



Training Seminar - Georgetown, Guyana  
31 January - 4 February 1994

United Nations  
International Research and Training Institute  
for the Advancement of Women

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United Nations  
International Research and Training Institute  
for the Advancement of Women

Women, Water Supply and Sanitation  
Training Seminar

Georgetown, Guyana  
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## NOTES

### Abbreviations used

GA	General Assembly
GUYWA	Guyana Water Authority
IDWSSD	International Drinking Water Supply and Sanitation Decade
INSTRAW	United Nations International Research and Training Institute for the Advancement of Women
NGO	Non-governmental Organization
PAHO	Pan-American Health Organization
TOR	Terms of Reference
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
WATSAN	Water and Sanitation sector
WHO	World Health Organization
WID	Women in Development
WSS	Water Supply and Sanitation

## ABSTRACT

The national training seminar on Women, Water Supply and Sanitation, organized by INSTRAW in cooperation with Red Thread Women's Programme, Guyana, was held from 31 January to 4 February, 1994. The Commonwealth Secretariat sponsored a lecturer and some of the participants at the seminar. The seminar was attended by forty participants from various parts of the country. Representatives from UNICEF, UNDP and PAHO participated in the seminar.

An overview of the training methodology and seminar procedures were presented. The modular training package on "Women, Water Supply and Sanitation" was aimed at senior officials of the government, development planners and authorities in charge of water supply and sanitation technologies as well as representatives of women's organizations active in water projects and programmes. The flexibility of this training package ensured that they could be adapted to the needs of different target groups. Each module, a self-contained training/learning unit, could be used either totally or partially. Group discussions were held at the end of each training module presentation to examine related issues and made recommendations.

Training Module I: The International Drinking Water Supply and Sanitation (IDWSSD) and Beyond focussed on the principal measures needed to strengthen and broaden the role of women, their involvement in project preparation, identification of implementing organizations for community participation and involvement of women, and the need to make budgetary provisions for these aspects in WSS programmes. Participants discussed issues related to problems of water supply and sanitation in the context of women's involvement, and possible solutions were examined. PAHO presented its experience in involving women in the water and sanitation sector through support to a project designed around community participation. Equipment, material and operating expenses were provided while the Women's Affairs Bureau assumed coordination of the transportation of the material and the general administration of the project. 90 villagers registered as self-helpers and the digging of 50% of the large reservoir was completed to a depth of around 22 feet and 25% of the small reservoir was completed. However, after eight years, the Yakarinta Water Project was not completed due to various factors. PAHO's experience showed that women participated in the administration of the project remarkably well. The difficulties encountered were due to technical inadequacies.

Training Module II: Participation of Women in Planning, Choice of Technology and Implementation of Women, Water Supply and Sanitation Projects focussed on national action for participation in water supply and sanitation projects. Adequate supply of clean water supply and sanitation was recognized as a practical gender need and concerns related to translating gender awareness in water and sanitation into practice were contemplated. The role of women as partners, planners and engineers of development effort and in women's organizations was examined and recommendations made. In addition, the involvement of women in various types of projects were addressed: large projects, community self-improvement, needs assessment, local planning process, technology choice and local design, and planning and implementation. Pertinent water supply and sanitation issues as they relate to gender were discussed.

UNICEF's experiences in involving women in the water and sanitation sector was presented. UNICEF's support to the sector was two-fold: to support the national agency to upkeep the aging water systems in the populated areas and to assist with small community projects, using low-cost and appropriate technology. The main constraints were the provision of adequate technical data for procurement of equipment and spares, limited technical capacity of the water authority, poor management at various stages of project implementation, lack of proper coordination among agencies involved, logistical problems, lack of community support and theft as a result of lack of participation and education.

Lessons learned were that new approaches and strategies were needed for gender awareness; proper planning must involve decision makers and beneficiaries, especially the women's groups; the strength and weaknesses of the community groups need to be evaluated before embarking on a project; consideration must be given to sustainability of the project, cost recovery mechanisms, training women in project skills, and sanitation and health education.

Training Module III: Role of Women in Hygiene Education and Training Activities for Water Supply and Sanitation. The missing linkage of involving health and hygiene education in the project and various training techniques were highlighted. The concept of sustainable development was explained with a focus on the centrality of women's roles. The participants discussed the concept of sustainable development at national and rural levels and made recommendations on how to involve women in various aspects of sustainable development.

Training Module IV: Participation of Women in Management of Watery Resources, Water Supply and Waste Disposal focussed on the participation of women in the management of water resources, water supply and waste disposal. The water availability in the country in the context of the objectives of the module was outlined. Most of the water in the ocean was not used as potable water supply as ground and surface water were available. However, the need to monitor and control water resources was emphasized. The role of women in low income urban areas and in rural areas as it relates to water resources management was discussed. The advantages of involving women were highlighted. Participant discussions focussed on problems encountered with water technology and recommendations on women's involvement beginning with the development planning stage were made.

Training Module V: Women and Waste Management focussed on sensitizing the participants on the linkages between women and waste management both at a conceptual level and, with the aid of discussion questions and case studies, at a locale-specific level. The main behaviour patterns which affect environmental sanitation conditions in the context of the disposal of human wastes, use and protection of water sources, water and personal hygiene, food hygiene, and domestic and environmental hygiene were presented. The roles that women can play in environmental sanitation projects were outlined and case studies were used to illustrate these roles. Group discussions focussed on related concerns and recommendations were made.

Training Module VI: Evaluation and Monitoring of Water Supply and Sanitation Programmes and the Role of Women focussed on the conceptual difference in approaches to evaluation in the 1960s and in the 1980s. The areas for improvement of evaluation methodology for programmes and projects on WID were elaborated. The difference between evaluation and monitoring of water supply and sanitation projects was illuminated. A checklist on how to involve women in project preparation, planning, implementation, training and evaluation, and follow-up was presented.

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## **I. REPORT OF THE SEMINAR**

1. The national training seminar on Women, Water Supply and Sanitation was held at Hotel The Park in Georgetown, Guyana, from 31 January to 4 February 1994.
2. The Seminar was organized by the United Nations International Research and Training Institute for the Advancement of Women (INSTRAW) in cooperation with Red Thread Women's Programme, Guyana. The Commonwealth Secretariat sponsored a lecturer and some of the participants at the seminar.
3. Forty participants attended the seminar from various parts of the country. The following United Nations organizations were represented: the United Nations Children's Fund (UNICEF); the United Nations Development Programme (UNDP); and the Pan-American Health Organization (PAHO) (see Annex I).

### **A. Opening of the Session**

4. The Seminar opened with statements from Ms. Vanda Radzik, on behalf of Red Thread Women's Programme, welcoming the Ministers, representatives from UNDP and INSTRAW, and the participants to INSTRAW's national training seminar. She stressed the importance of the training seminar and officiated as a facilitator during the opening session. This was followed by statements made by the Minister of Labour Human Services, Social Security; Minister of Public Works, Communications and Regional Development, the UNDP representative and the representative of INSTRAW (see Annex II).

### **B. Adoption of Agenda**

5. The provisional agenda for the Seminar was adopted by all participants (see Annex III).

### **C. Overview of Training Methodology and Seminar Procedures**

6. The INSTRAW representative, Ms. Borjana Schieber, described the modular training package on "Women, Water Supply and Sanitation". The package was aimed at three different target groups: senior officials of Ministries of Labour Human Services, Social Security, Public Works, Communications & Regional Development and Health; development planners and authorities in charge of water supply and sanitation technologies; and representatives of women's organizations that are active in water projects and programmes.
7. The flexibility of this training package was assured by a parallel activity, namely the possibility of training different target groups simultaneously and of using modular training material which enabled users to adapt it to their own needs. Each modular unit was supplemented with audiovisual support material, such as transparencies and sound-slide packages, as well as with additional reading and bibliographies; key-issue checklists for group work; evaluation forms for participants; and a trainer's guide.
8. The training packages were field tested in developing countries and designed to suit national needs. They could be adapted and modified by national professional staff at the community level. Instead of a conventional training text, modules had been designed to comprise of oral and visual media, with defined objectives and extensive group work.

9. Each module was a self-contained training/learning unit, designed in such a way that it could be used either totally or partially, for introductory training courses as well as for courses covering a given subject area. Clear instructions as to the precise material required were given with each session, so that local instructors could coordinate their lectures with the accompanying sound-slide package.

10. Finally, Ms. Borjana Schieber pointed out that each module was comprised of a topic, presented in audiovisual and printed form, to facilitate both teaching and learning, together with an "Instructors Guide for the Trainer/Lecturer".

**D. Technical session I: Presentation and Discussion of  
Training Module I: The International Drinking Water Supply  
and Sanitation (IDWSSD) and Beyond**

11. Module I, the International Drinking Water Supply and Sanitation Decade (IDWSSD) and Beyond, was presented by Ms. Borjana Schieber, Social Affairs Officer, INSTRAW.

12. Some progress had been made in increasing service coverage, particularly in the sectors of rural water and sanitation, and in raising awareness on critical issues in the role of women in water and sanitation; however, a number of problems stemming from inadequate water supply and sanitation facilities still remain in developing countries. These problems have severe consequences in relation to health, and economic and social costs, resulting in the loss of productive time and energy for women who are already overburdened with time-consuming water collection tasks.

13. Ms. Schieber pointed out that such complex and multi-dimensional problems require multi-disciplinary approaches taking into account the linkages between the socio-economic, technical, health, agricultural and environmental aspects as well as issues relating to the management and coordination of water supply and sanitation activities. Such approaches must be oriented to directing women's energies and time towards more productive objectives; they must, therefore, take into account the crucial role of women in maintenance and financing of water and sanitation facilities, achieving health benefits, broadening economic and social development and involvement in community development as well as income-generating activities.

14. The International Drinking Water Supply and Sanitation Decade, launched by the UN General Assembly in 1980, directed the attention of the international community and governments toward a number of these issues, stipulating its basic principles that access to safe water and sanitation facilities is a basic human right without which populations cannot achieve a quality of life consistent with human dignity. In urging an improvement in the standards and levels of water and sanitation services, the UN General Assembly resolution called upon governments to establish policies, set priorities, strengthen institutional frameworks and heighten public awareness on the need to intensify the involvement of women in water supply and sanitation activities.

15. The United Nations system of organizations was likewise called upon to provide financial and technical support to these efforts, and described a number of the initiatives and mechanisms set up in response to the IDWSSD basic precepts.

16. INSTRAW, with its mandates of supporting the advancement of women and their integration into the development process through research, training and dissemination of information, undertook a number of training activities during and after the Decade.

17. While there are a number of achievements from the IDWSSD in terms of improving coverage in the rural and sanitation sectors, coverage in the urban sectors is expected to be lower by the year 2000. Thus, given the unlikelihood of increases in sector funding, the key objective of the 1990s must be to make greater and more effective use of available budgets, by reducing costs and raising outputs. Approaches should, therefore, include greater involvement of women in the execution of local maintenance while lowering costs; achieving greater flexibility in technology and service levels; moving towards greater decentralization of decision-making to the field level, involving women and communities as "partners" in programme planning and implementation; incorporating women into local financial systems, and in the design and implementation of cost recovery measures.

18. Support at the country level, to achieve greater water supply and sanitation service coverage, will be coordinated by the UNDP Resident Representatives within the framework for cooperation.

19. Two United Nations system-generated events had important implications for the role of women in sustainable development - the International Conference on Water and Environment, held in Dublin, Ireland in January 1992, which included women in one of the main principles, and the United Nations Conference on Environment and Development (UNCED) of June 1992, together with Agenda 21 and Chapters 18 and 24.

20. In conclusion, the principal measures needed to strengthen and broaden the role of women were stressed: their involvement in project preparation teams; the identification of implementing organizations for community participation and involvement of women; and the need to make budgetary provisions for these aspects in WSS programmes.

21. Following the presentation of Module I, participants discussed the following issues:

- a. problems of water supply and sanitation in Guyana;
- b. problems of women's involvement in WSS project;
- c. possible solutions.

22. Under current problems of WSS in Guyana, the participants identified the financial policies and related aspects as one of the most important problems. Other problems included: the lack of community (particularly women's) education, information and training for women at all levels; implementation of inappropriate technologies in various water projects at community level; the problem of operation and maintenance; and the dependence on governments to finance solutions to problems.

23. Problems of women's involvement in WSS projects were multiple. Women were rarely included in the decision making. The WSS sector was male-dominated and few women were involved in any stage of the project planning and policy issues. Women's needs and the difference in priorities between women and men were not taken into consideration. Yet another obstacle was the cultural barrier and the accepted norms of male/female involvement in water projects. In this context, the need to explore alternate strategies of management, besides the top-down management, for planning and implementing water projects was emphasized.

24. INSTRAW's research findings show that not enough attention is given to involving women in clean and reliable water resources by various projects; that not enough attention is given to the involvement of women at various stages of the projects; the lack of data on women's participation; and the importance of evaluation and monitoring women's involvement in projects.

25. To solve existing problems, participants made the following recommendations: to train more women at all levels; to provide technical training for women; to organise education/training courses on overcoming cultural barriers and constraints; to recruit more qualified women at top decision-making levels to deal with women's issues; to conduct more public meetings at community level and provide forums where women can speak and participate openly; to promote the equal opportunities for men and women; to overcome religious barriers; to train trainers in sensitivity toward women's needs and priorities; to provide an education in churches and schools on women's issues and various aspects of water supply and sanitation; to support the extensive use of media and various forms of communication technologies in promoting women's involvement in WSS projects; to consult women and communities when installing new water technologies as well as give them full responsibility to be in charge of cooperation and maintenance of the technologies; to promote the equal education of boys and girls; to promote equal pay for women and men; and to develop women's networks at all levels. It was also pointed out that at the decision-making level, women should be included in the national development plans and that budgetary allocations should be made by the government for women's involvement in the projects. The importance of developing evaluation and monitoring tools for women's involvement and ensuring their use was highlighted.

#### E. Technical Session Ia: Presentation and Discussion of PAHO Experience in Involving Women in the Water and Sanitation Sector in Guyana

26. Mr. Guy Felix, representative of Pan American Health Organization (PAHO), presented PAHO's experience in involving women in the water and sanitation sector in Guyana. He explained that in 1982, the XXI Pan American Sanitary Conference adopted the resolution XXVII on "Women in Health and Development" which required that the Organization's Member Government: "establish in each Country, a focal point for Women in Health and Development to coordinate related intersectoral activities".

27. This resolution also recommended the planning, coordination and execution of activities in the field of Women, Health and Development in order to give women a steadily increasing role to play in the development of their Countries through growing participation in all national sectors, so as to attain the PAHO/WHO's goal of Health for All by the year 2000.

28. To pursue the implementation of this resolution, a PAHO Consultant, Ms Evelyn Laurin, visited Guyana, in November 1983, and held discussions with a number of Women's organizations and Government Officials to ascertain their interest in participating in an intercountry Caribbean project on Women's involvement in water and sanitation. The PAHO proposal encouraged all parties to submit proposals for funding. The programme was coordinated by the Women's Affairs Bureau.

29. In February 1985, Ms Shirley Anderson Fletcher, another PAHO Consultant visited Guyana with the objective of facilitating the preparation of project proposals in water and sanitation.

30. The mission's Terms of Reference included the following: the designing of strategies aimed at developing community-based projects; to enhance women's participation in Water and Sanitation; and to conduct a two-day workshop in project formulation for the community and women's group. Out of this workshop, the Farm Village project proposal was formulated and the Guyanese Federation of Women's Institutes was identified as the organization that would mobilize village women. Two other proposals, a water project in Yakarinta, North Rupununi, and an integrated project in Mahdia, Region #8 were also developed. While PAHO committed itself to the funding of the Yakarinta's project, its involvement in the Farm village and Mahdia's projects was rather limited.

31. The water project in Yakarintha was identified by the Anglican Mother's Union of Yakarintha and an outline was submitted to PAHO for funding through the Women's Affairs Bureau.

