

**WORKING PAPER**

NO. 18

**Lessons on Gender in ICT Applications: Case Studies of *infoDev* Projects**

It is often assumed that the application of technology is neutral and that benefits of an ICT project accrue equitably to all individuals in a community. In most cases, however, there are some individuals or groups that have fewer prospects of benefiting from services offered. Women typically constitute a majority of these persons. The objective of this paper is to summarize the findings from an overview of the *infoDev* portfolio from a gender perspective and field studies of six selected *infoDev* projects.

**WORKING PAPER NO. 18, 2002*****About infoDev's working papers series:***

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WORKING PAPER NO. 18, 2002

# Lessons on Gender in ICT Applications: Case Studies of *infoDev* Projects

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## Executive Summary

In 2001, *infoDev* was awarded a grant from GENFUND, a Norwegian trust fund for gender mainstreaming, to support efforts for mainstreaming gender in its programs. The grant enabled several research activities, including this paper, which summarizes the findings from an overview of the *infoDev* portfolio as well as field studies of six selected projects.

An important part of the context is that *infoDev* has previously not encouraged proponents to address gender. This study should therefore not be considered an evaluation of *infoDev* performance, but an attempt to learn lessons in an area which is strongly contributory to the fulfilment of *infoDev*'s mandate.

The overview of 95 projects funded showed that about four in five projects did not take into account potential difference in impact that the project could have on men and women. About 19 % of projects reviewed made some reference to gender. Eleven projects (12 %) addressed gender actively, and nine of these appear to be addressing and possibly altering relations between women and men in favor of women's empowerment. More recent projects were more likely to be gender aware, suggesting an increase in the gender awareness of proponents.

The purpose of the six field project reviews was to:

- Analyze the effect of project activities and outcomes on women's situation;
- Identify gender issues that affected the project design, implementation, and results;
- Identify lessons learned and make recommendations to ensure that *infoDev* projects equally benefit women and men.

In the absence of any field research guide for gender analysis of ICT projects, the project developed its own gender review framework, with a set of questions concerning the gender aspects of project planning, goals, objectives, activities, outcomes, beneficiaries, monitoring, and evaluation. Research was conducted by local consultants.

In addition to the rich lessons regarding each project, the following lesson themes emerged from the studies:

- It is nearly impossible to find a project without gender issues...
- ...but if you don't ask for gender, you don't get gender in project proposals
- In virtually all projects, women emerged with greater knowledge and self-esteem
- While technology empowers, it also affects and alters gender relations
- The socio-cultural context is critical – technology does not operate in a vacuum
- Aspects of e-commerce make it particularly attractive to female entrepreneurs
- Projects should actively ensure the participation of women as well as men...

- ...but gender awareness is more than counting women in a project, it means taking into account relations between men and women and their impact on community life

The review also suggested that the successful incorporation of gender in project design requires that beneficiaries are involved, that gender considerations are entered from the beginning, and that gender-aware persons be involved.

The most evident conclusion from the project reviews is that it is nearly impossible to find a project without gender implications. Upon examination, gender aspects of the project generally do come to light, in terms of whether the participants and users of technology are men and women, and who benefits directly and indirectly from project training and outcomes.

Including more gender-specific or gender-transformative projects in the *infoDev* funding portfolio is likely to contribute to a higher rate of successful projects and have a greater impact on poverty eradication. Every ICT project should include an understanding of the potential gendered benefits of the project and strategies to incorporate women's perspective and to overcome any disadvantages they are facing. The deployment of technology is also likely to be more effective when implemented to address the restrictions faced by women, which include socio-cultural barriers to use of technologies, restricted financial resources, restricted time availability, illiteracy, language and geographical location.

*infoDev* proposal forms and guidelines should request information on women's active participation in project planning, design and implementation. They should also cue proponents to demonstrate gender awareness. Finally, sex-disaggregated data should be a baseline component of project design and evaluation.

