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A NATIONAL CONFERENCE ORGANISED BY WOMEN IN ENVIRONMENT WITH SUPPORT FROM UNICEF NEPAL, THE WORLD CONSERVATION UNION (IUCN) NEPAL AND LEADERS, INC.

NEPAL NATIONAL CONSERVATION STRATEGY IMPLEMENTATION PROGRAMME NATIONAL PLANNING COMMISSION, HMG NEPAL, IN COLLABORATION WITH THE WORLD CONSERVATION UNION (IUCN) NEPAL

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REPORT OF THE NATIONAL SEMINAR ON WOMEN AS ENVIRONMENTAL CONSERVATIONISTS AND RESOURCE MANAGERS

3-4 JUNE 1990 KATHMANDU NEPAL

LEADERS, INC/IUCN ENVIRONMENTAL SEMINAR SERIES WITH WOMEN IN ENVIRONMENT AND UNICEF NEPAL

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CONTENTS

		PAGE
FORE	EWORD	i
INTRODUCTION		iv
PROCEEDINGS		1
RECOMMENDATIONS		7
ANNI	EXES	
I.	Welcome Speech-Inaugural Session	11
II.	Opening Remarks	13
III.	Inaugural Statement	15
IV.	Guest Speaker's Address	18
V.	Inaugural Address	19
VI.	Opinion from the Chair	20
VII.	Vote of Thanks	22
VIII.	The Role of Women in Environmental Conservation	23
IX.	The Role of Women as Resource Managers in Nepal	34
X.	The Role of Women as Resource Mobilisers	46
XI.	Management of Waste for a Healthier Environment	56
XII.	Women and the Nepalese Law	59
XIII.	The Women Development Division	63
XIV.	The Small Farmer Development Project	67
XV.	Recommendations of Group A	70
XVI.	Recommendations of Group B	⁻ 72
XVII.	Recommendations of Group C	74
XVIII	. Address - Closing Ceremony	75
XIX.	Remarks	76
XX.	Closing Remarks	77
XXI.	List of Participants	78

FOREWORD

Nepal is one of over 700 members of the World Conservation Union (IUCN), and is among more than 40 governments that have been assisted by IUCN in developing National Conservation Strategies. The National Conservation Strategy (NCS) for Nepal was completed in 1987 and endorsed as policy in 1988. IUCN was then requested by the Government of Nepal to assist in the implementation of the NCS for Nepal.

Founded in 1948, IUCN has become the largest professional world body working to conserve the earth's soil, land, water, air and life systems. IUCN is active in over 120 countries, and is the only international body that groups governments and non-governmental organisations and provides them equal opportunity to participate in conservation activity.

Nepal's National Conservation Strategy is being implemented through a series of programmes in the key areas of environmental planning and assessment, education and public information. Coordinated by the National Planning Commission (NPC), the implementation programme involves representatives of all the major ministries and government departments concerned with environmental issues, as well as an increasing number of local non-governmental organisations (NGOs).

An Environment Core Group has a key role in developing new environmental policies and procedures best suited to Nepal. The Group comprises of some thirty senior government officials from the fifteen ministries and departments and NPC divisions. Over several years, this Core Group is participating in a series of practical, field-oriented professional interactions, as well as in intensive policy development workshops. Group members will also work on short-term secondments with the NPC and relevant ministries in testing national and sectoral planning and assessment guidelines and procedures for Nepal.

While the Environment Core Group programme for developing planning policies and procedures is continuing at the national level, the IUCN Environmental Planning team has initiated local environmental planning activities through local NGOs. Communities are being assisted in the preparation of model environmental plans in eight villages and two districts, Lamjung and Arghakhanchi, to test field planning methods, including community involvement processes. This local planning effort will be used as a practical model for the formulation of national environmental planning guidelines and procedures.

The Environmental Core Group is also engaged in preparing national and sectoral guidelines for environmental impact assessment (EIA) of development projects. These guidelines are being tested and finalised over a two-year period. Linkages, through the Core Group, with the NCS Environmental Planning Programme, will ensure that the procedures and methods defined for the appraisal of projects will be appropriate to the

land use planning framework and field methods tested and developed under that Programme.

The NPC, with assistance from IUCN, has also initiated a Pollution Control Programme, the first stage of which resulted in a comprehensive inventory of industrial pollution in Nepal. The second stage of the project will provide a more detailed assessment and management prescriptions for the high priority problems identified through the national survey. The wider ranging objective of this project is a detailed and comprehensive understanding of Nepal's pollution situation, with enough quantified data to establish practical pollution standards and the technical capacity to apply them.

Another component of IUCN's support is concerned with conserving cultural and natural heritage of national significance. Under the NPC's leadership, IUCN is working closely with the Nepal Heritage Society, other local NGOs and relevant government ministries to compile a register of national heritage sites, their condition and current management. The programme will involve establishing criteria for national significance, critical review of existing inventories and comprehensive field survey, particularly for natural sites of importance outside existing protected areas. The preparation and implementation of management plans for selected demonstration sites which combine natural and cultural attributes of outstanding value is also a key element of the programme.

A series of education and training projects are being designed and implemented under the NCS Environmental Education Programme. These projects aim to enhance the coverage of existing environmental management and resource conservation subjects in formal and non-formal education programmes in Nepal. Regular National Environmental Education Conferences will be held to provide a forum at which concerned parties can form a consensus on Nepal's environmental education needs.

Primary school curriculum is a priority concern of the programme. The Environmental Education in Primary Schools pilot project includes the preparation of model environmental curricula, revision and expansion of current textbooks and the development of associated resource materials. Teachers and students are being involved in a series of trial and evaluation workshops to refine the lessons and teacher's guides. This package will be comprehensively tested in selected schools, accompanied by teacher training and evaluation. Ultimately, the project aims to have the tested environmental education materials integrated into the national level primary school curriculum.

The Environmental Education Programme further emphasises pre-service and in-service training of extension workers and government officers. Environment courses have already been introduced on a trial basis within three governmental training centres, and this work will continue to be expanded to produce and test training packages for a number of sectors.

The NCS Public Information Programme focusses on two main elements: publications support to other components of Strategy implementation and public environmental

awareness activities. An NCS Newsletter provides information and updates on the status of the NCS implementation programme and on agencies and programmes working in environment-related fields. Public awareness activities are implemented through local NGOs and include a strong training element aimed at orienting members of the media and professionals of various disciplines towards consideration and coverage of environmental issues.

Information is being disseminated at the community level through a wall newspaper, with the objective of expanding the currently limited information on conservation issues available to rural communities. Two weekly radio programmes and an Environmental Seminar Series also form part of the Public Information Programme. .

The seminars have been particularly effective in focussing public attention and debate on important issues at the national level, and in providing a public forum for underprivileged groups and interests that are often not directly represented at such meetings. The National Seminar on Women as Environmental Conservationists and Resource Managers was a key event in this series.

INTRODUCTION

Countries around the world, rich and poor alike, are becoming increasingly concerned about the deterioration of the natural environment and its consequences. While the causes of deterioration differ in developed and developing countries, the strategies for finding solutions to the problems which may ultimately affect all nations are basically similar.

Destruction of the natural environment is a process occurring in all countries, and Nepal is no exception. One of the world's least-developed countries, Nepal is affected by landslides, floods, drought, erosion of valuable topsoil, shortages of fuelwood and shortages of animal fodder as a direct consequence of damage done to its original natural environment.

Such occurrences quite naturally have a severe impact on the lives of the Nepalese people, and in particular upon the lives of Nepalese women. The World Conservation Union (IUCN) and the Women in Environment group (WE) hope that by educating women about the importance of environmental conservation, and by teaching women techniques which more effectively utilise natural resources, this negative trend may be slowed down and, ultimately, reversed. This seminar is part of a process intended to facilitate planning of programmes on environmental education for women.

Women in Environment, registered as an NGO under the Ministry of Industry's Department of Industry, was established in 1989 to develop environmental awareness in women, and to effectively involve women in all aspects of conservation. WE organises programmes supported by local and international agencies and NGOs to educate women on the need for conservation in Nepal, and to involve women more deeply in the process of conservation and effective use of natural resources.

WE's programmes include conservation education and environmental sanitation programmes at Padma Kanya High School, Kathmandu; Chandi High School, Lalitpur; and Lalit Shanti Nikunj High School in the Bishnumati, Kankeshwori area (with the assistance of Planco Consulting); an education programme in Boudhanath (with the cooperation of the Danish Volunteer Service); and a conservation programme in Imadol, Lalitpur (with CECI cooperation).

WE's first activity, a seminar on 'The Role of Women in Environmental Conservation', was held on World Environment Day, 1989. This report covers the proceedings of a second seminar, 'Women as Environmental Conservationists and Resource Managers,' conducted by WE in collaboration with IUCN as part of the World Conservation Union's environment seminar series coordinated jointly with Legal and Environmental Analysis for Development and Research Services (LEADERS, Inc.) and supported by UNICEF Nepal.

The topics for this seminar were chosen by means of a pilot study which polled the opinions of various NGOs, migrant settlers, and other population groups. The seminar topics that emerged were environmental conservation, resource mobilisation and resource management.

A seminar organising committee was then formed with three subcommittees for the preparation of working papers, contacting participants, and seminar management.

With the cooperation of LEADERS, Inc., IUCN - The World Conservation Union, and UNICEF Nepal, intensive work resulted in this seminar being held on World Environment Day, the 3rd and 4th of June, 1990, at the Hotel Blue Star in Kathmandu.



PROCEEDINGS OF THE NATIONAL SEMINAR ON WOMEN AS ENVIRONMENTAL CONSERVATIONISTS AND RESOURCE MANAGERS

PROCEEDINGS OF THE NATIONAL SEMINAR ON WOMEN AS ENVIRONMENTAL CONSERVATIONISTS AND RESOURCE MANAGERS

Kathmandu Nepal

3-4 June 1990

INAUGURAL SESSION

Moderator: Ms. Shanta Shakya

Among the distinguished guests present for this session were the Right Honourable Prime Minister, Mr. Krishna Prasad Bhattarai; the Honourable Minister for Finance and Industry, Ms. Sahana Pradhan; His Excellency Kant Kishore Bhargava, Secretary-General of SAARC; Her Excellency Julia Chang Bloch, Ambassador of the United States of America to Nepal; and Mr. Raymond Janssens, Officer-in-Charge, UNICEF. The session was chaired by Ms. Kamala Acharya Dhungel, President, Women in Environment.

Ms. Shilu Manandhar, Secretary, Women in Environment, welcomed the Right Honourable Prime Minister, the Minister for Finance and Industry, and other dignitaries and participants. She discussed the dangerous state of the world's environment and mentioned that this seminar had been organised to elicit the active involvement of women in solving the problems caused by the absence of conservation practices. (Full text in Annex I).

Ms. Madhavi Singh, Chairperson of the Seminar Organising Committee, said that the objective of the seminar was to work towards solving the environmental problems of Nepal. The seminar was expected to yield original, concrete ideas that would enable women to further the effort to conserve natural resources. (Full text in Annex II).

Mr. Raymond Janssens, Officer-in-Charge, UNICEF, outlined current UNICEF-assisted programmes and their impact on women in Nepal. Women and children, primary utilisers of their environment as collectors of drinking water, fuelwood and fodder, are often the first to be affected by degradation of the environment. These same groups must therefore form the focus for all programmes addressing problems within their immediate environment, ensuring women's involvement and their contribution in the decision-making process. Given that children are the most vulnerable group in any society, national development should keep the interests of children uppermost, as a prerequisite for social development. Referring to the UN Convention on the Rights of the Child, Mr. Janssens requested that Nepal be one of the countries to ratify this Convention, as a gift to the children of the world and to the children of Nepal. (Full text in Annex III).

The Honourable Minister for Finance and Industry, Ms. Sahana Pradhan, in her keynote address, expressed pride in the environmental concern being shown by women in Nepal, a least-developed country. She asked that Nepalese women work decisively to conserve the country's natural resources, and fight for civil rights for themselves. She congratulated Women in Environment for their work, and wished them success in their future activities. (Full text in Annex IV).

In his address, the Right Honourable Prime Minister, Mr. Krishna Prasad Bhattarai, said that women have always played a dominant role in the evolution of mankind, from barbarism to civilisation. In Nepal, they have inspired art and literature, but have otherwise been relegated to second place. In this context, a seminar on an issue of such importance is of great significance.

In order to realise the slogan 'Save the Earth', awareness of environmental issues is important in both villages and cities. Industrialisation itself can have adverse effects on the environment, and the potential environmental impact of any activity must therefore be considered during planning. He mentioned the Himal Cement factory in Chobar as an example of a mistake not to be repeated in the future. He urged environmental scientists and industrial planners to work together to help Nepal, pointing out that Nepal is best suited for medium and small sized industries, particularly from the point of view of conservation.

The Prime Minister felt that seminars such as this one played a vital role in the conservation process, by drawing attention to the consequences of practices such as stone quarrying, deforestation and so on. If women were to take the lead in conserving the environment, men would automatically follow their example. (Full text in Annex V).

Ms. Kamala Acharya Dhungel, President, Women in Environment, mentioned Nepal's past difficulties in developing conservation policies, and expressed the hope that this seminar would provide concrete solutions for resource management. (Full text in Annex VI).

Ms. Kusum Saakha, Director of LEADERS and President of the Nepal Centre for Women and Children's Affairs, thanked the Prime Minister and other distinguished guests and participants for their help and cooperation in making the opening ceremony a success. (Full text in Annex VII).

The seminar was then officially inaugurated when the Right Honourable Prime Minister, Mr. Krishna Prasad Bhattarai, lit the traditional panas lamp.

To conclude the inaugural session, the Right Honourable Prime Minister, Mr. Krishna Prasad Bhattarai, the Honourable Minister for Finance and Industry, Ms. Sahana Pradhan, and distinguished guests and participants attended a photo exhibition on the environment put together by government and non-government agencies. The Right

Honourable Prime Minister also inaugurated UNICEF's display on the World Summit for Children presenting the goals for children and development in the 1990s.

The inaugural session and the display received wide television and radio coverage.

SESSION I

The first working session of the seminar was chaired by Chudamani Raj Singh Malla, Senior Advocate. Three papers were presented with commentaries. The first paper was The Role of Women in Environmental Conservation' by Ms. Kamala Acharya Dhungel, with a commentary by Dr. Trailokya Nath Upreti.

Ms. Dhungel's paper dealt with causes of environmental destruction: pollution, receding farmlands, deforestation, agents of destruction and the role of women in environmental conservation. (Full text in Annex VIII).

Dr. Upreti's commentary pointed out that merely having women in positions of power is insufficient to eradicate environmental problems. He felt that the basis of Ms. Dhungel's paper could have been more broad, but praised her general approach.

The second paper was 'The Role of Women as Resource Managers' and was presented by Ms. Neeru Shrestha of CEDA, with commentary provided by Dr. Pushkar Bajracharya of LEADERS, Inc.

Ms. Shrestha's paper dealt with depletion of natural resources and its effects on the lives of Nepalese women. The paper discussed in detail difficulties encountered in collecting drinking water and fuel as well as gathering fodder for animals. It also addressed farming problems, such as the monopolisation by men of cash crop farming. The paper underlined the importance of maintaining a balance between ecosystems, and made a number of recommendations. (Full text in Annex IX).

In his commentary, Dr. Bajracharya said that there was a need to harmonise traditional and modern agricultural methods, and that statistics on wage discrepancies between men and women required more detailed work.

The session's final paper was presented by Ms. Pancha Kumari Manandhar, Advisor, National Commission on Population, and was entitled 'The Role of Women as Resource Mobilisers'. Dr. Ananda Raj Joshi provided the commentary.

Ms. Manandhar's paper dealt with population pressure, its effects on natural resources, and the vital role that women can play in controlling population and consequently in reducing environmental problems. (Full text in Annex X).

Dr. Ananda Raj Joshi essentially agreed with Ms. Manandhar's analysis, and expressed the hope that Nepalese women would be inspired by efforts such as India's chipko movement. Women, he said, can serve as resource mobilisers, for example by encouraging ten trees to be planted in place of each tree cut down. He recommended that communities at village level be educated on environmental conservation and that seminars, similar to this one, should be held for women in the villages.

