – and is a place for the settlement of industries that use the supply of cheap labour, favoured additionally with exemption from labour and/or environmental protection requisites.

Under the aegis of article 27 of the progressive 1917 Constitution, in 1936, President Lázaro Cárdenas had launched an agrarian reform, setting up the "ejidos", or communal lands. However in 1992, President Salinas de Gortari, carried out what at the time hundreds of peasant organizations called a counter agrarian reform, modifying the article in the Constitution, which guaranteed access to land by peasants, and allowed it to be sold privately. "And now they want to privatize tourist locations too, where there is great natural wealth that Mother Earth

herself has given to indigenous peoples and peasants, and that is what they want to privatize," said María Angelina, a Franciscan missionary who works for the Diocesan Coordination Office for Women in San Cristóbal de las Casas, in Chiapas, Mexico.

The peasants are always in inferior conditions, because they end up by producing for markets whose prices they do not control. Furthermore, the forest that has always been a source of resources, is taken away from them. For many years now, in the region of the Tojolabal de San Miguel community in Los Altos de Chiapas, logging companies and large sawmill companies have felled the forest, seeking pine, mahogany and other fine timber. It is hard for the trees to grow back, say the inhabitants. The same inhabitants also end up by cutting wood to make chairs, beds, furniture, trying to make a living out of this, but at very low sales prices.

María Rosario (Chayito) from the community of San Miguel, tells how in 1996 the Mexican army, as a strategy in its war against the insurgents used the burning of large areas of forest, to justify eviction of the Zapatista bastions. Her community was directly affected by those enormous forest fires. Chayito tells us how, from the four cardinal points, four fires surrounded the community. It was lucky the houses were not burnt down, but all the rest, the 282 hectares of cultivated lands, were lost.

From an agricultural standpoint, the lands of the San Miguel community are not very productive as it is an area of rocks and mountains covered by forests. However, the community had made an effort and after a lot of work had its plantations of corn and beans, the staple foods of the Indigenous People's diet. They were also "happy to have mountains with the freshness and joy they bring," in addition to finding in the forest a complement to their diet with small animals and obtaining a supply of firewood, water, flowers that the women sold, to obtain a complementary income.

The fires burnt everything down: the corn and bean plantations, the coffee plantations, and the forest. Together with the forest, the orchids, wild flowers and animals disappeared. "It is all finished," says Chayito. There is no more firewood nearby, and they have to seek it far away.

This also contributes to poorer housing conditions, as traditionally homes were built using trees for wood and poles and palms for the roof. When the palms disappeared, the community housing deteriorated enormously as they had to build the roofs out of building materials, purchased in the city and for which money – always scarce – is required. As women no longer have forest flowers to sell, family incomes have dropped even further.

Many nearby rivers and wells that used to supply water to the community have dried up. This implies more work for women who traditionally procure water. They have to go further to fetch it, increasing their tiredness and taking time from other tasks – that in themselves are many. All conspires to make a woman's day exhausting. "There is still a lot of 'machismo'. Few families are aware and help women."

The community has had to overcome the shortages and seek ways of solving the problem. For this purpose, it has sacrificed its cultivation plots so that the land can regenerate. "It is only now that the forest has started to recover, the mountains to turn green again, but the trees are still small," while the large trees are still falling, with their burnt roots.

On this side, sacrifice, and on the side of the government the solution could not be worse. They come with tree plantation projects with other types of trees that are not from the community, alien species, trees that "drink more water," the eucalyptus, jacaranda, pines, that are not "lasting" and "destroy the land because they need a lot of water." These are surely trees that will end up feeding gigantic paper mills, which in turn will feed gigantic packing companies, which in turn are linked to gigantic trading companies, which in turn… How far back has the community been left! How broad and alien has the world become for them! (WRM Bulletin N° 74, September 2003).

Impact of Logging on Women

Women around the world suffer greatly. They suffer from all kinds of situations such as wars and sexual discriminations by men. Children suffer as a consequent of their sufferings. In many cultures, men look upon women as inferior and as such they are forced to do all the heavy and hard work.

Ninety percent or 4.5 million Papua New Guineans depend on the forests for their livelihoods and have done so for hundreds and even thousands of years. The forests provide food, building materials, medicine and a source of culture and spirituality for the people.

Within the various cultures in Papua New Guinea, there is very little variation in the role that women play. While men act as the head of the family, their role is quite minimal. They act as the guardian of the family, and possibly the hunter or the fisherman depending where they live. The man will also spend a considerable amount of time at the men's house in some cultures and can be away from their families for weeks, even months, leaving the women by their own to fend for themselves and their families.

A day in the life of women in the communities may start with cooking food for the family very early in the morning, almost at the crack of dawn, and then it is off to the garden to tend to the crops or to the forests to gather food, often with the young ones in tow. Then she has to go and collect firewood and water to prepare the evening meal.

Women hardly ever have time to try and sort their personal problems out and on many occasions, they will endure these problems in order to carry out their responsibilities. A woman has to try and fulfil these tasks without failure for if she doesn't, she can be deemed to be an unfit wife and mother. In some customs, a man can get a new wife if he or his people feel that the current wife is not performing her traditional obligations.

Women are traditional collectors and gatherers of the many foods found in the forests. As primary forests are cleared through large-scale logging or for commercial developments such as plantations, their traditional harvesting and gathering grounds can be greatly affected by such large scale activities in the forests so again, they must walk very long distances in order to satisfy the needs of the family.

The destruction of forests by logging also results in the depletion of water resources, meaning that women will need to walk many kilometres to fetch good and clean drinking water, thus resulting in added work burdens for women. During dry seasons, women can spend 10-12 hours a day making more than two trips for water.

The activities of logging can destroy suitable land for gardening through the effect of top soil erosion, so again women have to wander far from their homes to find suitable land to plant their food.

The social impact of large scale logging on a forest dependent community is yet another area that women and the community in general are forced to face.

Logging activities generate money within a community not often familiar with the cash economy, especially through the payment of royalty money. This can lead to increased drunkenness not only amongst grown men but also youths and teenagers, prostitution, greater levels of sexually transmitted diseases and an increase in malnutrition, low birth weight babies and malaria. Such activities can also lead to law and order problems like armed robbery, stealing and crimes committed against women. Examples of these kinds of problems have been documented in many parts of Papua New Guinea where logging has taken place.

Women bear the brunt of the negative effects of industrial logging as it is their task to supply their families with water and collect food while they hardly participate in the decision-making on logging and in the distribution of timber royalties.

The introduction of other foreign methods of living such as style of clothing, diets, entertainment and social activities can have an adverse effect on women and the community in general.

In the words of Baida Bamesa, a women's representative from the Kiunga/Aiambak area of Western province where a large-scale road and logging project exists, “Our bush was really green and healthy before the arrival of the logging company, but nowadays, it is black. The company came and spoilt our environment and the animals are now very far away. We are very worried because we women are facing a very hard problem. They did not benefit us with any good things, nothing.” (WRM Bulletin N° 79, February 2004).

OTHER INDUSTRIAL ACTIVITIES THAT IMPACT ON WOMEN

Senegal: The Hidden Impacts of Charcoal Production

For many years, fuelwood use and charcoal production have been blamed for deforestation throughout the South, though this has seldom been the truth. In the case of Senegal it is clearly false. Charcoal is a major energy source in this country, where its capital city Dakar consumes 90 per cent of all the charcoal produced from the forest. However, forests are not even close to exhaustion, and regeneration after woodcutting is reported to be quite robust. But charcoal production is resulting in other types of impacts on the local communities where it is being produced, which have usually gone unreported.

It is important to highlight than in Senegal the state claims ownership over all forests and its Forest Service claims the right to manage them according to "national needs". Within the charcoal production sector, the management system put in place by the Forest Service only allows urban-based merchants to cut the forest, produce charcoal and market it. These merchants hire woodcutters from outside the area. The result is that local communities receive very few benefits from this activity, while the social and ecological costs of forest clearing are spread over the villages as a whole, disproportionally affecting women and poorer households.

In the case of women interviewed on this matter, they have recounted that before the arrival of charcoal producers, firewood had been available just outside the compounds, whereas after the first two years, firewood had to be gathered at distances of several kilometres, requiring anywhere from a couple of hours to half a day to collect. They have also explained that charcoal production has led to the disappearance of game birds and animals which are part of their diet. Additionally, they have complained that the presence of migrant charcoal producers drew down the wells, creating water shortages and water quality problems. Other concerns include social problems arising from hosting scores of migrant woodcutters in the village, harassment of women in the forest and fights over wood gathering between woodcutters and women.

Other impacts affect the community as a whole, among which the destruction of plants used for food, fodder, medicines and dyes, as well as wood for house construction. Woodcutters are also accused of starting bushfires, while heavy truckloads of charcoal are responsible for destroying the roads so badly that villagers are unable to take their products to market and to bring back the products they need.

This unfair situation, where local people receive only the impacts of a lucrative activity – some of the traders are reported to have made 100,000 US dollars in profits per year – has in some cases resulted in organized resistance. Such is the case of the district of Makacoulibantang in Eastern Senegal, where local villagers have blocked urban-based merchants and their migrant woodcutters from working in their forests. Resistance was partly aimed at stopping the destruction of a resource on which they depend for daily needs and partly to reap some of the benefits from woodfuel production and commerce.

Unfortunately, the Forest Service has continued taking sides with the merchants, while the Minister for the Protection of Nature has visualized those acts of resistance as "a dangerous set of events that could spread" and adding that "if villagers were given control of the forests there would be fuel shortages in Dakar." However, the minister appears to forget that the only fuel shortages in Dakar have been purposely created by merchants to obtain further benefits. What they have done is to threaten the ministers and the Forest Service with shortages in order to eke out quotas and to keep the forest policy friendly to their interests – in which until now they have been very successful. (WRM Bulletin N° 48, July 2001).

The Impacts of Mining on Women

While mining has negative impacts on all those who live in the mining communities in general and those who are affected by the mining operations, there are distinct impacts and added burdens on women.

The differentiated impacts can begun to be understood in concrete situations, such as that faced by a Dayak woman affected by a mine owned by the company PT-IMK in Indonesia.

"Mrs Satar had a field as large as 10 to 15 hectares on the community's traditional land. Upon this land, she could harvest enough produce for one year, in fact sometimes more. With the introduction of the mining into her community, she lost all but one hectare of her land to the mining company. Consequently, she had to buy approximately 3 sacks of rice per month at a cost of Rp39,000 per sack (rupiah, price at January 1998). In addition, the mining company's operations polluted the river, which could no longer be used to meet household needs, and no longer produced fish. Previously, Satar had cooked fresh fish each day for her family. Now, as a result of the pollution, she has to buy salted fish. If there is enough money, she purchases 2 kilos of salted fish a month at Rp15,000 per kilo. To obtain bathing and drinking water, Satar must walk a long way to a water source that is not affected by the company's tailings. Satar's livelihood is further threatened by the loss of her two water buffalos, found dead at the edge of the contaminated river."