32. On December 16, 1985 funding for the Yakarinta Water Project was approved by PAHO to the tune of US\$20,000, out of which \$14,000 was allocated for equipment and \$6,000 for operating expenses. On December 19, 1985 the Chairman of Region #9 and the Anglican Mother's Union were informed by the Women's Affairs Bureau. Visits to the sites were undertaken from February 27 to March 2, 1986. The PAHO focal point for Women, Health and Development, accompanied by a Women's Affairs Bureau delegate, visited Yakarintha and held meetings with the Regional Chairman, the Anglican Mother's Union and other interested parties, in order to finalize the planning of the project. It was decided that:

- a) the Regional Administration will supply all labour, clay brick needed for the plastering of the well, timber and tools, such as pick axes, hovels, portable pumps, etc;
- b) the Anglican Mother's Union of Yakarintha, the Village Captain, his Councillor, the Priest and the Head Teacher will be responsible for promoting community participation during the execution of the project;
- c) PAHO will provide equipment, material and operating expenses; and
- d) the Women's Affairs Bureau would assume coordination of the transportation of the material ordered by PAHO on site and the general administration of the project;
- e) March 10, 1986 was designated as the date for the commencement of the project.

33. The project met with some difficulties in scheduling. For instance, on March 4, 1986 the Regional Office of GUYWA submitted, to the Women's Affairs Bureau, a list of material comprising of solar pumps, PVC pipes and accessories, and tools necessary for the execution of the project. The list was forwarded to PAHO for immediately processing the order of the solar pump and panels for a total cost of \$11,800. However, the cost of the pipes and accessories was found too high. The central office of GUYWA was, therefore, asked to revise the list of pipes and accessories, so that the balance left on the grant could suffice for the purchase of the pipes and accessories. Through correspondence dated May 12, 1986 GUYWA indicated that the revision of the list was a very difficult task as nobody in GUYWA ever visited the site and there were no plans showing details of the location. However, they would venture to prepare a reduced list which will not be accurate.

34. Nevertheless, the execution of the project began as scheduled and works progressed satisfactorily. A report submitted by the regional supervisor, Mr. William Toney on June 9th, 1986 stated that:

- Ninety (90) villagers registered as self-helpers.
- By the end of May 1986, the digging of 50% of the large reservoir was completed and the depth was around 22 feet. However, no further progress could be made because the rainy season already started, causing work to cease to date.
- 25% of the small reservoir was completed.

35. However, some self-helpers withdrew from the project because of shortage of tools. The workers needed pulleys, buckets, pick axes and spades, etc. which were supposed to be provided by the regional administration. There was also need for a pump to remove the water from the well in order to dig further.

36. During the dry season, in early 1987, the well plastered with the depth remaining at 2~ feet with 5 feet of water which was not enough to accommodate the installation of the solar pump as it was supposed to be submerged in twenty feet of water.

#### Current Status of the Project

37. After eight years, the Yakarinta Water Project is not completed. A Proposal made to use hand-pump instead of the solar pumps was not accepted. In 1991, attempts to construct another well 50 feet deep was made with at least 20 feet of water in order to accommodate the installation of the solar pump. However, the required depth could not be reached because of boulders at the bottom of the well. These boulders could not be removed manually. Once again the works had stopped.

38. Furthermore, as indicated earlier, the project proposal for improving water supply and sanitation in Farm Village was prepared by the Guyanese Federation Women's Institute and later on was submitted to the Women's Affairs Bureau for funding. The proposal indicated the socio-economic characteristics of the village as well as the objectives and the population beneficiary. The Guyanese Federation Women's Institute was the organization responsible for the mobilization of women in the village. Since the well and the pipe were provided by PAHO some years ago, under separate funding, the Women's Affairs Bureau approached PAHO once more to secure funding for the pump. However, the funding was not approved as the capacity of the pump exceeded seven times the quantity of water required by the population, even though the specification of the pump submitted by Guyana Water Authority (GUYWA) was satisfactory.

39. The Mahdia Project was an integrated project developed by the Women's Affairs Bureau and funded by UNICEF at US\$250,000. In 1988, PAHO provided technical advice to the Women's Affairs Bureau to speed up the execution of the project. It was found that the water component alone, as proposed by GUYWA, would have cost US\$274,000. Therefore, a site visit was organized for all the parties involved to explore the possibility of a less costly solution for the water component of the project. The team, comprising of representatives from UNICEF, the Women's Affairs Bureau and PAHO, discovered that the population used existing springs for drinking water. Instead of constructing a water filtration plant, it would be cheaper to use these natural springs as the main source of the water supply system in Mahdia. With the participation of UNICEF, the Women's Affairs Bureau and Golden Star Mining Company, the new water supply scheme is under construction.

## Conclusions and Recommendations

40. Although the three projects indicated above continue to experience difficulties, they have not been attributed to the incapacity of the women to manage Water and Sanitation Projects adequately. On the other hand, the women have participated in the administration of the project remarkably well. The difficulties encountered were due to the inadequate support provided to women during the planning and selection of the site of the project, improper knowledge of the site by the technical people, inadequate investigation of the source of water available in the communities, improper engineering design, improper selection of equipment, lack of commitment from parties involved, inability of certain women's organizations to mobilize the community and the unreliability of transportation during the period 1986 to 1990 due to the shortage of fuel.

41. In planning rural water supply and sanitation systems, logistics is one of the fundamental aspect that leads to the success of a project. The Women's Affairs Bureau or any other women's organization involved in water supply and sanitation programmes should, at a very early stage of the project, seek the advice of an engineer in the selection of the site and the development of appropriate design.

42. Following the presentation of Mr. Felix, the UNICEF representative, the Women's Affairs Bureau updated the information on the three projects referred to in the presentation. The participants pointed out that projects fail when equipments are lost. The UNICEF representative emphasized on the need to ensure the security of project equipment and indicated that attempts were being made to install security officers. It was noted that though women were well trained during the project, most of them left after the project.

43. The participants stressed the need for commitment by regional government to ensure security for project equipment. The need for proper coordination and support from all levels of government and other funding agencies was also emphasized.

### **F. Technical Session II: Presentation and Discussion of Training Module II: Participation of Women in Planning, Choice of Technology and Implementation of Women, Water Supply and Sanitation Projects**

44. Module II was presented by Ms. Eppi Mfundo, Programme Associate (WID) - UNICEF/Women's Affairs Bureau.

#### **A. Women's Participation in Water Supply and Sanitation Projects - National Action**

45. Adequate supply of clean water supply and sanitation is a practical gender need. It is a need which influences all household members but affects women more because of their responsibility for the reproductive work in the household.

46. The International Drinking Water Supply and Sanitation Decade, 1981-1990 (IDWSSD) provided a new thrust directed towards untouched issues which included the development of community awareness and participation and the increased involvement of women as well as the development and utilization of affordable, appropriate technologies among others. It was realised that involvement of women who are the primary users of water contribute to the better planning, functioning and utilisation of improved facilities, especially when provided with appropriate training and support.

47. Does the current water policy and provision tend to exclude or constrain women's participation? In your opinion, do we have gender blind water programmes in our communities? Do women in low income communities have particular water problems and needs which are not sufficiently understood by those responsible for water and sanitation policies, programmes and projects?

48. Module II examines those questions and provides tools to translate gender awareness in water and sanitation into practice. The module provides participants with an understanding of how gender plays a key role in determining the ways in which men and women participate in water supply and sanitation projects. The basic premise is that men and women's lives are structured differently and, therefore, development policies and programmes affect them differently and provoke different responses.

49. The module attempts to integrate women more comprehensively. They are not added on as an interest group but involved from the identifying stage, planning, decision making, implementation, resource development and capacity building. It provides a framework for nations and local government institutions, NGOs and women's organizations to promote full participation by women in sustainable development. Gender sensitive language is incorporated.

#### B. Role of Women as Partners in Development Effort

50. The need to incorporate gender awareness into development resulted when the WID movement focussed on the status of women and ensured that women have the potential and opportunity to participate in the development process. Women's participation related to virtually every sector of the economy. About 20 years ago, national planners recognized that modernization could not occur by leaving out or without fully involving half the population in the process.

51. Women's participation is perceived to be difficult when examined in the context of its cultural significance or in the context of its scope in the current times. It is perceived differently in various nations, cultures and sub-cultures. However, one factor that cuts across all cultures is the gender division of labour as a result of which women play many roles. Because of these multiple roles, planners and administrators are often not able to reach women easily. Women's participation should be perceived within the context of their family and community roles. It should also be linked to their struggle for rights, increased control over their lives and support for their economic activities. Gender awareness amongst planners and administrators should be built by disseminating information, knowledge, techniques and technologies appropriate to the needs and concerns of women and their constraints. In sum, women ought to be seen as active partners in any development process.

52. Successful integration of women's concerns will depend upon concerted and integrated efforts of both government and non-governmental agencies at the national level, including women's organizations. Another key element in a policy statement should be the inclusion of improved communication since effective behaviour modification depends both on improved communication as well as active participation.

### C. Role of Development Planners and Engineers

53. - Formulate a policy on women's involvement (an unambiguous policy of commitment to the involvement of women in any kind of development activity) supported by gender disaggregated data on the position of women in the country.
- Earmark funds (taking into account the time, money and personnel required to activate full participation of both men and women).
  - Include women's specialists in project preparations - (trained personnel and consultants trained in gender analysis and gender sensitive programming).
  - Link project objectives to roles of women (by linking the practical needs to strategic needs but by not limiting oneself to quantitative short-term objectives which will render the project less sustainable). Avoid establishing white elephants through improved quality, quantity and effective use of improved facilities.
  - Select skilled organization to implement women's involvement (should be identified and involved from the project formulation process).
  - Review and adapt the task and job description and training. (Project staff should be trained in participatory methods and techniques).
  - Establish evaluation and monitoring systems (part of the overall project management).

### D. Role of Women's Organizations

54. - Promote and participate water supply and sanitation programmes in the government (to ensure that women's needs and participation are duly considered and to campaign for the government's commitment).
- Organize and support data collection and research (to provide the relevant information)
  - Prepare case studies, articles, broadcasts.
  - Provide space for women to women communication.
  - Promote fund raising.
  - Support local women's groups in water and sanitation projects (encourage and empower women's groups and provide a roster of women's candidates for training courses. Make sure technology leads to strategies that women can adopt within their particular circumstances.
  - Link government agencies with other organizations. (NGOs and other organizations have successfully demonstrated gender sensitive participatory approaches).
  - Increase resources.

### E. Activities to Enhance National Coverage

55. - Many times resources are limited for total coverage but programmes for simple improvements on water supply and sanitation conditions are critical as they can use the potential of women's organization and agencies to mobilize community action.
- Increased interest in and demand for cooperation is needed in densely populated urban areas as populations in urban centers are growing fast because of the rural/urban migration.

### F. Recommended Approaches

56. - Joint formulation of more active roles for women (despite the emphasis on construction)
- Joint operationalisation of roles (to reduce construction cost, e.g. digging trenches through voluntary work).
- Enhancement of knowledge - development, recording and exchange.
- Support women's groups to improve traditional systems for:
- a. Expanded coverage with same budgets
  - b. General use of only safe water and sanitation.

### G. Potential for Women's Involvement

57. - Requirements for women's involvement
- Open Attitude
- Creativity - there is no single model of women's participation and mobilization suitable for all situations, e.g.:

#### Situation a)

Women active in economic development, e.g. in Guyana. Strategy: women should be informed about the meeting well in advance in their own local dialect; and the meeting should begin on time.

#### Situation b)

Customs, culture, religion, legislation may impose barriers to women's equal participation. Strategy: asking local leaders for a separate women's meeting.

#### Situation c)

Women are secluded and have no immediate visible role.

Situation d)

A large number of female headed households. Strategy: women normally assume responsibility for the projects but because of the multiplicity of roles, the selected project proposal must correspond to local circumstance and capacity.

- Adaptation to type of culture
- Adaptation to type of project - strategy used in one project will not necessarily work in a different type of project.

### Types of Projects

#### A. Involving Women in Large Projects

58. Assess Women's views and potentials (get women's and other user's views on distance, taste, color, meeting place, costs, design, water point).

- Involve with social skills/attitudes.
- Train in use of participatory techniques.
- Develop tested procedures for women's involvement.
- Adapt technical procedures.
- Integrate established approaches in National System - to the community approach.

59. Large projects are mostly carried out as part of external intervention and sometimes with the involvement of agency managed systems - participation of users is mainly focused on local designs, preventive work in operation and maintenance.

60. Community managed systems - local capacity must be built and strengthened to maintain and manage completed water systems and improve local sanitation and hygiene.

61. Women's participation does not isolate or alienate them; using the gender-balanced approach, both men and women address the issues of involving women in large projects without ignoring the gender differences and identify a number of major issues concerning women's participation in water and sanitation projects in societies undergoing rapid transformation.

#### B. Involving Women in Community Self-Improvement

62. Benefits of involving women in community self-improvement programme:

- Expansion of improvements to as yet unserved areas;
- Use of existing resources and know-how;

- Lower capital and recurrent costs;
- Use of traditional maintenance and management systems;
- Enhancement of 100% use of safe water and sanitation;
- Increase of national coverage.

C. Involving Women in Needs Assessment

63. - Social feasibility study in field (communication with the community is part of the early stages of mobilization to involve men and women). Use interviews, participant observation, women's meetings;
- Women on study team;
  - Informal communication with women;
  - Contacts with low-income women (may not be represented in the neighborhood meetings, so other ways of obtaining their views will have to be found).

D. Involving Women in the Local Planning Process

64. - Support local leaders for women's involvement;
- Facilitation of women's meeting attendance;
  - Separate meetings with women if necessary;
  - Assistance to women to speak out;
  - Women choose trusted representatives (as part of the democratic process).

E. Involving Women in Technology Choice and Local Design

65. - Discussion of sustainability of technology (cases of rejection of water and sanitation facilities are not uncommon - women should have a say on what they can use, manage and maintain);
- Appropriateness of service level - (technologies should be adapted to small scale applications suitable for community participation and management);
  - Acceptability of service level - costs - how much they will be willing to pay;
  - Acceptability of location and design facilities (women have local knowledge of water sources; let them decide on sharing arrangements);
  - Need for additional facilities (eg. laundry, bathing, etc);

- Discussion of design, management, financing of additional facilities.

#### F. Involving Women in Planning and Implementation

66. - Contribution of women to construction - (provide tools, provide food for labour, provide paid or free labour, give views on sites);
- Role of women in managing self-help:
  - Grassroots work - based and women's organizations seen as potential areas where both men and women can be mobilized to work towards their needs;
  - Local maintenance of arrangements, including role of women as operators (arrange training for women) and ensure women are represented in local water committee;
  - More suitable management system including role of women (organize more effectively to meet women's needs);
  - Locally appropriate financing system, including role of women.

67. Women's participation does not confine them to a separate section, but is integrated into the mainstream activities where men and women are jointly involved (adequate care needs to be taken to ensure poor women are involved too) from the initial design to monitoring systems and evaluation.

#### Project Plans

68. No blueprint approach in project planning - leave ample space for learning from experiences depending on the reaction and cooperation from people. "Development is a learning process". Reviews and appraisals should be undertaken periodically and must include recommendations to improve the integration of women's recommendations. They should be included in the national strategies plans of action to identify changes necessary to eliminate constitutional, legal, administrative, cultural, behavioural, social and economic barriers to women's full participation.

#### Conclusion

69. Pertinent water supply and sanitation issues as they relate to gender were discussed. It is evident that programmes and projects involving women should be created around the notion that the high level of burden, which women bear, calls for change and improvement of the infrastructure around them, be it housing, water supply, transport and child care, to mention only a few. Policy should not be created around the notion that women are a homogeneous category; factors like culture, level of economic development, ethnicity, etc., differentiate the strategies that will be used in mobilizing women to be involved in programmes.

70. The role of women in water supply and sanitation is enhanced by formulating more active roles for women not only as beneficiaries but as partners and actors in development. The roles must be operational after giving women access to relevant information and training.

71. Women's organizations and groups should be supported as they mobilize women and communities in improving traditional water and sanitation systems, so the improved systems contribute to better community health. Strategies to implement the involvement of women should be formulated and implemented.

72. It is hoped the presentation of Module II participants with an introduction of how gender plays a key role in determining the ways in which both men and women participate in programmes. It is also hoped that the emphasis on certain critical interventions will help ensure social recognition of and support for women's distinct contribution towards water supply and sanitation systems.

73. Following the presentation of Module II, participants discussed the various aspects of women's involvement. After discussion participants divided into three working group sessions and addressed the following questions:

- a. What are the present problems women face at all levels of water supply and sanitation projects and programmes?
- b. What actions/mechanisms would you suggest for more effective involvement of women in WSS projects for Guyana?