In the afternoon, discussion was opened to the floor. Participants pointed out that neither noise pollution nor social pollution had been covered in any of the papers, and some objected to the seminar's limitations in terms of time and location. Participants also discussed the lack of cooperation from men in the context of women and environmental conservation.

In his concluding remarks, Senior Advocate Mr. Chudamani Raj Singh Malla, Chairperson, said that the problem of environmental conservation is an issue of global concern. While environmental problems in developing countries arise due to poverty, in developed countries they are caused by development itself. However, to counteract and solve the problems in developing and developed countries, both must work together in a collaborative effort.

Participants were then divided according to individual preferences into three discussion groups for deliberations, based upon the three papers, to begin the next day.

SESSION II

In this session the plenum was divided into three groups:

Group A -- 'Women as Environmental Conservationists'

This group, chaired by Ms. Shakuntala Upreti, had sixty-eight participants. They discussed the paper presented the previous day by Ms. Kamala Acharya Dhungel. This was followed by the presentation of a paper, with slides on the need for waste management, by Ms. Bhagawati Thapa, representative of the Solid Waste Management and Resource Mobilisation Centre. (Full text in Annex XI).

Group B -- 'Women as Resource Managers'

This group, chaired by Ms. Agatha Thapa, consisted of eighteen participants who discussed the paper that had been presented by Ms. Neeru Shrestha. Following the discussion, a paper on 'Women and the Nepalese Law' by Ms. Kusum Saakha was read by Dr. Pushkar Bajracharya. (Full text in Annex XII).

Group C -- 'Women as Resource Mobilisers'

This group, chaired by Ms. Bhubaneshwari Satyal, discussed the paper presented the previous day by Ms. Pancha Kumari Manandhar. Ms. Uma Pradhan and Mr. Bharat Kumar Pradhan then presented papers on the 'Women Development Division' and the 'Small Farmer Development Project' respectively. (Full text in Annexes XIII and XIV).

Recommendations from each discussion group were to be presented by the chairpersons at the concluding session.

CONCLUDING SESSION

The Honourable Mr. Marshal Julum Shakya, Minister for Works, Transport and Supplies, and Mr. Manmohan Adhikari, General Secretary, Nepal Communist Party were among the distinguished guests present for the concluding session chaired by Mr. Surya Prasad Dhungel, President of LEADERS, Inc.

The recommendations of the discussion groups were presented by Ms. Shakuntala Upreti, Ms. Agatha Thapa and Ms. Bhubaneshwari Satyal. (Full text in Annexes XV, XVI and XVII).

In his address, the Honourable Mr. Marshal Julum Shakya discussed his own longstanding interest in nature conservation. Stating that the widespread deforestation of Nepal which has occurred during the past 30 years would take another 50 years to reverse, he stressed the importance of educating villagers on the hazards of environmental degradation. He urged that conservation efforts be genuine, and not as in the past, when publicity about new tree plantation would occur concurrently with the wholesale felling of trees. (Full text in Annex XVIII).

In his address, honoured guest Mr. Manmohan Adhikari observed that the destruction of the environment was a global concern. He asserted that the reason for environmental degradation in Nepal was not industrialisation, but deforestation. He also suggested that the city of Kathmandu would in time become a dead city, swamped by its own garbage; the growing contamination of the Bagmati and Bishnumati Rivers were barometers of the level of pollution. Mr. Adhikari also said that women, who comprise half of Nepal's population, must have rights and opportunities on par with those of men. This would ensure an improvement in the country's natural and socio-political environment. (Full text in Annex XIX).

In remarks from the Chair, Mr. Surya P. Dhungel said that it was appropriate, in the current democratic system, that women were the first to direct the attention of the new

government towards environmental issues. He felt that the actual implementation of the seminar's recommendations would be a significant achievement.

In order to make a true contribution to the preservation of the environment, women, as environmental managers, should be accorded equal rights with men. (Full text in Annex XX).

Concluding the session, Ms. Shilu Manandhar, Secretary of Women in Environment, thanked the distinguished guests and participants, particularly the Right Honourable Prime Minister, Mr. Krishna Prasad Bhattarai, the Honourable Ms. Sahana Pradhan, the Honourable Mr. Marshal Julum Sakya, and Mr. Manmohan Adhikari for their attendance. She accorded special thanks to UNICEF for its financial support, and to Officer-In-Charge Mr. Raymond Janssens for his assistance.

A play, 'Sandhya Sangam', directed by Mr. Sunil Pokhrel of the Arohan Group was presented after tea. The play was based on a Japanese story and enacted the relationship between man and his environment.

RECOMMENDATIONS OF THE NATIONAL SEMINAR ON WOMEN AS ENVIRONMENTAL CONSERVATIONISTS AND RESOURCE MANAGERS

RECOMMENDATIONS OF THE NATIONAL SEMINAR ON WOMEN AS ENVIROMENTAL CONSERVATIONISTS AND RESOURCE MANAGERS

Kathmandu Nepal

3 - 4 June 1990

GENERAL

- 1. Any environmental programme is bound to fail if there is no basic awareness and knowledge of the importance of the conservation of nature. It is therefore recommended that all levels of the general public be educated on the environment, natural resources, the adverse effects environmental degradation has upon all life on earth, and how to conserve the environment. It is recommended that these subjects be introduced as part of formal education from primary school level onwards.
- 2. The population explosion is a major cause of deforestation in Nepal. It is therefore recommended that the Nepalese people as a whole be made aware of the potentially disastrous effect of rapid population growth, and of methods to curtail it.
- 3. It is recommended that public awareness on hygiene and waste disposal, and their relationship to health and disease, be increased and an intensive public cleanliness campaign begun.
- 4. Laws should be enacted to help conserve the environment and to uphold women's property rights.
- 5. It is suggested that workshops, seminars, meetings, training programmes, etc. be organised in order to implement the above mentioned recommendations. Furthermore, poster and photo exhibitions, as well as plays on the subject should also be held.

RECOMMENDATIONS RELATED TO THE WORKING PAPERS

6. WOMEN AS ENVIRONMENTAL CONSERVATIONISTS

Deforestation is the main source of environmental difficulties in Nepal. Reforestation programmes are therefore essential. To involve women in such programmes, the following are recommended:

- (a) The use of forests as sources for fuelwood has contributed to deforestation on a huge scale. Therefore, efforts should be undertaken to find alternative fuel energy sources: electricity, gobar gas, solar power, wind power, etc. Electrification should be installed wherever feasible in the country; training should be given for setting up gobar gas plants, and tree plantation programmes should be increased.
- (b) Ground cover vegetation is extensively consumed as animal fodder. Fast-growing multi-purpose grasses should therefore be planted. Plants for ground cover, in varieties suited to the local requirements, should be distributed in accordance with the needs of various households. Women should be educated about the care and uses of these plants.
- (c) Rapid urban growth and the proliferation of squatter settlements lead to unmanageable amounts of garbage which result in pollution. Town planning is recommended in order to reduce squatter settlements and build new dwellings. Rural area facilities (for health care, transport, electricity and other basic public services) should be upgraded in order to stem migration to cities. Sound sewerage and drainage systems should be put in place thus reducing pollution caused by inadequate sanitation.
- (d) The government alone cannot implement all the above suggestions. The Nepalese people should be apprised of the environmental situation and be involved in activities designed to achieve the above-mentioned goals.

7. WOMEN AS RESOURCE MANAGERS

- (a) Traditional technologies now in place at village level should be studied.
- (b) Where appropriate, technologies should be improved with regard to their impact on agriculture, forestry and the management of water and other natural resources.
- (c) Women must be taught that good management now will prevent shortages of natural resources in the future. The long-term repercussions of ad hoc solutions to problems should be made clear.
- (d) Natural resources are utilised by both sexes and ownership of these resources should be shared. Legal provision is required toward this end.
- (e) A quota system should be introduced in order to ensure the active involvement of women in all types of projects and programmes.

(f) Photographs, posters, pamphlets and books illustrating the role of women as resource managers should be published and distributed. This will encourage the participation of women in resource management.

8. THE ROLE OF WOMEN AS RESOURCE MOBILISERS

- (a) Women's involvement in decision making, project planning, evaluation, and execution is currently negligible. It should be made a compulsory factor in the future.
- (b) Responsibility for mobilising local manpower to execute projects should be given to local GOs/NGOs, clubs and religious groups.
- (c) Local expertise and technologies should be tried prior to the adoption of foreign expertise and technologies.
- (d) Environmental impact studies should be made before granting permission for new industries.
- (e) Cooperative community income generation programmes should include equal division of income between the sexes.
- (f) Girl children should be guaranteed equal opportunities for education and employment; projects should be prepared to promote their physical and psychological health.





ANNEXES

WELCOME SPEECH - INAUGURAL SESSION

Shilu Manandhar Secretary Women in Environment

On behalf of the WE group, I welcome everybody to this seminar on the role of 'Women as Environmental Conservationists and Resource Managers'. This seminar has been organised by WE to celebrate the World Environment Day, 1990, through the concerted efforts of UNICEF, IUCN and LEADERS, Inc.

The world at present is troubled by the fast-deteriorating state of its environment. Global problems of poverty and famine have combined with haphazard development efforts, a rapidly-growing population, industrialisation, unplanned urbanisation and pollution. As a result, we are all suffering, not only from hunger, disease and poverty but also from various kinds of pollution, drought, the greenhouse effect, uncertain weather, loss of the ozone layer, acid rain, radiation, landslides, floods, etc. Unfortunately, the world has yet to realise the seriousness of the situation.

Unarguably, Nepal has also begun facing environmental problems. Rapid deforestation, unplanned urbanisation, mountains of garbage, the population explosion, cutting down of trees for farming previously forested land without considering the consequences, unregulated land use, overuse of pesticides -- general public ignorance of the effects of all these factors on our environment is hastening the process of environmental destruction. We can already see the results around us -- completely barren hillsides, top-soil erosion, floods, landslides. Agricultural production is declining. If all these problems are not checked immediately, future generations will never forgive us. If we do not stop these processes today, we will be helping to wipe out humankind from the face of the earth. This does not mean that we should completely stop development; it means that development should be ecologically sustainable.

In discussing the environment in Nepal, the effect it has had upon women has been ignored. It is evident that the environment affects women the most. Women in all households are responsible for gathering fodder, fuelwood and water, and for disposing of garbage and waste materials. Due to deforestation, women now face difficulty in gathering fodder and fuelwood. Women often have to walk for hours in search for water for household needs. Environmental awareness in women is not sufficient of itself; it is also necessary to enable them to develop as effective conservationists and resource managers. With this in mind, the WE group, with the help of UNICEF, IUCN and LEADERS, Inc. has organised this national seminar. We hope the seminar will provide

recommendations for effective prevention of environmental problems and solutions for them. As the participants of this seminar represent people from both urban and rural areas of our country, we hope to reach practical solutions.

The presence of the Honourable Prime Minister, Honourable Minister and other distinguished guests has encouraged us in our efforts. Lastly, I once again wish to welcome all our guests and participants to the seminar.

OPENING REMARKS

Madhavi Singh
Chairperson
Seminar Organising Committee

On the occasion of World Environment Day, the WE group in cooperation with UNICEF, IUCN and LEADERS Inc. has organised this seminar on the role of 'Women as Environmental Conservationists and Resource Managers'. The theme of the seminar reflects the involvement of women in the environment. The involvement of women in all spheres of life is increasing at both the national and international level. In the environmental field as well, women are playing an increasingly more dominant role.

In current times the question of the environment and its conservation poses a challenge to the world community. A rapidly growing world population and its consequences have led to problems such as top-soil erosion, landslides, deforestation, loss of fauna, flora, and water resources, etc.: overall, a general depletion of natural resources. Concurrently, unplanned urbanisation and industrialisation and increasingly heavy vehicular traffic are contributing to pollution of air, water and our living atmosphere in general. Holes in the ozone layer are exposing us all to higher levels of ultraviolet radiation. We now have no alternative but to start preserving our natural resources and stop polluting our environment if we are to survive. In Nepal, too, this needs urgent attention from all segments of society.

The majority of Nepalese people live in villages. These rural families are even more dependent on nature's resources for their daily needs. Wood for cooking food, fodder for domestic animals, water for personal use, are all gathered from nearby natural resources; this is usually done by women. Thus, it would not be an exaggeration to assert that nature herself, with her hills, forests and rivers, forms the main basis for life in Nepal, and raising consciousness about conservation issues in people is therefore a priority. Though there has been a rather slow awakening to these issues, it is imperative to hasten the process and reach every household, family and segment of society. Women need to be actively involved in this effort.

This seminar has been organised with the objective of developing women's participation in environmental issues. Since women play an important role in environmental conservation and resource management, it is necessary to provide guidelines and identify a framework within which to operate. We are hoping that this seminar will produce guidelines which are useful and effective at the village level.



We are also hoping that one of the outcomes of the seminar will be original solutions to environmental problems. Papers will be presented on various topics relating to women as conservationists and resource mobilisers and I am sure that these will lead to fruitful discussions. Another natural outcome of these discussions should be the dissemination of information to NGOs and to government organisations on the various subjects that will be considered here, and on programme implementation. The WE group hopes that this process will naturally lead to more effective initiatives for conservation and management of natural resources.

INAUGURAL STATEMENT

Mr. Raymond Janssens
Officer-in-Charge
UNICEF NEPAL

Mr. Habib Hammam, the UNICEF Representative, is on official travel visiting UNICEF Headquarters and wishes to convey his best wishes to the participants for the success of this seminar.

It is indeed an honour for UNICEF to be associated with this seminar on Women and Environment. We are glad to have been able to contribute to facilitating this gathering of distinguished professionals, and look forward to the results of the discussions which will take place over these two days.

UNICEF is an organisation traditionally associated with women and children. Given that we are not an agency strictly dealing with environmental issues, some of you gathered here today might be wondering what our involvement is with the issues of this seminar. There are a number of responses to that question.

Since 1982, UNICEF has been working together with the Women Development Division of the Ministry of Local Development, assisting the programme for the Production of Credit for Rural Women. UNICEF has also been a partner in the Small Farmer Development Programme of the Agricultural Development Bank of Nepal. Both programmes have contributed significantly to the development and reinforcement of the role that women play in the economic development of this country.

It is also true that an improvement in the economic status of women is directly reflected in an improvement in the quality of life of their children. The substantial achievements of these two income generation and poverty alleviation programmes have thus made a very positive impact on the status of numerous families, and particularly children, in Nepal.

While the activities UNICEF currently assists in Nepal are indirectly supportive of environmental concerns, there is nonetheless tremendous scope for stepping up and augmenting the emphasis on environmental conservation and sustainable development, given the rapidly escalating dimensions of environmental degradation in this country. To effectively address environmental issues, such concerted efforts should form an integral part of existing programmes, especially those which have a well-established group focus.



While degradation of the environment most severely affects the poor sections of society, and especially a rural society in a predominantly agricultural economy, it is most often women and children who are first affected. Women's time allocations have a direct bearing on the quality of child care, and the correlation is clear between women's increasing work burdens vis-a-vis diminishing resources. At present, it is estimated that the total work burden for rural women amounts to 10.82 hours per day. In a context where traditional roles combined with increasing male migration bestow more tasks upon women, it is important to recognise that women are undeniably the closet links with their environment, both as its primary utilisers - as collectors of fuelwood and fodder - as well as those primarily affected by it. Eighty-four percent of the wood collection for household use is done by women and girls; up to 20 percent of the daily available time is spent on this task.

If we take as given that rural and urban poor women and children, and consequently households and communities, are the first to be affected by depleting natural resources and a deteriorating environment, we must focus on those same groups to enable their involvement in visualising rational and sustainable solutions to problems within their immediate environment. Experience indicates that a focussed and comprehensive integrated approach is undoubtedly the most effective, combined with a convergence of basic services, ensuring women's involvement and their contribution in the decision-making process.

It would logically follow, therefore, that in order to develop an environmental awareness and response component within community-based activities in the country, the most likely foundation upon which to build would be areas where the availability of convergent basic services has combined flexible inputs which contribute to a stable growth and living environment, providing for a more comprehensive approach in addressing the ecological crisis many people in Nepal face as an impediment to a balanced and sustained livelihood, and as a threat to the future.