It is also necessary to understand that companies usually enter into negotiations only with men, excluding women also from the royalties or compensation payments. They even have little or no control over and access to any of the benefits of mining developments, especially money and employment. Thus, women are deprived of their traditional means of occupation and become more dependent on men, who are more likely to be able to access and control these benefits.

Large-scale mining entails the replacement of subsistence economies which have nurtured generations of communities and Indigenous Peoples with a cash-based economy. The new market-based economy implies a significant erosion or destruction of traditional values and customs which have been crucial in sustaining community, tribal, clan and family solidarity and unity. In such process, women become marginalised since their traditional roles as food gatherers, water providers, care-givers and nurturers are very much affected. Economic visibility depends on working in the public sphere and unpaid work in the home or community is categorised as "unproductive, unoccupied and economically inactive."

Whereas both men and women had previously been in charge of farming activities, now men have to go out for a wage, thereby

increasing women's workload and responsibilities, leading to more stress and tensions. Additionally, the environmental destruction caused by large-scale mining has also decreased the productivity of the fields and poisoned wildfoods, marine life, animals. Many women are pushed to enter into the informal economy to find additional sources of income.

Whilst large-scale mining has limited scope for women's employment, the small-scale sector absorbs women as contract or bonded labour under highly exploitative conditions. In India, for example, women's wages are always less than that of men, safety standards are non-existent, paid holidays are not allowed even during pregnancy or childbirth, work equipment is not provided, and there are no toilets or facilities available. Unemployed women living in mining communities eke out their livelihood by scavenging on the tailings and waste dumps, often illegally, and suffer from the constant harassment of company guards, local Mafia and the police. They are exposed to the physical and sexual exploitation of the mine-owners, contractors and miners and are at the mercy of local traders when selling their ores. In addition, women work with toxic, hazardous substances and suffer from several occupational illnesses including respiratory and reproductive problems, silicosis, tuberculosis, leukemia, and arthritis.

Alcohol abuse, drug addiction, prostitution, gambling, incest, and infidelity are increasing in many mining communities. These have worsened cases of family violence against women, active and often brutal discrimination in the workplace that is often sanctioned or ignored by judicial and political institutions. Even men-led workers' organisations usually do not raise cases of human rights violations against women. The orientation of discussions between these organisations and mining companies is directed towards economic issues, such as wage increases, subsidies and so on.

In sum mining – be it small or large-scale – is resulting in a large number of specific impacts on women, who are losing out in almost all aspects related to the development of this activity. The wealth generated by mining further pushes women into poverty, dispossession and social exclusion. (WRM Bulletin N° 71, June 2003).

Papua New Guinea: Women's rights undermined by Placer Dome gold mine

Misima Island is situated in the Louisiade Archipelago in Milne Bay Province, Papua New Guinea. The island is 40 kilometres long and 10 kilometres wide at its broadest point, and is covered in lowland hill rain forest except for the coastal zone and the foothills which have been cleared for cultivation and replaced by woodland.

With a subsistence farming community of approximately 14,000 people, Misiman society is divided into clans, and membership of these clans is matrilineal. Women traditionally inherit and own land, although senior men retain authority over some areas. It was into this environment that the Canadian-based Placer Dome company introduced its gold mining operations.

In December 1987, a Special Mining Lease for 21 years had been granted to Placer Pacific (now Placer Dome Inc.) and construction of the mine began in 1988. Declared officially open in 1989, the Misima mine is a conventional open-pit mine.

The introduction of mining into Misima involved the purchase of vast tracks of land and resettlement of communities previously living on this land. Social values have rapidly changed since 1989, facilitating the breakdown of traditional social structures and the growth of a prominent generation gap, both of which negatively impact on women.

The company engaged men in the resettlement negotiation process, excluding the traditional landowners – the women. Prior to mining, women held a relatively high status and prominent role in public life due to their central role in land ownership and food production for both the living and offerings for the dead. Thereafter, their status, independence and role within the community has been undermined.

Mining has directly and indirectly provided employment opportunities for a large majority of the Misiman men living on the eastern tip of the island and a number of 'expatriate' Misimans. Misiman women have found their traditional power base supplanted by the power of cash, which can be acquired and disposed of without their involvement.

The increase in the cash economy has also created divisions between women. Some wives of wage earners employ other women to tend to their gardens, which results in the distribution of cash within the community, but at the same time diminishes the status of these women in the eyes of other Misiman women.

Many women whose husbands are wage earners no longer create large gardens because the men are unavailable to assist in garden activities, especially the clearing of land, and also because they can buy food with the money earned by the men. However women, especially those not engaged in the cash economy, are placed under increasing pressure to maintain these gardens due to the reduced availability of food trees as a result of extensive land clearance.

The island's environment is widely perceived to be polluted by mining operations. Residents complain about the taste and health of fish and the decreasing water levels of the rivers. Some women are disinclined to go to the rivers to bathe, wash clothes or prepare food because of low water levels and the discolouration of the water after rain, which they perceive to be evidence of pollution. Women report that the quality of the water is so poor that they can no longer drink it. Some women feel that this jeopardises their own and their babies' long term health.

Social problems including excessive alcohol consumption have arisen due to the increased availability of cash. As is the case in most places of the world, it is women and children who bear the brunt of the impact of alcohol abuse.

The company's initial response to issues raised was to employ a limited number of women for secretarial, administrative, clerical and cleaning work as well as to support local women's groups and businesses, and ensuring that women were represented on committees such as village liaison groups and the Social Impact Study (SIS) Status Review Committee. However, some of these mechanisms were not conducive to women's participation beyond their attendance at meetings. Having a position on a committee does not automatically mean that they feel able to speak, to be heard, or to affect outcomes. Participation does not automatically include those who were previously left out of such processes and is only as inclusive as those who are

driving the process choose it to be, or as those involved demand it to be. Male dominance within the government, and amongst Misima's community representatives, also contributed to effectively denying women their rights.

As is often the case, and despite any efforts, many of the social, cultural and environmental costs of a mine are not readily apparent until development begins. At this time the local people began to experience first hand the unexpected change in their lifestyles owing to the sudden participation in cash economy, the abrupt influx of outsiders needed to construct and operate a mine, environmental damage due to waste rock and tailings discharges, and even dietary imbalances as food prices skyrocketed.

The mine will cease operations in 2005. The closure will pose further unprecedented problems for the Misima people. Business closure, loss of employment, decrease in transport alternatives, inaccessibility of shop food, loss of electricity and the degradation of buildings and infrastructure are just some factors that the community may face.

However, the extent to which the Misima will be able to return to their traditional practices has been negated by intergenerational disputes and loss of traditional values. The fundamental shift in the status of women and their unique relationship to the land is unlikely to be regained after the closure of the mine, with repercussions for generations to come. (WRM Bulletin N° 69, April 2003).

Mexico: Women Suffer the Effects of Market Opening Doubly

Chiapas, in southern Mexico, is home to peasants, mestizos and indigenous Tzontal, Tzontzil, Chole, Zoque and Tojolabal peoples. There, bananas, cacao, sugar cane, and rice are planted. Each family has its own agricultural plot, where they plant maize and beans for subsistence. These communities, like many others in Central America, feel that “we were born among flowers and in the warmth of the 'temascales' (sweat lodge); from the time we were toddlers we learnt to walk up the mountain and to keep water among the stones; we prayed to the hills and we had feasts with the sky,” – as expressed in the final declaration of the Second Biological and Cultural Diversity Week held in 2002 – but now

commercialization and depredation have reached what for them is their mother – the earth – and their home – the forests. For them, the forest is life. It is a sacred place. The forest is where they get their fire and their water, their seeds, medicines and the material to build their houses.

Large-scale logging eats up the forest and dams either drown it or dry it up, wounding to death the community populations. Behind this are the companies that see the forest as a timber resource to be exploited to obtain large sums of money that they do not share. They see the rivers as an energy resource to profit from, flooding whatever is in their way. The communities are left as orphans of the forest, with nothing in exchange. In Chiapas, abundant electric energy is generated but it does not reach local communities because the services are too expensive.

Women, responsible for seeking and providing water, suffer from these depredations twice over. The streams where they used to find abundant water for consumption and domestic use are drying up. However, they must continue to find water to cook and to do the washing. In some cases the communities organize themselves to seek together a well or a spring from which they install long hoses to reach the village. But in other places women have to walk to the woods and streams or rivers that are increasingly distant, carrying their pitcher or their amphora to bring back water.

Market opening and free trade have reached Chiapas on the heels of the North American Free Trade Agreement (NAFTA). This has implied a change in the societies' economic life, which had previously relied mostly on exchange. Now money has become essential, markets are flooded with subsidised products from the North and the communities must practically give away their crops. "There is no fair price," states Maria Angelina, from San Cristóbal de las Casas. "Peasants have been paid up to two pesos a kilo for coffee when in the cities, processed coffee costs forty."

Emigration is just a step away, and usually it is the man who leaves. When this happens the women are left in charge of looking after the plot and the children, of doing the housework and providing water and firewood and, very often, of obtaining money to cover other needs when

the men do not come back, a frequent situation. There are cases in which, through collective organization with groups working with women, they have developed projects for poultry raising, vegetable growing and handicrafts for sale. This happens in a social context in which women have traditionally been in inferior conditions vis-à-vis men: they do not have any power of decision, they cannot study, they have no right to land, and they must not go out because they are destined to do the housework.

On the other hand, the danger of total breaking up of the communities hangs over them, in the form of the Puebla Panama Plan (PPP) with its mega-projects for highways and dams crossing the whole of Central America, further increasing the process of acculturation and family disintegration. Propaganda encouraging them to change their traditional corn plantations for oil palm is advancing, leaving the communities tied to markets they do not regulate. The maquilas – factories based on imported inputs used for the production of goods for export under unsafe, precarious and badly paid working conditions – are just another consequence of the PPP. In San Cristóbal de las Casas one has already been installed, where the workers are mostly women, nearly all indigenous.

But women do not remain passive. They have become aware of their social function and have taken on their responsibilities. For this reason, they have participated in the Third Biological and Cultural Diversity week held from 17 to 20 July 2003 in La Esperanza, Intibuca, Honduras. Here they have made their voices of denunciation and demand heard, sometimes with humour and irony. They are winning a place that they must take to make another world possible. (WRM Bulletin N° 69, April 2003).