A. Report of Group I

Question (1)

- i. Lack of training in WSS projects;
- ii. Need for more education/training for women at various stages of water projects;
- iii. No existing technical institutions for training in rural areas;
- iv. Lack of finance for women to work in the projects;
- v. Deprivation of opportunities by husbands;
- vi. Existing government policies do not involve women;
- vii. Sexual harassment by male employers;
- viii. Single parent families;
- ix. Overcoming religious beliefs to involve women.

Question (2)

- i. There is a need for formation of community development groups;
- ii. There should be training in technical fields for women, such as on-the-job training;

- iii. There should be involvement of women in all aspects of project, from planning to evaluation and monitoring;
- iv. There is a need for attractive salaries for women;
- v. There is a need to create awareness and sensitize men that women should be involved in policy-making level.

B. Report of Group II

Question (1)

- i. More women should be involved in needs assessment and project planning;
- ii. Women's opinions are often ignored or overlooked;
- iii. Women lack expertise in project planning, development and execution;
- iv. There is a communication gap between women and decision making;
- v. There is no feedback mechanism for project monitoring;
- vi. There is a lack of coordination among women's groups;
- vii. There is a negative attitude brought about by dependency on state interventions;
- viii. There is a huge bureaucratic procedure with funding agencies.

Question (2)

- i. Women's organizations should be given effective recognition and support to execute their mandates and programmes;
- ii. There should be government policy to include women's groups in project identification and appraisal;
- iii. There is a need for capacity building at all levels of women's organizations;
- iv. There is a need for effective triangular flow of information between government and people of project planners;
- v. There is a need for realistic post-project maintenance strategies;
- vi. There is a strong need for more seminars and workshops;
- vii. There should be government accountability to the project beneficiaries;
- viii. There is a need for strong improvement of women by women's organizations;

- ix. There is a need to train young girls and women to be more action-oriented within their communities.

C. Report of Group III

Question (1)

- i. There is minimal involvement of women and decision-making at the community and national levels;
- ii. There is absence of clear policy for the involvement of women in WSS Projects at national level;
- iii. There is lack of skills training for women as well as access to information;
- iv. There is a need to overcome the existing socio-cultural norms, perceptions and traditions toward women;
- v. There is an attitudinal problem to leave everything to the government to solve. The government is not in a position to solve all the problems;
- vi. There is a tendency to link water projects and policies toward elections and political benefits;
- vii. There is a time constraint by women to be involved in various activities.

Question (2)

- i. There is a need to include women in the government policies at all stages of WSS projects;
- ii. There is a need to develop motivation of women through training;
- iii. There is a need to sensitize men to change attitudes and perceptions toward women;
- iv. There is a need to use simple, affordable and appropriate technologies;
- v. There is a need to establish and link women's groups and networks at all levels.

**G. Technical Session IIa: Presentation and Discussion of  
UNICEF Experiences in  
Involving Women in the Water and Sanitation Sector in Guyana**

74. The presentation of UNICEF experiences in involving women in the water supply and sanitation sector in Guyana was made by Mr. Karan Singh, Programme Officer, UNICEF.

75. Mr. Singh thanked the organizers of this workshop for the opportunity to share with them some of UNICEF experiences in the water and sanitation sector in Guyana. UNICEF had always advocated the importance of water and sanitation programmes especially in developing countries as millions of children

die each year due to the lack or shortage of water and adequate or satisfactory means of sanitation. UNICEF also recognized the responsibilities that women had to provide their families with this basic essential commodity. The situation in Guyana was indeed alarming as over the years the sufficiency and reliability of both water and sanitation diminished to the extent that experts have reported that only about 35% of the population receive water and only 60% have access to some form of sanitation. Even these figures are questionable as there is no monitoring system in place and no testing is undertaken to determine the potability of water. With respect to sanitation the situation is even more alarming as even the urban areas suffer, among other problems, from poor excreta disposal, blocked drains and garbage piles with very little health education provided to the community. Many donor agencies including UNICEF recognize the burden being placed on women and children to meet the demand for their families. Children are kept away from school and, at a very tender age, are required to transport water. Many of these children are exposed to traffic hazards when pushing water carts and fetching containers that are too big for them. Statistics show that many children become victims of road fatality.

76. Women also spend a lot of time transporting water. This is a time-consuming customary responsibility that uses a lot of their time which could be better utilized if these women had a close and reliable water source. Many women hold full time jobs to supplement their domestic income but still have to fetch water after a day at work.

77. The Water Authority was responsible for sanitation and the Ministry of Health, through the Public Health Department, was responsible for the rural sanitation programme. The sanitation situation, however, was quite poor. In urban Georgetown, the streets and pavements were lined with garbage piles covered with flies, insects and rats. The city drains were clogged with garbage and were not cleared for long periods. Short periods of rainfall resulted in heavy flooding and exposed the population to the dangers of diseases. There was also the frequent threat of fecal contamination of the water supply. In rural areas, there was a lack of discipline and education in basic hygiene and sanitation practices. In some communities, residents used the tribal practice of defecating in the bushes, water streams and open pastures and ignored the habit of hand-washing. There were others who had poorly constructed latrines which were abandoned because they were infested with flies, offensive smelling and prone to regular flooding during rainy seasons. This caused many, particularly children, to become ill from water borne disease. Drainage in some rural areas was also poor. There were no regular guidelines regarding garbage disposal in the rural areas. Some people buried while others burnt; yet others simply dumped their garbage indiscriminately due to the lack of simple information and education. The above presents a picture of the waste and sanitary situation in the country. It was really a miracle, pointed out Mr. Singh, that the infant and child mortality figures were not higher than their current status.

78. UNICEF's involvement in the WATSAN sector goes back to the early 80s. Mr. Singh pointed out that as he had worked with both the Water Authority and UNICEF, he was familiar with the situation from both perspectives. He shared UNICEF's experiences which he believed would help formulate new strategies to help improve WATSAN in the country. UNICEF's support was twofold:

- a. To support the national agency to upkeep the aging water systems in the populated areas on the coast through the provision of essential spares and other equipment. While funding was not large enough to have significant impact on its own, it complemented what other donors were contributing.
- b. With the assistance of the donor committee, assist with small community projects, using low cost and appropriate technology.

### What were the Constraints

79. The constraints that evolved during the past years were many and they varied from location to location. I have summarized these as follows:

- i. The provision of adequate technical data for procurement of equipment and spares - this caused long delays in purchasing materials;
- ii. The limited technical capacity of the water authority prevented them from being able to provide answers to technical questions which could not be answered by non- technical people;
- iii. Extremely poor management at various stages of project implementation - this is also due to the result of unskilled staff and low staff morale;
- iv. Lack of proper coordination among the agencies involved;
- v. Logistical problems as some locations were very difficult and expensive to access - even the availability of transport was scarce;
- vi. Lack of community support - in most communities participation was very minimal if any at all;
- vii. Theft - the result of lack of participation and education.

### Lessons Learnt

80. Through the years of working with both agencies, many lessons were learnt. Some of these lessons are presented below:

- i. The attempt to inject gender awareness was not fully successful and perhaps new approaches and strategies need to be examined;
- ii. Proper planning must involve decision makers at all levels including the beneficiaries, especially the women's groups;
- iii. Consideration must be given to both the strength and weaknesses of the community groups and to evaluation before deciding to embark on the project;
- iv. Consideration must be given to the sustainability of the project - who is going to provide maintenance services, recurrent expenses, etc;
- v. Consideration should be given to cost recovery mechanisms;
- vi. Training, especially women, in the skills relevant to the needs of the project;
- vii. Paying attention to sanitation and health education.

81. Following Mr. Singh's presentation, participants discussed the problems encountered in their communities while implementing water supply and sanitation projects. The participants felt that the

Guyana Water Authority often planned or implemented programmes without the consultation of the community. They further agreed on the absence of an adequate assessment of community needs regarding water supply and sanitation projects. Many group members felt the water tax rates did not promote water resource management nor had been systematically collected.

78. The participants agreed that the communities should be the watchdogs of community water supply projects.

80. Participants further agreed that increased technical support from the Guyana Water Authority and other non-governmental organizations was essential.

#### H. Technical Session III: Presentation and Discussion of Training Module III: Role of Women in Hygiene Education and Training Activities for Water Supply and Sanitation

81. Module III, on the Role of Women in Hygiene Education and Training Activities for Water Supply and Sanitation was presented by Ms. Vanda Radzik and Ms. Joseline Dow, Resource Unit, Red Thread Women's Development Programme.

82. Ms. Radzik began her presentation by pointing out that water and sanitation are the pillars of the environment. As women are the primary users of water, they have triple roles: as producers who depend on water, reproducers who require water for basic survival and community managers.

83. One of the main problems faced by developing countries is that relating to water and sanitation diseases. Water-borne diseases are also a major cause of high-infant mortality; approximately five million children die annually from diarrhoeal diseases worldwide.

84. The scarcity of water is a major factor in the transmission of diarrhoeal diseases, and that bacteriological contamination of drinking water is another important cause of transmitting diarrhoeal diseases. Furthermore, dracunculiasis affects some 10 million persons each year. Another severe disease is schistosomiasis, which often affects women and girls owing to their constant contact with water. She stated that it is, therefore, of crucial importance to train women in hygiene education and its related activities in water supply and sanitation in order to ensure the proper use of water and its maintenance. Improvements in practices of excreta, waste and liquid waste disposal are also essential for raising standards of public health.

85. Furthermore, involving women in health education programmes, not only as trainees but also as planners and trainers is of the utmost importance in water and sanitation programmes. In the families, women are the main providers of health care, while in communities, women function as birth attendants and transmit information.

86. Women's organizations can play a substantial role in helping rural and low-income urban communities improve local hygiene conditions and practices. In working with women's groups and organizations, two basic approaches can be defined: those that aim at the development of individual knowledge and skills, and those that aim at the development of analytical capacities and groups-building.

87. With regard to training activities in water supply and sanitation projects, she pointed out that training must be carefully planned in order to ensure that trainers are actually able to use their newly acquired skills. The participation of women in the field of water could be greatly increased through education, training and participation in WSS projects.

88. The analysis of human resources and training needs in the water sector is a complex undertaking, as it involves not only the supply of trained human resources, but also an analysis of overall WSS and rural development plans, as well as an analysis of the national and international sources from which such training may be available.

89. Ms. Dow elaborately presented the concept of sustainable development and explained to the participants Agenda 21 and its purpose at the national level. She used various examples from within the country to explain the interlinkages between women and sustainable development.

90. Participants welcomed her presentation as few of them were aware of UNCED and Agenda 21. Through her practical examples, the participants understood the significance of the centrality of women's role in Agenda 21 and sustainable development.

#### Report of Group I

##### Question (1)

Why is it important to include health/hygiene education in WSS projects?

- i. Training provides the vehicle for effective use of sanitary facilities;
- ii. Inculcate habits which are conducive to the maintenance of a healthy society;
- iii. It educates members of the community as to why hygienic practices must be adopted in the use of WSS facilities;
- iv. Effective training will promote the consciousness and the motivation to maintain the facilities.

##### Question (2)

What are the roles of women in health/hygiene education?

- i. Because women deal with the above issues, they should be:
  - a) the educators within the family structure and community;
  - b) the broker linking family members in what is happening outside and with the facilities;
  - c) the facilitator to encourage participation of the household in all aspects of the planning process for the community as it relates to WSS;
  - d) activists who participate in the movement for positive or negative changes.

Question (3)

What are the main steps in the management of training activities of a WSS project? Indicate women's role in each step.

- i. Women must assist in identifying training needs and training components of the project. Each training programme must specify an objective, a target group and the specific information to be passed on;
- ii. Women can assist in determining the availability of resource needs such as financial, human resources, and structural;
- iii. Women can help tailor programmes to ensure that they are a reflection of the objectives;
- iv. Women can assist in providing logistics, mobilizing community members, and disseminating correct and accurate information;
- v. Women can help to determine a strategy for implementation, monitoring and evaluation;
- vi. Women should participate in programme modification;
- vii. Women can provide a feedback mechanism.

Question (4)

Which constraints prevent participation of women from in-training programmes for WSS projects?

- i. Lack of time;
- ii. Lack of opportunity;
- iii. Lack of support from the household and family;
- iv. Lack of confidence;
- v. Lack of communication with other women and families;
- vi. Lack of transportation to site;
- vii. Impractical location of training.

## Report of Group II

### Question (1)

- (1) It is important to include health/hygiene education in WSS Projects in order to create and enhance awareness of these areas in our daily lives, from the family and community levels to the national level.

### Question (2)

- i. The role of women in health/hygiene education is to serve as:
  - (a) providers of health care for families;
  - (b) environmental educators in the home;
  - (c) decision makers of the type of produce to buy;
  - (d) decision makers of the method of disposal of domestic garbage;
  - (e) providers of water and sanitation practices; and
  - (f) promoter of proper hygiene habits;
- ii. In their communities, women may deliver health services through religious and women's organizations.

### Question (3)

- i. The main steps in the management of training activities of a WSS Project include the following:
  - (a) women should be included in identifying the trainers and participants;
  - (b) needs and priorities need to be defined;
  - (c) objectives are set;
  - (d) to ensure that financial and logistical resources, i.e. transportation etc., are available;
  - (e) programmes are planned;
  - (f) programme implementation;
  - (g) programme monitoring; and
  - (h) programme evaluation.

Question (4)

- i. Constraints that prevent the participation of women in training programmes for WSS Projects include the following:
  - (a) household chores;
  - (b) lack of interest;
  - (c) accessibility;
  - (d) the issue of gender; and
  - (e) the relevance of qualifications, background, i.e. technical.

Report of Group IIIQuestion (1)

- i. To show the risk of poor hygiene through contracted water related diseases;
- ii. To develop an understanding that pure wholesome water can prevent these diseases from occurring;
- iii. Education would teach community members to take care of the facilities and to avoid wastage;
- iv. To develop health habits based on personal hygiene;
- v. To develop confidence amongst community members regarding the project.

Question (2)

- i. Women are the first level educators in the family;
- ii. Women are the most accessible group for receiving training for transfer to the community;
- iii. Women as the main managers of the home, help enforce health and hygiene education;
- iv. Women, as the main providers of water, can influence health and hygiene education.

Question (3)

- i. Identify properly qualified trainers;
- ii. Finance and other resources;
- iii. Selecting suitable trainers, including women;

- iv. Selecting the most suitable time and place for training activities, giving special regard to women's needs;
- v. Ensure adequate logistics are in place, for example, transportation;
- vi. Advocate an effective monitoring of projects involving women;
- vii. Meaningful evaluation procedures at the end of each completed WSS project;
- viii. Follow-up programme applications and refresher training.

Question (4)

- i. Time constraints in relation to completing daily tasks;
- ii. Financial constraints and lack of incentives;
- iii. Cultural and traditional constraints;
- iv. Inadequate communication between women and between men and women;
- v. Lack of awareness of training activities;
- vi. Lack of support from family members and husbands.

**I. Technical Session IV: Presentation and Discussion of  
Training Module IV: Participation of Women in Management of  
Water Resources, Water Supply and Waste Disposal**

91. Module IV, relating to the participation of women in the management of water resources, water supply and waste disposal, was presented by Ms. Lolita Roopnarine and Mr. Francis Chale.

92. Ms. Roopnarine started her presentation by explaining objectives of the module and the water availability in Guyana. She pointed out that most water in the ocean is not used as potable water supply. In Guyana, ground and surface water are available. There are two aqua systems: A sand and B sand. A sand is 700 below ground level and B sand is 1200 below ground level. She explained the hydrological map of the water cycle.

93. Ms. Roopnarine explained the purposes and objectives of water resource development which included a demand for water; further that the functions of water resource projects consisted of:

water supply for rural, municipal and industrial uses; water supply for thermal-electric power plant; irrigation; flood control and damage prevention; hydroelectric power; water quality management, etc.

94. Water resource management is a balance between supply and demand of water resources, and that there must be monitoring and control of water resources. Guyana falls within this balance as water is constantly being extracted far more than it is being replenished.

95. Ms. Roopnarine pointed out the difference between supply and demand management. She explained that demand management is ways in which water is used and the various tools available to promote desirable levels and patterns of use. Water supplies that are developed must be maintained, otherwise it causes more damage than good.