It is in this context that UNICEF has now started supporting an environmental project through PCRW and SFDP in 16 project sites, gradually to be expanded to all sites in which both programmes operate.

Children are the most vulnerable group in any society, and are most affected by any threat to the environment. National development should keep the interests of children uppermost, as an integral prerequisite for social development.

With this in mind, over the last several years, a major debate has taken place globally on the rights of the child, culminating in the UN General Assembly adopting the Convention on the Rights of the Child. Let me take another minute to elaborate on this issue. With the national debate going on regarding the new Constitution of the country, a legitimate question is what and where is the place of the Convention on the Rights of the Child in the new Constitution of Nepal.

Similarly, this debate will also take place as a major opportunity for the global community to commit itself to the future, in the World Summit for Children.

Six governments have called for this Summit for Children which will take place at the United Nations in New York on September 29 - 30 this year. The goals for Children and Development for the 1990s will be debated, as well as the Convention on the Rights of the Child. Twenty countries need to ratify the Convention; five have already done so. Mister Prime Minister, let Nepal be one of the countries to also ratify the Convention as a gift to the Summit for Children, as a gift to the children of the world as a gift to the children of Nepal.

GUEST SPEAKER'S ADDRESS

Hon. Min. Sahana Pradhan Minister for Finance & Industry

The subject of the environment is still a new one for Nepal and I am very proud and happy to see that women of a least-developed country like ours have shown concern about this topic. The conservation of nature and natural resources is a matter of great importance for the future of our planet, and we in Nepal cannot afford to waste time by turning a blind eye to the problems we are facing in this area.

The last government of our country did not grant women sufficient rights or opportunities, nor did it try to link them to the development process. Maybe that has been one of the main reasons for the many problems present in our environment today. That women are always responsible for the upkeep of their surroundings is easily illustrated: consider the derelict state a household falls into when the woman of the house is away even a few days. Therefore, it would be foolhardy to exempt women from their birthright of conserving and managing their environs. This applies not only to Nepalese women, but to women all over the world. It is thus only wise to assimilate women into the conservation process.

I ask all the women of Nepal to assist in the fight for conservation and efficient management of our natural resources, along with their fight for civil rights and equal opportunities. I feel that though the fight for other issues may be resolved at some later date, the fight for our natural resources must begin right away, as it is a fight which cannot afford postponement. I also wish to remind all women present about the vital role we play in educating our children about the importance of the conservation of natural resources.

Once again I commend and congratulate the 'Women in Environment' group for being a key symbol of Nepalese women's awareness on environmental issues.

INAUGURAL ADDRESS

Rt. Hon. P.M. Krishna Prasad Bhattarai

To tell the truth, it comes as rather a surprise to me to find that a seminar of this type has been conceived, managed and hosted solely by women. However, women have always played a predominant role in the evolution of mankind, from barbarism to civilisation. Women have been the inspiration for art, literature, romance and even wars have been fought over them -- to mention a few, the Mahabharata, the Iliad, etc. Thus, it only seems appropriate that a national level seminar on an issue of such grave importance should be organised for the first time by Nepalese women. I congratulate the organisers for their efforts to create awareness of the issue in question.

Not only our villagers, but even our city-dwellers are blissfully ignorant about the dangers of environmental destruction; they are, in fact, helping to hasten the process by smoking, polluting rivers, etc. Awareness of environmental conservation should be taught in the villages as well as the towns of Nepal in order to realise the United Nations slogan 'Save the Earth'.

Industrialisation, a major factor in our steps towards development, requires careful planning. If enough care is not taken at the planning stage, industrialisation will have an adverse effect on our environment. Look at the eyesore that is the Himal Cement Factory located at Chobar. In B.S. 2032 I was in Nakkhu jail for some time, and the smoke and dust emitted by the factory irritated us no end, so I can imagine the plight of the people living in the areas nearby. In order not to repeat such expensive mistakes in the future, I ask all environmentalists and industrial planners to cooperate with each other and help our country on its path to true development. I also feel that a small country like ours is more suited to medium and small sized industries rather than heavy industries, especially from the viewpoint of conserving natural resources.

Seminars like this, I feel, play a vital role in the process of conservation by drawing attention to the repercussions of stone quarrying, deforestation, soil erosion, etc. Therefore I would once again like to thank and congratulate the organisers of the seminar. I also ask all present to pass on this awareness to our villages and outlying districts. Since the women of our country have taken the initiative on the issue, we men cannot help but follow!

OPINION FROM THE CHAIR

Kamala Acharya Dhungel
President
Women in Environment

To celebrate 'World Environment Day' this year, the WE group has organised a national-level seminar which will consider women and children and their role in environmental conservation. UNEP has designated this year the year of 'Children and the Environment'. However, we feel that this slogan should be a permanent one, and that programmes should be implemented to make the slogan a reality. The deterioration of the environment poses a serious threat to the human race. Environmental problems such as the greenhouse effect, acid rain, radiation, landslides, floods, top-soil erosion, drought and its consequences, industrial pollution, etc., have given us cause for deep concern.

Though the problems of the environment have been caused mainly by industrial and nuclear pollution in developed countries, in a developing country like ours such problems are caused mainly by population explosion and by poverty. Therefore, we face challenges in terms of management, conservation and development of our natural resources. The haphazard manner in which our natural resources have been used in the past, especially in the case of our forests, has led to the undesirable situation we are now facing.

The reasons behind this have been short-sighted government policies, bad planning, mismanagement of projects and corruption. Another reason has been the non-inclusion of the general public in these initiatives. We now have to bring to an end this lopsided policy and start new conservation programmes. We feel that in all future planning, men as well as women should be actively included.

We hope that this seminar will analyse and give concrete suggestions on how women can take an active role in resource management, for instance, what role can women play in policy making and policy implementation? To what extent can women's knowledge and skills be utilised?

The negative effects of environmental destruction affect women and children more than other segments of society; therefore, it is only correct that women should be the first to draw the attention of society and government to this issue.

We are deeply indebted to the Honourable Prime Minister and the Honourable Minister for honouring us with their presence and encouraging our efforts. The Honourable Prime Minister has given suggestions towards solutions to environmental problems. We shall use

these as guidelines for the discussions. We are doubly encouraged because the Honourable Prime Minister has given us and this issue his time despite his busy schedule; his practical suggestions will be very useful to us.

The recommendations made by Mr. Raymond Janssens, Programme Coordinator, UNICEF, are worthy of serious consideration. The spirit in which he has helped to organise this seminar and his unfailing devotion to the women and children of Nepal has gone unnoticed by few. We hope to be able to fulfill the trust he has placed in us.

The participation of all present, their Excellencies, Honourable Ministers, has been of great assistance to the success of this seminar. The cooperation of UNICEF, IUCN, and LEADERS, Inc. will not be forgotten.

We hope that the keen interest shown and the encouragement given by the Honourable Prime Minister and other ministers will lead to correct policy making and programmes in this area. I also wish the Honourable Prime Minister all the best for his forthcoming visit to India.

In conclusion, I wish to express my strong conviction that the recommendations and suggestions which result from this seminar will be borne in mind by the Council of Ministers when they prepare future plans.

VOTE OF THANKS

Kusum Saakha Director LEADERS, Inc.

On behalf of 'Women in Environment' and LEADERS, Inc., I extend a heartfelt welcome to all present here for making the opening ceremony of this national seminar on the role of 'Women as Environmental Conservationists and Resource Managers' a success. As most of you are aware, this seminar was organised by WE with the help of UNICEF, IUCN, and LEADERS, Inc. to celebrate World Environment Day, 1990.

I would like to express our deep gratitude to the Honourable Prime Minister for taking time from his busy schedule to inaugurate the seminar. Similarly, I wish to thank the Honourable Minister of Finance and Industry for her words of encouragement. I also extend many thanks to Her Excellency the American Ambassador, His Excellency the Secretary General of the SAARC Secretariat, and other distinguished guests for giving us their invaluable time and making this occasion a success.

Special thanks go to UNICEF for sponsoring the seminar. I wish to express my sincere gratitude to Mr. Raymond Janssens for his encouragement throughout each stage of the organising of this workshop, and also thank him for his speech. I also thank IUCN and LEADERS, Inc. for their financial and technical cooperation and their help in organising the seminar.

Last but not least, I want to express my heartfelt thanks to all participants who have played an active role in making this occasion a success.

BACKGROUND PAPER I THE ROLE OF WOMEN IN ENVIRONMENTAL CONSERVATION

Kamala Acharya Dhungel
President
Women in Environment

If I have any regret, it is that I did not emphasise sufficiently the difficulty which parents face.

Oh! I saw my task to be the advocate of the child. But I believe now there is another important task -- to be the advocate of the mother.

Bruno Bettelheim

The following environmental changes which have occurred over the past 20 years are striking to anyone who has returned to Nepal after an extended stay abroad:

- 1. The vegetation of Nepal is now negligible. Various species of plant and animal life are nearly extinct.
- 2. Evidence of floods, landslides and soil erosion can be seen everywhere.
- 3. The quality of alluvial soil has decreased. Some areas are slowly turning into deserts.
- 4. Overpopulation, unplanned and rapid urbanisation, pollution and poverty have increased.

These problems can be better understood in the context of relevant background information. Research carried out in the past has revealed the following:

- a. In the course of two decades, 6,400,000 hectares of forestland has diminished to 4,000,000 hectares. Every year, approximately 100,000 hectares of forest land are destroyed; only 5,000 hectares are replanted. His Majesty's Government acknowledged that during the one-year period of economic blockade by India, 240 hectares of forest land were destroyed every day. Since the declaration of a multiparty system, people have begun cutting down forests and claiming land (Bista, 1987; Yug Sambad; May 11, 1989, The Rising Nepal, May 28 and August 18, 1989; Daily Samaj, May 25, 1990).
- b. Of the 453 species of birds which were at one time available inside the Kathmandu Valley, 33 species have become extinct within the last three decades



(Environmental Newsletter, 1988). Butterflies are being captured for export purposes (Gorkhapatra, Shrawan 7, 2045 BS).

c. Nepal loses about 1.7 mm of alluvial top-soil every year. About 13 percent of the country is affected by erosion. In Western Nepal, around 10,000 hectares are in the process of turning into arid wastelands. Last year, in Myagdi District, 104 people died as a result of landslides, and 200 head of cattle were lost. Floods in the Koshi caused damage to the value of Rs. 4,000,000 (Thapa, 1983; Gorkhapatra, June 10, 1988; The Rising Nepal, September 7, 1989).

The unscientific use of pesticides and insecticides has lowered soil fertility. Alarming and increasing levels of chemicals which are detrimental to health are being found in agricultural produce. Unfortunately, sufficient attention is not being paid to these factors (*Klarman*, 1987).

d. The rate of deforestation over the past two decades has proceeded at two percent per year, with the result that only 29 percent of Nepal's original forest land remains. In the same period of time, Nepal's population has grown at the rate of 2.66 percent per year, increasing from 10,000,000 to 18,000,000 people. Eighty percent of Nepal's fuel energy consumption is supplied by firewood from forests; therefore, the picture presented by this kind of population growth is very bleak indeed. Pollution is also increasing because of industrialisation, urbanisation and migration (Thapa, 1983; Dhungel, 1990; Upreti, 1990).

If the degradation of the environment continues at this alarming rate and nothing is done to stop it, we will be robbing future generations, as well as ourselves, of a secure future. We are victims of past mistakes, but we are also the creators of present mistakes. Future generations are dependent on our actions today. Therefore, in every sphere of our lives, we must keep in mind the effects our actions and lifestyles have upon the future of this planet. If we are not able to efficiently coordinate the use of natural resources today, environmental problems will become even more complex tomorrow.

Environmental Problems

The question of environment preservation and conservation is directly related to the management of natural resources, their effective use, and to development work presently being carried out or planned for the future. We are all affected by the pollution caused by the developed countries of the world due to industrialisation, development of nuclear energy, the arms race, production and use of various chemicals, carbon monoxide from vehicular exhaust and so on. These factors have resulted in environmental problems such as holes in the ozone layer, acid rain, the greenhouse effect, toxic waste, etc. (Newsweek, November 27, 1989; Our Common Future, 1987).

The environmental problems of MDCs are due to development and prosperity, whereas the environmental problems of LDCs are caused by efforts towards development and the fight against poverty. These problems are faced by both men and women living in these countries. Though some problems may be area or region-specific, in general, environmental problems affect countries as a whole. However, these problems affect women and children more deeply than they affect men. Women are more deeply affected because they are responsible for resource mobilisation and management (Baer, 1988; Lopez, 1988). While seeking solutions to environmental problems it is absolutely essential to seek the cooperation of the daily resource mobilisers, namely women.

When dealing with environmental problems, it is necessary to keep in mind the following five points (Salim, 1988):

- 1. Pressure of overpopulation on natural resources.
- 2. Disproportionate growth of poverty in comparison to income growth.
- 3. Shortsighted policies which disregard the interrelation of various sectors in development.
- 4. Utilisation of unsuitable technologies which result in an increase in pollution and waste.
- 5. An international economic model which exploits and misuses the resources of the LDCs and hinders their economic development.

This analysis suggests that overpopulation and poverty are the main reasons for environmental degradation in LDCs. Policies regarding development and the international economic model also add to the problem. However, while looking into the reasons for Nepal's environmental destruction, it is necessary to keep in mind other additional factors other than those mentioned above. If the interrelation between natural resources and women's role as resource mobilisers is overlooked, it will be very difficult to understand the causes of our environmental problems. The destruction brought about by women in their daily use of natural resources can only be remedied if they are involved in the process of seeking viable solutions to the problems. In order to elicit their cooperation, it is necessary to study their roles as resource mobilisers and users.

The Interrelation of Women and Natural Resources

Research has revealed that in developing countries women carry out nearly 60 to 80 percent of all food production, processing and marketing activities. About 88 percent of all African women are involved in agriculture. Women spend around 2,000 to 5,000 hours gathering water and fuel for household use (UNIFEM, 1988-89). However, society in general does not give women due credit for their work. Even whilst making policies, such facts are often ignored by this male-dominated world.

The fruit of all this labour is reaped by the families dependent on these women, but the poor woman herself does not enjoy the benefits of her hard work. This situation is true for Nepal as it is for most LDCs.

Ninety percent of the Nepalese population is engaged in farming activities (UNICEF,1987). As farming is the main source of livelihood, the relation between land, the forest, livestock and humans is of prime importance in the Nepalese context (Bajracharya,1986). Of Nepal's total area, 26 percent is arable land. Forty-three percent of this arable land is situated in the Terai region; just eight percent in the Hill region (Gurung,1984). Approximately 1.5 hectares of arable land is shared by five persons and five head of cattle (Sharma,1987). However, the majority of people dependent on farming for their livelihood own only 0.5 hectares. Families possessing so little land can be called 'landless' families (UNICEF,1987; CBS Report,1981/82). Statistics reveal that 42.55 percent of the Nepalese population lives below the poverty line. The average income in Nepal is Rs. 10,667 per annum. A study conducted in 1983 reported that the income of just ten percent of the high-income households constitutes 47 percent of the total national income; 40 percent of the poor people's income accounts for just nine percent of the total national income (NPC, 1983).

These statistics provide an insight into the existing condition of poverty in the country. These landless people are totally dependent on natural resources for their sustenance. They have no other alternatives. In the near future, as well none will emerge.

If the time division of a family is considered, only four percent of the total daily working hours is spent on off-farm activities; the remainder is spent on farming and collection of natural resources (Acharya and Bennett, 1981).

We are dependent upon forests for more than 80 percent of our fuel needs. Cattle fodder and wood for construction is also provided by the forests, as are medicinal herbs. Very soon our forests will not be able to meet the high demands we place on them, and it seems very unlikely, at least in the near future, that any alternative resources will be found.

Ninety-three percent of Nepalese women are involved in the collection and use of natural resources, and in household activities (Baer, 1988). Women spend approximately nine hours each day in these activities whilst children spend approximately three to five hours daily (Hotchkiss and Kumar 1988). Women contribute over 50 percent to household income (Joshi, 2045, B.S). Though women spend much of their time generating income, they themselves are unable to make use of that income to improve their circumstances since, for the most part, earned income is under the control of male family members (UNO - CWD Proceedings, 1987).