Women's Life Devastated by Mining

More than 35 % of Indonesian upland territory has been licensed as mining concessions, of which 11.4 million hectares is located within protected areas. However, the mine sector's contribution to the Indonesian government's net income is only 2%-4%. The amount is unequal to the impacts caused by the sector toward local people and the environment across the Indonesian archipelago.

One of the islands most suffering from mining activities is Kalimantan (Borneo), and particularly eastern Kalimantan. The island of Borneo has a width of 10% of the total area of Indonesia and is inhabited by 2.5 million people who live in 1,276 villages. The male and female population is balanced. The main livelihood of the people is farming, artisan fishing and nursery shrimp breeding.

There are at least 106 mining companies operating in Kaltim (East Kalimantan) with a total concession area of 44.85% of the island's width. With the addition of areas of private forest concessions (HPH and HTI) these extractive industries manage concession areas of up to 73.07 % of East Kalimantan's territory.

Although men and women together have been impoverished by the invasion of capital, women tend to be more affected by it than men do. They have been evicted from their plantations so that they cannot earn an income and become dependent on other family members.

The impoverishment of women mostly takes place in villages. Based on information from the Central Bureau for Statistics (BPS), 75% of citizen poverty is found in rural areas, while urban poverty only accounts for 25%. Thus, it is suggested that the exploitation of natural resources does not significantly increase people's wealth and even causes poverty.

Cases of poverty are also found in locations where mine companies operate. According to field investigations carried out by the Work Team on Mine and Women (TKPT) Kaltim, women suffer problems that are brought about by mining companies' operational activities.

* Economic impacts:

Mine industry concessions always overlap with the sites of people's livelihoods. The theft of people's lands has taken place at oil and gas mining and also at coal mining locations. For example, the people of the village of Sekerat have been victimized by PT. Kaltim Prima Coal (KPC)/ Rio Tinto, the biggest coalmine company in South-east Asia. Some 20,482 hectares belonging to 287 households have been taken, which implies that there are 287 women whose livelihoods have been destroyed or altered. Female artisan fishers living in Bagang kampong, near to the oil and gas mine location of PT UNOCAL, have received the

impact of fluid waste dumped by the company into sea water. The fish catch of artisan fishers in the village of Rapak Lama declined for this reason.

The women of the village of Terusan work as Benur (shrimp offspring) collectors, now earn lower income as well. Women and children use *Porok* and *Rumpong* to collecting shrimps. They used to place this equipment on the coast, or in deeper places, such as the edge of mangroves and the Nipah forest around the river mouth. The decline of this shrimp collecting has reached 95%.

* Social impacts:

Mining operations have resulted in an alteration of the traditional rules that used to be respected. Facts suggest that prostitution is now present in all mining concession areas to serve the needs of male mine workers. Families frequently quarrel internally at places where there is prostitution, usually ending up with violence against women.

Violence against women that has taken place includes violence, either carried out in terms of state/military power or in terms of sexual violence such as sexual harassment and rape. Of all 21 cases of sexual violence against women, 17 are cases of extreme violence against women (rape), and 16 of all cases were conducted by KEM employees. Those cases all happened between 1987-1997.

Land occupation by PT KPC has also brought about impacts by increasing women's work volume because men who used to work on farms, now work as loggers or fishermen, making them stay out of home longer. As a result, more household problems are handled by women themselves, while in fact they have lost their access to economic independence due to eviction. Women's economic self-reliance has vanished. This has placed women in a lower position than men.

* Environmental Impacts:

PT KEM/Rio Tinto operations have devastated women's environment. Air pollution from dust from the company's roads has caused respiratory, eye, and stomach diseases. It has also disrupted people's businesses such as that of shops selling food and beverages,

the growth of crops, landscapes and has also resulted in water contamination by cyanide, causing death to fish.

The presence of mining companies has in fact threatened both women's productive and reproductive roles. A significant reproductive role of women is maintaining the family's quality of health by increasing traditional knowledge on herbal medicinal and health keeping. However, since much community land was occupied by companies, many medicinal plant species have become rare or even extinct. Now they must pay to purchase medicines at drugstores.

The loss of women's cultivation sites has eliminated the productive role of women and women's access and control to the economic sector where principally, the people's access to production assets such land also supports their access to things like politics, information and decision-making as well as other social relationships.

The dark picture of women victimized by mining in east Kalimantan has been worsened by the scant contribution provided by all parties, including state, public, even NGOs to women's matters. This is understandable, since the State or capital paradigm still uses a family-based approach when discussing mining problems. This paradigm is originated by the generalized idea that men usually act as the family head, democratically representing all members' interests. Ratification of the "Convention on the Elimination of All forms of discrimination Against Women (CEDAW)" has apparently contributed nothing to defend the interests of women victimized by mining operations.

Scant government attention is given to problems relating to women. This is obvious in the fact that there is no women's perspective in the newly established mining Act. Even though the president of Indonesia is a woman, the newly established oil and gas Act no. 22/2001 has no such regard of women's problems and interests. (WRM Bulletin N° 79, February 2004).

Linkages Between Climate Change and Women

Climate change analysis has so far been science-driven, presented in terms of greenhouse gases and emissions. While the scientific analyses

remain crucial, social imperatives must be taken into account. Although there are no obvious direct linkages between climate change and women, its potential impacts in terms of socio-economic vulnerability and adaptation place women in a key position.

The notion of gendered impacts of climate change may be perceived by cynics as yet another attempt at academic babble; a systematic attempt at gender mainstreaming in key development policies. After all, climate change is a phenomenon of our times that may alter the lives of humankind in general. Just as hurricanes, storms and floods strike indiscriminately, so too will the consequences of climate change. So, what gender differences could be expected?

The release of greenhouse gases through human activities is creating a thick blanket in the atmosphere, bringing about global warming and hence climate change. Carbon dioxide is one of the most important of these gases and its release is mainly caused by the use of fossil fuels and by deforestation.

As we consider along this bulletin, women who live in or depend on the forest are already being affected by processes which destroy or degrade it: logging, mining, oil, dams, expansion of agriculture, plantations, shrimp farming. These processes in turn contribute to climate change (through the release of carbon dioxide and methane), while changes in the climate will further degrade forests, thereby accelerating the release of carbon dioxide. This means that women already impacted by deforestation would suffer the additional impacts of climate change.

Physical impacts such as rising sea levels, increasing salt-water intrusion, and intruding into human settlements will dramatically alter the natural balance of local and global ecosystems. The problem of rising sea levels is crucial, especially in terms of small islands and low-lying areas. These areas are inhabited by a significant percentage of the human population whose main sustenance comes from their natural habitat. Water contamination of ground water by seawater would also occur in low-lying deltas. Women involved directly or indirectly (as fish traders) will see their income fall significantly. Climate change impacts could give rise to job losses and an increase in the price of fish leading to social upheaval.

In their quest for remunerative activities, women may be unable to adapt to the vagaries of the weather and their remunerative activities could be severely disrupted. Also, many women are responsible for the cultivation and production of agricultural crops. Climate change may worsen agricultural production and, consequently, exacerbate food insecurity. Women who are centre stage in the food chain, in production and in distribution already have to contend with environmental stress such as cultivating arid land, and climate change will exacerbate the situation.

Climate change may also heighten the problem of human migration. Natural catastrophes such as floods and storms could result in severe infrastructural damage on the coast and lead to population displacement. Worldwide, 150 million people will become homeless due to coastal flooding, agricultural disruption and shoreline erosion. Because women are key actors in maintaining the social cohesion of the family, this possible impact of environmental degradation could be very destabilising. Migration and environmental change could also trigger economic and social instability.

Climate change is predicted to cause serious health problems related to cardiovascular, respiratory and other diseases. Also women and children may be exposed to greater water-related health risks since they are responsible for drawing water and have to contend with unhygienic and unsanitary conditions.

Women constitute the majority of low-income earners. Perpetually imprisoned in cycles of dependency and co-dependent roles, women have to strive to maintain the household and its nutritional needs. Defining poverty is not easy, yet indicators such as per capita income, access to credit, ownership of assets, differential access to land rights, life expectancy, education, all put women in an unfavourable position in comparison to their male counterparts. In addition, because poor people and poor women specifically tend to have isolated lives, they find themselves marginalized and do not figure in poverty indicator analyses. Climate change is predicated to accentuate the gaps between the world's rich and poor, and women are among the poorest and most disadvantaged. They often develop adaptive strategies, yet the nature and scale of environmental stress is such that it may overwhelm women's

ability to contribute effectively to socio-economic development. Climate change related hazards could mean a loss of revenue for women in agriculture, industry, fisheries and also in the informal sector.

Climate change is simply a much graver example of the complexity of environmental stress and how it could affect women, who have a multi-dimensional role as mothers, providers, carers and often natural resource managers. (WRM Bulletin N° 79, February 2004).

The Impact of Dams and Resettlement on Women's Lives

This article highlights the vulnerability of dam-affected peoples – especially women – being displaced from their homes and lands, and relocated elsewhere. Due to the need to clear forests and divert the river, dams can effectively deprive those in the way of dams of rights to their traditional resources. It highlights some dam-related issues which are apparently shared the world over. But first some examples of on-going and completed dam projects in Malaysia, to show the price tag for 'development':

- The controversial Bakun hydro-electric power project across the Balui River in Sarawak, Borneo, cleared 70,000 hectares of tropical rainforest and forcibly resettled nearly 10,000 indigenous people to make way for the reservoir.

- The Sabah State government compulsorily acquired 169.860 hectares (419.732 acres) of land to construct the 70 metres high Babagon Dam and relocated about 200 Kadazandusun people to the Tampasak Resettlement Site in Penampang, Sabah, Borneo.

- The construction of numerous dams in Peninsular Malaysia affected many Orang Asli (First Peoples). For example, the 127 metres high Temenggor dam – which boasts of being the largest human-made lake in the Temenggor-Belum forests of Upper Perak in the north – covered an area of 15,200 hectares, and when constructed in 1979 for power generating facilities it affected about 1,500 Orang Asli. Other dams that displaced Orang Asli include the Linggiu Dam in Johor, the Kenyir Dam in Trengganu, and the Nenggiri Dam in Kelantan. The damming of the Selangor River in 1999 uprooted two Temuan (a subgroup of Proto-

Malay Orang Asli) settlements with approximately 339 persons and inundated 600 hectares of land.

Yet dams keep growing, the latest being the proposed Kelau Dam water supply project to transfer water from the east coast (Pahang) to the west (Selangor) probably with Japanese Bank for International Cooperation (JBIC) financing reported as RM3.8 billion (US$1 billion).