96. Guyana's water extraction is not being monitored at all. An example of Turkeyen area and University of Guyana where water is being wasted. In Georgetown, 20 million gallons of water were being produced and the actual need is 6 million gallons per day. In conclusion, Ms. Roopnarine stated that there was a need for demand management.

97. Mr. Chale presented the roles of women in water and sanitation management. He defined the roles of women in low income urban areas and in rural areas. In the low-income urban-areas, women are members of local committees that manage communal taps or sanitation facilities; that they are organizers and managers of water vending and that they act as organizers and managers of neighbourhood water supplies and sanitation systems. In rural areas where women are involved as managers of communal water points, they are concerned with drainage and hygiene, proper use of taps and pumps, prevention of damage by children and livestock. Where women have been included in maintenance, it is basically in preventive maintenance and the preservation of site hygiene. However he pointed out that at present women are still excluded from both environmental and river basin development projects. He highlighted the advantages of involving women:

- \* More effective projects through use of women's knowledge and commitment;
- \* additional income earned by women;
- \* improvement of women's self-image and contribution to the reduction of unplanned negative project effects on environmental resources.

98. Mr. Chale also explained economic tools for demand management, such as water tariffs, tools for domestic demand and community financing and financial management. He concluded by stating that women and men have to be equal partners for water related activities.

### Group Work

The participants discussion on the contents of Module IV focussed on how women could be involved the water resource development planning stage. Their responses are presented below:

- i. Women should be involved in the management of water in homes;
- ii. Generally, men are in charge of water wells, thus, creating a lack of self confidence among women in water related projects;
- iii. Men should be more responsible for allowing women into water related projects;

- iv. Women are already overburdened by daily activities. This, therefore, decreases the amount of time available for participation in water projects.

#### Problems with Water Technology

- i. Inadequate water distribution system at central level;
- ii. The community has no confidence in the existing system;
- iii. The equipments installed usually have simple missing parts;
- iv. There is a need for a decentralized approach between governments and community;
- v. There is a lack of linkage between reservoirs and the existing distribution system;
- vi. There is a lack of operation and maintenance of existing systems;
- vii. There is a lack of continuous water source;
- viii. There are no spare parts for projects that break down;
- ix. There is little collaboration with relevant agencies (i.e. energy and water);
- x. Some pipelines are damaged by animals or stolen;
- xi. When the river is the only source of fresh water, dry seasons create droughts and floods cause possible water-borne diseases, such as cholera outbreaks during the rainy season;
- xii. There is a need to spread a message for preservation and conservation of water;
- xiii. There is a lack of services and central plans for water projects.

#### Recommendations

- i. Financing must be provided for technological training;
- ii. An improvement of salaries may create incentives for training;
- iii. Installation management must be semi-private;
- iv. Semi-privatization will create a sense of ownership;
- v. There should be a two-way flow of communication between agencies and the local government.

**J. Technical Session V: Presentation and Discussion of  
Training Module V: Women and Waste Management**

99. Module V, relating to women and waste management was presented by Ms. Mary Liao, INSTRAW consultant and a co-writer of the module.

100. Ms. Liao pointed out that the training seminar in Guyana, provided an excellent opportunity to test the recently completed INSTRAW training module, Women and Waste Management. A brief introduction to the objectives of the module was given with emphasis on the fact that the module was not a technical document outlining technological options for waste management but that the module revolved around the need to sensitize decision makers, government officials, external support agencies, trainers, engineers, and non-governmental organizations of the need to more fully involve women in every aspect of the waste management process. The structure of the module and sub-modules was explained and the flexibility of the module was highlighted. Ms. Liao cautioned the participants that while the module was intended to sensitize participants about the linkages between women and waste management both at a conceptual level and, with the aid of discussion questions and case studies, at a locale-specific level, it was not intended to provide a step-by-step "how to" guidelines on including women in waste management projects.

101. For the particular needs of the participants in Guyana, the second and third submodules on Women, Waste Management and Environment, and Women, Water and Environmental Sanitation were presented. Submodule II, Women, Waste Management and Environment, provided a definition of waste management and a summary of the seven components of the waste management process, including sanitation, solid waste disposal, liquid waste disposal, gaseous wastes, industrial wastes, hazardous and toxic wastes and waste reuse. It also provided an introduction to the concept of the involvement of women in the waste management process. It was emphasized that women play a central role in safeguarding the health of the family and as such have a deep concern in maintaining a clean environment in which to live. A number of case studies accompanying the module were presented to show participants the ways in which women have been involved successfully in waste management projects.

102. Sub-module III, Women, Water and Environmental Sanitation was presented in the next hour. The term environmental sanitation was defined and broken down into its six components, including water hygiene and consumption of safe water, human waste disposal, safe waste water disposal and drainage, proper solid waste disposal, proper personal hygiene behaviour and food hygiene. The reasons why environmental sanitation, as part of the whole waste management process was considered important was discussed. Water supply and sanitation systems will deliver the health benefits for which they were designed. Thus women in their traditional roles as care givers and managers of household and family health and hygiene behaviour patterns are at the centre of any water supply and sanitation interventions.

103. The main behaviour patterns which affect environmental sanitation conditions within each of the five behavioural domains of health and hygiene interventions (disposal of human wastes, use and protection of water sources, water and personal hygiene, food hygiene, and domestic and environmental hygiene) were presented. The roles that women can play in environmental sanitation projects were outlined and case studies were used to illustrate these roles.

104. A number of questions for discussion were selected and given to the participants in the group work session. The participants were asked to give some thought to these questions both individually and in the assigned groups.

105. During group work session, the questions were discussed. Many experiences, problems and issues, both, at a conceptual level and at the field, project and locale-specific level were brought forth.

- \* What are the main problems of waste management in your country?
- \* Are you familiar with any waste management projects in your country (in liquid waste, human waste solid wastes, etc.)?
- \* a. Were women involved in these projects? In what capacities?
- b. What constraints, if any, did women and communities face in obtaining improved waste management systems? How were these overcome?
- c. Were women and communities involved in the selection of the technologies used in this project?
- \* What are the main responsibilities that women have in environmental sanitation activities in your country?
- \* What are the main responsibilities that children and men have in environmental sanitation activities in your country?
- \* What would be needed in Guyana before:
  - a. the need for waste management activities and waste management project gain more recognition?
  - b. should more waste management projects be implemented?
  - c. can women and communities take on central roles in these work management projects?

### Group Discussion

#### Group 1

What are the main problems in waste disposal and waste management in Guyana?

- i. Lack of adequate finances
- ii. Careless bureaucratic officials in charge of waste disposal.
- iii. No proper site for dumping.
- iv. Corruption via bribes of various agency personnel.
- v. Management - poor or insufficient.
- vi. Lack knowledge of recycling.

The participants reported that:

- \* Officially, garbage is suppose to be taken to a dump but this never happens. No money means insufficient staff, trucks, etc. Dumps are then allowed to grow and become health and road hazards to the community. They also attract scavengers and homeless persons.
- \* Dumping is also done in rivers destroying water supply and sea life. This then leads to water being taken from local springs or unaffected rivers.
- \* Mining has affected the rivers causing mercury and all other forms of pollution.
- \* The overall lack of public awareness in environmental concerns and practices only exacerbates the problem.
- \* Overall, there is no mechanism or system in place for waste management.

### Group 2

Are you familiar with any water management projects in your area?

- a. Were women involved in the projects? In what capacities?
- b. What constraints, if any, did women and communities face in obtaining improved waste management systems? How were they overcome?
- c. Were women communities involved in the selection of the technologies used in the project?

The participants concentrated on interior location projects. Women were involved in decision-making management and implementation of a project. In the development stage of this project, 90% of the participants were women.

One community targeted the problem of accumulation of garbage in a school yard. The community organized to build a pit area where garbage can be burnt.

In another project, women were involved in the selection of the technology for a simple project.

Overall, women were involved in local waste management projects with the goal of creating a healthy and safe community for themselves and others.

### Group 3

What are the main responsibilities that the following have in environmental sanitation activities in Guyana?

- a) women
- b) men
- c) children

- i. Families, including women, men and children, should be aware of their environmental responsibilities, especially as they relate to waste management, such as being responsible for rubbish in the yard, cleaning solutions for the house, insecticides used to keep the flies out and maintaining proper sanitation practices.
- ii. Men are responsible for providing the structure or facility for fecal disposal. Men are also responsible for cleaning the septic tank.
- iii. Women and children are responsible for keeping the facilities clean after they are provided by the men.
- iv. Men are also responsible for biogas systems for fecal matter, i.e. recycling waste for cooking gas.

#### Group 4

What measures would need to be taken in Guyana before:

- a) the need for waste management activities and waste management project gain more recognition?
- b) more waste management projects become implemented?
- c) women and communities take on central roles in these work management projects?
- i. Financial resources are needed before waste management programmes are implemented. Money is needed to finance and maintain the projects. The need for waste management is recognized.
- ii. Communities need to be better educated in proper waste management disposal.
- iii. Central roles must be assigned for women in the waste management of communities. Then women must be trained so that they educate others in the community. People must be trained for waste management activities in order to sustain themselves.
- iv. The fastest way to educate children is through the schools.
- v. There exists the need to identify safe waste disposal sites.
- vi. Improved technology in waste management is also needed; for example, in Guyana, incinerators take only certain materials, everything else is landfilled. Improved technology would help to manage waste disposal systems better.

106. A video entitled "Cover-up" was shown after discussions of the module on women and waste management which focused on problems of the waste management in English-speaking Caribbean countries.

**K. Technical Session VI: Presentation and Discussion of  
Training Module VI: Evaluation and Monitoring of Water Supply  
and Sanitation Programmes and the Role of Women**

107. Module VI, relating to the evaluation and monitoring of WSS programmes and projects and the role of women was presented by a representative of INSTRAW, Ms. Borjana Schieber, Social Affairs Officer.

108. Ms. Schieber explained the conceptual difference in approaches to evaluation in the 1960s and in the 1980s. In the 1960s, evaluation was donor-oriented and limited to identification of beneficiaries and to cost-benefit analyses with a bias towards cost. Projects did not involve beneficiaries; there was inflexibility in execution and a lack of monitoring and evaluation. By the 1980s, evaluation was expanded to include the benefit side and a number of issues were addressed, such as: what to measure, how to collect information at a reasonable cost and in a timely manner, and who should undertake it. As a result, the question of how to build gender-sensitive evaluation into project design was raised since, by and large, women's concerns had not been built into programme project design.

109. Ms. Schieber pointed out that INSTRAW had organized the consultative meeting on "Evaluation methodologies for Programmes and Projects on Women in Development (WID)" to discuss the evaluation of programmes and projects, both mainstream and women-specific, with a view to promoting the integration of women in all aspects and phases of mainstream programmes and projects and to enhance the effects of women's projects on development. One of the crucial components of evaluation methodologies for WID was the principle of economic analysis of projects and programmes. There was a difficulty in applying cost-benefit analysis with precision as there were a number of WID programmes and projects that had been evaluated as too costly in terms of narrowly conceived cost benefit analysis, without taking into account the wider socioeconomic objectives and developmental change advocated by WID approaches.

110. Further, areas for improvement of evaluation methodology for programmes and projects on WID were elaborated, which included: effect/impact analysis; data bases; cost effectiveness of data collection; types of expertise and evaluation; human/cultural factors in evaluation; purpose of evaluation; institutional constraints; sustainability and community-based approaches.

111. Ms. Schieber explained the difference between functions of evaluation and monitoring of water supply and sanitation projects. Evaluation, she explained involved the assessment of the achievements of a project and of the activities, methods and financial inputs by which these achievements had been reached. Evaluation was carried out at specific points in time in the project cycle, e.g. at the end of a pilot stage, at mid-term and at the administrative end of a project. It consisted of the scheduled collection of information on project management to follow the progress of the project, to assess users' reactions, to keep track of trends and new developments and to collect factual data as inputs for periodic evaluations. She further explained the differences between conventional and participatory evaluations and the purpose of participatory evaluations.

112. With regard to evaluating women's involvement in water supply and sanitation projects, Ms Schieber elaborated a checklist on how to involve women in project preparation, planning, implementation, training and evaluation, and follow-up. She pointed out that evaluation of benefits in water and sanitation projects had two dimensions: assessment of the impact of projects of the users and the impact which women's involvement had on the projects. Improved water supply and sanitation projects had many benefits for women, such as: reduction in the time and energy consumed by water

collection; easier management of their daily tasks; and greater use of water for cooking, cleaning and small scale production. On the other hand, however, projects might have negative impacts on women, such as: serious social and economic consequences; and greater involvement of women in carrying out the full burden of installation, maintenance and repair.

113. The INSTRAW representative pointed out that one of the new emerging trends was the evaluation of project sustainability. That meant assessing or measuring "the ability to keep up the establishment, functioning, use and benefits of improved facilities and practices without detrimental effects on the environment, also after special assistance has been phased out". As no community remained static, sustainability could only be achieved by strengthening problem-solving capacities in communities and by addressing changes in demand, interest, capabilities, finance, natural resources and policies. The key in this process of achieving sustainability was building human and institutional capacity in communities and partnership agencies.

114. Ms. Schieber stated that evaluating sustainability involved measuring capacities and development in four main areas: on-going implementation of functioning and used facilities and hygiene education by agencies and communities; development of human capacities at community and agency levels; building of institutional capacity in groups, communities and agencies; and continuation of inter-organizational cooperation.

115. Ms Schieber concluded by reiterating that evaluation and monitoring of water and sanitation projects had become important management tools. They served to improve the implementation of projects, and especially their effective life after completion of the installation operations. Project evaluation was becoming less of an external judgement tool on whether investments had been well spent and more a means of learning from programmes and improving project inputs and processes.

116. In both monitoring and evaluation, women and women's workers are important partners, as they have personal experience with local water and sanitation conditions, and much of the work involved is socio-culturally appropriate for them. She stated, however, that this partnership could only be effective when women's roles were taken into account in the design of evaluation and monitoring systems and provisions were made to enable them to participate.

#### Group Discussion of Module VI

##### Question (1)

What are the main concepts of community based evaluation and monitoring?

Participants felt that the following were important concepts in community based evaluation and monitoring.

##### Community level

- \* location and environmental effect of project;
- \* needs of community;
- \* type of project;
- \* finances for project;
- \* duration of project;

- \* who is responsible for managing the project;
- \* who will do the training;
- \* who will be in charge of security;
- \* defining needs assessment;
- \* identifying government responsibility;
- \* allocation of staff by community;
- \* people should be involved in projects in full-scale (employment);
- \* follow-up.

The participants agreed that the community's involvement was critical to the monitoring and security of water systems.

All agreed that the community should be involved in security, planning and implementation phases of a project; this means more women need to be involved. Further, the lack of cooperation with government officials and water agencies frustrate in any type of progress. Too much political interference and the lack of political will to cooperate with engineers, also prevents progress.

Ms. Schieber noted in communities that do not have an adequate literacy, alternative ways of documenting evaluation and monitoring will have to be devised.

#### Question (2)

How can the project's impact from women's involvement be improved?

- i. The participants commented that the women's and children's needs would be met.
- ii. With women's involvement, there would be easier access to water, which in turn would save time and allow women to participate in other activities, such as income-generation.
- iii. Water diseases and incidence of death would be reduced.
- iv. The standard of living would improve for all.
- v. Financial improvement would also result.
- vi. One participant commented that there would be greater access to education for young girls.
- vii. Women's involvement and training would result in water projects that are better maintained.
- viii. One participant noted that if children are trained to care for the water facilities, they will be better maintained as well.
- ix. Ms. Schieber noted that because women are the primary users of the water facilities, they are better able to maintain the facilities on a daily basis.
- x. One participant noted the importance of evaluating the execution of the water projects, in particular to evaluate GUYWA, which has overall jurisdiction of water projects in Guyana.

Further, it was noted that the links between project personnel and government officials were crucial.

- xi. The effective partnership between men and women for effective use of water supply and sanitation projects was seen as critical.
- xii. The benefit of women's involvement in water projects would improve the quality of family life.
- xiii. Women's participation in the projects should also include financial incentives.

The module analyses, along with the following pre- and post-questionnaires and findings, were compiled for INSTRAW by the following student researchers at the Robert F. Wagner Graduate School of Public Service, New York University:

Raquel Maysonet  
Matthew McGinley  
Caroline Tse

The student researchers accompanied Social Affairs Officer Borjana Schieber to the INSTRAW WWSS Seminar held in Georgetown, Guyana, on January 31-February 4, 1994. The students were also instrumental in helping to compile the summaries of presentations made for each module during the seminar.