Besides the collection of firewood and animal fodder, women also spend a great deal of time collecting water. The situation becomes more and more difficult as nearby water sources dry up due to deforestation. Monsoons further contribute to complications. All

these factors affect not only women, but also children and their health. Epidemics are often rampant due to lack of clean drinking water. If all these facts are considered, it is apparent that women would never intentionally destroy natural resources as their lives are highly dependent on them. Most of the destruction is wrought by outside factors over which they have no control, and of which they may not even be aware.

The Role of Women in Environmental Conservation

Women can play a major role in environmental conservation by making effective use of natural resources. Women are usually efficient resource mobilisers and are known to use available resources wisely. They may sometimes unwittingly exploit available resources due to ignorance, or because someone else has influenced them to do so.

Let us examine the history of resource mobilisation:

- 1. Women have never been, and never will be involved in the destruction of forests. Forests have been destroyed for political reasons at the behest of and under the leadership of men. The government has caused massive deforestation for resettlement purposes. Women are also not responsible for the destruction of natural resources that has resulted from wrong policies and corruption. In fact, women are often victims of this destruction.
- 2. Women have in no way been responsible for the huge foreign-aid backed development projects in the country, for example road and dam construction, electricity production, etc., which have contributed to the damage of our natural and cultural environment. On the contrary, women have been victimised by such projects.
- 3. The government allows excessive felling of trees for commercial purposes. It is also responsible for the export of valuable wood and herbs which has resulted in some rare species becoming totally extinct.
- 4. Ineffective rules and regulations have also contributed to the destruction of natural resources. Prime examples of this are the Godavari Stone and Marble Quarry, the Orind Magnesite Mine at Charikot and the Himal Cement Factory.

Another example is the licensing of some 131 furniture workshops and sawmills in Rupandehi District, after hectares of forests had been destroyed by politicians under the guise of assistance to landless families. It does not seem appropriate to license furniture factories where even the demand for wood for household use is difficult to meet. Licences have been issued to industries and development projects without paying any heed to what their effect on the environment might be. This policy needs to be remedied immediately.

Projects like Karnali and Arun III should not be implemented until studies to assess the impact they might have on the environment have been carried out. The results of these studies should be published for public discussion; people should have the right to decide in favour or against. Till now, not only women, but we as a nation have all been victims of misguided policies.

It is very clear from these examples that women, even out of ignorance, are not responsible for the destruction of natural resources. Natural resources have been destroyed and denuded because of shortsighted development policies, corruption and the exclusion of women from conservation policy-making. The inability of men to acknowledge the contribution of women in conservation is a deterrent to development. It is therefore essential to educate men on environmental conservation. Women already play an active role in the process of conservation as their daily lives are intricately interlinked with the mobilisation and use of natural resources. While no attempts have been made to study the extent of their role or to make it more effective, some of the conservation activities they carry out can be categorised as follows:

1. Women and Organisation

Women can be deemed a conservation organisation as they mobilise, conserve and preserve resources in their multifarious roles as housewives, mothers, wives, daughters and farmers. A woman is singly equivalent to a conservation society as she manages resources wisely and selflessly.

2. Women as Architects of Integrated Conservation Programmes

Women are architects of integrated conservation programmes as they are simultaneously involved in mobilising and making selective use of forests and other necessary natural resources. They try to increase the fertility of the soil by mixing in compost, ash and green fertilisers as and when needed, and help the regeneration process of the forest by regulating its use. They are always aware of the forest-land-livestock-human resource chain which is essential for sustainable development.

3. Use of Indigenous Materials

Women are proficient at meeting the demands of their families as far as is possible with indigenous materials. They buy only bare essentials such as salt, cloth and cooking vessels from the market. Thus, as their entire livelihood is dependent on available natural resources, they are constantly trying to conserve them.

4. The Skilled Art of Resource Management

Women have developed the management of resources into a skilled art. They are experts at finding suitable resources and in maximising their use. However, no one has tried to understand these skills. On the contrary, with the introduction of new technologies, women's skills are often neglected or overlooked. We often reject women's expertise and, as new and foreign technologies often fail to show the required results, are losers on both fronts. The fact that local women have a wide repertoire of knowledge about conservation was revealed, amongst others, by a study carried out among the inhabitants of the Amazon area in Brazil (Darning, 1989).

5. Handing Down Skills

Women more frequently assign daughters to helping around the house than sons. Through this process, the daughter also masters skills of efficient resource mobilisation and management which she later puts to use in her husband's house and hands down to her own daughters. Thus conservation skills are not lost to these women; they help to strengthen the bond between man and the environment. This is sustainable development.

6. Conservation of Rare Species

Women have always been careful about utilising available resources. They work in harmony with nature and try to keep ecological chains intact. This is one of the greatest contributions that women have made to the conservation process. However, the introduction of new technologies has not taken these points into account, with the result that many rare species have become extinct. No one has tried to study women's contributions in this area.

The fact that women have traditionally made major contributions to the conservation of natural resources is beyond debate. We should study and try to understand this contribution and also apprise others of the role of women. We must undertake a massive campaign to preserve this disappearing indigenous knowledge and skill by involving various individuals, organisations and groups.

Problems and Solutions

One of the major obstacles to environmental conservation is the exclusion of women from the formulation of policies and programmes. Women possess invaluable knowledge in this field, rarely utilised by planners. It appears rather strange to maximise the involvement of those who are contributing to destruction, while totally neglecting the social group which actively promotes conservation. The dawn of democracy in our country should herald an era in which concrete steps are taken to preserve our natural resources. Women should also take part in this process. To actively involve women, it is first necessary to make them aware of the importance of conservation, and their potential in helping to preserve the environment. Women should then play a responsible role in informing other of the importance of this issue. It is also necessary to make the involvement of women absolutely essential to both the planning and implementation stages of all government and non-government programmes. The following should be kept in mind during this process:

- 1. To give priority to environmental conservation in development policy-making, it is necessary to form a high level commission and immediately start work in this direction.
- 2. The social groups which make use of resources should be included in decision-making, implementation of programmes, training, workshops and preparation of educational materials on conservation issues. Women should be involved in all these processes. The major decisions should be in the hands of the public.
- 3. It is time that alternatives to natural resources be sought out. The government should focus on identifying and developing such alternatives.
- 4. Conservation of the environment should be an essential component of programmes aimed at economic development; women should be involved in these issues.
- 5. Special programmes should be conducted for population control and poverty alleviation.
- 6. Unless concrete steps are taken to control population growth and alleviate poverty, demands on natural resources will keep increasing.
- 7. It is necessary to incorporate environmental education as part of the regular school and college curriculum. Systematic steps should be taken to prepare topics for study.
- 8. All programmes being implemented by various foreign organisations, national corporations and organisations, should include an 'environment component'; women should be actively involved.
- 9. It would be wise to research the traditional, indigenous methods of conservation and further their use. It is also necessary to reduce the tendency to import expensive foreign technologies.
- 10. It is necessary to institutionalise and finance NGOs functioning in the field of environmental conservation and to broaden the target areas of their programmes

- to include people at village level. Foreign agencies should also be encouraged to adopt a more flexible policy in this regard.
- 11. The government should attend to making laws for conservation. It would be in keeping with the times to incorporate guidelines for conservation in our forthcoming Constitution (Our Common Future, 1987).

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BACKGROUND PAPER II THE ROLE OF WOMEN AS RESOURCE MANAGERS IN NEPAL

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INTRODUCTION

It is a statement of fact that natural resources are being depleted, and that such depletion has brought about changes within the natural ecosystem and in social harmony. The crucial question, then, is how to introduce better management of natural resources so as to ensure sustainability of resources and the maintainance of social harmony.

In this context, it is important to develop a clear perspective on the social, biophysical and technological sub-systems of the resource system. Individual perspectives as to the sustainability of the ecosystem must also be taken into account. Unfortunately, however, development planners and policy-makers have rarely acknowledged women's perspectives and the role of women in resource management. The inability of government and donor agencies to appreciate and understand the extent to which women's activities relate to resources and resource management is, according to Shyhard (1985), the major contributing factor to the persistent failure of resource development in third world countries.

Nepal is a mountainous country facing severe challenges in the management of its resources. It is attempting to address these problems through a process of decentralised planning and management, and a recognition of women's roles in resource management. This paper seeks to identify the challenges to resource management, define the contribution made by women, outline the emerging responses and strategies against resource degradation and, finally, to provide a set of recommendations to upgrade women's existing resource management skills.

THE CHALLENGES AND THE ROLE OF WOMEN

Women as Managers of the Agro-Ecosystem

Historically, women are believed to have initiated the domestication of plants and the art and science of crop farming (Swaminathan, 1985).. While men went hunting in search of

food, women gathered seeds from the native flora and began cultivation of those which were useful for food, animal feed, fodder, fibre and fuel.

Women have traditionally protected soil quality through organic recycling, and have promoted crop security by promoting diversity and genetic resistance. The knowledge and physical contribution of women is therefore essential to any efforts directed at popularising alternative systems of land management, shifting cultivation, arresting gene and soil erosion, and promoting soil care and healthy crops and farm animals.

However, it was only subsequent to Bosorup's study that an appreciation was gained of the contribution of women to agriculture and livestock production. It was finally realised that women could not be expected to continue to function as 'invisible farmers'. Experience indicates that rural women are engaged in virtually all aspects of agricultural production, with the exception of ploughing.

Women in hill settlements in Nepal are active participants in the utilisation and transformation of resources. A study on the status of women in Nepal (Acharya and Bennett, 1981) indicated that women's participation in the village economy ranged from 67 percent in family farm enterprises, to 40 percent in the local market economy and 19 percent in short-term migration for employment. The contribution of adult women to the household economy was estimated at 50 percent of total household income (compared with that of men [44 percent] and children [6 percent]). Although men were found to exercise marginally greater decision-making power on labour allocation for crop farming activities, women made major agricultural decisions about the nature of crops to be planted as well as planting schedules; the varieties of seed; the type of fertiliser to be used, and periodicity of use; schedules for weeding and harvesting, and so on. These findings provide a clear indicator of the fact that women play a significant role in the management of the agro-ecosystem.

Agricultural activity in the hilly areas of Nepal is comprised of crops, livestock and trees, and women play an important role in sustaining an integrated farming system.

A CEDA study on women as resource managers (Shrestha, 1989) confirmed crop farming to be a single household activity, with specialised roles for men, women and children. The absence of any one family member could adversely affect returns from production; when men and women must substitute for each other in their economic roles, the results are less than ideal.

Men play a predominant role in activities which earn a cash income. Women work as unpaid labourers on family farms, with a greater role than that of men in operational decision-making. The contribution of women to crop production is mainly effected through exchange of labour. Overall, the difference between the labour contribution of men versus that of women to crop production activities is insignificant.

TABLE I

Labour Use Pattern by Crop, Sex and Type of Labour in Kakani Village Panchayat

(Man days per hectare)

TYPE OF	Maize		Rice			Radish			Total			
LABOUR	м	F	Т	М	F	Т	М	F	Т	М	F	Т
	31	29	60	29	14	43	88	97	185	148	140	188
FAMILY	(21.8)	(20.4)	(42.2)	(12.8)	(6.2)	(19.0)	(30.7)	(33.8)	(64.5)	(22.6)	(21.3)	(43.9)
	19	12	31	60	31	91	45	24	69	124	67	191
HIRED	(13.4)	(8.4)	(21.8)	(20.4)	(19.7)	(40.1)	(15.6)	(8.4)	(24.0)	(18.9)	(18.2)	(29.9)
	19	32	51	46	47	93	18	15 .	33	83	94	177
COOPERATIVE	(13.4)	(22.5)	(35.7)	(20.3)	(20.7)	(41.0)	(6.3)	(5.2)	(11.5)	(12.6)	(14.3)	(26.9)
TOTAL	69	73	142	135	92	227	151	136	287	355	301	656
	(48.6)	(51.4)	(100)	(53.5)	(40.5)	(100)	(52.5)	(47.4)	(100)	(54.1)	(45.9)	(100)

Note: M =

M = Male; F = Female; T = Total

Figures in Parentheses denote Percentages

Source:

Shrestha, N., (1989), Women as Mountain Environmental Managers in

Nepal: A Study of Kakani Village Panchayat, CEDA.

The labour contribution of women is more pronounced in maize than in other crops.

Labour contribution to various crops differs according to ethnicity. The direct labour contribution of Tamang women to crop production is higher than that of Tamang men. Newar women and men contribute to an almost equal extent, while in Brahmin-Chhetri communities, the direct labour contribution of women in crop production is comparatively lower than that of men.

With regard to wage labour in the agricultural sector, women not only have least access to wage labour, but encounter disparities within wage payment rates as well.

TABLE II

Male/Female Mean Wage Rate by Crop and by Activity
[In Rs. Per Day]

Activities		Female				
	Maize	Rice	Radish	Maize	Rice	Radish
Land Preparation						
Digging/Ploughing	24	25	30	15	14	14
Making crop beds		•	31		7	15
Making ghal	22	25	33	12		•
Seed Sowing/Transplanting	24	20	27	15	13	14
Weeding/Winnowing	22	20	30	13	14	16
Applying Chemical Fertiliser	30	22	30	-	•	•
Harvesting/Past Harvesting	23	23	29	12	14	18
Selling	•	19	30	-	18	•
Mean Wage Rate	24	24	30	13	15	15

Source: ibid, pg 36

Cultural practices have determined wage payment in farm activities where the physical environment as well as marketing and cultural factors are also taken into account. Wage differentials exist by physiography, by crop, and within crop activity. The lower wage payment for women as compared with that for men is a clear reflection of socially approved gender discrimination.

Crop establishment is a women-specific activity. This is perhaps due to the fact that women consider crop disease and pests as major problems of arable land management. Men tend towards the use of chemical fertilisers; women emphasise preventive control of crop pest and disease problems (Table III).

TABLE III

Perceived Nature of Problems in Arable Land Management (In Rank Order)

Nature of problem	Male	Female
Loss of Top Soil	3	3
Livestock	2	2
Disease and Pests	5	1
Soil Quality Deterioration	7	5
Lack of Seed	6	11
Lack of Fertiliser	1	5
Lack of Mule Labour	11	10
Land Tenure	12	6
Difficult Access to Credit	9	9
Market	8	7
Lack of Know-how	10	4
Forest Loss	4	6
Unfavourable Climate	8	8

SOURCE: ibid, pg 36

Women are more aware than men of the need for, and lack of, agricultural know-how. The problem of land tenure is also perceived to a greater extent by women than by men.

Apart from crop production activities, women also play a major role in livestock management. The tradition of maintaining livestock as *pewa* (property) by women also reveals the significance of livestock in their lives. Choices on the nature of livestock — goats, chickens, cows, oxen, pigs or buffaloes — depend upon the age of the women, the ethnicity and the household economic condition as well as the sex ratio in the family. Oxen, due to their role in agricultural activities, are preferred to cows when adult males are absent from a household situation.

Responsibilities for collecting animal fodder, stabling, and feeding and milking of livestock are usually relegated to women, although men and children assist in these activities to some extent. Grazing is a shared responsibility, while men are responsible for accessing animals to veterinary facilities, and for the purchase and sale of livestock and their produce.

Animals are comparatively better fed and better maintained in households with a higher female population; in such households, the amounts of fodder and stabling materials collected run as high as 101 kg and 42 kg respectively (Table IV).

TABLE IV

Daily Average Fodder, Stabling Material and Fuelwood Collection Per Household by Sex Ratio

Sex Ratio	Animal Bedding	Fodder	Fuelwood
Female = Male	35.2 -	75.5	22.0
Female > Male	41.9	101.3	24.4
Female < Male	38.7	92.7	24.3

Source: ibid, pg 36

Both women and men are partners in maintaining sustainable agricultural development. However, the challenge before women lies in the fact that they are not considered equal partners by the societies in which they live. They are discriminated against in terms of wage payments, and bypassed entirely in agricultural innovations and information dissemination. Comparatively recent innovations, such as the introduction of cash crops, have continued to undervalue the potential of women's inputs.