The construction of dams in Malaysia endanger indigenous and rural communities living on ancestral lands and near river ecosystems or forests, as happened around the world, who invariably have to pay a higher price for development. This plot is a story familiar to uprooted peoples who possibly might have some gains, but largely, dams have severely affected the lives, livelihoods, culture, identity and spiritual existence of indigenous peoples and ethnic minorities, in particular those who have been confronted by forced displacement. In many cases a majority of indigenous peoples do not have land or legal titles, so this makes it even easier for them to lose the right to their traditional resources.

Specifically, dams and resettlement have implications for women in several aspects.

Resettlement undermines the position of indigenous women and their power to exercise control over their lands and resources without official titles or deeds. Although recognised under customary law; these lands have been often excluded from compensation payment. For example, my study in 1998 on the Kadazandusun community in Sabah displaced by the Babagon Dam revealed that 61% females and 65% males had land without official titles or deeds. Of these, women whose lands were acquired for the dam without any due compensation, accounted for 88% while 78% of men were in that situation. While women and men had little recourse to the government's claims on their untitled lands, the men normally have greater mobility to seek waged work in towns or alternative jobs as compared to women.

Without land, subsistence and forest-dependent families lose an essential resource on which to grow food, which in turn leads to the destruction of their traditional subsistence base and a scarcity of

natural resources. When this happens, the burden of finding alternative sources for the scarce resources, such as water, fuel wood, fodder or wild vegetables often falls on the shoulders of women. A young mother displaced by the Selangor Dam from her ancestral village in Gerachi told me in April 2003, “Before we were moved to this resettlement site (Kampung Gerachi Jaya) in 2001, we lived on what we gathered from the forest and rivers. Now, we have to walk further to catch fish or collect edible shoots and petai [*Pakia speciosa*]. Life is so much harder now.”

Ironically though, hunting trips where women and children often accompany the men are now curtailed due to the distance from the forest so the men now carry out these excursions alone. The impact of 'modern' gender roles have impacted on women, so they now stay at home to mind the children or engage themselves in home-based work such as making joss-sticks from bamboo sticks.

Nutritional problems such as poor diet, low growth achievement, underweight, anaemia and diarrhea reflect the poor health of displaced women and children more than men. This is because women are faced with greater obligations and responsibility towards the children and the elderly which are more demanding on their time and energy.

Women and the older generation generally suffer greater stresses in trying to cope with the changes brought about by resettlement, particularly the stress that arises from being uprooted from homes, property and other losses of cultural or religious significance. In mid 2003 I visited Upper Perak where some 1,500 persons mainly from the Jahai sub-ethnic group (Negrito) and a small number from the sub-ethnic Temiar, Semai (Senoi) and Lanoh (Negrito) were resettled in the Pulau Tujuh Resettlement Scheme in the mid-1970s “as a military strategy to isolate the 1,508 Orang Asli villagers from the communist insurgents” (during the Emergency period, 1948-1960, these regions were hotbeds of the communist insurgency). They were resettled again in 1979 to the present site known administratively as the Banun Regroupment Scheme, when the Temenggor Dam being constructed then inundated the site. I found the elderly folks in the scheme constantly reminiscing about the 'old days with our forests and rivers'.

In sum, dams are tied to poverty at best and destruction of not only the economic base but also the identity, spirituality and cultural traditions of indigenous peoples at worst. Dams and resettlement have harsh consequences for women, hence the call for greater attention to be given to women's needs to enable them to cope with the changes brought about by resettlement. (By: Carol Yong, WRM Bulletin N° 79, February 2004).

Women Victims of Oil and Protagonists of Resistance

The gypsy people say that when their women are standing on street-corners, offering themselves and when their old people die alone in old-peoples' homes, the gypsy people will no longer be a people. The women in these oil zones have been cast to the street corners, punished with violence and are literally submerged in contamination.

The Sarayacu community in Ecuador would have been subdued by the oil companies long ago, if it had not been for their women. Victims and protagonists of resistance to oil, that is what the women are.

There is abundant data and evidence showing the impact of oil activities on the environment and the economy. We ecologists have shown, with data, the impact on ecosystems, health and biodiversity. With their testimonials, local peoples have described the state of their impoverishment and humiliation, and even the IMF has had to recognize that "we have found that over the past 30 years, the Ecuador's oil reserves have dropped, while its debt has increased, gradually impoverishing the country."

In spite of the fact that a considerable part of the environmental and social disasters has been recognized and recorded, little is said about the impacts suffered by women and there is even less reflection on these impacts in the long term that is to say, on future generations.

Oil activities have destroyed thousands of millions of hectares in the world. In Ecuador alone, 5 million hectares have been given in concessions, including protected areas and indigenous territories. Contamination is permanent, accidental and a matter of routine. In

Ecuador alone, in the year 2001, 75 oil spills took place, lasting 5 days each, with a loss of over 31,000 barrels of oil.

Women have had the worst lot, and are more vulnerable than men to disease. According to a study carried out by Acción Ecológica, which analysed, well by well, the impact of cancer, 32% of the deaths in the oil zone can be attributed to cancer, three times more than the national average (12%) and five times more than in the province studied, and mainly affect women.

People know it, they say there is a lot of cancer, a lot of deaths. For example, the wife of Mr. Masache, 8 months pregnant and healthy, had internal bleeding and died. Afterwards it was know that she had cancer; he said that women are more affected by cancer because they are more delicate, they have children and work.

At Lago Agrio, the oil city of the Ecuadorian Amazon, 65% of the mothers are single, as the oil companies reach the city with single men having resources and offers of a prosperous life. It is the zone with most complaints about violence, in spite of the fact that most of the victims of violence remain silent.

"Years ago, when Shell was exploring the Kichwa territory, an incident took place. Three young women went to the camp to sell chicha (a local fermented beverage), the oil workers followed them to the woods and raped them. They went back to the community, and out of shame did not say anything. Days later one of the husbands heard the oil workers laughing at them… then the men hit their wives in a rage." I was told this story a while ago by Cristina Gualing, from Sarayacu.

Seventy-five percent of the population living in oil exploitation areas uses contaminated foul-smelling, salty water, with a colour and with oil on the surface. The oil companies say that there is no problem in using it, that the water is healthy, that it has proteins and as it froths, it must even have milk in it.

Women suffer from this contamination and end up by offering it to their families. They are in permanent contact with the water, they wash

the clothes, go to the river for the children to bathe, prepare the chichi. Furthermore they are carrying a heavier burden as not only do they have to walk further to fetch water to drink and firewood to cook, but very often have to look after the vegetable garden as the men take part in the circuit of the oil company demands, as daily workers or bargaining and changing their hunting territory to supply the oil camps with meat.

The first time I entered Huaorani territory I was surprised that for four days I never heard a child cry, not one single time. It seems of little importance and perhaps only other women will understand what it means, but those kids were really well off, almost in collective care, and did not need to cry.

Today, after the entry of the oil companies, the Huaorani women tend the Shell Mera bar. The almost drunk men take rides in the company vehicle, before waking up, injured in hospitals as has already happened. And the children, at modern speed, must adapt themselves to these new conditions which separate them from their parents, that destroy their land and therefore mutilate the future of this people.

The Huaorani women and old people fell, like people fall in the midst of a battle. There was too much pressure, making them sign a "friendly agreement" with the U.S. Company, Maxus – an agreement signed in English for a 20 year period. In this agreement, oil operations were permitted on their territory, ending months of resistance. The signing of the agreement was done in the presence of the daughter of the President of the Republic and the business attaché of the United States Embassy, and recorded by the press. Alicia Durán Ballen gave her ear-rings to a Huaorani woman and received in exchange a Huaorani pectoral plate. Do you think we won in the exchange she asked the American advisor with a smile. "We won Manhattan like this," was his reply.

Not far from where this capitulation took place, another people are still continuing with a seven year struggle. The people of Sarayacu are resisting the Argentine company CGC and the U.S. company, Burlington.

The women organized themselves and said that if the men decided to let the companies in, they would have to start looking for other

women… and another territory. They said they would not allow their children and the young people of Sarayacu to become workers and slaves of the big oil companies. This was a non-negotiable decision.

The company has responded by creating inter-community disputes, bribing, manipulating and putting pressure on the government to turn the area into a military zone. A little while ago they told the population that the paths had been mined to prevent the population from leaving the community.

The women of Sarayacu decided to walk along those paths so than none of their children would loose their lives. They started the walk with the weight of the fear of imminent death, and ended the walk with the relief of having recovered their right and that of their children, to walk in their territory.

In Sarayacu it is the women who, by resisting, are defending the possible future of their people. (By: Esperanza Martínez, WRM Bulletin N° 79, February 2004).

Large Scale Shrimp Farming and Impacts on Women

Inland aquaculture has been practiced in Asian countries, namely in Indonesia, China, India and Thailand for hundreds of years. Shrimps were traditionally cultivated in paddy fields or in ponds combined with fishes, without significantly altering the mangrove forest, which for centuries has been used communally by local people providing them a number of products such as commercial fish, shrimp, game, timber, honey, fuel, medicine. Women have played a key role in taking the advantage of mangrove resources. In Papua Island, indigenous knowledge regulates woman's role in mangrove forest.

Recent increase in market demand have pressed for a change into intensive and semi-intensive shrimp farming, with much less respect to local ecosystems and people. Multinational corporations, coupled with the support of the World Bank and Asian Development Bank, have expanded intensive shrimp aquaculture in Asia, taking all the access and blocking traditional users' access to coastal resources. This has meant loss of food, health, income and social and cultural welfare for them.

Shrimp cultivation is the most high-risk process in the shrimp industry, especially after virus attacks that began in 1993 and continue until today. In spite of that, small farmers were encouraged by the government and influenced by the industry to continue investing in this activity. Most of the small farmers became indebted and did not continue the business anymore. The current shrimp owner is mostly the local businessman who bought the ponds from several small indebted farmers.

This modern and large scale shrimp farming creates major socio-economic problems to the local people, including land conflicts, exploitation of the poor by large corporations, and changes in social structures of local communities.

Although coastal communities may in fact have used and cared for the land over a long period, they do not posses formal landownership documents. So, most resistance against shrimp industry has been related to land taking by government and corporations.

Farmer families who lose the land will leave to the cities for low-skill jobs. Woman and children are the most fragile group related to changing in social structures, and in some cases may end up in prostitution. Employment opportunities of shrimp processing factories for the local people are often limited to unskilled and low-paid jobs, such as watchman and harvester. Only few jobs are available to local women, who can be employed as cleaning service and other low skill and part time works.

The current trend in Indonesia is that the traditional farmers are directed to join as satellite farmers in a Nucleus Estate Smallholders Scheme (NESS). Large scale NEES is usually supported by government and provided with high technology. The NESS system is also very biased against women. In large-scale shrimp farming only adult and educated men can hope to get a job. In case of death or inability to work of the smallholder males, women must leave the farming estate, leaving behind all the assets that they had been paying for by credit instalment.