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# 1 Introduction

## 1.1 Background to the Study

The Information for Development Program (*infoDev*), a multi-donor program managed by the World Bank, is part of the global effort to bridge the digital divide between developed and developing countries. *infoDev*'s mission is to promote innovative projects on the use of information and communication technologies (ICT)<sup>1</sup> for economic and social development with a special emphasis on the needs of the poor in developing countries.

In 2001, *infoDev* was awarded a grant from GENFUND, a Norwegian trust fund for gender mainstreaming, to support efforts for mainstreaming gender in its programs. The grant enabled three activities: Research, training, and strategy development. The two main outputs from the research phase were a literature study on the 'gender digital divide' and this report, analyzing *infoDev* projects from a gender perspective.

## 1.2 Ensuring Equal Access to Opportunities Afforded by ICTs

It is often assumed that the application of technology is neutral and that benefits of an ICT project accrue equitably to all individuals in a community. In most cases, however, there are some individuals or groups that have fewer prospects of benefiting from services offered. They include indigenous peoples, people who are illiterate or who have disabilities, those with less access to opportunities for making a living or making their voices heard – in sum, the poor and the disadvantaged. Women typically constitute a majority of these persons.

Focusing more on the needs of women would increase *infoDev*'s ability to reach the poor, just as the introduction of ICT could potentially contribute to reducing inequalities between men and women. This entails ensuring that men and women have equal access to technology, have equal opportunities to absorb and utilize technology, and benefit to an equitable extent from the applications of technology.

Although gender research has received more resources and attention lately, there are few studies that document gender differences in ICT applications. There is a need to identify risks of gender imbalances in ICT projects, as well as to accentuate the opportunities created by giving poor women access to ICT.

To meet these needs, *infoDev* engaged in a gender mainstreaming exercise with the overall objective of ensuring that *infoDev* can effectively contribute to bridging the gender digital divide, as part of its aim to alleviate poverty. Gender mainstreaming is the process of assessing the implications for women and men of any planned action, including legislation, policies, and programmes, in any area and at all levels. It is a strategy to make women's and men's concerns and experiences an integral dimension in the design, implementation, moni-

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<sup>1</sup> The term "information technology (IT)" tends to be used interchangeably with "information and communications technologies (ICT)". The latter recognizes the multiple technologies which carry information as well as the ubiquitous convergence of communications with information technology. However the term "information technology" has come to include the idea of many technologies as well as the element of communication. In general, IT tends to be used in the United States, while ICT is the preferred usage outside of the U.S. This paper will use the term ICT except in cases where the element of communication does not apply.

toring and evaluation of policies and programmes in all political, economic and societal spheres. Its aim is for women and men to benefit equally from the intervention in question and to work towards the elimination of inequality. The ultimate goal is gender equality. True gender mainstreaming will make fundamental changes in the way ICT are implemented for development, not only increasing the success of *infoDev* projects, but in enabling both women and men to improve their own lives.

The origin of this study is the recognition that in order for *infoDev* to implement projects that benefit women and men equally, there is a need to:

- Take stock of *infoDev*'s experience and understand gender consequences of *infoDev* projects;
- Ensure that the program adequately addresses the key constraints to poor women benefiting from ICT; and
- Integrate gender concerns into *infoDev*'s strategies and processes.

### **1.3 Objective of this paper**

The objective of this paper is to summarize the findings from an overview of the *infoDev* portfolio from a gender perspective and field studies of six selected *infoDev* projects.

The purposes of the project reviews were to:

- Analyze the effect of project activities and outcomes on women's situation;
- Identify gender issues that affected the project design, implementation, and results;
- Identify lessons learned and make recommendations to ensure that *infoDev* projects equally benefit women and men.