Engagement in livestock activity also poses a continuing challenge to women. The lack of fodder and/or banmara species within forest or pasture land have caused an imbalance within traditional methods of tending of livestock. Similarly, in regard to crop production activity, the use of chemical fertilisers conflicts with the traditional use of manure and is noted to have adversely affected cost, flavour of crops cultivated, nature of crop disease, soil quality, and harvest storability. However, the increased use of chemical fertilisers has been actively preferred by women, given their contribution to the growth of grass and weeds used as animal fodder.

The questions remain: should the use of chemical fertiliser be emphasised in its capacity as a generator of weed infestation/animal fodder, or as a factor which contributes to crop productivity? Can ecological agriculture be enhanced, through the intellectual and physical contribution of women, towards the sustainable development of arable land?

Traditional ecological agriculture was earlier practised in the hills of Nepal, but with the decline in pasture and forest land, problems have emerged with respect to availability of compost manure, grasses for animal fodder, and stabling materials, all of which have led to a lack of animal excreta. The practice of land fertilisation through rotational grazing of animals in parcels of land is also on the decrease. Families which have traditionally preferred the use of compost manure are now obliged to purchase composting materials such as chicken manure and rice husk.

Inevitably, dependence on chemical fertilisers has increased significantly. This shift from manure to chemical fertilisers has adversely affected women's control over crop

establishment because the diffusion of modern agricultural knowledge is largely maleoriented, leading to increased dependence on men for crop productivity. The traditional social system of sharing and cooperation in agricultural activity has gradually diminished, while the monetary value of crops as well as production activity have registered an upward trend. Consequently, the prospects for men in agricultural wage labour and marketing have widened, while women continue to remain invisible farmers.

Livestock is an integral component of the farming system in Nepal. The average size of livestock holdings, as well as the overall health status of livestock, is believed to have deteriorated in recent years. Changes in livestock feeding are frequently reported; grazing is being replaced by stall feeding of farm weeds. This change in feeding practices has adversely affected women's time schedules and, more importantly, the condition of their pewa or property.

Nonetheless, there remains strong resistance amongst farmers, both men and women, to growing fodder crops despite their existing knowledge of livestock raising and the widespread shortage of fodder. Such reluctance may be due to a number of factors such as lack of tangible initiatives in fodder plantation, poor supply of fodder species, and the perception that tree plantation competes with crop cultivation. Unless such resistance is minimised, not only will women's control over the farming system decrease with time, but the sustainable development of agriculture will also be thrown into question. Given the existing circumstances, it is evident that women's control over the management of agroecosystems is narrowing at an increasing rate.

WOMEN AS MANAGERS OF FOREST ECOSYSTEMS

As observed by FAO (1989), rural women in Asia are the primary users of forest products; not only for domestic consumption but also for commercial purposes to augment family income. Women usually utilise forest products in ways other than male utilisation patterns, causing a potential conflict of priorities. The difference in priorities between men and women provides strong justification for the need to integrate women in forestry development activities. Such integration is essential, not only for reasons of equity but also because women are the primary users, collectors and distributors of fuelwood, and because of their role in the management of forest resources and in income generating activities related to forest products. Women's lives are greatly affected by a depletion of forest resources.

Although fuelwood and fodder collection is not the exclusive responsibility of women, the fact that they are primary users provides them with better knowledge about the burning qualities of different varieties of fuelwood and the nutrient values of various fodder species (Haskin, 1981; Shephard, 1985; Shrestha, 1987). A receding forest makes a major impact on the lives of women. The resultant increase in time required for fetching forest products affects the economic productivity of women, while contributing to furthering the deforestation process.

Given the role of women in Nepal in sustaining and promoting linkages between forestry and farming, and the need to further develop such linkages, it is essential that an understanding be made of women's access to forest resources and their role in forest management. Rural women in Nepal are multiple users of forested land and thus possess significant knowledge on the value of forests.

Studies have shown that men are inclined to use forests to meet construction needs for timber, while women tend to find more diverse uses. While women's interest in forests is very much a part of their daily lives, the role of men is limited to cutting down large trees or helping to collect fuelwood in instances where the forest may be situated in difficult terrain. As multiple users, women, to a greater extent than men, are able to identify a large number of tree species (Shrestha, 1989). Women are also able to ascertain fuelwood scarcity sooner than men.

Women can potentially be active partners in maintaining sustainable forest development. Unfortunately, women are often perceived as marauders rather than managers of watersheds. Gathering forest products is not considered an economic activity. Plants and plant products gathered by women are seldom integrated in the design of community and agroforestry technologies. Women are rarely invited to serve as members of forest conservation committees, and are bypassed by technology development and dissemination processes. The crucial issue here is to devise the means through which women can be integrated into technology research and development so as to minimise reinforcement of the deforestation process.

In the past, when distinctive ownership of forest land was not strictly observed and the population pressure on forest products was much lower, the collection of forest produce was a comparatively easy activity. An abundance of species on the forest floor also facilitated grazing of livestock. Gathering of forest produce would be undertaken as and when required, and in accordance with preference for certain species of forest products.

With the disappearance of forest cover, however, and the enforcement of distinctive ownership rights, the gathering of forest products has developed into a major activity for women, requiring careful planning and organisation.

On an increasing basis, women must travel long distances to fetch forest products, and must often face arrest and prosecution along with confiscation of their tools and implements. Consequently, poaching of forest produce is on the rise, an activity in which male family members are obliged to assist.

Another interesting consequence of deteriorating forest resources and restrictions on entry to forests has been the comparatively recent tendency of women to store fuelwood in stock the year round. Women are also displaying an increasing interest in establishing property rights on trees (*Shrestha*, 1989). Other responses include economising on the use of fuelwood, seeking alternative fuels, restriction of species preference, and entering into

prior agreements with buyers of fuelwood. Equally significant is the emergence of group cooperation or protest with regard to action undertaken by forestry agencies.

WOMEN AS MANAGERS OF WATER RESOURCES

Studies of rural water supply systems indicate that women undertake the primary responsibility for fetching water for household use (Acharya and Bennett, 1981; Pant, 1986; Rizal, 1987; Shrestha, 1989). As noted by Bennett (1985), while excess water in the summer months poses increasing threats of flash floods, water scarcity not only limits the scope for double-cropping but adds to the burden of fetching water. Studies have found that the quantity of water, and water quality used, are dependent upon the distances over which water must be carried to bring it to the household (Rizal, 1987; Shrestha, 1989). Women are aware of the fact that easy access to water increases time available for economically productive activities. Elmendorf (1981) noted that it is women, as mothers and home managers, who determine the appropriate and hygienic use of water. Women's efforts are thus vital in disease control, especially for control of diarrhoeal disease resulting from faecal contamination of food and household water. The role of women in the management of irrigation water may be low, but their role in the use of domestic water resources is immense.

Studies have found that drinking water supply to rural areas in Nepal has improved in recent years. The increasing problem is that of the distribution and management of water resources. Although few efforts have been made to collect and store rainwater for subsequent supply during dry seasons, noticeable development has taken place with regard to piped water schemes despite the fact that the piped water supply is usually available on a seasonal basis only. The increased availability of water in the highlands, however, has encouraged women to set up local rakshi (liquor) stills, an activity which could contribute to the deforestation process.

One of the major problems inherent in water management is the lack of community involvement in the installation of water systems. The tap water provided by external agencies, unlike the traditional kuwa (well) system, is often looked upon as common property and is indiscriminately used. The maintenance of taps is poor. In the dry season, tap water is heavily polluted as water reservoirs for piped water systems are carelessly used by local people from highland areas for washing clothes and other domestic activities. People often climb into these tanks to fetch water, thereby increasing the chances of contamination. Reservoirs are poorly maintained and are open to pollution by snakes, frogs and insects. Communities living in the vicinity of the water source often pollute water by cutting pipelines and blocking them with clay, stone, grass, etc. It is thus evident that community response to agency-managed water systems is very poor. An attempt must therefore be made to encourage women — the actual users of water sources — to participate in the installation and management of water systems so as to ensure the sustainability of water resources.

CONCLUSIONS AND RECOMMENDATIONS

All the issues focussed upon herein indicate that, while women make a significant input to resource management, there are numerous constraints in making women effective resource managers. Women are primary users of natural resources, providing the link between such resources and the individual household level. They are also more knowledgeable about resource status and interrelationships between resources, and are able to understand and explain the nature of potential loss in terms of income and family sustainability in the event of changes being introduced within the resource system. Any effort to assist women to become better managers of resources must recognise existing gender-specific problems, specifically those relating to time demands and the financial and cultural factors which inhibit the effective participation of women in resource management. Equally important is a consideration of the factors which ensure benefits to women. Unfortunately, such recognition is still absent in the policy-formulation process and, consequently, in the technology development and research process.

The following are some of the options which could be considered in efforts to improve the status of women as resource managers.

Policy Formulation

- Resource management policy should address household level participation and responses to depletion of resources. Gathering of fuel, fodder and other forest produce should be recognised as an economic activity to provide an impetus to improvement of conditions in this sector.
- -- The limited access of women to resources, particularly land, presents a major constraint to the effective participation of women in resource development. Issues regarding the ensuring of tenurial security for women need to be addressed at policy level.
- -- While designing agricultural and forest processing and marketing policies, efforts should be made to incorporate special policies in regard to products with significant current or potential involvement of women. The time availability of women should also be examined carefully.
- -- Policies should encourage individual women/women's group involvement in resource development committees.
- -- Policies should also be developed to provide alternative resources in situations where environmental conservation programmes restrict the use of natural resources.

Technology Research and Development

- Technology research and development personnel should be conscious of gender issues. In the designing of agricultural technologies, and technologies pertaining to agroforestry and social forestry, consideration should be given to women-specific activities and women-specific crops as well as to plants and plant products gathered by women.
- Research and development should also focus on plants and activities that yield potential for profitable processing and marketing by women. Technical information on pest and seed management should be provided to women.
- -- Women must be involved in technology development and dissemination processes, both as clients and as professionals.

Participation and Rural Development

- Line agency personnel and local communities should be encouraged to develop positive attitudes towards women's involvement in the resource management system. Any attempt to reach women and encourage their participation should be preceded by an effort to convince community leaders and men within the community of the viability of women's involvement. The traditional role and degree of independence of women should be carefully assessed before implementing any resource management programmes.
- -- Women often have a more responsible attitude towards resource degradation because of the important role resources play in their daily lives. Women can be motivated to participate in resource management to a greater extent by making them aware of the potential hardships they and their families would face as a result of continuing depletion of resources. It should be borne in mind, however, that an effort to encourage women's participation should not create false expectations in regard to possible results.
- -- Jobs for women professionals should be ensured, so as to encourage the further participation of women in resource development.

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BACKGROUND PAPER III THE ROLE OF WOMEN AS RESOURCE MOBILISERS

Pancha Kumari Manandhar National Population Commission

The Government of Nepal is committed to the objective of fulfilling the basic needs of life -- food, shelter, fuel, drinking water and health -- for each citizen by the year 2000 and thereby improving the quality of life of the Nepalese people. These necessities are dependent upon the economy of the country, and the economy in turn is related to the preservation of nature and natural resources as well as the effective utilisation of capital, population and technical knowledge. The proper use of these resources can assure steady economic growth. Rapid population growth has adversely affected nature and the environment, and if this trend is not checked soon it will result in irreparable loss through soil erosion, landslides, floods, and pollution of air and water, directly affecting the environment and the living standards of the people.

Unfortunately, Nepal faces a number of problems. Account must be taken of her increasing population, poverty, geological situation and so on. The immediate problems are related to the unscientific use of land for cultivation and the dependence upon forests for wood, fuel and fodder for animals. These in turn lead to floods, landslides and soil erosion which disturb the environment and the normal course of life.

We are all aware that human beings are reliant on the resources of the natural environment from birth to death. The natural environment is thus essential, not only to fulfill the basic needs of life, but also for overall human progress and development. The proper utilisation of natural resources will effect an ecological balance that will help to preserve nature and the environment. In this context the female population, which amounts to almost half the net population of Nepal, has a very significant role to play.

However, prior to dealing with questions on the type and nature of plans and policies of women as environmental conservationists and resource managers, it is necessary to examine the relationship between increasing population and the environment.

Current Population Status

According to population data of 2038 BS, the population of Nepal amounted at the time to 15,022,839 persons. Population has been increasing at a significant rate over the last thirty years. The annual average growth for the decade 2028 to 2038 BS was 2.70 percent.



Table 1 indicates that if this increment remains constant, the population will double and reach three crores within the next 25 years. Despite the planned development programmes of the last thirty years, economic growth has remained stagnant and has had an adverse impact on the general population. The reasons for this unprecendented population increase lie in improved health, and a consequent reduction in the death rate (which is low in relation to the birth rate); the high fertility of women during their reproductive years (15 to 49 years); illiteracy; rural belief in the necessity of having a large family; superstition; religion and culture; and increasing migration. Immediate steps should be taken to formulate and implement population plans and policies to check population growth and to maintain a proper balance between the human population and the environment.

TABLE 1

Population of Nepal (B.S. 1968 - B.S. 2038)

Year (BS)	Total Population	Annual growth Rate	Population doubling time (years)
1968	5,638,749	•	•
1977	5,573,788	0.2	•
1987	5,523,564	0.1	•
1998	6,283,649	1.2	19.4
2009	8,473,478	2.3	30.4
2018	9,799,820	1.6	43.0
2028	11,556,000	2.1	33.33
2038	15,022,839	2.7	25.9

Source: National Commission on Population

Effects of Population on Nature and Environment, and Cultivated Land

Being a mountainous country, Nepal has a limited availability of fertile, arable land; yet 90 percent of the country's population depends on agriculture for its livelihood (Table 2).

TABLE 2

Population and Employment (in thousands)

Area .	2018 BS	Percent	2028 BS	Percent	2038 BS	Percent
Net	2047	100.00	4852	100.00	6850	100.00
Agriculture	4041	94.78	4578	94.4	6244	91.2
Service	82	1.9	138	2.8	314	4.6
Business	47	1.1	67	1.4	119	1.7
Transport	16	0.4	10	0.2	7	0.1
Construction	6	0.1	5	0.1	2	
Electricity & Gas	1	-	2	-	3	•
Others					127	1.9

Source: National Commission on Population

Table 2 shows that there has been no increase in any other economically viable employment areas. Though a marked decrease was noted in the percentage of the population involved in agriculture from 2018 to 2038 BS, there was no corrresponding increment in employment in other areas such as business, industries and commerce. However, it can be assumed that an increase in the numbers of those engaged in government services did occur. The dependence on agriculture is therefore still high. As a result, the insufficiency of arable land available to an increasing population has caused people to engage in intensive cultivation, even on steep, hilly slopes, and increased deforestation in order to create land on which to grow crops (Table 3). Agricultural development programmes, however, have not increased; on the contrary, they have slackened. Thus, the production of foodgrains has decreased, with the average annual food production per person dropping to 150 kg. The minimum nutritional requirement in both hills and the Terai is 200 kg, per person per year. The countrywide picture of food production thus indicates a marked deficiency in the quantity and quality of food, and a consequent impairment of the health and development of the Nepalese people.

TABLE 3

Population and Agricultural Situation

Year	Population	Each Person		Income of each	h person
	ratio (in thousands)	Food (kgs)	Arable Land (ha)	Agriculture	Net
2021/22	10.0	200	0.190	930	1331
2022/23	10.2	210	0.190	1022	1399
2023/24	10.4	190	0.180	954	1345
2024/25	10.6	190	0.190	951	1327
2025/26	10.8	190	0.200	971	1383
2026/27	11.0	200	0.200	971	1383
2027/28	11.3	190	0.190	951	1322
2028/29	11.6	190	0.190	869	1335
2029/30	11.9	180	0.180	906	1295
2030/31	12.2	190	0.180	1049	1342
2031/32	12.5	190	0.190	924	1336
2032/33	12.8	190	0.180	905	1348
2033/34	13.0	180	0.180	845	1352
2034/35	13.5	170	0.160	824	1368
2035/36	13.9	170	0.180	827	1366
2036/37	14.3	140	0.170	767	1299

Source: Agriculture Market Service Department and Nepal Rastra Bank (based on income of 2031/32 and stable price).