## II. EVALUATION OF THE EFFECTIVENESS AND USEFULNESS OF TRAINING MODULES FOR WOMEN, WATER SUPPLY AND SANITATION

After the demonstration of each module the participants were provided with evaluation questionnaire forms for their assessment of the six training modules demonstrated during the workshop:

**Module I -** *The International Drinking Water Supply and Sanitation Decade (IDWSSD) and Beyond*

**Module II -** *Participation of Women in Planning, Choice of Technology and Implementation*

**Module III -** *Role of Women in Hygiene Education and Training Activities for Water Supply and Sanitation*

**Module IV -** *Involvement of Women in Management of Water Resources, Water Supply and Waste Disposal*

**Module V -** *Women and Waste Management*

**Module VI -** *Evaluation and Monitoring of Water Supply and Sanitation Projects, Programmes and Role of Women*

The Evaluation forms were filled by representatives of United Nations organizations and participants in local community groups and organizations with regard to:

1. The participants' professional interest in the particular topic included in the modular unit;
2. The clarity of the objectives of the module;
3. The extent of achievement of the above objectives;
4. Whether or not the module is well structured;
5. The appropriateness of the terminologies (whether they are easy or difficult to understand) used in the module;
6. The clarity and usefulness of the audio-visual material (slides and transparencies) used in the module;
7. The completeness of the checklist for the module with respect to its coverage of the subject;
8. The usefulness, simplicity and sufficiency of the checklists being provided;
9. The ability to impart new knowledge by each module;
10. The usefulness of the knowledge gained from the module in their present work;
11. The usefulness of newly gained knowledge in the near future;
12. The comprehensiveness, depth and level of interest of the topics contained in each module;
13. The necessary improvements of a particular training module to increase its effectiveness and usefulness.

The present evaluation is based on the analysis of the completed questionnaires received from the participants. These participants came from various local women's community groups, local and national water authorities, and various other local government organizations.

## A. EVALUATION OF INDIVIDUAL TRAINING MODULES

### Module I: *The International Drinking Water Supply and Sanitation Decade (IDWSSD) and Beyond*

Thirty-five responses were received for this module.

An analysis of the completed evaluation questionnaires by the workshop participants indicated that 77% of the participants had a very high interest and 23% had high interest in Module I. As regards objectives, 86% considered that the objectives were very clear, 9% considered they were clear, and 3% considered they were *not* clear. 25% of the participants felt that the objectives of the modules met all of their expectations, while 51% felt that only some of their expectations had been met.

As regards the contents of the module, 68% thought that they were extremely well structured and 2% thought they were well structured. With regard to the terminology used in the module, 80% thought that it was very easy to understand and 11% thought it to be easy.

In assessing the clarity and usefulness of the visual material (slides and transparencies) used during the presentation of the module, 22% thought that they were very clear, and 45% thought that they were very useful.

Regarding the completeness of the checklist in covering the subjects in Module I, 25% thought that it was very complete and 20% thought it was complete. Only 3% felt the checklist were *not* complete at all. Concerning the usefulness, simplicity and sufficiency of the checklist, 51% thought it was extremely useful, and 6% felt it was useful, 17% thought it was simple, and 20% thought it was extremely sufficient, while 14% thought it was sufficient.

With regard to enhancing the knowledge of the participants, 68% thought they had learned many new things from the module, and 11% thought they had learned new things. In addition, 28% thought that the knowledge acquired through the module was very useful, and 5% thought it was useful to some extent.

Among the list of topics which participants would like to have treated more extensively in Module I are:

1. Training and maintenance of water projects;
2. Financing and technology of water projects;
3. People and the environment;
4. Actual solutions to the problem of increasing women's involvement in water projects;
5. Participation, consultation and equality of women in water projects;
6. Education of both sexes, especially at early ages, toward women's role in water projects;
7. Different needs and concerns for women involved in water projects;
8. Lack of commitment and education at various levels;
9. Problems faced by women's involvement;
10. Training of trainers;
11. How to collect basic information from communities;
12. How successful water projects were established;

13. Qualities needed for local trainers;
14. How government officials may be further sensitized toward involving women in water projects;
15. Further discussion of ideal situations and what can be done in Guyana;
16. Training of women in rural areas;
17. How training programmes can begin;
18. How to encourage women to speak openly.

**Topics of particular interest to participants but not contained in Module I include:**

1. How to influence and change policy at the government level;
2. Re-education of men to include women at the decision-making level;
3. What alternative technologies for water generation are available or have been used in other countries;
4. General environmental impacts of poor water supply;
5. How to improve water and sanitation in the hinterland areas;
6. Using men to educate women;
7. Drawing away from cultural beliefs and adopting the present day norms in encouraging development, opportunity, and socialization of women in water projects;
8. Sexual harassment of women involved currently in water projects.

**Suggestions for improvement in Module I include:**

1. Use of practical examples of how water projects have been achieved in other countries through videos, speakers, etc.;
2. Use of more research experiences that INSTRAW or other UN agencies may have;
3. Continual training programmes every six months;
4. Visual aids and diagrams of other countries successes may be helpful;
5. Incorporation of the teaching aids into the module would have been more helpful;
6. More involvement of women as participants from the community level;
7. Providing some programme guidelines for participants to read prior to attending the workshop.

**Module II:** Participation of women in planning, choice of technology and implementation of water supply and sanitation projects.

Thirty-one responses were received for this module.

In evaluating the level of interest in Module II, 87% of the participants indicated very high interest and 13% indicated high interest in the module. As regards objectives, 96% felt that the objectives of the module were very clear and 4% felt they were clear. 48% of the participants considered that the objectives of the module met all their expectations, while 26% considered that only some of their expectations were met.

As regards the contents of the module, 87% thought that they were extremely well structured and 10% thought they were well structured. With regard to the terminology used in the module, 87% thought it to be very easy to understand and 6% thought it to be easy.

In assessing the clarity and usefulness of the audio-visual material (slides and transparencies) used in the module, 68% thought that they were very clear and 55% thought they were very useful. Only 6% thought they were useful.

Regarding the completeness of the checklist in covering the subjects in Module II, 61% thought that it was very complete, and 16% thought it was complete. Concerning the usefulness, simplicity and sufficiency of the checklist, 77% thought it was extremely useful, 16% thought it was simple, 23% thought it was extremely sufficient and 6% thought it was sufficient.

With regard to enhancing the knowledge of the participants, 65% thought they learned many new things and 19% thought they learned a few new things. In addition, 38% thought that the knowledge acquired through the module would be useful to them in their profession.

Among the list of topics which participants would like to have treated more extensively in Module II are:

1. Government strategies and policies for involving women;
2. How to increase the participation and cooperation of different players, all aimed at involving women in water projects;
3. Education and development for local communities;
4. Participation of women in planning and choosing technology;
5. The role of women's organization's in increasing women's participation in water projects;
6. How to increase the number of women in planning and training seminars;
7. Planning strategies at various levels;
8. Supporting local leaders to push for women's involvement;
9. Formal training for women in water engineering.

Topics of particular interest to participants but which were not contained in Module II include:

1. The role of women in the interior areas (hinterlands);
2. The role of women activists;

3. Planning of local management systems and maintenance;
4. Involvement of women in choice technology service.

Suggestions for improvement of Module II include:

1. Time should be given to the participant to study the module prior to attending the seminar;
2. The use of slides depicting case studies to reinforce the ideas/concepts of women's involvement of water and sanitation projects.

**Module III: Role of women in hygiene education and training activities for water supply and sanitation projects**

An analysis of the twenty-five completed questionnaire returns for **Module III** indicated that **88%** of the participants had a **very high level of interest** and **12%** had a **high level of interest** in **Module III**. As regards objectives, **100%** thought that the **objectives of the module were very clear**. **72%** responded that the **objectives of the module met all their expectations**, while **4%** stated that only **some of their expectations were being met**.

As regards the contents of the module, **92%** thought that they were **extremely well structured**, while **8%** thought they were **well structured**. With regard to the terminology used in the module, **80%** thought that it was **very easy to understand** and **16%** thought it **easy to understand**.

In assessing the **clarity and usefulness of the visual material (slides and transparencies)** used in the module, **51%** thought that they were **very clear and useful** and **8%** thought they were **clear and useful**.

Regarding the **completeness of the checklist** in covering the subjects in **Module III**, **64%** thought that it was **very complete**, **16%** felt that it was **complete**. Concerning the **usefulness of the checklists**, **88%** found the checklists **extremely useful**, while **4%** found it **useful**. Only **17%** found the checklists **too simple**, while **13%** found them **simple**. Regarding the **sufficiency of the checklists**, **63%** found them **extremely sufficient**, while **4%** found them **sufficient**.

With regard to enhancing the knowledge of the participants, **80%** thought they **learned many new things** and **16%** thought they had **learned some new things**. In addition, **84%** thought that the **knowledge acquired through the module was very useful**, and **8%** thought it was **useful to some extent**.

Among the list of topics which participants would like to have **treated more extensively in Module III** are:

1. The function and role of the family in development;
2. Women's role in the control of diseases;
3. Acquisition of finance for sustainable development, with special interest in women's development;
4. More in-depth coverage of the role of women in hygiene education;
5. Additional information regarding women as planners and trainers in relation to hygiene education and women;
6. The role of women's organizations relating to the subject matter covered in the module;
7. More discussion of Agenda 21 and the issue of sustainable development;
8. Additional discussion of the management of training activities for women;
9. More focus on rural and hinterland health issues.

Topics of particular interest to participants but not contained in **Module III** include:

1. The importance of ethnicity and race relations and development;

2. The role of the political system in terms of its interrelatedness with other subsystems and institutions;
3. Current health issues and women;
4. Ideas for project funding;
5. Hygiene education for young girls.

Suggestions for improvement of **Module III** include:

1. Relevant case studies of the role of women in hygiene education and training activities;
2. Highlights of presentations summarized;
3. Use of role play and demonstration to emphasize the importance of the module;
4. Ideas on how to improve the health of rural communities.

**Module IV: Participation of women in management of water resources, water supply, and waste disposal**

An analysis of the twenty completed questionnaire returns for this module indicated that **75%** of the participants had a **very high level of interest** and **25%** had a **high level of interest** in **Module IV**. As regards objectives, **85%** thought that the **objectives of the module were very clear** and **15%** thought they were **clear**. Half the participants said that the **objectives of the module met all their expectations**, while **5%** said they **met some of their expectations**.

As regards the structure of the module, **90%** thought that the module was **extremely well structured**, **5%** thought it was **well structured**, and **5%** thought it was **badly structured**. With regard to the terminology used in the module, **75%** thought that it was **very easy to understand**, another **20%** thought it to be **easy**, while **5%** thought the module was **hard to understand**.

In assessing the **clarity and usefulness of the visual materials (slides and transparencies)** used in the module, **65%** thought that they were **very clear and very useful**, **7%** thought they were **clear and useful**, while **5%** thought they were **somewhat confused and useless**.

Regarding the **completeness of the checklist in covering the subjects in Module IV**, **65%** thought that it was **very complete**, **15%** thought it **complete**, and **5%** thought it **somewhat complete**. Concerning the **usefulness of the checklists**, **80%** thought that it was **very useful**, while **15%** thought it **useful**. Regarding the **simplicity of the checklists**, **20%** thought that they were **too simple**, while **20%** thought them **simple**. Regarding the **sufficiency of the checklists**, **45%** found them to be **very sufficient**, while **10%** found them **sufficient**.

With regard to enhancing the knowledge of the participants, **80%** thought they **learned many new things from the module**, **15%** thought they **learned some new things**, and **5%** thought they **did not learn anything new**. In addition, **80%** thought that the **knowledge acquired through the module was very useful** and **15%** thought it was **useful**.

Among the list of topics which participants would like to have **treated more extensively in Module IV** are:

1. Case studies of waste disposal and waste management in Guyana;
2. More discussion of community-based training regarding water supply and sanitation projects.

Topics of particular interest to participants but not contained in **Module IV** include:

1. Women in small business as it relates to water supply and sanitation projects.

Suggestions for **improvement of Module IV** include:

1. Need for more contact with grassroots and community-based groups as it relates to the module;
2. More lively facilitators;
3. More in-depth study of issues of water supply and waste disposal;
4. Use of this module and training material in other parts of the country;

5. Relating the module to the problems of water resources management and waste disposal to Guyana;
6. Having participants read module material prior to its presentation.

**Module V: *Women and Waste Management***

An analysis of the nineteen completed evaluation questionnaires by the participants indicated that **84%** had very high interest and **16%** had high interest in **Module V**. As regards objectives, **89%** thought that the objectives of the module were very clear and **11%** thought the objectives were clear. **53%** stated that the objectives of the module met all their expectations, while **5%** said that only some of their expectations had been met.

**95%** of the participants felt that the module was very well structured, while **5%** thought the module was well structured. With regard to the terminology used in the module, **84%** thought that it was very easy to understand and **16%** thought it to be easy.

In assessing the clarity and usefulness of the visual materials (slides and transparencies) used in the module, **53%** thought that they were very clear and **10%** thought they were clear, while **58%** thought that they were very useful and **5%** thought they were useful.

Regarding the completeness of the checklist in covering the subjects in **Module V**, **63%** thought that it was very complete and **21%** thought it was complete. Concerning the usefulness, simplicity and sufficiency of the checklist, **79%** of the participants thought it was very useful, **16%** thought it was simple, while another **16%** thought it was too simple. **58%** thought the checklist was highly sufficient, while **5%** thought it was sufficient.

With regard to enhancing the knowledge of the participants, **95%** thought they learned many new things from the module, while only **5%** thought they learned nothing new. In addition, **95%** of the participants thought that the knowledge acquired through the module was very useful, while **5%** thought it was not very useful.

Among the list of topics which participants would like to have treated more extensively in **Module V** are:

1. Educate and train communities on proper waste management;
2. Specific training material for community groups;
3. Types and availability of compost units -- from basic to more technical;
4. More information on gaseous wastes.

Topics of particular interest to participants but not contained in **Module V** include:

1. Need for community participation;
2. Need for responsibilities of both community and authorities.

Suggestions for improvement of **Module V** include:

1. To involve more people in training;
2. Have more local case studies presented;
3. Easier reading materials, perhaps in pictorial form;
4. More video programmes of both successful and failed projects in other areas.

**Module VI: Evaluation and monitoring of water supply and sanitation programmes, projects and the role of women**

An evaluation based on twenty-nine completed questionnaire returns indicated that **93%** of the participants had a **very high level of interest**, while **7%** indicated **high interest in Module VI**. As regards objectives, **100%** thought that the **objectives of the module were very clear**. **62%** said that the objectives of the module **met all their expectations**, while **7%** said that **only some of their expectations** had been met.

As regards the contents of the module, **100%** of the participants felt that the module was **very well structured**. With regard to the terminology used in the module, **90%** thought that it was **very easy to understand** and **10%** thought it to be easy.

In assessing the **clarity and usefulness of the visual materials (slides and transparencies)** used in the module, **80%** thought that they were **very clear** and **69%** thought that they were **very useful**.

Regarding the **completeness of the checklist** in covering the subjects in Module VI, **76%** thought that it was **very complete** and **7%** thought it was complete. Concerning the **usefulness, simplicity and sufficiency** of the checklist, **100%** of the participants thought it was **very useful**, **14%** thought it was simple, while **17%** thought it was **too simple**. **45%** of the participants thought the checklist was **highly sufficient** and **7%** thought it was sufficient.

With regard to enhancing the knowledge of the participants, **83%** thought they **learned many new things from the module**, and **10%** thought they **learned some new things**. In addition, **100%** of the participants that responded felt that the **knowledge acquired through the module was very useful**.

Among the list of topics which participants would like to have **treated more extensively in Module VI** are:

1. How to evaluate and monitor;
2. Techniques of data/information gathering;
3. Management information systems;
4. Some practical ways in which women can be absorbed in training.

Topics of particular interest to participants but **not contained in Module VI** include:

1. How to set-up evaluation/monitoring exercises;
2. How to analyze the data gathered;
3. Evaluation of benefits to women resulting from their involvement in WSS projects.