The change from traditional to industrial shrimp farming that is rapidly taking place might in the short term benefit the government and the

large-scale shrimp investors due to foreign currency generation, but the environmental and social costs associated with the industry by far outstrip the benefits. Local communities are particularly marginalised and exploited and local social structures are threatened by growing tensions and conflicts. (WRM Bulletin N° 79, February 2004).

India: Women's Response to Devastating Mining

Mining has devastating impacts on the environment and on people, but it has also specific serious effects on women. Besides causing deforestation and contaminating the earth, rivers and air with toxic waste, mining destroys the private and cultural spaces of women, robbing them of their socialization infrastructure and social role, and all that for the sake of profit of just a handful of huge corporations.

In the case of India, when mining projects displace villages, women are left more unprotected, with even less possibilities of claiming at least for rehabilitation or compensation, since they have no rights over lands or natural resources. With forests being cut down to accommodate mines and related infrastructure – more often than not failing to comply with the laws and international agreements related to human rights including ancestral and cultural rights of indigenous peoples – women become alienated from their traditional economic roles and lose their right to cultivate their traditional crops or gather forest produce for domestic consumption and medicinal purposes. Plunged into a strange cash economy, they may end up pushed into marginalized forms of labour as maids and servants or into prostitution. Women also have to face previously non-existent social evils like wife-battering, alcoholism, indebtedness, physical and sexual harassment, which become commonplace among mining and mining-impacted communities.

Mining, by its very nature, has no room for women to be employed, so they lose their independence as they depend solely on the wages of the male members. In the cases where they are employed – in the small private sector mines – they are the first to be retrenched, have no work safety measures, are susceptible to serious health hazards which affect their health and ability to bear healthy children. The conditions of work, in the event that they are employed in mining activities, expose the women to sexual exploitation.

Human rights abuses on women miners or women affected by mining have shockingly increased with the entry of big capital and private corporations, with no attention paid by the government on this situation. On the contrary, protests and resistance from the victims have faced violent response from the State.

However, against this background of women's exploitation and alienation from their environment, many small struggles to protect and campaign for the rights of women as communities, workers, protectors and nurturers of natural resources and ecology, are trying to come together and raise a collective voice and action.

Thus, a national alliance has been formed called "mines, minerals & PEOPLE" (mm&P). A major focus of the alliance is the National Network of Women and Mining in India, which seeks to address the problems of women miners and women in communities affected by mining. This Network is also a member of the International Network of Women and Mining and its coordinating office for the Asia-Pacific region.

The objectives of the network are:

* Understanding the status of women in mining and affected by mining
* Work for the rights of women mine-workers and women displaced/ affected by mining
* Work towards a collective struggle in order to advocate for a gender sensitive mining policy for the country
* Link up with women's struggles and campaigns nationally and internationally, and particularly in the Asia-Pacific region, to gain strength and solidarity for their struggles
* Fight for new legal rights for women to gain control over land and other natural resources which have traditionally been male-oriented domains
* Campaign for the protection of human rights of women displaced by, or working or living in mining areas
* Fight against employment of girl-child labourers in mines
* Understand the health problems and hazards of women in mining areas and address these problems

* Organize the Third International Women and Mining Conference in India (which was hold in October of this year 2004, hosted by mm&P).

The Network assumes the “Pact for Life”, “because the Earth is our mother and the rivers are our mother´s milk. The Earth is our life and death. Therefore we demand water for all, protected wells, rivers free from contamination and waste, an Earth free from degradation.” (WRM Bulletin N° 80, March 2004).

Ecuador: Women from Sarayaku Against Terrorism Waged by the Army

On April 17 2004, more than 400 special troops of the Ecuadorian army entered the detachment of Tigre, on the South Eastern border of the Province of Pastaza, frontier with Peru, allegedly to "capture, neutralize and annihilate armed elements" in the area. This territory belongs to the Kichwa Yana Yaku community, where the Pastaza Indigenous Peoples Organization (OPIP) is based. On that same date, 80 soldiers unexpectedly occupied its premises, accusing it of being the “centre of logistic support” for allegedly subversive groups.

Even though after 15 days of searching the whole area the army found no evidence, on 30 April, 60 elite soldiers heavily armed with rifles, machine guns, grenade launchers, rocket launchers and other heavy weapons, violently assaulted the community of Yana Yaku accusing them of being the “key logistical support” of insurgent groups. They broke into the houses and other community facilities, threatening the women that opposed them both with weapons and verbal abuse, confiscating hunting tools, intruding into the family farms allegedly looking for coca plantations and overrunning the school causing panic and terror among the children. The community denounced that the army forced men of the community to take pictures carrying hunting guns, which later were showed as “evidence of subversive activities.”

Concurrently with these operations, the army increased militarization of the Kichwa community in Sarayaku – a community that borders the Bobonaza River in Pastaza – who have been defending their rights against oil policies. The women of Sarayaku are voicing their deep

concern and anger over these operations which they denounce are linked to the so called "Patriot Plan" – a controversial military operation that would deploy some 15,000 troops in the Colombian/Ecuadorian tropical forests as part of Plan Colombia, openly backed by the United States. The Sarayaku women also say that the increasingly violent militarization process of the indigenous territories of Pastaza subscribes to the oil policies launched in the province of Pastaza by the former army colonel, Lucio Gutiérrez (now President of Ecuador).

The women denounce that on the one hand the military high command publicly proclaims respect for the Constitution and democracy while on the other hand it is threatening the lives of the communities in open violation of the collective rights of indigenous peoples set out in the Constitution and in the International Labour Organization's Convention Nº 169.

Faced with this action, the Indigenous Women's Association of Sarayaku (AMIS) has expressed its solidarity with the women and children of the Yana Yaku community, declaring: "We support the ideals of the Sumak Kausai (the Kichwa people's philosophy of life) alternative development proposal. We also support the proposals submitted by the Kichwa people of Sarayaku to the National Government and Armed Forces:

1. Immediate withdrawal of the troops who are abusing and perpetrating actions against the psychological integrity, pacific cohabitation and productive activities of the Yana Yaku and Jatun Molino communities in the jurisdiction of Sarayaku.

2. That the communities of the Kichwa Peoples and other indigenous peoples who traditionally live in the Province of Pastaza will never allow any type of military occupation which, under the pretext of operations mounted by the armed forces themselves, is intended to support oil activities in the Indigenous territories of Pastaza.

3. Establishment of responsibilities and dismissal of Dr. Clara Fernández, the Judge responsible for the Pastaza Attorney's Office, who is involved in these shameful actions.

4. We demand impeachment by National Congress of the Joint Commander (General Octavio Romero) and the Commanders of the Amazonas Fourth Division (General Gonzalo Tapia) and the 17th Brigade of the Pastaza Forest (Colonel Fausto Rentaría), for attacking Indigenous peoples rights, women's rights, children's rights, creating a feeling of insecurity among the communities and for unnecessarily wasting vast economic and logistic resources, assets of the Ecuadorian people.

5. The establishment of an inter-institutional commission comprising the National Congress Commission for Amazon Affairs, Human Rights organizations, the Catholic Church, the Inter-American Human Rights Commission, CONAIE and media representatives to thoroughly investigate and make known to national and international public opinion this serious abuse of the morals, honesty, transparency and dignity of the Indigenous peoples of Pastaza.

6. To request the establishment of a commission comprising representatives of the UN, ILO and OAS to investigate directly the violation of the Indigenous rights in Pastaza.

7. To request the intervention of ALDHU and other Ecuadorian human rights organizations to ensure the peace and integrity of the Indigenous communities of Pastaza.

8. To lodge a complaint with the United Nations Permanent Forum on Indigenous Peoples.

9. To hold an Assembly of the Organization of Indigenous Peoples of Pastaza in the community of Yana Yaku, with the presence of CONAIE, to give support to the inhabitants and adopt actions aimed at preserving the right to life and to peace of the Kichwa people of Pataza.

10. To compensate the Yana Yaku community for the economic and productive, psychological and moral damages caused by the raids that affected the community's normal development.

11. As the Association of Indigenous Women of Sarayaku, (AMIS), in support of the women of the Yana Yaku community, we appeal to

the Inter-American Court for Human Rights, against the violation of Women and Family Rights, set out in the Constitution of the Republic. We empower that Court to bring the corresponding action against Dr. Clara Fernández, the Judge responsible for the Public Attorney's Office in Pastaza.

Furthermore, we affirm that the Sarayaku people's struggle for their dignity, respect for their territory, their projects and dreams of alternative development is not an isolated one. It is the decision of all the Kichwa OPIP grass-roots communities and other sectors identifying themselves with this cause, and therefore OPIP will never accept any kind of abuse from any sector, be it oil, governmental or military." (WRM Bulletin N° 82, May 2004).

THE APPROPRIATION OF NATURE

The Impact of Protected Areas on Twa Women

The Twa are the indigenous people of the Great Lakes region of Central Africa, inhabiting Burundi, eastern Democratic Republic of Congo (DRC), Rwanda and Uganda. Their population is estimated at less than 100,000 in the region. Originally the Twa were forest-dwelling hunter-gatherers living in the mountainous areas around Lakes Tanganyika, Kivu and Albert, but over time the forests were encroached by incoming farming and herding peoples and taken over for commercial development projects and protected areas. Nowadays, few Twa are still able to lead a forest-based way of life. During the 20th century Twa communities were expelled from national parks and conservation areas throughout the region, including the Volcanos National Park and Nyungwe Forest in Rwanda, the Mgahinga and Bwindi Impenetrable Forest and the Echuya Forest in Uganda, the Kibira forest in Burundi and the Virunga National Park and Kahuzi-Biega National Park in DRC.

"The ancestors told us we were the first. The people who know how to write have invaded our lands [the Kahuzi-Biega National Park]. According to our ancestors, all those lands belonged to us, but we do not have any rights there now. The park was our area since the time of our ancestors. When a man left with his spear from his home to go into

the forest, the family knew they would eat. If the man did not get out his spear, the woman knew she had to get her basket and axe to collect wood. She took the wood to non-Pygmies, and bartered it for bananas, so the family had food. Now, we, the women of the forest, don't have access to the forest. […] We cry because we have a miserable life. Then, we could live, we had enough to eat, all our needs were satisfied. Now there is nothing." (Twa woman from Buyungula/ Kabare, DRC at Women's Rights Conference organized by the Congolese Twa organization PIDP in 2000).