Although Nepal's economy depends on agricultural production, there was a decrease in arable land from 0.200 in 2028 BS to 0.150 in 2038 BS; as a result, income per person has greatly decreased. This, as well as increasing population pressure, has rendered national economic programmes ineffective. Effective measures must hence be carried out on a national scale before it becomes impossible to raise the standard of living in Nepal.

Population and Forest Reserves

Statistics reveal that in 2020 to 2022 BS Nepal had 64 lakh hectares of land covered with rich forests. In the last 20 to 25 years, loss of forests has occured at an annual rate of 2.2 percent. Within that time period, the increase in population was 2.5 percent per year. As a result, the forest-covered area today is less than 39 lakh hectares. The main reasons for this loss are lack of arable land (forests are therefore destroyed to grow crops), growing demand for firewood, careless cutting down of trees, over-grazing by domestic animals and uncontrolled population increase (forests are thus cut down to build houses).

Moreover, 80 percent of the demand for firewood for cooking purposes, both in the town and villages, is supplied by forests. On an average, an individual uses 750 kg of fuelwood per year, with electricity and biogas being supplementary sources used. A recent survey on the feasibility of hydroelectricity development shows that nearly 83,000 megawatts of hydroelectric power could be generated; of which approximately 20,000 megawatts are economically viable. Prior to 2040 BS, Nepal was able to produce and use only 138 megawatts of hydroelectricity. His Majesty's Government should thus initiate definite programmes to develop hydroelectricity as an alternative resource to meet the growing demands for fuel.

Other Environment-Related Effects

Disturbance of the environment can lead to widespread and cumulative problems. These problems are interrelated. Increased population pressure results in deforestation, floods, landslides and soil erosion, which consequently affect the Terai region, the foodbelt of Nepal. Misuse of land and vegetation results in the drying-up of water sources such as natural springs. This in turn affects irrigation. Landslides block river outlets, raising the water level of rivers and causing floods. These activities disturb the harmony and balance of the environment and also affect the economy of the people of those areas, forcing them to leave their homesteads in search of better prospects elsewhere. The climate is also adversely affected.

Population pressure in the hill areas leads to the migration of people to the towns. This concentration of people in urban areas creates problems of waste disposal and sanitation; ponds and rivers become waste-dumping grounds. This leads to environmental pollution and pollution of water, resulting in ill-health. Hence, in the Nepalese context, increased population has not only worsened the problems of environmental conservation but also has put a stop to economic growth and national development. His Majesty's Government has addressed this problem through the following population control measures.

Objective-Oriented Measures To Solve The Population Problem

An organised and capable management and executive body is needed to mobilise the country's population and solve its problems. Available natural resources should be maximised by the use of appropriate technology to meet existing and future economic and social demands. Human resource development should thus be initiated through training programmes. The present picture of Nepal is bleak. It shows that the limits of sustainability have been exceeded by environmental pollution, a stagnant economy and population explosion. In response to this, His Majesty's Government has set a target for the reduction of the birth rate from 6.3 children per woman to 2.5 children per woman by the year 2057 BS.

TABLE 4

Population Growth Objective Chart

Year BS	Net Birth Rate	Potential Population	Annual Growth Rate (percent)
2042	5.4	163,000	2.2%
2047	4.0	197,000	1.9%
2057	2.5	206,000	1.2%

Source: National Commission on Population, National Population Strategy, 1982.

In order to make this population control policy and programme an effective long-term measure, HMG has placed priority on disseminating family planning information and making such services easily accessible to village communities (which represent the majority of Nepalese people). Furthermore, HMG also intends to incorporate population-control programmes in every development project, to encourage literacy in women and provide them employment, to involve local community and non-governmental agencies and also to curb the growing incidence of migration.

Plans and Policies to Mobilise Women Communities as a Major Resource

The preceding study demonstrates the necessity of being aware of the significant role of women in preserving the environment; the following policies and programmes are necessary to increase their involvement in specific areas.

Agriculture

In Nepal, where 90 percent of the total population is dependent upon agriculture and women comprise 48 percent of the total population, women's contribution to agriculture amounts to almost 70 percent. Women also contribute to cottage industries and other industries related to agriculture. Despite their significant role, due acknowledgement is not given to their contribution. National development programmes which have emphasised better farming methods have neglected to mobilise women or give them the opportunity to participate in training programmes. This has had an adverse impact on agricultural production, which has decreased instead of increasing. To bring about marked improvements in agriculture, the farming community must have access to the latest information on improved seeds, chemical fertilisers, better farming techniques and harvesting methods; people must be given the opportunity to participate in relevant training programmes. These programmes must encourage mass participation. Women, who

play such an important role, must not be neglected; they can effectively motivate others and work towards maintaining a balance between the population and the environment. Their full participation is an absolute necessity. Their function as resource persons in development work can be ensured by adopting the following measures:

- 1. Women must be encouraged to participate as a medium for disseminating information on how to increase agricultural productivity; top priority should be given to their maximum involvement in training programmes.
- 2. Rural women must be involved in all village-level committees that deal with plans, programmes and measures for evaluating efficiency.
- 3. Rural women must be provided training in improved and scientific methods of farming.
- 4. Agricultural loans, farming implements and technical knowledge should be made easily available to women.
- 5. Women's working conditions and environment should be improved in order to increase their participation, both at home and at work.
- 6. The basic needs of daily life, such as firewood, biogas and electricity, should be easily available.
- 7. Maximum time and space should be allotted in the commercial media to women's prize-winning activities at village level.
- 8. Poor and landless village women must be encouraged to increase agricultural productivity and become involved in cottage industries by giving them security-free low-interest loans.
- 9. Alternative sources of employment should be provided for landless women.
- 10. The equal participation of women should be encouraged, particularly in view of their important role in national agricultural productivity, and management of irrigation facilities and hydroelectricity.

Forestry

Mass awareness must be generated on the consequences of deforestation, environmental pollution and the advantages of preserving an ecological and environmental balance. This work cannot be carried out by men alone. Society, the community and the nation itself must recognise the great contribution made by



women. Women's full participation should be encouraged by providing appropriate training and workshops on the preservation of nature and the environment. The problem is becoming even more acute since 90 percent of rural people depend upon forests for items of daily use such as firewood and dry leaves and grass for animal fodder. Alternative sources of energy must be found. Similarly, imbalance is also caused by the careless grazing of domestic animals in forest areas, and by forest fires. Therefore the question is, in what ways can women be mobilised for their maximum cooperation and participation at village level. This can only be made possible through well-organised and well-managed policies and programmes.

Unfortunately, Nepal has additional problems of poverty and illiteracy. Life in the village is directly linked to nature; unless HMG first addresses the villagers' immediate problems and needs, the preservation of nature and the environment will be of little relevance to village people. The fact that their efforts will bear fruit in the future is meaningless to people whose immediate concern is for their day-to-day survival. Women must therefore be made aware of the importance of protecting nature and natural resources. They must be encouraged to become involved in planting trees and fodder grass, to use scientifically-controlled farming methods, productive animal farming, newly developed stoves that require lower fuel consumption, and family planning methods. Involvement in such activities will increase their awareness of the need to preserve nature and the environment, the common property of all mankind. Women can easily convince other women, and in this way all women will become aware of their significant role in society. Women can be motivated in the following manner:

- 1. Mobilise rural women, as resource persons, to preserve wildlife, nature and natural resources, and initiate programmes in this direction.
- 2. Encourage activities such as bee-keeping, silk farming, sheep and goat or pastoral farming, fruit and flower nurseries, mushroom and cardamom farming and the production of herbal medicines and nutritious fodder grass for animals. These activities will help to supplement and increase women's incomes.
- 3. Women must be given full responsibility for work such as planting saplings, maintaining forest nurseries and developing grazing areas for animals.
- 4. Women must be provided training on preserving wildlife and nature, along with basic education.
- 5. Whenever agencies organise training programmes on the conservation of forests, nature and wildlife, women should be encouraged to participate.

Population Education

Educating rural women on the necessity of small families is essential, but is nonetheless a very difficult task. In rural areas, large families are more useful because many farm hands are needed to bring water from far-off places, to gather firewood from the forest, to help graze cattle, to work in the fields and around the house. Children are regarded as future social and economic security for parents. Knowledge of family planning, family health and control of population can bring long-term benefits by preventing the destruction of forests and pollution of the environment. In order to effect a harmony between population control and environmental preservation, the following steps are necessary:

- 1. Formulation of future policies to include women's participation in efforts to raise the living standards of the Nepalese people, by maintaining a balance between population and national development programmes.
- 2. Inclusion of population and environmental preservation issues in all major development programmes: agriculture, forestry, village development, education and women development programmes.
- Emphasis on maternal health and infant mortality, so that women's awareness of the importance of a small, healthy family is increased, thus bringing about a balance between population and the environment.

Conclusions

The population of a country must be mobilised if all-round development is to occur. However, the fact remains that the resource represented by the women of Nepal, who constitute almost 48.8 percent of the total population, is still underutilised because of the financially and socially backward status of women. Their full involvement cannot be expected for at least a further two decades.

Nepal's population has increased sharply; the consequence is deforestation, an increase in animal farming and the destruction of natural resources. Its direct effects include reduction of soil fertility, landslides and soil erosion, which in many instances have led to barren lands. Measures to counteract this trend have been initiated by government and non-governmental agencies but the results are not encouraging. The programmes must be interesting and engage the attention of rural communities. For this, too, rural women must take the lead in spreading an awareness of the close relationship between the environment and population levels, and of public responsibility for nature preservation. They must also publicise the benefits that people can acquire through their own efforts. Therefore, in order to increase awareness of nature, wildlife and the environment for all-round national development, work should be initiated at the village level. People should be encouraged to plant trees and fodder grass, to engage in scientific farming, to improve

storage, to undertake more productive animal farming and to implement related measures such as family planning and population education. If these measures are soon undertaken, we can hope for improvement in the status of the economic development of Nepal.

MANAGEMENT OF WASTE FOR A HEALTHIER ENVIRONMENT

Bhagwati Thapa Solid Waste Management and Resource Mobilisation Centre

(Paper for Discussion Group A)

The issue of environmental pollution has become a matter of deep concern for both the rich and the poor countries of the world. Most of these countries are faced with unique pollution problems. A major cause of pollution in the richer countries is growing consumerism and the resultant industrialisation. The establishment of nuclear energy plants is another source of pollution in developed countries.

Developing countries are, however, faced with a different set of factors causing pollution. Some of these are unplanned settlements, rapid urbanisation, improper waste management, impure drinking water and overuse of natural resources.

Thus, the problem of pollution affects all countries of the world, whatever their stage of development. Pollution is detrimental to the well-being of all mankind, no matter what its causative factors are. In the modern world even countries with comparatively low levels of pollution are concerned about its effects. This is due to the fact that pollution cannot be confined within geopolitical boundaries. Therefore, though Nepal is a relatively pollution-free country, it is, nonetheless, deeply concerned about this issue.

Nepal is as yet relatively unaffected by pollution caused by heavy industrialisation and nuclear energy plants; however, it is being increasingly affected by pollution caused by other factors. Some of these factors are Nepal's geophysical location, a rapid increase in unplanned urbanisation, squatter settlements, rapid growth of population, torrential rainfall, droughts, rivers changing their course, unrestricted deforestation (for both household and commercial use), opening of the Himalayas for trekking and mountaineering, improper drainage systems in the towns and cities, lack of pure drinking water, etc. It goes without saying that all these factors contribute to a more unhealthy environment. The denudation of vegetation and deforestation are causing imbalances in ecological systems. Environmentalists have warned that, if we continue at this pace, Nepal will soon be bereft of all types of vegetation except some species of cacti and 'rambaas'. What the final result of all this will be is beyond imagination.

The hills, mountains and forests of Nepal are the mainstays of ecological balance. However, the fact that the adverse effects of road construction in the hill regions have had broad repercussions in the Terai area cannot be overlooked. All the rivers of Nepal have their sources in the Himalayan region. These rivers flow down the mountain and hill slopes before reaching the Terai plains. In the course of their journey towards the Terai, these rivers often erode valuable soil from slopes which are bare of all vegetation.

Sometimes these rivers also cause considerable damage by flooding both the hill areas and the Terai plains. The suggestion of control measures against such damage, however, falls outside the purview of this paper.

Both government and non-governmental organisations functioning in various countries are now making substantial efforts to improve the environment. These efforts have met with some success. The Solid Waste Management and Resource Mobilisation Centre (SWMRMC) of Nepal is also making a valuable contribution to the management of pollution within its area of function.

SWMRMC was established with the help of the Federal Republic of Germany in 1980. The centre is helping to create relatively pollution-free areas in the townships of Kathmandu, Patan and Bhaktapur. Prior to the establishment of this project, solid waste management of Kathmandu and its neighbouring towns was handled by the respective Town Administration Offices. However, with the rapid growth of urbanisation within the valley, these town administration offices did not have the necessary manpower or technical expertise to cope with the task. The accumulation of garbage on roadsides, vacant lots and town squares once again became a problem. The centre was established with the objective of helping to manage this problem, and SWMRMC functions in league with the concerned town administration offices.

SWMRMC has now successfully completed two phases of the project which is now into its third phase. During the first phase of the project (1980 - 1983), the centre worked on creating public awareness about the importance and merits of proper garbage disposal. To emphasise the advantages, the centre started a garbage collection service in selected wards of these towns. In accordance with its objectives, the centre was able to provide this service to approximately 400,000 citizens. A participatory approach was adopted in the programme and the general public was encouraged to initiate waste management programmes. In the second phase (1983 - 1986), the programme expanded its coverage to include garbage collection from the roadsides of Kathmandu and Patan. In this phase, the centre also collected all garbage accumulated over the years in individual household dumps, dumpyards of hospitals, hotels, restaurants and town squares. The manpower required to meet the objectives set by the centre was also trained during this phase. In order to make the centre self-sustaining, nominal fees were charged to all citizens making use of its services. Campaigns were also undertaken to maintain cleaner public toilets and slaughterhouses. Programmes for establishing health centres were implemented and a centre for making fertiliser from waste material was established during the second phase. The concept of industry from waste products was also introduced at this phase. However, due to widespread public ignorance, these programmes did not meet with complete success. Therefore, the centre once again initiated its public education programme on

personal hygiene, health, the responsibilities of being a citizen and the advantages of living in a pollution-free community.

The positive effect the centre and the town administration offices' efforts have had in improving the environment of these towns has not escaped public notice. However, the SWMRMC was unable to completely fulfill its objectives due to diverse factors. Some of these factors were the underutilisation of manpower, bottlenecks in supply, lack of proper incentives for workers, imbalances in input-output ratio, locale-specific problems, internal management insufficiency, etc. Yet if the achievement of the centre in environmental sanitation is to be evaluated within its given constraints, the achievements are undeniably significant.

Public participation, as experience from over the world has shown, is the most important factor in the success of programmes. The question of cleanliness and health is a very personal one, and improvement can therefore only be achieved via public participation. The main obstacle to eliciting public participation in our country has been ignorance; thus both government and non-governmental organisations must work on educating the public on the value of these programmes. This seminar is therefore a very strategic step in the process of environment conservation. As women constitute nearly half of Nepalese society, and as they are the ones mostly concerned with the upkeep of the house and its surroundings, I am very hopeful that this seminar will produce practical solutions to the problems under consideration. In a country like ours, where the illiterate population vastly outnumbers the literate, particularly in the case of women, it becomes doubly important to educate everyone about pollution and other environmental problems. This seminar will only be a success when information about the solutions reached by this gathering is given to each and every household of the country, be they in the urban or the rural areas. I wish the seminar all the best and I hope it is successful in reaching conclusions for increasing the effectiveness of the Solid Waste Management and Resource Mobilisation Centre's programmes.

WOMEN AND THE NEPALESE LAW

Kusum Saakha President Centre for Nepalese Women and Children Activities

(Paper for Discussion Group B)

Men and women constitute two necessary halves of any society; however, in this male dominated world, women often suffer second class treatment. Though women are the pillars of society, they are exploited by all the other segments within it. Women's involvement in, and contribution to, various issues are often regarded as unimportant. The legal systems also favour the male sector of society. Though the existing legal system of Nepal is based on Act 10 of the Constitution which guarantees equal rights to all regardless of class, creed or sex, the legal system fails to reflect this. The law on Citizen's Rights of 2021 BS Sections 3 and 4 stresses equality for all and equal opportunities for employment in the public service commission, etc. But the Muluki Ain of 2020 BS still favours unequal opportunities. Despite the elimination of discrimination on the basis of caste and creed, discrimination based on sex is still prevalent. The status of the Nepalese woman still requires many more legal guarantees before it can be truly improved. Nepalese women are still subject to limited civil rights, unequal laws, discriminatory social customs, ignorance due to lack of education, and financial constraints. Thus, laws concerning women need to be totally reviewed.