The approach in these studies was both empirical and experimental. In the absence of any field research guide for gender analysis of ICT projects, the project developed its own gender review framework, based on current gender theory and ICT project experience (see Annex IV). The key component of the framework was a set of questions concerning the gender aspects of project planning, goals, objectives, activities, outcomes, beneficiaries, monitoring, and evaluation. Research was conducted between November 2001 and February 2002. The project operated under strict resource and time constraints, which limited the extent to which the methodologies could be refined.

An important part of the context for this study is that *infoDev* has previously not encouraged proponents to address gender. Proponents generally adhere strictly to the guidelines, and project proposals that addressed gender, or had women as main beneficiaries, did so on their own initiative. This study should therefore not be considered an evaluation of *infoDev* performance, but an attempt to learn lessons in an area which is strongly contributory to the fulfilment of *infoDev*'s mandate.

The paper has three main sections:

- *Overview of infoDev projects from a gender perspective.* Project documentation from 95 active and completed *infoDev* projects was reviewed to assess the extent of inclusion of gender issues.
- *Findings from field reviews of six active and completed projects,* commissioned from local consultants in China, Ethiopia, India, Kenya, Panama and Peru. Projects to be reviewed were chosen for regional representation as well as to represent various categories of *infoDev* projects.
- *Conclusions and Recommendations.* Conclusions summarize key findings of relevance to gender for ICT projects in general. The recommendations are based on the findings, and include suggestions to ensure that more women, especially poor women, benefit from ICT projects and are encouraged to become full and equal participants in the digital society.

## 2 Overview of *infoDev* Projects from a Gender Perspective

### 2.1 Objectives and Methodology

In November, 2001, a team consisting of *infoDev* staff and the Consultant together carried out a desk review of 95 active and completed projects funded under *infoDev*'s core program during 1995-2001. This included virtually all projects funded since *infoDev*'s inception, except conferences and special initiatives, and corresponded to a total of over \$20 M in grants. The list of projects reviewed appears as Annex I.

The aim was to assess, by way of a brief gender analysis<sup>2</sup>, the extent to which *infoDev* projects address gender. The project components analyzed included the design, intended beneficiaries, implementation, and results (where applicable) of each project. A set of indicators was defined to capture potential gender aspects of *infoDev* projects and the projects were analyzed in this framework. The analysis was based on available project documentation, including project proposals, related correspondence, quarterly and final reports, and evaluation reports. The amount of documentation available varied from project to project.

Projects were classified according to whether they made any reference to gender in project documentation or not. Seventeen additional indicators were used to analyze the gender awareness and content of projects. This summary report will only discuss the overall findings, as so few projects had gender components. The complete list of indicators is provided as Annex III.

Due to resource constraints, only funded project proposals could be studied. The study can therefore not be used to draw conclusions about the gender awareness of all *proposals* submitted to *infoDev* or about any potential bias in the proposal selection process.

### 2.2 Summary of Findings

Of the 95 projects reviewed, the breakdown according to gender references in project documentation was as follows:

Category	Projects / Frequency	Relative Frequency
<i>No</i> reference to gender in project documents	77	81 %
<i>Some</i> reference to gender in project documents	18	19 %
Total	95	100 %

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<sup>2</sup> Gender analysis is a methodological tool for understanding gender relations and the implications thereof. In the case of projects, gender analysis would denote the attempt to assess the differential outcomes and impacts of projects for women and men.

About four in five projects did not make any reference to gender in project documents. It appears that these projects did not take into account gender-specific roles and responsibilities<sup>3</sup> and the different impact that the project could have on men and women. About 19 % had some reference to gender, but it should be noted that the definition used was very generous.

Of the 18 projects that made some reference to gender, seven (39 %) did not have any active gender component (see Annex II for a list of projects that made reference to gender). However, eleven projects (61%), including five that targeted both women and men, were found to have active components to involve women. At least nine of these appear to be gender-transformative, meaning that it is likely to address and possibly alter relations between women and men in favor of women's empowerment ('gender-transformative' projects). In summary, 11 out of 95 *infoDev*-funded projects (12 %) addressed gender actively.