The removal of the Twa from these forests has caused enormous hardship. No lands were provided as compensation at the time of eviction, with the result that the former inhabitants of these forests are now largely landless and suffering extreme poverty. A few communities have since obtained small amounts of land through government distribution or NGO land purchase schemes. In these cases the distribution has either been to individual families or to Twa communities, who have then divided it up between the families. In these circumstances, the Twa have adopted the customary laws of neighbouring farming communities as concerns land rights – the family plot is considered to be owned by the husband, land is inherited by sons from their fathers and women only have use rights. According to these customs, a wife can be denied access to the family land if her husband takes another wife, or if he dies, his family can remove the widow from the land. Although these customs seem to be applied more flexibly in Twa communities than in neighbouring ethnic groups and Twa women not infrequently can inherit and retain control of family land if their marriage ends, the rights of Twa women are weaker than those of men. They are also probably weaker than when Twa lived as hunter-gatherers, when it is likely that collective rights to large areas of forest enabled women to exercise autonomy in how they used the land, and their rights to gather or hunt were not dependent on their husbands.

The loss of access to forest resources has also had a severe impact on Twa women, who are mainly responsible for providing daily food for the family. Forest yams that are a favourite food of Twa are no longer accessible, along with many other forest products including leaves, fruit, mushrooms and small animals, as well as medicinal herbs. When

they had access to the forest, women could also sell forest products such as charcoal and vines, and make handicrafts such as mats.

"We go to look for yams and milunda bitter leaves in the marshes on the edge of the lake and in the eucalyptus plantations of the Zaïrois [DRC Twa term for non-Twa people], as that's where the yams like to grow. We can't go to the park since they closed it off, and even if we bend the rules a bit, if we are caught we are threatened with death. Yet, it's in the forest that there's a large amount of food, but how to get access to it? Now we don't even know if we can go to the eucalyptus plantations, as the Zaïrois have started to threaten us and drive us away, saying that we are damaging their trees by cutting their roots when we dig up the yams." (Twa woman, Chombo/Kabare, DRC).

Without land and without access to wild food resources, Twa women's main source of livelihood is now from labouring on other peoples' fields, carrying loads or opportunistic searching for food, including begging. Some communities, particularly in Rwanda and Burundi are specialists in pottery, but this is no longer profitable due to the advent of metal and plastic goods. A Twa woman's typical earnings from a day's agricultural labour is 15-50 US cents, or the equivalent in food i.e. 1-2 kilos of beans or cassava flour. With these earnings she is scarcely able to meet the daily food needs of her family, let alone have spare resources for essentials such as clothes, soap, medical care or paying for her children's schooling. The extra food that would have been supplied by her husband, in the form of game from the forest, is also no longer available, unless her husband hunts clandestinely.

As the Twa have lost their forests, so has their culture been undermined.

"Before, when we had access to the forest, the boy had to present his future mother-in-law with a bride price of 5 fuko [small rodents] caught in the forest. In our grandparents' time, we gave an antelope and buffalo as bride price. Now we are all in the same situation, without means to pay a bride price, so we just live together without ceremony." (Twa woman, Chombo/Kabare, DRC).

Very few of the national parks employ Twa, and then only as game guides and park guards. No Twa women are employed even though

they also have valuable forest knowledge like their men folk. The ongoing violent civil conflicts in the area have severely reduced the number of visitors to the national parks. However, women in one or two Twa communities on the edge of the Bwindi Impenetrable National Park in Uganda have been able to benefit from tourism by selling handicrafts to them, and also being members of dance troupes that put on performances for tourists. (By: Dorothy Jackson, WRM Bulletin N° 79, February 2004).

Pachamama: The Impact of the Commodification of Nature on Women

Pachamama is a Quechua term, which stands, basically, for Mother Earth. The Quechua, an Indigenous People living in a large part of the Andes, believe that the Earth is a mother which cares for people as if they were her children.

The concept of ecological services is a very strange one, in this perspective. According to the concept of ecological services, the different functions healthy ecosystems provide to local people, like the provision of food, medicines, fuelwood, water and construction materials, and local climate mitigation, can be translated into monetary economics, turning local people who use these “services” into clients. Clients that will, one way or another, have to pay for these functions. It is like one enters a family and suddenly forces the children to pay for the care their mother provides.

Women have always played a fundamental role in the non-monetary “economy” of people. Much of their day-to-day employment is targeted towards caring for their loved ones, their children, husbands, parents. Like the functions of Mother Earth, these activities are very hard to translate into monetary terms. Yet, they are indispensable for human well-being.

However, neo-liberal biodiversity policy-makers are actively trying to impose the concept of ecological services upon people living within "Mother Earth’s care”. These local people suddenly see themselves in a position where they have become the “clients” of ecoservices.

Water that used to be available to them – and used to be fresh – has suddenly become a commodity that has to be paid for, and paid for dearly. Due to water privatization, some families in Mali are now paying up to 60% of their income for freshwater alone!

Fuelwood used to be freely accessible to them, but with the privatization of forests, and the rapidly progressing conversion of forests into monoculture tree plantations, every branch has to be paid for nowadays.

Medicinal plants used to be and still are a fundamental source of health care for many rural families, but with biodiversity destruction reaching epidemic speed worldwide, many families have lost their access to medicinal plants, which means they have to rely on expensive commercial health services.

Bushmeat has become overexploited by commercial hunting, and coastal fish grounds are becoming rapidly degraded, with the only fishstocks left being sold to large commercial fishing fleets.

Even seeds, which are the result of generations of joint innovations of farmers, most of them women, are becoming rapidly privatized and monopolized. Large biotechnology companies are even introducing special terminator technologies, which ensure that farmers are unable to reproduce their own seeds. Meanwhile, it is the reproduction of seeds which has formed the engine behind the development of the world's amazing agrobiodiversity.

As women are – in average – targeting a large part of their daily work to non-monetary activities like family care and unpaid care for people in their direct neighbourhood in general, they have a very disadvantaged position in the monetary economy. In many countries, women are still unable to participate fully in the monetary economy: they are unable to own real estate, they cannot get a mortgage, and they often cannot take a loan without permission of their husbands.

Worldwide, women are paid 30 to 40% less than men for comparable work. Meanwhile, women in developing countries work 60 to 90 hours a week, they provide 40 to 60% of the household income, 75% of

healthcare services, and over 75% of the food consumed throughout Africa. Even in the UK, the average full-time weekly earnings of women are 72% of men's.

Meanwhile, women are far more dependent on nature in their economic activities than men. In most countries, women are responsible for providing basic needs like freshwater, fuelwood and health care to the family. In most rural families they are also responsible for maintaining the family vegetable garden, and caring for small livestock like chicken, which form an important source of nutrition in the family. Men often work in paid labour or cash-crop production, and they are more likely to benefit economically from monocultures like export-oriented cash crops and even from logging.

The replacement of biodiverse systems by monocultures is a major cause of impoverishment of rural women. As most of their work is unpaid, it deprives them of their main source of income and makes them more dependent upon men. This diminishes their overall status in society and increases their vulnerability, including their sexual vulnerability.

The introduction of ecological services schemes adds even more to this problem. As women receive relatively little monetary income, they are unable to pay for basic needs like fuelwood and water. Due to their low status in many societies they are also less capable to negotiate on an equal level about access to so-called ecological services, thus leading to an even more disadvantaged position in the so-called ecological services market. The concept of ecological services has thus become a major cause in the further impoverishment of rural women.

Instead of trying to sell life and associated knowledge, we should address the direct and underlying causes of deforestation and other forms of biodiversity destruction. Only by challenging market-oriented approaches to biodiversity, and supporting the efforts of millions of women and men around the world to nurture nature and share the benefits of it, we can make any progress towards eradicating poverty amongst women and preventing ecological disaster. (By: Simone Lovera, WRM Bulletin N° 79, February 2004).

Central Africa: The Twa Alienation from their Forests Impact Doubly on Women

The Twa were the first inhabitants of the equatorial forests of the Great Lakes region. Originally a high-altitude forest people, inhabiting the mountains of the Albertine Rift Area in Central Africa, they specialized in hunting and gathering. At present, the Twa of the Great Lakes region of Central Africa live in Burundi, eastern Democratic Republic of Congo (DRC), Rwanda and southwest Uganda.

They identify themselves as indigenous and share many of the characteristics of indigenous peoples. However, over decades they have suffered from the loss of their traditional forest habitat and its natural resources through war as well as through wildlife conservation and commercial exploitation. Also, the Twa's landlessness results from their historical occupation of forests where, like hunter-gatherer or 'Pygmy' peoples throughout Central Africa, their land rights were not recognized in customary or statute law.

In most of their traditional territory, the Twa have been forced to forsake their forest-based hunter-gatherer culture and economy. The demographic and political processes that have caused this include: deforestation by incoming farming and herding peoples, which started centuries ago in Burundi and Rwanda; and forest clearance for agri-development, infrastructure, logging, military zones and mining during the last century. In the last 50 years, Twa communities have been forcibly expelled from forest areas designated for "development" projects, and from conservation areas including the Parc des Volcans and Nyungwe forests in Rwanda, the Mgahinga and Bwindi Impenetrable Forest mountain gorilla parks in south-western Uganda and the Kahuzi-Biega National Park and Virunga National Park in DRC.

A central element of recent Twa history is the deeply entrenched discrimination and marginalization they experience from neighbouring ethnic groups. This has increased as the Twa have become alienated from their forests and have been forced to live on the margins of the dominant society.

Many Twa communities are transient squatters, constantly looking for land where they can lodge until they are moved on. Currently, the Twa are one of the most disadvantaged ethnic groups in the Great Lakes region in terms of land ownership. A study of Twa exclusion in Burundi showed that 53 per cent of Twa households were landless, and in Rwanda, 58% are landless. In 1995, 82 per cent of Ugandan Twa were entirely landless.

"These people who let us stay on their land, they call on us to cultivate [it]. If we refuse they say 'Move away, we no longer want you.' We are not settled here, because other local people are pressing the landowners saying 'What do you need Twa for?' and at any time we may have to shift and settle elsewhere. […] The landlords don't let us put up toilets because they don't want anything permanent on their land, or holes which could be a problem for cultivation later. But if they catch us defecating in the fields, they are angry. My daughter was caught and was forced to remove the faeces with her hands." (Middle-aged Twa woman, Nyakabande/Kisoro, Uganda, May 2003).

Central African forest-based hunter-gatherers who are still able to maintain a traditional lifestyle consider themselves to be in an intimate, nurturing relationship with the forest. The abundance of the forest is maintained by sharing between people, and between people and forest spirits, also by singing and dancing rituals, which ensure the support of spirits to help them satisfy all their needs. These peoples do not conceive of individual "ownership" of land and resources. People are free to use the natural resources they need and in whatever quantity. Clan membership, friendship and marriage give individuals access to a wide range of different areas in which they can hunt and gather food and other forest products.