Some of the points given below should be kept in mind while these laws are being revised. These points are:

(a) Discrepancies in property rights

Property Law 16 states that sons are entitled to paternal property from the moment they are born. However, for daughters to have any rights to paternal property, they have to remain unmarried and to have reached the age of 35. According to Property Law 10, sons have a birthright to food, lodging and education as afforded by the father, but there is no law which states equivalent rights for daughters. Equal rights for all is a basic tenet of human rights; this should therefore be endorsed by Nepalese law.



(b) Discrepancies in inheritance laws

Inheritance Law 2 states that if anyone dies intestate, the first claim to the deceased's possessions and belongings goes to the husband/wife or sons. If none of these persons lays claim to the belongings, daughters are then entitled to the deceased's possessions. This law should be amended to give daughters rights on par with those of sons.

(c) Discrepancies in adoption laws

The chapter on adoption 2 and 9 (kha) clearly discriminates by giving unequal rights to citizens, in that a wife is not allowed to adopt any children when her husband is still living but a husband can adopt children even when his wife is still alive.

(d) Discrepancies in tenancy rights

According to the Land Act, 2021 BS, Section 26, a widowed daughter-in-law or unmarried daughter is not eligible to inherit tenancy rights.

(e) Discrepancies in wealth-use laws

Property Law 10 makes it clear that within a family, a father and son have more rights to use the family wealth than does a mother. Also, the law regarding women's property (2) recommends that a woman who lives separately, and has already received her share of family wealth, is not entitled to dispose of more than half of her inherited ancestral property if she has a living son. This law is in direct contradiction to the Constitution's guarantee of equal rights.

(f) Discrepancies in acquiring citizenship

The Citizenship Ain, 2020 BS, clearly illustrates discrepancies in the rights of Nepalese women as compared to those of Nepalese men. If a Nepali man marries a foreign woman she automatically, by virtue of marriage, becomes entitled to Nepalese citizenship. However, if a Nepali woman marries a foreigner, he is not automatically entitled to Nepalese citizenship.

(g) Discrepancies in marriage laws

Though the law concerning marriage (9) deems it necessary for a man to be divorced before remarriage, 9 (kha) of the law denotes exceptions to this rule. This section of the marriage laws clarifies the circumstances in which the man is allowed to take a second wife without divorcing the first wife. There are no such provisions for women.

Therefore, it is clear that Nepalese women are subject to unequal laws. Further, they are also suffering because the legal system of the country has been unable to implement even the existing laws favourable to women. For example:

- (i) There is no sexual bias in the right to education. In fact, the Tribhuvan University Act, 2028 BS, Section 8, further guarantees equal opportunities for education regardless of religion, caste, creed or sex; however, in actuality, this is not the case. The tendency to favour sons for education is still prevalent. Instead of providing opportunities for higher education to daughters and making them self-sufficient, parents still prefer to see them married as soon as is possible. This perpetuates their dependence on other persons throughout their lives.
- (ii) Citizens Rights Ain, 2013 BS, guarantees equal opportunities for public service to Nepalese women; however, the Nepalese civil service has hardly any women. With the exception of women in some urban areas, approximately 82 percent of women are illiterate and approximately 95 percent of the women are formally unemployed. Women who are employed in provision of unskilled labour are not paid as much as men -- even though their jobs and working hours are the same, e.g., in factories and construction sites.
- (iii) While the law has officially banned child marriages, polygamous marriages and marriage by force, these are still practised due to ineffective enforcement of the laws. Though there are clear provisions in the law to stop these situations, society is still largely unaware of them. Another reason for this ineffective enforcement of the law is the lack of legal provision to declare such marriages null and void, compounded by the provision of bail for such crimes.
- (iv) Laws have been made for the protection of women against crimes such as trafficking, rape, slander, etc. These laws are not effective as they have too many loopholes and also because law enforcement agencies are lax about enforcement. The government needs to implement a strong and effective programme against such crimes.

Conclusions

Though some of the discrimination by men against women may be remedied by education, other discriminatory practices will definitely require legal remedy. Therefore, the future Constitution of Nepal should deem any such discrimination unconstitutional. Laws treating women unequally should be abolished. The future Constitution should not only guarantee equal laws for women but also guarantee their legal and effective enforcement. In fact, it might even be advisable to enact laws which guarantee women special privileges in order to help them 'rise' up to the level of men. This kind of privilege might not be fair but the present constitution does have a clause (Constitutional Act 17.2 [cha]) to this effect -- only it has never been implemented. If our country is to truly develop, it is necessary to establish a legal framework which guarantees equal rights in reality and not only on paper. If the women of our country are ignored in the path of true progress, half

the country is left behind. To truly develop, therefore, the women of our country need in no uncertain terms to be brought out of their present state of ignorance and injustice.

THE WOMEN DEVELOPMENT DIVISION

Uma Pradhan
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(Paper for Discussion Group C)

The Women Development Section under the Ministry of Local Development was established in 1980, and was recently upgraded to the status of Women Development Division (WDD). WDD was established with the mandate of integrating women's needs into the national development strategy.

The main objective of WDD is the establishment of linkages between rural women and the services and expertise available within development agencies. Specifically, WDD seeks to enhance women's market-source incomes by:

- implementing a series of village level programmes; and
- -- maintaining a liaison with projects relating to women in order to develop women's resources, initiating various activities which will promote integration of women in the mainstream of development activities.

Objectives

- 1. To conduct a dialogue with all line agencies and ministries to encourage the incorporation of women's needs within their programmes;
- 2. To formulate and implement effective policies and programmes for the overall development of rural women;
- 3. To perform a supervisory role for WDD projects;
- 4. To define evaluation criteria for on-going projects;
- 5. To assess the training needs of rural women, and to arrange appropriate training opportunities for them through the Women Training Centres, Training Centres and line agencies.



The Production Credit for Rural Women (PCRW) programme is an on-going activity which encourages low-income women to take advantage of credit funds provided by commercial banks under the Priority Sector Credit Scheme. Under this scheme, commercial banks are required to direct 8 percent of their loan portfolios towards small scale loans in the priority sector as defined in the Sixth Five Year Plan (1980-85), i.e., agriculture, livestock, industries and services. Rural women have thus been able to avail themselves of small scale loans to establish income-generation activities.

The PCRW programme plays an essential role in working within the national economic programme to find ways to bridge the gap between village women and the largely male-oriented development infrastructure. In this context, the broader goals of the programme include an attempt to:

- -- increase the access of rural women to services, covering not only access to credit but also to education, health care, agricultural extension services, etc.; and
- -- through group formation, to increase the involvement of rural women in community level decision-making and local political processes.

The programme has worked towards bringing together the extension network and community development expertise of the Ministry of Local Development with the credit resources and financial management expertise of commercial banks, to establish a group formation and input delivery mechanism in support of income-generation projects and community development activities for rural women.

The PCRW programme, initiated in five districts in 1982, expanded to 49 districts by mid-1989. The economic activities facilitated by the programme are intended to augment income-generating activities, whereas the community development components are geared to assist the undertaking of economic activities. Most community development activities are aimed at introducing time and labour saving interventions for women in order to enable them to undertake gainful and productive economic activities.

The programme's broader goals are to encourage the participation of rural women in decision-making and development infrastructures, and to increase their access to the services available through other ministries. WDD staff act as facilitators in this process.

At most PCRW sites, the first major task which is undertaken is the encouragement of economic activity. Field workers help rural women obtain credit for projects in the field of animal husbandry, agriculture, cottage industry or services. Women Development Officers (WDOs) and Bank Field Assistants provide credit information to low-income rural women. Loans to individuals who have no tangible collateral to offer are effected through a system of group guarantees. The WDO assumes the major responsibility for assisting women to organise credit groups and to identify viable credit projects. The WDO also provides regular supervision and arranges training and technical support for credit projects.

With the implementation of economic activities, the WDO and Chief Woman Worker (CWW) begin to work with villagers to identify the most important needs of the community and towards designing community development projects to meet those needs. The WDO is also responsible for ensuring that the priority needs identified are included in HMG's plans and budget. To date, community development projects in several sectors, including adult literacy, agricultural improvements, water systems, health, sanitation and afforestation have been implemented in each of the PCRW programme sites.

In conclusion, the major impact of the PCRW programme has been evident in the following areas:

- The creation of a new group of woman government officers, with the establishment of posts for WDOs. This action has opened up possibilities for new development roles for women, and contributes to the planned intensification of activities at the district level with the WDOs acting as managers and focal points for women's activities.
- -- The establishment of groups of village women who can efficiently undertake community development activities which benefit themselves and their families.
- -- The creation of a delivery system whereby multiple inputs are channelled towards supporting income generation projects established by rural women.
- -- The reinforcement of the Women Development Division as an agency providing unique services and its incorporation within the Ministry of Local Development as an increasingly powerful force for women's development in Nepal.

An impact evaluation study of the PCRW programme, undertaken by the Centre for Women and Development in 1989, reveals that the programme has had a positive impact on the integration of rural women into the mainstream of economic development; on poverty alleviation; and on raising the awareness of rural women. The findings of this study also indicate that the PCRW programme has helped underprivileged rural women to raise their status within their families and communities.

These achievements are reflected in physical coverage statistics: as of January/February 1990, 1,725 women's groups comprising of 8,191 members had been formed, while 7,440 women have been provided credit to a total extent of Rs. 18,778,049. The overall repayment rate averages 90 percent. Of the total loans disbursed, 73 percent have gone towards livestock activity, 17 percent for agriculture, 6 percent for services and 4 percent for cottage industry. Community development activities undertaken up to February 1990 have benefitted a total of 212,268 persons, of which women comprise 32 percent, children 45 percent and men 23 per cent.

The report of the tripartite review of the programme, conducted in August/September 1989, presents a broad overview of the project, compares project accomplishments with

programme objectives, identifies the lessons to be learnt from the project's experiences, places PCRW in the context of women's projects elsewhere in the world, and provides suggestions for the future direction of the PCRW programme in the 1990s.

Several donor agencies, primarily UNICEF, have supported the PCRW programme over the years. The programme has gained national and international attention as a model for the empowerment of women and the integration of their skills and potential into the national development process. Over the years of its implementation, PCRW has achieved national and international recognition, especially within the South East Asian region.

SMALL FARMER DEVELOPMENT PROJECT

Bharat Kumar Pradhan Agricultural Development Bank

(Paper for Discussion Group C)

The Small Farmer Development Project (SFDP) was initiated in order to organise and help subsistence farmers who work on leased land, landless farmers, farmhands, and people earning their livelihood from indigenous crafts and cottage industries. This programme was begun as an experiment in 2032/33 BS in two districts, Dhunasha and Nuwakot. It targeted farmers with less than three bighas of land in the Terai region, and farmers with less than twenty ropanis of land in the hill region. Today, the programme has spread to cover a growing number of areas and now has as its target group any person with annual earnings of less than Rs. 1,200. Though this programme was implemented with the intention of providing equal service to both male and female members of rural societies, illiteracy, backwardness and ignorance resulted in women rarely coming forward to make use of the services offered. This led to questions about the effectiveness of the programme; thus, in the fiscal year 2038/39 BS, a special programme was designed with the sole objective of targeting women. This programme was named the Women Development Programme.

The SFDP and the special Women Development Programme was begun with the following objectives:

- to increase the income of small farmers and enable them to afford at least their minimum requirements;
- to make small farmers independent by involving them in the process of programme planning and implementation;
- to balance the needs of small farmers and services offered by development agencies.

The first step in a SFDP programme is the formation of groups of about five to twelve persons. While forming these groups, priority is given to women and landless farmers. The groups are responsible for designing their own income-generation and other programmes. Development and service agencies are apprised of the needs of the group. The group's confidence is developed to enable them to utilise the skills and resources they already posess and to enable them to procure services offered by various organisations

and local agencies. The groups are encouraged to utilise the programmes they have prepared along with the resources present in their own group to stimulate other such groups and to enhance their income. Small Farmers Organisations, run by the farmers themselves, are then established through which foundations are laid for systemised village development programmes. Another feature of the programme entails group saving by farmers, helping to increase their joint resources. Relevant training is provided throughout to both the farmers and the SFDP officers. The Women Development Programme of SFDP follows the same process. Thus, the programme helps women become independent and self-confident by training them as well as by augmenting their incomes.

At present, there are 4,165 small farmers' development projects running in 72 districts of the country. Of these, 89 Women Development Programmes in 43 districts are already operative. Incorporation of 17 more Women Development Programmes in SFDP are intended for the fiscal year 2046/47 BS. Of the 11,795 groups formed under the programmes 1,618 are 'women only' groups. Among 95,968 SFDP members, 14,390 are women. Of the total amount of Rs. 202,071,000 already invested in the programme, Rs. 119,911,000 has been used by the programme's women members. Out of the total amount of Rs. 1,046,870,000, loans repaid, a sum of Rs. 7,468,000 was paid back by women. The group funds raised by the SFDP amount to Rs. 11,994,000, of which Rs. 919,000 was collected by its women participants. A total of 59,569,000 persons have been trained by SFDP; of this number, 15,945 are women farmers.

Women associated with this programme have been able to capitalise on their skills, labour and resources to improve their farming and animal rearing methods as well as raise the standard of their cottage industries which has resulted in increased income generation. They has also extended their cooperation to community projects such as those concerned with health, literacy, smokeless stoves, construction of roads and bridges, conservation of forests, drinking water, etc.

The efforts made by women to eradicate social evils can act as guidelines for men. However, some women join the groups only when permitted to do so by their husbands and there have been cases where women have been forced to leave these groups because of their husband's disapproval. In addition, since women have to tend children and do the household chores they sometimes lack both the time and interest to attend group meetings. Implementation of the programmes meets with obstacles. Women are best motivated by other women workers but even the extension workers themselves are restricted by social norms and are thus unable to carry out field work. As 'women only' groups have not yet been able to carry out income generation programmes independently, most of these groups consist of married couples. The lack of skilled personnel for evaluating and monitoring the programme is yet another problem.

The provision services without keeping in mind the actual needs of the small farmer has led to the failure of programmes run by various agencies.

In regard to constraints experienced in SFDP implementation, the following solutions would appear appropriate:

- it seems wise to first offer simple services before attempting more sophisticated ones.
- the small farmers' programme requires a great deal of monitoring; care should be taken to regularly organise group meetings.
- a cadre of skilled people capable of motivating farmers should be encouraged; local farmers should therefore, be encouraged to motivate the small farmers groups.
- it would be worthwhile to award prizes to outstanding women's groups and women motivators, in order to encourage the participants of the programme.
- extra care should be taken when training women farmers; this training should take place locally.
- the inclusion of men in women's groups would increase the possible number of groups.

RECOMMENDATIONS OF GROUP A

Shakuntala Upreti Chairperson Group 'A'

I am honoured to read the recommendations of the group. Our group consisted of 68 members, of which 35 persons made suggestions and recommendations. In the course of discussions, a question was raised about whether only women qualified for the role of conservationists. I would like to clarify that the title of this seminar does not suggest that only women are involved, or should be involved, in nature conservation. We are all aware that men play an equally important role. This workshop was thus entitled to especially create awareness among the women of our country in particular, and to emphasise the importance of their role with regard to this issue.

The participants in our group were from the Solid Waste Management and Resource Mobilisation Centre and various NGOs. There were lawyers, teachers, researchers, social workers and representatives from rural areas. The group was further divided into three sub-groups during discussions. The three sub-groups were assigned different topics for discussion. Sub-group 1 discussed solutions to environmental problems paying specific attention to household problems. Sub-group 2 focussed on health problems arising from environmental pollution. Sub-group 3 discussed problems in the fields of agriculture, irrigation and waste management. Each sub-group deliberated on solutions to these problems, at the policy level and the legal level, by creating awareness and by technological innovations for environmental conservation and pollution control. The groups laid emphasis on the role of women in the solution of these problems. The point was raised as to whether it was really fair to further burden women by making them responsible for environmental conservation in addition to their already numerous responsibilities.