Suggestions for **improvement of Module VI** include:

1. The visual material (slides) in video form;
2. The use of more visual materials;
3. Cassettes for participants to take to communities;
4. Case studies for analysis of concepts that were discussed.

## B. Overall evaluation of training modules

The usefulness and effectiveness of the training modules were evaluated based on the following indicators:

1. Level of interest shown by participants;
2. Relevance of objectives with regard to training needs;
3. Quality of content and structures of training modules;
4. Effectiveness of training modules as a media in imparting knowledge and experience; and
5. Clarity and understandability of the training material.

### 1. Level of Interest

An analysis of the completed questionnaires returns indicated that over **85%** of the participants had a **very high interest in all the modules**, while the remaining indicated **high interest**. In general, all participants of the workshop showed keen interest in all six modules as can be judged from a large number of innovative and useful suggestions proposed by them to improve the effectiveness of the training modules.

### 2. Relevance of objectives with regard to training needs

The views of participants with respect to the level of fulfillment of their expectations by the objectives of the modules are summarized below.

Extent to which expectations are being fulfilled  
(Figures indicate % of participants)

	<u>All Expectations</u>	<u>Some Expectations</u>	<u>No Response</u>
Module I	25	51	24
Module II	48	26	26
Module III	72	24	
Module IV	50	5	45
Module V	53	5	42
Module VI	62	7	31

### 3. Quality of content and structure of training modules

The usefulness of the contents of the module to their respective professions were rated by the participants as follows:

Percentages of Participants (%)  
(Figures indicate % of Participants)

	<u>Very Useful</u>	<u>Useful</u>	<u>Not Useful</u>	<u>No Response</u>
Module I	28	5	--	67
Module II	--	38	--	62
Module III	84	8	--	8
Module IV	80	15	--	5
Module V	95	--	5	--
Module VI	97	--	--	3

The assessment of the structure of the modules with regard to their ease of use is given below:

Percentages of participants (%)  
(Figures indicate % of Participants)

	<u>Very Good</u>	<u>Good</u>	<u>Bad</u>	<u>No Response</u>
Module I	68	2	--	30
Module II	87	10	--	3
Module III	92	8	--	--
Module IV	90	5	5	--
Module V	95	5	--	--
Module VI	100	--	--	--

### 4. Effectiveness of training modules

The effectiveness of the modules was evaluated with regard to their ability to impart new knowledge and experience to participants. The participants' evaluation of the training modules in this regard is summarized below.

Amount of knowledge imparted  
(Figures indicate % of participants)

	<u>Many New Things</u>	<u>Some Things</u>	<u>Nothing New</u>	<u>No Response</u>
Module I	68	11	--	21
Module II	65	19	--	16
Module III	80	16	--	4
Module IV	80	15	--	--
Module V	95	--	5	--
Module VI	83	10	--	7

5. Clarity and understandability of the modules

The participants' evaluation of the understandability of the training modules is given below.

Percentage of participants (%)  
(Figures indicate % of participants)

	<u>Very Easy</u>	<u>Easy</u>	<u>Difficult</u>	<u>No Response</u>
Module I	80	11	--	9
Module II	87	6	--	7
Module III	80	16	--	4
Module IV	75	20	5	--
Module V	84	16	--	--
Module VI	90	10	--	--

6. Clarity of the Visual Aides

Percentage of participants (%)

	<u>Very Clear</u>	<u>Clear</u>	<u>Confused</u>	<u>No Response</u>
Module I	22	--	--	78
Module II	68	--	--	32
Module III	42	8	4	46
Module IV	60	5	5	30
Module V	53	10	37	--
Module VI	80	--	--	20

## 7. Usefulness of the visual material (slides and transparencies)

### Percentage of participants (%)

	<u>Very Useful</u>	<u>Useful</u>	<u>Useless</u>	<u>No Response</u>
Module I	45	--	--	55
Module II	55	6	--	39
Module III	60	8	--	32
Module IV	70	10	5	15
Module V	79	16	5	--
Module VI	100	--	--	--

### C. Pre-Seminar Questionnaire

Thirty-one participants of the INSTRAW Women, Water Supply and Sanitation seminar completed the **Pre-Seminar Questionnaire**.

16% of the participants had participated in a United Nations-sponsored, or similar seminar in the past.

81% of the participants were aware of existing water supply and sanitation projects in Guyana and cited the following as examples:

- 1) World Bank Water and Sanitation Rehabilitation Project;
- 2) World Bank Water Supply and Inter-American Development Bank project;
- 3) Georgetown Water and Sewerage Rehabilitation Master Plan Project;
- 4) EEC/GOG/GIP Water and Sanitation in Pomeroun/Northwest;
- 5) World Bank Programme for the Coastal Areas;
- 6) EEC/PAHO in the Northwest and Pomeroun;
- 7) PAHO and North Rupununi;
- 8) EEC funded Sector Programme;
- 9) Counterpart Fund;
- 10) Guyana Water Authority (GUYWA);
- 11) Skeldon Hospital Restoration Project for Water and Sanitation by Bahai's;
- 12) Water and sanitation projects undertaken by the following funding agencies, e.g. SIMAP, Futures Fund, IDB, Basic Needs and CEMCO;
- 13) Water supply to the city and towns and communities in rural areas and the building of ventilated improved pit latrines; and
- 14) Madya, Farm Village, Lime Path, Gigerbay and other rural projects.

94% of the participants cited the following as the most "pressing" water supply and sanitation needs of Guyana for:

a) Coastal Provinces:

- 1) Reliable year-round supply of potable water in communities;
- 2) Improved waste water (sewerage) disposal and sanitation systems;
- 3) Improved existing water supply and drainage systems;
- 4) Upgrade or improvement of water quality and the reduction of water contamination;
- 5) Greater knowledge and use of water purification;
- 6) Education and training in the areas of water and sanitation;
- 7) More electric water pumps and pipelines;
- 8) Proper distribution of water supply;
- 9) Management, staff and funds for maintenance and operation of water supply and sanitation projects;
- 10) Water leak detection;
- 11) More water supply centres; and
- 12) Sustainability of water projects.

b) Hinterlands:

- 1) Potable water in home;
- 2) Accessibility to water supply and sanitation in the entire community;
- 3) Reliable year-round supply of potable water in communities;
- 4) More organized and educated community;
- 5) Appropriate technology according to community needs;
- 6) Clean water and latrines;
- 7) Wind mills and hand pumps;
- 8) Electrical water pumps, pipelines, and taps in homes;
- 9) Adequate wells and water plants;
- 10) Overhead tanks;
- 11) Community organization and awareness of proper hygiene;
- 12) Training and maintenance personnel;
- 13) Supply of spare equipment; and
- 14) Reservoirs.

58% of the participants are currently involved or have been involved in water supply and sanitation projects in Guyana or elsewhere, which include the following:

<u>Location</u>	<u>Date(s)</u>	<u>Capacity</u>	<u>Water or Sanitation</u>
Georgetown	current	funding agency	water
Annandale ECD	1993	funding agency	water and sanitation
Buruna ECD	1993-94	funding agency	water
St. Cuthbert's	current	funding agency	water and sanitation
Belmonte	current	funding agency	water
Phoenix Park	current	funding agency	water
East Coast Supply	Apr 1993		sanitation
East Coast Belmonte	June 1993		sanitation
Farm Village	1993	project officer	water
St Cuthbert's Mission	1992		wind mill
Pomeroon	1992-94		water and sanitation
Region 10	current	project officer/ engineer	water and sanitation
Region 8	current	project officer /engineer	water and sanitation
Suddic Hospital	current	project officer/ engineer	water and sanitation
Corriverton in Skeldon Hospital	July 1991	Bahai Service project	sanitation
New Amsterdam	Jan 1994		water
Pomeroon	1993-94		water and sanitation
Wismar	Apr 1993		water and sanitation
MMA/ADA	1987-1992	manager/ environ. unit	water
Giton	1985-91	macro economic planner	
Hinterland	current	project officer, GIP	
Upper Corentyne, Region 6	1993		water and sanitation
Region 2	1993		water
Craig EBD			water
La Penitence			water and sanitation
Berbice			
Hosorono			
Mabarurna			

Of the participants who have been or are currently involved in water supply and sanitation projects in Guyana or elsewhere, **constraints that were encountered during the policy, planning or implementation phases of the water supply and sanitation project include the following problem areas:**

- 1) Information on supplies of required parts/pumps;
- 2) More community participation and better education on the use of the project;
- 3) Initiative by communities and commitment by community and authorities;
- 4) Women's involvement in a managerial capacity;
- 5) Poor project management;
- 6) Appropriate use of technology;
- 7) Mobilization of qualified persons;
- 8) Little or no financial management;
- 9) Little or no project supervision;
- 10) Maintenance of projects and coordination between regions and centre;
- 11) Distance from water source to homes;
- 12) Scarcity of qualified personnel (engineers, etc.); and
- 13) Late funding from funding agencies.

**53%** of the participants who have been or are currently involved in water supply and sanitation projects in Guyana or elsewhere **cited women's groups as being involved in their water projects.** The following women's groups were listed:

- 1) St. Cuthbert's women;
- 2) Phoenix Park CDC, comprised mainly of women;
- 3) Amerindian women;
- 4) La Penitence Sideline Dam Community Group;
- 5) the community;
- 6) the school population;
- 7) Skeldon Hospital Restoration Committee;
- 8) Skeldon High School Water and Sanitation Committee;
- 9) Fair-Field Development Group;
- 10) R.T. Organization; and
- 11) Supply/Belmont/Vereenigen Development Group.

Of the participants who cited the involvement of women in their water supply and sanitation projects, **women were most actively involved in the following areas:**

- 1) Design and implementation;
- 2) Training and dissemination of information;
- 3) Supplying and catering for the dietary needs of workers;
- 4) Secretarial services and behind the scene activities;
- 5) Digging ponds during the dry season in the hinterlands;
- 6) Physical work, decision-making, sharing ideas;
- 7) Collection of water (traditional method);
- 8) Generating ideas for improvement of water projects;
- 10) Organized to set up a new wind mill.

The participants rated the importance of the following groups in implementing water supply and sanitation projects by the following categories: *very important* (highest rating), *important*, *somewhat important*, and *not important* (lowest rating). The following groups were rated as follows:

	<u>Very Important</u>	<u>Important</u>	<u>Somewhat Important</u>	<u>Not Important</u>	<u>N/R</u>
A. Community Development Groups	100%	-	-	-	-
B. Religious Leaders	29%	45%	26%	-	-
C. Ministry of Health	90%	3%	6%	-	1%
D. Foreign and Private Businesses	48%	16%	32%	-	4%
E. Water/Sanitation Engineers	90%	-	9%	-	1%
F. SIMAP	48%	9%	29%	3%	11%
G. Foreign Aid Workers	32%	16%	32%	3%	17%
H. Women	68%	3%	26%	-	3%
I. Health Workers	71%	-	22%	-	7%
J. Guyana Water Authority	87%	3%	9%	-	1%
K. Local Women's Groups	48%	6%	45%	-	1%
L. Ministry of Public Works	42%	19%	32%	-	7%
M. Managers and Trainers	77%	6%	16%	-	1%

■ Note: N/R indicates nonresponse rates. SIMAP is the Social Impact Amelioration Programme.

The participants were asked to list the three most important groups in implementing water supply and sanitation projects from the list above. The following were listed as most important:

<u>Group</u>	<u>Frequency of Response</u>
1) Community Development Groups	71%
2) Guyana Water Authority	48%
3) Ministry of Health	39%
4) Water/Sanitation Engineers	30%
5) Managers and Trainers	23%
Foreign and Private Businesses	23%
6) Local Women's Groups	16%
7) Religious Leaders	6%
8) Women	3%
Foreign Aid Workers	3%
Health Workers	3%
SIMAP	3%
Funding agency (not listed)	3%
9) Ministry of Public Works	3%

Participants commented that community development groups were most important because:

- *"the community development groups will have to cooperate with the Ministry of Health to have a proper programme and then to have the managers and trainers train the local group for future maintenance of the equipment being put in place."*
- *"the community must be involved in the process because they are the benefactors. GUYWA has the technical expertise, and Ministry of Health [is important] for education, awareness, and establishment of standards."*
- *"Community Development Groups and Women [are important] because they identify the problems. Ministry of Public Works/Health are the influential decision-makers. Foreign and private businesses and foreign aid workers [are important because] money is usually needed."*
- *"GUYWA, foreign aid workers, and community development groups [are important because they] would ensure that water reaches its destination - which is the people of the community."*

The participants were asked to list the three most "crucial" factors in implementing water supply and sanitation projects. The following sets of answers were listed:

- 1) Foreign and private businesses, water/sanitation engineers, and SIMAP;
- 2) Finance, proper planning, and qualified personnel;
- 3) Local women's groups, managers and trainers, and health workers;
- 4) Finance, management, and expertise;
- 5) Guyana Water Authority, managers and trainers, and local women's groups;
- 6) Financial aid, technical assistance and consultation on the projects at all levels with the involvement of both men and women;
- 7) Education, training and planning, involvement;
- 8) Identifying the proper location for setting up wells, leaving of equipment after training, and educating the public;
- 9) Accessibility, sustainability in areas of operation and maintenance, and involvement of the community at each stage of the project;
- 10) Consultation with the community, policy direction, and data;
- 11) Location and source of water supply, proper and high quality distribution, and cost recovery and maintenance; and
- 12) Needs assessment, local management capacity, and coordination with local authorities.

The participants cited the following as barriers preventing women's involvement in water supply and sanitation projects:

- 1) Lack of consultation with women;
- 2) Women too involved in child rearing, farm work and house work;
- 3) Lack of technical experience;
- 4) Non-acceptance by men (regarding involvement of women);
- 5) Religious beliefs;
- 6) Involvement in home;
- 7) Cultural beliefs, customs and traditions;
- 8) Non-participation in planning and implementing projects;
- 9) Lack of skilled training;
- 10) Policy of government/decision-makers;
- 11) Water projects dominated by men;
- 12) Lack of opportunity for training;
- 13) Deprivation of opportunities;
- 14) Single-parent families;
- 15) Top-down management without encouraging the participation of the people who are being planned for, generally and for women specifically;
- 16) Lack of motivation, communication skills;
- 17) Low self-esteem;
- 18) Women not given opportunity to speak; and
- 19) Multiplicity of roles based on the gender division of labour.

The following were listed as roles that women could play in water supply and sanitation projects:

- 1) Teaching the proper use of water in the home;
- 2) Educating children on proper waste disposal;
- 3) Delivering practical job training;
- 4) Total involvement in water projects, from planning and implementation to project management;
- 5) Consulting at all levels of decision-making;
- 6) Making decisions and suggesting ideas to maintain water systems better;
- 7) Training in the area of sanitation;
- 8) Involve family as a whole in water supply and sanitation;
- 9) Involvement at every stage of the project cycle--conceptualization, implementation, evaluation;
- 10) Group work by women, leadership roles, project organization;
- 11) Needs assessment;
- 12) Project coordination; and
- 13) Serve as community motivators.

The participants cited the following as what they might expect to learn by attending the seminar:

- 1) More about water supply;
- 2) Proper sanitation;
- 3) How women can play roles at international levels, not only in WSS but all other aspects of involvement that are beneficial to them and to society;
- 4) Hygiene education;
- 5) The involvement of women in the social service of water supply, their experiences and the role of government and interest groups in terms of support and assistance in achieving their objectives;
- 6) How to handle women on the job and how best women can be trained;
- 7) Techniques to employ in public education and awareness programmes at the national level;
- 8) How women can be involved and motivated in water and sanitation projects;
- 9) To be apprised of the possibilities for women's involvement in project planning and water-related projects, how such participation can be accomplished, and what possible changes should be made in the present system to facilitate better management of water resources;
- 10) How to mobilize communities;
- 11) The state of other countries in relation to these problems;
- 12) How to reach the communities and to collect the information required;
- 13) Share with the experiences of others so that additional information/strategies for working with women in the field of WSS projects could be gleaned;
- 14) How women can be trained in water technology; and
- 15) To build self-confidence.