In the few areas where the natural resources have not been captured by conservation interests, dominant ethnic groups or entrepreneurs, such as on Idjwi Island and the forested areas of eastern DRC outside national parks, the Twa have more livelihood choices based on the use of diverse natural resources, and are not as destitute. But in the remaining areas, Twa traditional livelihood systems, based on flexibility and mobility, and immediate returns from the exploitation of renewable natural resources are almost impossible to maintain. In today's market

economy, the Twa's alternative strategies, based on the selling of labour or craft products, are scarcely able to meet the most basic daily needs of Twa households placing them among the poorest of the poor.

In these traditional forest-based societies women's autonomy is assured by the collective nature of rights over resources, and their ability to access these resources freely and independently, in their own right and not as a consequence of their relationships with men. Overall, the factors that have contributed to the chronic landlessness of the Twa as a whole explain also the land situation of Twa women. However, they have lost opportunities for access to land, not only through the loss of traditional land rights of the Twa as a whole, but also due to the adoption of new attitudes to land ownership, especially within Twa communities dispossessed of their forest lands who have been drawn into the land tenure systems of neighbouring farming and herding groups. Women's land rights in the few Twa communities that have secured some form of land ownership or use rights outside the forest are weaker than those under forest-based communal land tenure systems.

As indigenous people, Twa women suffer from social, economic and political marginalization, and as women they suffer unequal opportunities with respect to access to land, social services and representation.

"Now, we, the women of the forest, don't have access to the forest. […] We cry because we have a miserable life. Then, we could live, we had enough to eat, all our needs were satisfied. Now there is nothing." (Middle-aged Twa woman from Buyungula/ Kabare, DRC at Women's Rights Conference organized by the Congolese Twa organization PIDP in 2000). (WRM Bulletin N° 82, May 2004).

Cameroon: Restriction Policies in National Park have Major Impacts on Women

Local communities generally perceive forest management as a public affair. And yet, in the household, the public domain and investment fall within the competence of men, since women are responsible for "private," domestic business. Because of their deciding role in household food security, women are most affected by disruptions in the availability

of and access to resources. Hence, latest forest policies fuelled by international and national environmental trends that restrict people's activities in parks, affect local communities and mainly women within them.

Bifa and Ebianomeyong in Cameroon are good illustrations of that. The two villages caught researchers' attention because the women there were unusually vocal in their opinions about a nearby national park called Campo-Ma'an. A CIFOR field work on the park's impact on the socioeconomic activities of communities adjoining the park, tells these women's story.

The Campo-Ma'an forest, located in the southwestern part of Cameroon, borders Equatorial Guinea and is endowed with an almost unique wealth of flora and fauna. Starting in 1932 as a game reserve, the area was later the target of a series of commercial projects – logging, industrial plantations – until 1999, when the Cameroonian government established 260,830 hectares of protected areas and forest. In 2000, with the financial support of the World Bank, this area was converted to a national park.

Bifa is a village of 306 inhabitants, jammed between the national park and an agro-industrial complex made up of vast rubber plantations, factories, and workers' camps with approximately 18,216 inhabitants. The local communities are Bulu, an ethnic group that settled in Bifa around 1860 and is part of the large Fang-Beti ethnic complex, formed by Fang, Fon, Mvae, Ntumu, Zaman, and Bulu ethnic groups. They have preferential and complex relationships with their neighbours of Nzingui.

As in neighboring villages, the people of Bifa have experienced external influences over the years, which have gradually modified their way of life. The creation in 1975 of HEVECAM's rubber plantation occupied part of the village land and caused great changes within the local communities, including exacerbation of inter and intracommunity conflict for the remaining resources; destruction of large areas of forest and reduction in resources and incomes; influx of strangers into the area in search of jobs; increased poaching and illegal occupation of land by plantation labourers and their families.

The men and women of Bifa carry out traditional activities like agriculture, hunting, gathering and harvesting of non-timber forest products, fishing, small-scale poultry keeping, and breeding of small ruminants. Studying time allocation in Ntumu ethnic group in Campo-Ma'an region, researchers found that both men and women spend the same amount of time on livelihood activities (about 4.5 hours per day). The daily trekking for livelihood activities relates to both men and women takes about 2.5 hours per day.

Local populations gradually adapted their way of life to cope with the changes induced by external factors over the years. In the process, women initially got the lion's share by positioning themselves as the salespeople of the family products. The men did most of the hunting, but trading was largely women's work, so the money went to them. Until recently, Bifa's women collected all the resources and redistributed them for purchases, sales, gifts, and various social exchanges.

The creation of the national park led to new disturbances, which have disrupted the very basis of village economic life and put in question the achievements of all the local communities, especially women. The women accuse ecoguards, who have been present in the area since the creation of the park in 2000, of failure to demarcate the park clearly and to spell out the rules and regulations governing hunting, in a bid to seize any game found with the women in the market or in the village. The women complain of being harassed by the ecoguards, who do not hesitate to "enter into kitchens to examine the contents of pots" or to "seize our game anywhere and anytime".

The ecoguards didn't manage to stop the hunting, but now people have to sneak into the forest and buy their meat directly from the hunters. Since the sale of game was the main source of income for Bifa's women, they have become increasingly poor, unable to work out adaptation strategies in time like the men. The women see their incomes dwindling while the problem of poaching still exists. This has had a negative impact on the equilibrium between men and women.

Ebianemeyong is a village of 103 inhabitants belonging to the Mvae ethnic group and to different clans. It is situated in an enclave on the southeast edge of the national park. The population of Ebianemeyong

are traditional farmers, who make their living by practicing agriculture, hunting, collecting non-timber forest products, and fishing. Women are engaged principally in food-crop farming and increasingly in the cultivation of fruit trees. Activities typically undertaken by men are financially profitable to them. Women's activities, in contrast, are more focused on meeting the household's subsistence needs; only agriculture, and to a lesser extent gathering and harvesting of non-timber forest products, bring in cash income.

However, women say that the above-described economic activities do not really represent the current situation, but rather the situation before the closure of the Ebianemeyong-Campo route road, which was suspended at the request of the World Bank because it runs through the park and they want to keep out poachers. This has left the people of Ebianemeyong without access to Campo Ma'an. Actually, the poachers rarely used the road because they could easily get caught. The real losers have been female farmers who can no longer send their crops to the market or take their sick children to the doctor.

Apart from the reduction of living space, which is a common problem to all communities living adjacent to the national park, the women in Bifa and Ebianemeyong are experiencing more difficulties than the men in adapting to new circumstances. This is not an isolated case. The smallest disruption of the agricultural sector directly affects women's capacity to feed their families and deprives them of their main source of income. This vulnerability is linked to the competing demands on women's time, the circumscribed scale of women's activities, the concentration or uniqueness of their income sources, and the low market value of products derived from their activities. They are daily overloaded with work in production activities such as agriculture, hunting, fishing, harvesting, breeding, transportation, etc., as well as all the various household tasks such as fetching water, feeding the family, raising children, and managing the home. Thus, they hardly have the time to organize themselves to adopt reasoned and common strategies in the face of adversity.

As an Ebianemeyong woman, Septe declared, communities must not be "hostages of animals" in Campo Ma'an. (WRM Bulletin N° 90, January 2005).

REFERENCES

WOMEN AND FORESTS, AN INTRODUCTION

Women's Voices Coming from the Forest

- By: Bernice A. See, Tebtebba Foundation (Indigenous Peoples International Centre for Policy Research and Education), e-mail: tebtebba@skyinet.net; http://www.tebtebba.org

Women React to a Male-dominated World Forestry Congress

- Article based on information from: Notes prepared by Jeannette D. Gurung, Coordinator of the Network for Women in NRM, e-mail: jeannettegurung@yahoo.com

CONSERVING THE FOREST

India: Gender Bias and Disempowerment in World Bank-funded Forestry Projects

- Article based on information from: Madhu Sarin, “Disempowerment in the name of ‘participatory’ forestry? - Village forests joint management in Uttarakhand”, Forests, Trees and People Newsletter, No. 44, April 2001.

Seeing the Forests through Women's Eyes

- Article based on: “Seeing the Forest for the People, a Handbook on Gender, Forestry and Rural Livelihoods”, Vanessa Griffen, APDC (Asian and Pacific Development Centre), 2001.

Philippines: Lessons on Gender from Community-based Forest Management

- Article based on information from: “Seeing the Forest for the People. A Handbook on Gender, Forestry and Rural Livelihoods”, Vanessa Griffen, APDC (Asian and Pacific Development Centre), 2001.

Women and Forest Resources: Two Cases from Central America

- By Iliana Monterroso, FLACSO-Sede Académica Guatemala; e-mail: imonterroso@flacso.edu.gt

Senegal: Women's Project Restores Nature and Benefits the Community

- Article based on information from: "Ker Cupaam: ejemplo para el desarrollo sostenible", sent by Liliana Marcos Barba, Canal Solidario, e-mail: lilianita_81@hotmail.com
- Cultivant la Diversité - Afrique de l'Ouest, La gestion de l'espace communautaire Ker Cupaam, http://www.grain.org/gd/fr/case-studies/cases/wa-abstract-senegal-fr.cfm
- Case study, La Réserve Naturelle de Popenguine (Sénégal): une expérience de développement durable basée sur la conservation de la biodiversité, Paul Ndiaye, http://www.cdr.dk/sscafrica/ndi2-f-s.htm

Amazon Women

- By: Tania Roura, Revista Iniciativa Amazónica Nº 8, November 2003, ALDHU

Role and Status of Women in Land Use Control and Management

- By: Anna Pinto, CORE , e-mail: anastasiapinto@coremanipur.org

Women's Land Tenure Security and Community-Based Forest Management

- Excerpted and adapted from: "Towards Sustainability and Development of the Community-Based Forest Resource Management System through Ensuring the Women's Land Tenure Security (A Case Study in Malasari and Mekarsari Villages in Halimun Ecosystem Area)", by RMI - The Indonesian Institute for Forest and Environment, e-mail: rmibogor@indo.net.id, sent by Ulfa Hidayati. The full document is available at: http://www.wrm.org.uy/subjects/CBFM/RMI.rtf

Women, Forests, and Adaptive Collaborative Management

- By: Carol J. Pierce Colfer, e-mail: c.colfer@cgiar.org, Center for International Forestry Research, Bogor, Indonesia

Women and Knowledge of Medicinal Forest Plants

- By: Monica Litovsky, CEUTA, e-mail: yuyos@chasque.net

India: Women's Knowledge and Power in Forest Societies

- Article based on information from: "Patriarchy at Odds: Gender Relations in Forest Societies in Asia", Govind Kelkar and Dev Nathan (Eds.), 2003, http://www.gendermainstreamingasia.org/img/b1.PDF
- Women's indigenous knowledge of forest management in Orissa (India), Smita Mishra, http://www.nuffic.nl/ciran/ikdm/2-3/articles/mishra.html

WOMEN AND PLANTATIONS

Indonesia: Gender Impacts of Commercial Tree Plantations

- Article based on information from: "Seeing the Forest for the People, a Handbook on Gender, Forestry and Rural Livelihoods", Vanessa Griffen, APDC (Asian and Pacific Development Centre), 2001 (Chapter 4. Indonesia-Livelihoods in Teak and Pine/Mahogany Plantations and National Forest).