The recommendations reached by the group as a whole were as follows:

- 1. Women should play an active role in raising awareness.
- 2. Nature preservation education should be made easily accessible to all.
- 3. Alternative natural energy resources should be researched.
- 4. Pollution of rivers should be prevented through protection of watersheds.
- 5. The 'Right to Live' should be legally changed to the 'Right to Live in a Healthy Environment'.
- 6. A plan of action should be carefully designed and implemented by this seminar.



- 7. Information on environmental conservation and preservation should be equally available to men and women.
- 8. Environmental education should be part of the regular school curriculum.
- 9. As the majority of the Nepalese population is illiterate, educational posters and pictures should be used to raise awareness.
- 10. The public should be told about the adverse effects of rapid urbanisation. Efforts should also be made to balance the natural environment of outlying areas affected by this process.

RECOMMENDATIONS OF GROUP B

Agatha Thapa Chairperson Group B

I wish to present recommendations on behalf of Group B. This group had a total of 18 members. The main topic of discussion was 'Women as Resource Mobilisers'. Discussions on the topic followed Mr. Pushkar Bajracharya's presention of Ms. Saakha's paper on 'Women and Nepalese Law'.

The main issues that were raised during the discussion were as follows:

- i. Lack of public awareness about environmental conservation and what could be done to improve the present situation.
- ii. The obstacles faced in training people to be efficient resource managers.
- iii. Widespread ignorance among the rural populace about the longterm adverse effects of environmental destruction.
- iv. Shortages of natural resources and the resultant problems.
- v. The lack of ownership of natural resources by women and the problems arising from this in the management and mobilisation of resources.
- vi. Environmental problems caused by industrialisation.
- vii. Problems of finding suitable technology for rural and urban Nepal.

Following discussion of these subjects the following recommendations were made:

- 1. Awareness about the role women play in conservation should be increased by preparing and distributing posters, photographs, booklets, etc.
- 2. Information about traditional conservation methods should be gathered from rural women and efforts should be made to further improve these methods. Knowledge about improved conservation technologies should be imparted to the general public.
- 3. Instead of focussing upon future problems, attention should be paid to the environmental problems existing at present. The public should also be apprised of the present situation.

- 4. Women should be made aware of the problems created by inefficient resource management. Training should be provided to make them more efficient resource managers.
- 5. Since women are ceaselessly involved in the process of conservation they should be legally entitled to the ownership of natural resources. This would make the mobilisation and use of natural resources more efficient.
- 6. Quota systems should be introduced in various development projects to secure the involvement of women in conserving the environment.

RECOMMENDATIONS OF GROUP C

Bhubaneswari Satyal Chairperson Group C

All people are naturally fond of children, flowers and young plants. If we begin to look after plants and trees in the same way as we look after our children, we will automatically conserve our natural environment. In turn, nature will meet our needs.

From time immemorial, women having been looking after and caring for the many things around them. Now, in modern times, women must include the natural environment within that loving care.

Although women have never been and will never be initiators or agents of destruction, society has not yet realised or acknowledged the positive aspects of the important role of women. Until society is able to recognise the role women play in preserving and conserving natural resources and the natural environment, the task of conservation and preservation will not be fully accomplished.

We recommend that women, who are responsible for planting trees and tending gardens around their own homes, should now take the lead in tree plantation programmes in deforested and denuded areas. We recommend that women be apprised of the root causes of problems that they experience, such as fuelwood shortages, etc. We suggest that, when women are made fully aware of the relationship between the problems they are experiencing and the prudent use of natural resources the aim of environmental conservation will be achieved.

ADDRESS - CLOSING CEREMONY

Hon. Min. Marshal Julum Shakya
Minister for Works
Transport and Supplies

I feel deeply honoured to be addressing a national level seminar on an issue of global consequence. I first considered the subject of the environment when I was in jail. A friend of mine gave me a book on the topic, and I personally found the book very interesting (though in those days the topic was a 'dry' one and awareness about it very, very poor). I feel great satisfaction at being able to address a national seminar on the very same subject that I once read about in a dark jail cell.

In reality, the subjects of women and environmental conservation are deeply linked because women are conservationists in every sphere of life. Even though I am not an expert in this field, I realise the importance of conserving our natural resources. I am happy to note that this movement, which was born at the UN meeting in Stockholm in 1972, has resulted in the topic becoming an issue of global concern. In the Nepalese context, too, this subject should not be restricted to any social class, sect, or gender; information about the environment should be made accessible to people from all walks of life to make them realise its importance. We should follow the example of Europe which, following the Stockholm Conference in 1972, has achieved a great deal in the field of nature conservation.

I would not deem this seminar a success until the recommendations passed by it are implemented at village level. When we look around the valley today, we can see the effects of deforestation. Unless we can replant forest land, we will not be able to revive our environment. Unfortunately, our country's previous government did not pay sufficient attention to the problems of environmental conservation. The trees felled in our country over the past ten years will take another half century to replace. However, the present government, which is a government of the people, will always do its utmost to preserve this country's national heritage. To accomplish this, we need the active support of women such as yourselves.

REMARKS

Manmohan Adhikari Secretary General Nepal Communist Party

The destruction of the environment is a topic of deep concern to all of us. While I feel that a commentator on the subject should ought to be an expert on it, I will nonetheless say a few words to encourage your laudable efforts in this direction.

The reason for destruction of the environment in Nepal is not industrialisation, but deforestation, which has led to problems such as soil erosion, droughts, floods and landslides. If the topsoil of our land continues to erode at this alarming rate, in a few years' time all our fertile lands will be turned into deserts.

The manner in which our natural resources are being misused has led us to think again on the issues as to whether we will ever be able to sell hydroelectricity to our neighbouring countries. The pollution of the Bagmati and Bishnumati rivers are examples of my concern. Adverse development plans and unplanned urbanisation have had deeply negative effects on our environment. At the present rate of progress, Kathmandu will turn into a dead city smothered by its own garbage.

Since women comprise 50 percent of our population, it is only fitting that they be granted equal rights and opportunities with men. This, in turn, will enable them to become better resource managers and help in preserving our natural heritage as well as the socio-political environment of our country. If women demand their rights, these rights must be granted. I believe that if Nepalese women are granted equal rights and opportunities, they will equal, if not surpass men in every sphere of life.



CLOSING REMARKS

Surya Prasad Dhungel Chairperson LEADERS Inc.

It seems very appropriate that Nepalese women in this newly democratic era should be the first to direct the attention of the new government towards the issue of the environment. We face tremendous tasks with regard to the environment; not least the tremendous task of conserving our natural resources. I think steps have been taken in the right direction by actively involving the top echelons of the present government as well as distinguished members of popular political parties in this issue. This is indeed a praiseworthy achievement.

I think it is commendable that this seminar has thought it fitting to include the issue of the preservation of cultural heritage as a subject worthy of discussion. This has brought an added dimension to the celebration of World Environment Day. I also see as noteworthy the efforts made by the organisers to include people from all walks of life in the seminar. The careful and detailed discussions on all issues pertaining to conservation show the deep commitment of all those taking part.

Another important achievement of the seminar is the fact that it has been organised by women. However, merely hosting such a seminar is not an end in itself. It is rather a means toward an end, that is to say the recommendations and suggestions arising from this seminar must be implemented. This should be the final goal.

I therefore urge the organisers to move in that direction by lobbying for a fundamental 'Right to a Clean Environment' in the future Constitution of our country. In order to make the preservation of the environment a reality, women need to be granted equal rights as its managers.

I wish all involved great success in these tasks.

LIST OF PARTICIPANTS OF THE NATIONAL SEMINAR ON WOMEN AS ENVIRONMENTAL CONSERVATIONISTS AND RESOURCE MANAGERS

Kathmandu Nepal

3-4 June,1990

	Managa Angal	A D C (A) 1
1.	Meena Aryal	ABC/Nepal
2.	Durga Ghimere	ABC/Nepal
3.	Sunita Bhattarai	ACAP(KMTNC)
4.	Aparna Bhatta	Action Aid/Nepal
5.	Meena Manadhar	Action Aid/Nepal
6.	Urmila Simkhada	Action Aid/Nepal
7.	Radhika T.	ALMR/Nepal
8.	Shanti Rayamajhi	APROSC
9.	Ramrajya L Shrestha	APROSC
10.	Nisha Sharma	Arohan Cultural Group
11.	Sunil Pokhrel	Arohan Cultural Group
12.	· , · · . · . · . · . · . · . · . · .	Arohan Cultural Group
13.	1	Babar Mahal
14.	Anju Adhikari	Balaju
15.	Sashi Adhikari	Baneswore
16.	Manju Maskey	Bangemudha
17.	Daman Dhungana	Battisputali
18.	Janak Devi	Botany Dept., TU
19.	Dilli Devi Shakya	Botany Dept., TU
20.	Ambika Shreshtha	BPWC
21.	Udaya L Pradhanang	BTRT, Pokhara
22.	Monika Manadhar	CCO
23.	Neeru Shreshtha	CEDA
24.	Shailaja Acharya	Chabahil
25.	Banoo Bajracharya	Chauni
26.	Situ Shrestha	CWD
27.	Dr. S. M. Gumand	Dec. Consultant, Kimdol
28.	Prafulla M.S. Badha	DHUD
29.	Nati Maiya Baidya	DHUD
30.	· · · · · · · · · · · · · · · · · · ·	DHUD
31.	T. N. Upreti	Dilli Bazaar
32.	Indira Bhatta	Dilli Bazaar
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DNPWC Mahendra Shreshtha 33. DVS/DANIDA 34. Som Rai Acharya Radhyashyam Adhikari D-Yad Law 35. Rosha Chitrakar **ECCA** 36. GAA Kamal Tara Tuladhar 37. Gokarna Nanu Devi Gokarna

38. **39**. Janak Shreshtha Gokarna 40. **Sumitra Basnet** Gokarna 41. Shanti Nepal 42. Ramesh Sharma Gorkha Patra Sarad Wasti Gorkha Patra 43. **GTZ PAS** 44. Sabina GTZ PAS 45. Renata Sherpa

46. Narayan Bhattarai HMG/UNESCO/NORAD

47. Jeannette Denholm ICIMOD
48. Premeeta Janssens-Sannon ILICN

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Sushila Bhatta **55.** Kalikasthan **56.** Sandhya Bhatta Kalimati Kamalachi **57.** Anup Raj Sharma 58. Anita Manandhar Kamalachi **59**. Bharati Adhikari Kupondole 60. Naina Shreshtha Law Campus Law Campus 61. Dr. Shanta Thapliya 62. Law Campus Shreejana Mali

63. Bhuvan Dhungana
 64. Ramesh Bickram
 65. Shashi Adhikari
 66. Chattra Gurung
 67. Surya Dhungel
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69. Junu Aryal LWS
70. H. Benthin Maharajgunj
71. Saraswati Manandhar Maru Tole
72. Sangeeta Khadka MASK

72. Sangeeta Khadka MASK
73. Jitha Laxmi Nagbahal

74. Sharmila Maharjan
75. Sr. Roselyn
76. Muna Ghimire
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77. P.K. Thapa NCP

78. Sahana Pradhan NCP(M) *7*9. Bharat Mohan Adhikari NCP(M) 80. Mana Mohan Adhikary NCP(M)**NCWCA** 81. Kusum Saakha NCWCA 82. Shailaja Mainali 83. Sharada Kharel Nepal Australia Forestry 84. Indra Maya Shakya Nepal Scout 85. Man Bahadur Ghale NTV Nepal Congress Party Office 86. Bal Krishna Khanal 87. Sama Shahi Nepal Congress Party Office 88. Minu Amatya(piya) **NEW ERA** 89. Gyanu Shova Kansakar New Road **NPC** 90. Ananda Joshi 91. Chakra Man **NPC** 92. Sita Pandey **NSC** 93. Sumitra Bantawa **Nursing Campus** 94. Roshanee Shrestha Nyokha Bahal 95. Shanta Shrestha Observer 96. Sabitri Shrestha Observer 97. Surya Kiran Gurung Observer 98. Ila Gautam Observer 99. Makhana K.C. Observer 100. Shilu Singh Observer 101. Jawahar Manandhar Observer 102. K K. Bhargav Observer 103. Madhavi Singh Observer 104. Govind Dhital Observer 105. Jamuna Gurung Observer(Baudha) 106. Gyan Bahadur Bhandary Observer(Baudha) 107. Bel Bahadur Lama Observer(Baudha) 108. Ganga Lama Observer(Baudha) 109. Bashu Gurung Observer(Baudha) 110. Bishnu Prasad Shrestha Observer 111. Renuka Joshi Padma Kanya Campus 112. Vijaya Shrestha Padma Kanya Campus 113. Annette Slowinski Peace Corps/Nepal 114 Dama Thapa Peace Corps/Nepal 115. Devaki Shrestha PLAN Nepal 116. Dr. Jamuna Acharya Prasuti Griha 117. Dr. Govinda Sharma Private Clinic Project 118. Satya Narayan Putalisadak 119. Kalika Putalisadak 120. Pushpa Shrestha Padma Kanya Campus 121. Dr. Leela Devi Padma Kanya Campus 122. Suprabha Ghimire Padma Kanya Campus

123. Lili Gulmi PK School PP Mitra School MB 124. Rita Chhetri 125. Participant Rabi Bhawan Rabi Bhawan 126. Ram Lal Shrestha 127. Gyanmala Khanal Ramkot 128. Mina Kumari Manandhar Ramkot Redd Barna Nepal 129. Sangeeta Shrestha Redd Barna Nepal 130. Santa Laxmi Shrestha Dept. of Roads 131. Bharat Sharma **RONAST** 132. Arati Thapa 133. Renuka Malakar **RBG** 134. Maya Awale **RBG** 135. Bina Shrestha **RBG** 136. Indra Man Shrestha Sanepa 137. Harihar Birahi Saptahik Bimarsha 138. Agatha Thapa Seto Gurans NCDSS 139. Santi Choudhari Shreejana Bikash Kendra 140. Puspa Sitapaila 141. Mahohar Karki SYS/Imadol 142. Bhagwati Thapa **SWMRMC** 143. C. Malla Tangal 144. Dr. Bhola Rijal Teaching Hospital 145. Dr. Shyam Rijal Teaching Hospital Thapathali 146. Sapna 147. Sarita Thapathali 148. Divya Rimal TC Campus 149. Rita Koirala TC Campus 150. Karuna Silwal TC Campus 151. Gita Acharya TC Campus 152. Suman Subedi TC Campus 153. Laxmi Shrestha TC Campus 154. Sujita Sakya TNAN 155. Bhuvenshwori Satyal **UCEP** 156. Raymond Janssens UNICEF 157. Shanta Khadgi UNICEF 158. Isabel Crowley UNICEF 159. Anjali S. Pradhan USAID/Nepal 160. Saloni Joshi USAID/Nepal 161. Kamala Acharya Dhungel WE 162. Shilu Manandhar WE 163. Geeta Budhathoki **WE** 164. Samira Yadav **WE** 165. Niru Shrestha WE 166. Madhuri Ale **WE**

WE

167. Sunimaya Lama

168.	bita Dhakwa	WE
169.	Bharati Ghimire	WE
170.	Kamala Upreti	WE .
171.	Phurba Sona Sherpa	WE
172.	Kusum Bastola	WE
173.	Kusum Rawat	WE
174.	Bandana Risal	WE
175.	Sita Khanal	WE
176.	Representative	Wildlife Conservation Programme
177.	Representative	Women Lawyers Association
178.	Ishwari Dahal	Women Lawyers Association
179.	Usha Malla	Women Lawyers Association
180.	Bimala Manandhar	Women Education Programme
181.	Silu Singh	WLSP

Note: Due to technical difficulties, a complete text of commentaries by Dr. Trailokya Nath Upreti, Dr. Pushkar Bajracharya, and Dr. Ananda Raj Joshi, remarks by Senior Advocate Mr. Chudamani Raj Singh Malla and vote of thanks by Ms. Shilu Manandhar could not be included in this report.