The participants were asked to list the three most "crucial" factors in implementing water supply and sanitation projects. The following sets of answers were listed:

- 1) Foreign and private businesses, water/sanitation engineers, and SIMAP;
- 2) Finance, proper planning, and qualified personnel;
- 3) Local women's groups, managers and trainers, and health workers;
- 4) Finance, management, and expertise;
- 5) Guyana Water Authority, managers and trainers, and local women's groups;
- 6) Financial aid, technical assistance and consultation on the projects at all levels with the involvement of both men and women;
- 7) Education, training and planning, involvement;
- 8) Identifying the proper location for setting up wells, leaving of equipment after training, and educating the public;
- 9) Accessibility, sustainability in areas of operation and maintenance, and involvement of the community at each stage of the project;
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- 5) Religious beliefs;
- 6) Involvement in home;
- 7) Cultural beliefs, customs and traditions;
- 8) Non-participation in planning and implementing projects;
- 9) Lack of skilled training;
- 10) Policy of government/decision-makers;
- 11) Water projects dominated by men;
- 12) Lack of opportunity for training;
- 13) Deprivation of opportunities;
- 14) Single-parent families;
- 15) Top-down management without encouraging the participation of the people who are being planned for, generally and for women specifically;
- 16) Lack of motivation, communication skills;
- 17) Low self-esteem;
- 18) Women not given opportunity to speak; and
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- 4) Total involvement in water projects, from planning and implementation to project management;
- 5) Consulting at all levels of decision-making;
- 6) Making decisions and suggesting ideas to maintain water systems better;
- 7) Training in the area of sanitation;
- 8) Involve family as a whole in water supply and sanitation;
- 9) Involvement at every stage of the project cycle--conceptualization, implementation, evaluation;
- 10) Group work by women, leadership roles, project organization;
- 11) Needs assessment;
- 12) Project coordination; and
- 13) Serve as community motivators.

The participants cited the following as what they might expect to learn by attending the seminar:

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- 3) How women can play roles at international levels, not only in WSS but all other aspects of involvement that are beneficial to them and to society;
- 4) Hygiene education;
- 5) The involvement of women in the social service of water supply, their experiences and the role of government and interest groups in terms of support and assistance in achieving their objectives;
- 6) How to handle women on the job and how best women can be trained;
- 7) Techniques to employ in public education and awareness programmes at the national level;
- 8) How women can be involved and motivated in water and sanitation projects;
- 9) To be apprised of the possibilities for women's involvement in project planning and water-related projects, how such participation can be accomplished, and what possible changes should be made in the present system to facilitate better management of water resources;
- 10) How to mobilize communities;
- 11) The state of other countries in relation to these problems;
- 12) How to reach the communities and to collect the information required;
- 13) Share with the experiences of others so that additional information/strategies for working with women in the field of WSS projects could be gleaned;
- 14) How women can be trained in water technology; and
- 15) To build self-confidence.

#### D. Post-Seminar Questionnaire

Twenty-eight participants of the INSTRAW Women, Water Supply and Sanitation Seminar completed the Post-Seminar Questionnaire.

When asked how much they had learned from the seminar, **71%** of the participants **agreed strongly** that they learned a great deal from the seminar, **29%** agreed that they had learned a great deal, and **7%** **disagreed** that they had learned a great deal by attending the seminar.

In terms of whether the knowledge gained by attending the seminar will help them better involve women in future water supply and sanitation projects, **68%** of the participants **agreed strongly** that the knowledge gained from the seminar will help them better involve women in future water projects, **25%** agreed, **4%** disagreed, and **4%** did not respond to the question.

**61%** of the participants **agreed strongly** that the material covered in the seminar will benefit them in planning and implementing effective water supply and sanitation projects, **36%** agreed, while only **4%** **disagreed strongly** that the seminar will not benefit them.

**57%** of the participants **agreed strongly** that the material covered in the seminar will help them address women's needs and concerns when implementing water supply and sanitation projects, while **43%** agreed with the statement.

When the participants were asked which module(s) will be of greatest benefit to them in their field of work and why:

- **39%** answered that all of the modules will benefit them.
- **21%** of the participants answered **Module IV** *because most women are already active in these areas, and that the modules will help strengthen their capabilities in this area.*
- **18%** felt **Module V** would benefit them most as it deals effectively with the needs of the participant's community.
- **14%** felt **Module III**, while **4%** felt **Module VI** and **Module II**, respectively, would benefit them in the future.

Overall, participants felt that the most useful information they had learned during the seminar in the implementation of future water supply and sanitation projects was **how important women's involvement is to the success of WSS projects.**

Having completed the seminar, participants were asked to rate the following groups on their importance in implementing water supply and sanitation projects. The groups were rated according to four categories: *very important* (highest rating), *important*, *somewhat important*, and *not important* (lowest rating). The groups were rated as follows:

	<u>Very Important</u>	<u>Important</u>	<u>Somewhat Important</u>	<u>Not Important</u>	<u>N/R</u>
A. Community Development Groups	93%	-	-	-	7%
B. Religious Leaders	18%	14%	7%	-	61%
C. Ministry of Health	78%	11%	7%	-	4%
D. Foreign and Private					
Businesses	36%	39%	14%	-	11%
E. Water/Sanitation Engineers	86%	7%	-	-	7%
F. SIMAP	43%	39%	-	3%	15%
G. Foreign Aid Workers	28%	32%	18%	7%	15%
H. Women	82%	11%	-	-	7%
I. Health Workers	75%	14%	-	-	11%
J. Guyana Water Authority	71%	21%	-	-	8%
K. Local Women's Groups	82%	3%	7%	-	8%
L. Ministry of Public Works	50%	32%	-	7%	11%
M. Managers and Trainers	86%	-	3%	-	11%

■ Note: N/R indicates non-response rates. SIMAP is the Social Impact Amelioration Programme.

When the responses were broken down by gender, both men and women answered similarly for each response.

In answering how critical women's involvement is in implementing water supply and sanitation projects, 53% of the participants felt that women's involvement was highly critical, 25% felt it was critical, 11% felt it was somewhat critical, and 7% felt it was *not* critical. 4% of participants did not respond to the question.

The following are responses to how critical participants felt women's involvement is in water supply and sanitation projects in the following areas:

	<u>Highly Critical</u>	<u>Critical</u>	<u>Somewhat Critical</u>	<u>Not Critical</u>	<u>N/R</u>
A. Planning of Water Projects	57%	25%	-	7%	11%
B. Training for Water Projects	54%	32%	-	7%	7%
C. Hygiene Education	64%	11%	-	14%	11%
D. Management of Water Resources	46%	32%	11%	3%	8%
E. Supply and Waste Disposal	61%	21%	3%	7%	8%
F. Waste Management	5%	18%	7%	11%	7%
G. Evaluation and Monitoring of Water Projects	39%	43%	-	3%	15%

■ Note: N/R indicates non-response rates.

When the above responses were broken down by gender, 83% of the male responses thought that water supply and waste disposal was highly critical, while only 54% of the female responses thought the same. On the other hand, female participants were more concerned with training for water projects (59%) than were male participants (33%). While all the male participants pointed to hygiene education as highly critical, only 59% of the female participants felt the same.

The following are responses of how participants viewed women's involvement in the following areas of water supply and sanitation projects, in their field of work.

	<u>Very Active</u>	<u>Active</u>	<u>Somewhat Active</u>	<u>None</u>	<u>N/R</u>
A. Planning	71%	18%	-	3%	8%
B. Technical Training	57%	21%	14%	-	8%
C. Hygiene Education	82%	7%	-	-	11%
D. Community Development	61%	11%	3%	-	25%
E. Waste Management	68%	14%	11%	-	7%

■ Note: N/R indicates non-response rates.

When participants were asked, having attended this seminar how they saw women playing a more active role in water supply and sanitation projects, some participants stated that "*women can play a more meaning role if they are mobilized.*" Overall, participants felt that barriers should not exist to prevent women's involvement in water supply and sanitation projects. Participants felt they had obtained much information on the different roles women can play in water supply and sanitation projects.

Participants made the following recommendations on how to improve the effectiveness of the INSTRAW WWSS training seminar:

- Duration of seminar should be longer.
- The use of videos to display typical problems being faced by other countries' water agencies and the successful involvement of women in water supply and sanitation projects.
- A follow-up workshop should be conducted a year after the seminar to monitor the progress of participants.
- More field trips should have been organized to see what kinds of projects currently exist in Guyana.

Additional comments regarding participants' assessment of the seminar include:

- *"The group work was an excellent way to network and meet people that we ordinarily would not have been able to meet."*
- *"Women badly need recognition in Guyana. This seminar provided the first step toward giving the women that acknowledgement."*
- *"Each module should have some practical work involved in the discussions."*

## Pre-Seminar Questionnaire

<b>Name of Participant:</b>	_____
<b>Questionnaire #:</b>	_____ <b>Gender:</b> ___ F ___ M
<b>Institution:</b>	_____
_____	_____
<b>Occupation:</b>	_____
_____	_____
<b>Date:</b>	_____
_____	_____

1. Have you participated in any United Nations-sponsored, or similar seminar, in the past? Please answer as best you can.

Seminar Title: \_\_\_\_\_

\_\_\_\_\_

Subject: \_\_\_\_\_

\_\_\_\_\_

Location: \_\_\_\_\_

\_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_

2. (A) To the best of your knowledge, what water supply and sanitation projects currently exist in Guyana?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(B) In your opinion, what are the most pressing water supply and sanitation needs of Guyana?

Coastal Provinces: \_\_\_\_\_

\_\_\_\_\_

Hinterlands: \_\_\_\_\_

\_\_\_\_\_

3. Are you currently or have you been involved in any water supply and sanitation projects in Guyana or elsewhere?

Yes \_\_\_\_\_

No \_\_\_\_\_

**IF NO, PROCEED DIRECTLY TO QUESTION # 6.**

If yes, how many? (approximately) \_\_\_\_\_  
Please list:

<u>Location</u>	<u>Date(s)</u>	<u>Capacity</u>	<u>Water or Sanitation</u>
-----------------	----------------	-----------------	----------------------------

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

PLEASE USE BACK IF NECESSARY

4. If difficulties were encountered during the policy, planning or implementation phases of your water supply and sanitation project, what were they?

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5. (A) In the water projects you listed in Question #3, were women's groups involved?

Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, list the names of the groups below.

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(B) If women were involved in your water supply and sanitation projects, list the areas in which they were most actively involved.

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6. (A) In your opinion, how important are the following groups in implementing water supply and sanitation projects? Please mark one box per item.

	<u>Very</u> <u>Important</u>	<u>Important</u>	<u>Somewhat</u> <u>Important</u>	<u>Not</u> <u>Important</u>
A. Community Development Groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Religious Leaders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Ministry of Health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Foreign and Private Businesses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Water/Sanitation Engineers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. SIMAP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Foreign Aid Workers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Women	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Health Workers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
J. Guyana Water Authority	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
K. Local Women's Groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L. Ministry of Public Works	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M. Managers and Trainers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(B) In your opinion, which three groups are most important in implementing water supply and sanitation projects and why?

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7. In your opinion, what are three most crucial factors in implementing water supply and sanitation projects?

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8. What barriers prevent women's involvement in water supply and sanitation projects?

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9. In your opinion, what roles could women play in water supply and sanitation projects?

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10. What do you expect to learn by attending this seminar?

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**Thank you very much for your time.**

## Post-Seminar Questionnaire

Questionnaire #: \_\_\_\_\_

Date: \_\_\_\_\_

For Questions 1-4, please mark the box that best describes your answer.

1. Overall, I have learned a great deal by attending this seminar.

Agree Strongly <input type="checkbox"/>	Agree <input type="checkbox"/>	Disagree <input type="checkbox"/>	Disagree Strongly <input type="checkbox"/>
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2. The knowledge I gained by attending this seminar will help me better incorporate women in future water supply and sanitation projects.

Agree Strongly <input type="checkbox"/>	Agree <input type="checkbox"/>	Disagree <input type="checkbox"/>	Disagree Strongly <input type="checkbox"/>
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3. The material covered in this seminar will not benefit me in planning and implementing effective water supply and sanitation projects.

Agree Strongly <input type="checkbox"/>	Agree <input type="checkbox"/>	Disagree <input type="checkbox"/>	Disagree Strongly <input type="checkbox"/>
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4. The material covered in this seminar will help me to address women's needs and concerns when implementing future water supply and sanitation projects.

Agree Strongly <input type="checkbox"/>	Agree <input type="checkbox"/>	Disagree <input type="checkbox"/>	Disagree Strongly <input type="checkbox"/>
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5. (A) Which module(s) will be of greatest benefit to you in your field of work and why?

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- (B) Which module(s) will be of least benefit to you in your field of work and why?

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6. Overall, what did you learn during the seminar that will be most useful to you in the future implementation of water supply and sanitation projects?

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7. List three important aspects of water supply and sanitation projects that you did not know before attending the seminar.

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8. Having completed this seminar, how important are the following groups in implementing water supply and sanitation projects? Please mark one box per item.

	<u>Very</u> <u>Important</u>	<u>Important</u>	<u>Somewhat</u> <u>Important</u>	<u>Not</u> <u>Important</u>
A. Community Development Groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Religious Leaders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Ministry of Health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Foreign and Private Businesses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Water/Sanitation Engineers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. SIMAP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Foreign Aid Workers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Women	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Health Workers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
J. Guyana Water Authority	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
K. Local Women's Groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L. Ministry of Public Works	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M. Managers and Trainers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Overall, how critical is women's involvement in implementing water supply and sanitation projects? Please mark one box.

Highly Critical	Critical	Somewhat Critical	Not Critical
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. How critical is women's involvement in the following areas? Please mark one box per item.

	<u>Highly Critical</u>	<u>Critical</u>	<u>Somewhat Critical</u>	<u>Not Critical</u>
A. Planning of Water Projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Training for Water Projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Hygiene Education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Management of Water Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Supply and Waste Disposal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Waste Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Evaluation and Monitoring of Water Projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. In your field of work, how do you see women's involvement in the following areas of water supply and sanitation projects? Please mark one box per item.

	<u>Very Active</u>	<u>Active</u>	<u>Somewhat Active</u>	<u>None</u>
A. Planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Technical Training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Hygiene Education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Community Development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Waste Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. Having completed the seminar, how do you see women playing a more active role in water supply and sanitation projects?

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13. What recommendations would you make to improve the effectiveness of the seminar?

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14. Any additional comments regarding your assessment of the seminar would be greatly appreciated.

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Thank you very much for your time.