Malaysia: The Plight of Women Workers in Oil Palm Plantations

- Article based on: "Poisoned and Silenced. A Study of Pesticide Poisoning in the Plantations", Tenaganita, e-mail: tenaganita@yahoo.co.uk or tnita@hotmail.com, http://caramasia.gn.apc.org/tn_page0.html
- Pesticide Action Network (PAN) Asia and the Pacific, e-mail: panap@panap.net, http://www.panap.net/ The full report is available at: http://www.evb.ch/index.cfm?page_id=1300

Brazil: Women's Working Conditions in Tree Plantations

- Article based on information from "Agricultores e asalariados das plantações florestais em Minas Gerais: quais problemas?", Múcio Tosta Gonçalves, http://www.cedeplar.ufmg.br/diamantina2002/textos/D72.PDF
- "Certifying the Uncertifiable. FSC Certification of Tree Plantations in Thailand and Brazil", World Rainforest Movement, August 2003.
- Information provided by Rosa Roldán, e-mail: rroldan@alternex.com.br

Tree Plantations Impact Doubly on Women

- Article based on information from: Shiva, Vandana, "Staying Alive: Women, Ecology and Survival in India", Zed Books, 1989.

- "Seeing the Forest for the People, a Handbook on Gender, Forestry and Rural Livelihoods", Vanessa Griffen, APDC (Asian and Pacific Development Centre), 2001.
- "Certifying the Uncertifiable. FSC Certification of Tree Plantations in Thailand and Brazil", WRM, August 2003.
- Information provided by Rosa Roldán, e-mail: rroldan@alternex.com.br

Women Plantation Workers Poisoned and Silenced

- Article based on information from: "Women Plantation Workers Poisoned and Silenced", Tenaganita/PAN-Asia Pacific, 2002, http://www.panap.net/highlightsA1.cfm?id=9&hiliteid=HILITE04#Top
- "A Study of Pesticide Poisoning in the Plantations", Tenaganita/PAN-Asia Pacific, 2002, http://www.panap.net/highlightsA1.cfm?id=16&hiliteid=HILITE04

South Africa: Women Forestry Workers under Outsourcing Schemes

- Excerpted and adapted from: "What role for forestry in reducing poverty in South Africa? Case studies of contractors in the forestry sector", Jeanette Clarke and Moenieba Isaacs, May 2004, http://www.wrm.org.uy/countries/SouthAfrica/Final_Report.pdf, sent by Wally Menne, TimberWatch Coalition, e-mail: plantnet@iafrica.com

IMPACTS OF DEFORESTATION ON WOMEN'S LIVES

India: Women more Affected than Men from Deforestation

- Article based on information from: Joe Human and Manoj Pattanaik, "Community forest management. A casebook from India." UK, Oxfam, 2000.

Sri Lanka: Deforestation, Women and Forestry

- Article based on information from: Anoja Wickramasinghe, Deforestation, Women and Forestry. The case of Sri Lanka, reviewed by Clare Hillyard Melia, http://www.gn.apc.org/peacenews/issues/past/2390/pn239015.htm

Papua New Guinea: Malaysian Companies Logging out the Forest

- Article based on information from: “Komunity Bus Nius”, Issue 1, September/October 2002, sent by Timothy King, e-mail: tim@global.net.pg

Mexico: The Loss of Forests for the Community and for Women

- Article based on information from an interview held in July 2003 with Maria Rosario Gomez (Chayito) secular diocesan missionary from the Parish of San Miguel Arcángel and María Angelina Miranda, Diocesan Women’s Coordinator (CODIMUJ), Chiapas, Mexico, e-mail: codimuj@yahoo.com.mx

Impact of Logging on Women

- Excerpted from: “Women Suffer the Most from Large Scale Logging”, by Joe Meava, Echoes from the Forests 12, http://www.ecoforestry.org.pg/Women_Logging.doc

OTHER INDUSTRIAL ACTIVITIES THAT IMPACT ON WOMEN

Senegal: The Hidden Impacts of Charcoal Production

- Article based on information from: Jesse C. Ribot, "Rebellion, Representation, and Enfranchisement in the Forest Villages of Makacoulibantang, Eastern Senegal". In: Zerner, Charles, "People, Plants & Justice: The Politics of Nature Conservation", New York, Columbia University Press, 2000.

The Impacts of Mining on Women

- Article based on information from: “The globalisation of mining and its impact and challenges for women”, Victoria Tauli-Corpuz, Tebtebba Foundation (Indigenous Peoples' International Center for Policy Research and Education), http://www.twnside.org.sg/title/chal-cn.htm
- “Women's rights undermined”, Ingrid Macdonald.
- “The Polarisation of the People and the State in the Interests of the Political Economy and Women's Struggle to Defend their Existence, a critique of mining policy in Indonesia”, Meentje Simatauw.

- "Labour, love and loss: Mining and the displacement of women's labour", Kathryn Robinson.
- Tunnel Vision: Women, Mining and Communities, Forum Report, November 2002, _http://www.caa.org.au/campaigns/mining/tunnelvisionpapers/index.html

Papua New Guinea: Women's Rights Undermined by Placer Dome Gold mine

- Article based on information from: "One day rich; community perceptions of the impact of the Placer Dome Gold Mine, Misima Island, Papua New Guinea", Dr Julia Byford, Tunnel Vision: Women, Mining and Communities, Forum Report, November 2002, http://www.caa.org.au/campaigns/mining/tunnelvisionpapers/index.html
- The Misima mine: An assesssment of social and cultural issues and programmes, Allen L. Clark and Jennifer Cook Clark, http://www.natural-resources.org/minerals/development/docs/pdfs/misimacasestudy.pdf

Mexico: Women Suffer the Effects of Market Opening Doubly

- Article based on information from: interview with Maria Angelina Miranda, Diocesan Women's Coordinator (Coordinadora Diocesana de Mujeres-CODIMUJ), e-mail: codimuj@yahoo.com.mx

Women's Life Devastated by Mining

- Adapted and excerpted from: "Picture of Women's Life Devastation by Mining In East Kalimantan, Indonesia", by Haris Retno Susmiyati, sent by Siti Maimunah, JATAM, e-mail: mai@jatam.org, http://www.jatam.org/english/index.html. The full version of the article is available at: http://www.wrm.org.uy/deforestation/Mining_Women.rtf

Linkages Between Climate Change and Women

- Excerpted and adapted from "Gendered Impacts of Climate Change", by Fatma Denton at ENDA-Energy Programme, e-mail: energy2@enda.sn,/published in: ENERGIA News, vol. 3 nº 3, http://www.google.co.uk/search?q=cache:YKhgHEkBDR8J:www.sms.utwente.nl/energia/pdf/issue3_v3/enews33_13-4.pdf+Gendered+Impacts+of+Climate&hl=en&ie=UTF-8

The Impact of Dams and Resettlement on Women's Lives
- By: Carol Yong, e-mail: rakit98@yahoo.co.uk

Women Victims of Oil and Protagonists of Resistance
- By: Esperanza Martínez, Oilwatch, e-mail: tegantai@oilwatch.org.ec

Large Scale Shrimp Farming and Impacts on Women
- Adapted and excerpted from "Large Scale Shrimp Farming and Impacts on women", by P. Raja Siregar, Campaigner of WALHI (Friends of The Earth-Indonesia) and Coordinator of Coalition of Anti-Debt Movement. Sent by the author, e-mail: radja@walhi.or.id . The full document is available at: http://www.wrm.org.uy/deforestation/shrimp/women.rtf

India: Women's Response to Devastating Mining
- Article based on information from: "Women and Mining. A resource Kit", April 2003, published by Delhi Forum, e-mail: delforum@vsnl.com
- "The International Network, Women and Mining-An Appeal for Support", 25 February, 2004, Mines & Communities Website, http://www.minesandcommunities.org/Mineral/women6.htm

Ecuador: Women from Sarayaku Against Terrorism Waged by the Army
- Article based on information from: "Manifiesto de la Asociación de Mujeres Indígenas de Sarayacu 'AMIS' frente a la acción terrorista de las Fuerzas Armadas del Ecuador en la comunidad Kichwa Yana Yaku, en Pastaza".
- "Militarización sigue en las comunidades indígenas de Pastaza en Ecuador", by the Organization of Indigenous Peoples of Patraza, http://www.earthrights.org/news/Yanayakuspanish.shtml
- "Acción terrorista de las Fuerzas Armadas del Ecuador en la comunidad Kichwa de Yana Yaku, Pastaza. Declaración de la Organización de los Pueblos Indígenas del Pastaza (OPIP), Consejo de Gobierno del Territorio Autonómo de la Nación Originaria del Pueblo Kichwa de Sarayaku (TAYJASARUTA)", 1 May 2004, http://www.llacta.org/organiz/coms/com574.htm

THE APPROPRIATION OF NATURE

The Impact of Protected Areas on Twa Women

- By: Dorothy Jackson, Forest Peoples Programme, e-mail: djackson@gn.apc.org. For more information about the situation of Twa women see Jackson, D. (2003) "Twa women, Twa Rights in the Great Lakes Region of Africa." Minority Rights Group International.

Pachamama: The Impact of the Commodification of Nature on Women

- By: Simone Lovera, Friends of the Earth International, e-mail: lovera@foei.org

Central Africa: The Twa Alienation from their Forests Impact Doubly on Women

- Excerpted and adapted from: “Twa Women, Twa Rights in the Great Lakes Region of Africa”, Dorothy Jackson, 2003, Forest Peoples Programme, e-mail: djackson@gn.apc.org . The full text is available at: http://www.forestpeoples.gn.apc.org/Briefings/Africa/twa_women_nov03.pdf

Cameroon: Restriction Policies in National Park Have Major Impacts on Women

- Article based on edited excerpts from: “Women in Campo-Ma’an National Park. Uncertainties and Adaptations in Cameroon”, by Anne Marie Tiani, George Akwah, and Joachim Nguiébouri, in "The Equitable Forest", sent by Rahayu Koesnadi, Center for International Forestry Research (CIFOR), e-mail: r.koesnadi@cgiar.org, http://www.cifor.org/

I. Rosgal S.A. Dep. Legal 333989/05