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# Annexes

592-3	16059
592-3	16059

## ANNEX I

LIST OF PARTICIPANTS

Names	Occupation	Institution	Address	Tel. No.	Fax No.
Guy Felix	Sanitary Engineer	PAHO/WHO	Lot 8, Brickdman	592-2-69 165	592-2-66654
Gordon Gilkes	Civil Engineer	SIMAP Agency	62 Main St. G/town	592-2-75564	
Pamela O'Toole	Educational Consultant	GOSED	220 Charlotte St, G/town	592-2-65952 42018	
Epiphania Mfundo	Programme Assoc. WID	UNICEF/WAB	P.O.Box 10960 G/town	592-2-67083 73662	
Maurice Alarie	Director	Futures Fund, CHF	26 Lamaha and Irving Sts, G/town	592-2-77839 65891	
Marlyn Jordan	Project Officer	Futures Fund	26 Lamaha and Irving Sts, G/town	592-2-65891	
Claudette Pablo	Domestic		Marunanan Village South Rupununi	592-2-61172	
Maurie Parbhoo	Business Woman	WAAC	Essequibo Coast		
Angela Singh	Business Woman	G.C.A.	Essequibo Coast		
Dorothy Fraser	Project Officer	Futures Fund	26 Lamaha and Irving Sts, G/town	592-2-68591	
Ann Callender	Personnel Clerk	GUYWA	Highway Lab, Sophia	592-2-71590	
Deokarran Singh	Water Driller	GUYWA	Sophia, G/town	592-2-72116	592-2-66059

Ivonne English	Conf. Secty.	GUYWA	Sophia, G/town	592-2-72116	592-2-66059
Hazel Halley	Social Worker/Adm	WAB	1 Water and Cornhill Sts G/town		
Hazel Griffith	Adm Off. WFP	PAHO/WHO	Brickdam	592-2-53000	592-2-66654
Paulette Bynoe	Snr Env. Officer	GAHEF	Liliendaal Gr. G/town	592-2-24412	592-2-24413
John Williams	Superintendent	GS and WC	Vlissengen Rd, G/town	592-2-64076-8	
Deborah Archer	Lab Technician	GS and WC	Vlissengen Rd, G/town	592-2-64076-8	
Amanda Ferreira	Govt. Midwife	St. Cuthbert Health Centre	St. Cuthbert Mission	592-2-61-2549	
Wendy Wellington	Community Worker	Red Thread Women's Development Programme	154 2nd St S/T, Wismar	592-2-66995	592-2-74232
Anita Katlow	Housewife	St. Cuthbert Women Group	St. Cuthbert Mission	592-2-612549	
Bercina Humphrey	Medex	Lethem Hospital	Rupununi		
Sidney Allicock	Touschau	Annai Village Council	Annai Village, North Savannahs, Rupununi		
C. Dass	Social Worker	Com Dev. Projects	Mahaica, ECD		
Kwesi Nkofi	Environmentalist	AGHEF	Liliendaal Gr. G/town	592-2-24412	592-2-24413
Jean Gillis	Seamstress	GOSED-BAHAI	206 South Vryheid's Lust H/S E.C.D.	592-2-65952	
Vivekanaand Baker	Farmer	GOSED	#67 Village Corentyne	592-2-65952	
Leontina Jose	Teacher	GOSED	St. Ignatius Lethem		

Yolanda Yaw	Civil Engineer	CEMCO	272 Forshaw St., G/town	592-2-63878 62773	
Beverly Chan	Project Officer	Futures Fund	26 Lamaha and Irving Sts.	592-2-65891	592-2-66242
Gene Evelyn	Economist	CEMCO	272 Forshaw ST.	592-2-62773	
Darrell Sequeira	Consultant (UNDP)	GAHEF/EPA	Liliendaal Gr. G/town	592-2-24418 24412	592-2-24413
Joycelyn Bacchus	W/Shop Facilitator	Red Thread Women's Development Programme	173 Charlotte St	592-2-66995	592-2-74232
Chandra Persaud	W/Shop Facilitator	Red Thread Women's Development Programme	Pin Bellvue West Coast	592-2-66995	592-2-74232
M. Rayside	W/Shop Facilitator	Women's Affairs Bureau	c/o RDO, C/hill St./G/town		
Faap de Lange	Civil Engineer	PAHO	Lot 8 Brickdam	592-2-69165	592-2-66654
Matti Marjamaki	Programme Officer	UNDP	P.O.Box 10960	592-2-64040	592-2-62942
Sr. J. Sukhraj	Project Officer	Futures Fund	26 Lamaha and Irving Sts, G/town	592-2-65891	
Sandy Griffith	Env. Officer	GAHEF	Liliendaal Gr. G/town	592--2-24412	592-2-24413
Karan Singh	UNICEF Consultant	UNICEF	72 Brickdam	592-2-73662, 67083	592-2-65894
K. Gordon Shamoo	Manager	New Amsterdam Water Works	Lot 8-7 St. Ann Street, New Amsterdam	592-2-35993	592-2-35795

## Annex II

## OPENING STATEMENTS

**(A) Mr. Harripersaud Nokta**  
**Honourable Minister of Public Works,**  
**Communications and Regional Development**

Distinguished Ladies and Gentlemen, it is indeed a pleasure for me to deliver the opening address at this seminar, on a topic of such evidence - Women, Water and Sanitation. When I look at the agenda for your deliberation, it is heartening to see the serious subjects which would be discussed. I am quite sure that in your final evaluation of the seminar, there would be pluses all around.

In present day society women as single parent in the home bears the full brunt in fashioning family life, work and earn the family bread and take care of all the responsibilities so demanded. Women have penetrated the "glass ceiling" in most societies today, and in the context of Guyana, the contributors to this seminar bear evidence to their new role. I would be the first to admit that our Guyanese women are second to none.

Since the beginning of time and the dawn of the Human Race, women have always been the homemaker, the "haulers of wood and the drawers of water". At the present time not much has changed. Away from the urbanized areas in the western world and predominantly in the undeveloped so called "Third World" countries, women are still responsible for the task of getting the water.

Water as everyone would agree is the "lifeblood" of our human race, composing 90% of our own bodies, hence water is the essence of life itself. The need for water supply and sanitation has been documented by Governments the world over. In Arabia, they speak of desalinating the water which is obtained from the sea, with a high salt content. In parts of Central Africa, men drill thousands of feet to find the water bearing aquifers of potable water, while in others, modern methods of water treatment prevail. However, investment in this sector has always been inadequate, particularly in the less well-off countries, where water authorities have been made to manage pipe networks of previous centuries, resulting in water losses and ingress of polluted water, thereby endangering the lives of the inhabitants.

If I may dwell on the situation in Guyana, where our people yearn for potable water and an end to the drudgery of providing water for domestic use, also an improved sewerage system in our city which could make gastroenteritis and other water borne disease a thing of the past.

Our problem has been chronicled for decades by experts in that field, representing international organizations such as PAHO/WHO. What remains today is for the solution to be applied. It is the intention of our Government to provide Pure Water to every community in Guyana.

Let me now share with you some of the projections for the improvement to this sector which is against a background of a fragmented water and sanitation situation that suffered from uncertainty in direction and objective, aggravated by an old infrastructure and general lack of investment, culminating in a declining standard of service and consumer dissatisfaction. It became apparent that if an outbreak

of gastroenteritis were to be averted that no effort must be spared in getting the multi-lateral donors to agree to a time-table for the rehabilitation of the regional and urban water supply systems.

Ladies and gentlemen, I must say that the loan for the rehabilitation of the regional system has been signed with the World Bank, paving the way for 145 water supply systems to be rehabilitated on the coast and interior areas. Also, a mechanism to ensure that sustainability is put in place. Finances are also expected from the overseas Development Association and the Caribbean Development Bank for the project.

The situation within our urban centers are somewhat similar, particularly Georgetown. Georgetown Sewerage System dates back to the 1920's. In 1929, a waste water disposal system was commissioned and since that time, no serious effort was made to improve the system. However, between 1967 and 1971, due to an outbreak of gastroenteritis and typhoid in Georgetown, the then Government requested the assistance of the UNDP/PAHO/WHO to solve the problem. PAHO/WHO commissioned experts to study the problem. In 1972, they submitted their report to the then Government, who in turn, sought financing from the UNDP for the development and improvement of potable water supply, sanitary sewerage and storm drainage in Georgetown, Linden and New Amsterdam.

In 1975, a final report was submitted by the Consulting Firm which was commissioned to do the studies. However, the plan was never implemented and it was not until 1985, under the Lome II Convention of the EEC that 24 sewerage pump stations were rehabilitated, along with the ring main and out-fall discharge piping. Today, all these stations require rehabilitation. The yard sewer connections are all broken and raw sewers are visible in many areas. Efforts are arduously being made to acquire pumps and spares to repair the stations, in order to avert an epidemic in the city.

The water supply in Georgetown which is a prerequisite for the sewerage system in Central Georgetown, is in a state of collapse. Suffice it to say, as a precondition to a loan from the InterAmerican Development Bank, for the remedial works to the water supply and sewerage system, the GS&WC must become autonomous, and I am pleased to say that steps have been taken to enact the legislation and by so doing the GS&WC will benefit from a US\$13.5 million loan from the IDB to repair the distribution system and other components of the water works facility. The programme is estimated to take four years to complete, thus paving the way for a major project - the Master Plan - which is in an advanced stage of completion.

While Georgetown is being looked by the IDB, New Amsterdam Water Works, with the assistance of the CEC under the EEC Lome IV Convention, along with co-financing from the CDB, will have its distribution network completely rehabilitated, having benefitted previously from funds under the LOME III Convention, where a new Treatment Plant was installed.

Safe water and hygienic sanitation is necessary for life. It must be noted that General Zoology by Walker and Smith has mentioned that a large percentage of each cell in the body is simply water. "The human water content ranges from about 20% in the bone to 80% in brain cells. " The state of the World's children" - the poorest fifth of humanity still lack pure water and safe sanitation. Water is necessary for health, productivity, good quality of family, social and economic life and without this every other aspect of human development is endangered. In particular, progress of all kinds is held back by the diversion of so much of the time and effort of women and girls to the task of providing water.

Water is used daily for:

- (1) Drinking/Feeding
- (2) Cooking
- (3) Bathing
- (4) Cleaning
- (5) Washing, etc. It can be contaminated by:
  - (a) Disease producing bacteria, viruses and parasites especially those that come from human faeces.
  - (b) Parasites with a cycle through snails
  - (c) Chemicals that are poisonous, some coming from factories or farms. Water also breeds vector for malaria and yellow fever.

Contaminated water used for drinking, washing hands, clothes, utensils and cleaning can cause the spread of several illnesses, hence affecting members of different communities and nations. The UNICEF report also states that "Access to safe water and hygienic sanitation is therefore an aim, a mean measure of development. Therefore increasing access to these two vital amenities will be as good a guide as any to real human progress in the last decade of the twentieth century."

Extraordinary efforts are made to put some countries on course to achieve universal access to clean water in the mid to late 1990's.

A country which can provide safe water and hygienic sanitation for all its people can be regarded as a progressing country.

Our inadequate water supply and the poor state of sanitation in Georgetown at the present moment makes it difficult and sometimes impossible for women to provide a healthy and hygienic environment. The high "piled up" and rotting garbage are good breeding grounds for flies, roaches, rodents, mosquitoes, etc. the broken water mains, blocked drains, overflowing sewerage from manholes are causing great difficulties in maintaining safe water and hygienic sanitation which will eventually lead to serious outbreaks of diseases such as diarrhoea, gastro, typhoid, skin diseases, etc. So when pure water is readily available, these tasks associated with sanitation, would become a lot easier for all of us to achieve, and the lot of women on the whole would improve. We may count on all of you to help us reconstruct and build this great country of ours!

Ladies and gentlemen, the future of this sector is well on its way to improvement and when a careful assessment is made of the contributions to this seminar, I have no doubt that the title of the topic was well chosen, so it leaves me only to wish you a good deliberation.

**(B) Ms. Indra Chandarpal**  
**Honourable Minister in the Ministry of**  
**Labour, Human Resources, Social Security and Housing**

Madam Chairperson  
Members of the Head Table  
Ladies and Gentlemen,

The impact of inadequate water supply and poor sanitation on women's lives has not been given the attention it deserves in many developing countries. As primary household caretakers, women more so than men, are dependent on their immediate environment to successfully combine household tasks with income-generating and other activities.

The presence or absence of certain facilities or conditions, such as adequate water supply and a clean, healthy environment, can mean an improvement or aggravation on the daily tasks of women. Women who have to expend a great part of their time and energy in accessing water and in trying to cope with unhealthy, insanitary surroundings, find that they have less time to spend on their many other tasks, including their own development.

This training seminar on Women, Water Supply and Sanitation, sponsored by the United Nations International Research and training Institute for the Advancement of Women (INSTRAW), is a commendable and significant step in addressing the problem in Guyana. Although this country is called the "land of many waters", access to adequate and safe water has been a problem for many years, and the problem has been growing worse in both rural and urban areas. Years of neglect and poor maintenance have left us with few and faulty water system. Leakages into the systems have created a health hazard in potable water supply. In many rural areas, there is a visible water-fetching culture, where women and children spend many productive hours fetching water, sometimes from long distances. Where potable water is available in many rural household compounds, it is often due to efforts to lower pipelines and construct reservoirs in the ground. It is not unusual to find Guyanese buying potable water.

Shortage of safe water supply means that many women and children have to spend a lot of time carrying water. For working women, especially female heads of households, this is done at nights, after cooking and cleaning tasks are completed.

Poor sanitation is a widespread problem that takes on somewhat different characteristics in rural and urban areas. But we tend to give sanitation less attention than water supply, although good drainage and disposal of waste are essential elements in creating and nurturing a healthy environment. But these are visibly lacking in both rural and urban areas.

Both of these problems contribute to the aggravation of housewives' tasks and can hinder women's productive labour. One way of lessening this problem is to involve women in projects and decision-making concerning water supply and sanitation. This training session is, I believe, a good starting point in moving towards this direction.

It is good that this seminar is held at a time when we expect significant improvements in potable water supply. With the impending local government elections we look forward to see more women, in particular, get involved in decision-making bodies that affect their existence.

I wish you fruitful deliberations over the next few days. It gives me great pleasure in formally declaring this seminar open.

I thank you.

**(C) Margaret Shields**  
**Director**  
**United Nations International Research and**  
**Training Institute for the Advancement of Women**  
**(INSTRAW)**

Minister Chandarpal, Minister Nokta, distinguished participants, ladies and gentlemen,

On behalf of the Director of INSTRAW, Ms. Margaret Shields it is a pleasure to welcome you to this INSTRAW training seminar on Women, Water Supply and Sanitation. INSTRAW is particularly grateful to Red Thread Women's Development Programme for assisting the Institute in organizing this seminar. INSTRAW is greatly indebted to the Government of Guyana for hosting the training seminar. I must express also the Institute's gratitude to the Commonwealth Secretariat for sponsoring a lecturer and some of the participants at this seminar. In addition, I would like to express thanks to Mr. Martinez, UNDP Resident Representative in Guyana for providing support to this seminar, and to colleagues from UNICEF and PAHO who will be presenting their experiences in Guyana.

In welcoming the national lecturers and participants, I would like to reiterate INSTRAW's appreciation to you who will share with us your experiences and provide advice and guidance for future action. We have three students from New York University present at the seminar who will assist INSTRAW in the evaluation process.

Water is a prerequisite for the survival of human beings and their sustainable development. It is one of the main pillars of environment. Water is a renewable but finite natural resource. Current and projected problems with freshwater resources arise from the pressure to meet the agricultural, human settlement, food and industrial needs of a fast-growing global population. The multi-sectoral nature of water requires appropriate coordination among the international and national institutions and authorities concerned with water, agriculture, industry, health, rural development, environment as well as among agencies in charge of education and training.

The statistics tell the story. Water scarcity is going to be the dominant issue in the 21st century. One billion people lack access to clean water and 1.7 billion have no sanitation. Together, these problems lead to about three million deaths every year and another 900 million cases of disease. Two million of these deaths could be prevented if adequate sanitation and clean water were available. Water extraction worldwide is expected to grow by four to eight percent a year to meet the growing need. Within the next generation, water needs will have grown by 600 percent.

A holistic approach toward water resources, development and management is a prerequisite for the effective sustainable development of nations. It implies the development of human societies and economies and the protection of natural ecosystems of which the survival of humanity ultimately depends. This includes not only the need to look at the water cycle but also to intersectoral needs, ecological issues, alleviation of poverty and disease, sustainable rural and urban development and protection against natural disasters.

Women are the primary users, carriers, family educators and managers of water and thus they have a vested interest in securing safe drinking water and adequate sanitation. However, to date still not enough attention has been given to women as primary human resource and as the main ultimate users of water.

a core group of facilitator trained to conduct similar seminars at community level, thereby ensuring a multiplier effect.

I look forward to your active participation and hope you will share openly your experiences, problems and solutions.

In conclusion, I would like to say that I am confident that the outcome of this seminar will be successful and hope that your experience here will prove useful to your country in carrying out their activities in the field of women and water resource management.

**(D) United Nations Development Programme**

The United Nations Development Programme (UNDP) representative welcomed the participants to INSTRAW national training seminar on Women, Water Supply and Sanitation.

He pointed out the importance of the training seminar and welcomed participation of participants from various parts of Guyana.

## Annex III

### AGENDA

1. Opening of the session
2. Adoption of the agenda
3. Overview of training methodology and seminar procedures
4. Technical Session I: Presentation and discussion of training module I, **The International Drinking Water Supply and Sanitation Decade**
5. Technical Session I a: Presentation and discussion of PAHO experience in involving women in the water supply and sanitation sector in Guyana
6. Technical Session II: Presentation and discussion of module II, Participation on women in planning, choice of technology and implementation of sustainable water supply and sanitation projects
7. Technical Session II a: Presentation and discussion of UNICEF experience in involving women in the water supply and sanitation sector in Guyana
8. Technical Session III: Presentation and discussion of module III, **Role of Women in Hygiene Education and Training Activities for Water Supply and Sanitation**
9. Technical Session IV: Presentation and discussion of module IV, **Participation of Women in Management of Water Resources, Water Supply and Waste disposal**
10. Technical Session V: Presentation and discussion of module V, **Women and Waste Management**
11. Technical Session VI: Presentation and discussion of Module VI, **Evaluation and monitoring of water supply and sanitation programmes and the involvement of women**
12. Adoption of the report of the seminar and closing session