It is interesting to note that there were more potentially 'gender-transformative' projects as 'gender-specific' (women-only) projects. Projects from Asia were twice as likely to make reference to gender, compared to those from other regions. The projects least likely to mention gender were global, multiregional or interregional projects.

Given the strong correlation between poverty and gender (women comprise an estimated 70 % of the world's poor), the review noted whether or not projects had a focus on reducing poverty. Surprisingly, only 35.8 % of projects studied had a direct focus on poverty alleviation.

More recent projects – approved in 2000 and 2001 – were more likely to be gender aware than earlier projects, which suggests an increase in the gender awareness of proponents of *infoDev*-funded projects.

## **2.3 Suggestions for Proponents on Integration of Gender in Future Projects**

### **2.3.1 The Need for Social Analysis in Every Project**

Every project that has a human resource dimension should incorporate elements of gender and other social analysis. The review noted several projects that had women as key beneficiaries, but that did not consider gender issues. The risk of not considering gender issues is that some beneficiaries – women or men – may not derive maximum benefit from the project. For instance, women may have difficulties engaging in project activities due to their domestic role, or men may have difficulties participating due to their productive role. Are there (culturally-based) gender constraints that are not obvious to the project team? Could the project design be adapted to make it easier for people in the target group to participate and benefit?

Some cases were noted in which women could have been empowered by participating actively in the project, but no transparent effort had been made to involve them. The risk of

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<sup>3</sup> In the gender literature, women are considered managing three different roles: A domestic/reproductive role, a productive role, and a community role. See Caroline Moser (1993), *Gender Planning and Development: Theory, Practice, and Training*, New York: Routledge.

disregarding gender is not only that of discrimination and exclusion, but also the risk of missing opportunities for empowerment.

### **2.3.2 Decision-Support and Information Systems**

Information systems are generally built after a specification of user needs. Projects creating, implementing or disseminating information systems, such as Geographical Information Systems (GIS), management information systems, and other software-based projects should acknowledge that women are a key user group of these systems. Women's economic and legal interests may require a different organization of data and information. Moreover, women may also contribute specific indigenous knowledge relevant to the system, which is another reason to solicit participation and input from women.

Projects developing decision-support systems should adopt women's specific concerns and incorporate them among indicators. Including indicators that are relevant to women's as well as men's needs will ensure the consideration of concerns of the wider populace, and can even have gender-transformative effects.

Information infrastructure indicators should include data disaggregated by sex and other key population characteristics, to enable the tracking of different groups' access to and appropriation of available technologies.

Projects consisting of research on technical subjects such as telecommunications settlement revenues should consider using other units of analysis than the household, as there are often gender concerns within such units. This is particularly important when the project involves a social analysis.

Governance projects need to address different user information needs, and the users should include all the citizenry. Stakeholder groups such as women's organizations should be among those consulted in the development of national ICT policies or other projects seeking to build consensus around key ICT issues.

Awareness-raising projects (such as the Y2K initiative) should target women specifically to ensure that they are aware of potential domestic, household, and community impacts that they face. This enables women to take part also in shaping solutions.

### **2.3.3 Conferences and training**

Conferences and training programs need to make special efforts to recruit and attract qualified women. Attempts to recruit more women are important not only for equality, but also for the opportunity of increasing women's participation in fields where women are underrepresented. It will also add to the diversity of perspectives reflected by participants. Active efforts are therefore critical for projects that are designed to correct social exclusion.

In terms of training modes, women may benefit to a greater extent from distance education, as the relative flexibility can mitigate the time and resource constraints they face.

Many of the inter-regional projects could incorporate a gender dimension by, for example, locating training projects in institutions where admissions guidelines are already gender-responsive, or by otherwise deploying active efforts to enrol women in training programs.

#### **2.3.4 Micro-entrepreneurship and rural development**

Projects using ICT to stimulate micro-enterprises and agricultural development should involve women in planning, in order to ensure the incorporation of particular concerns that female entrepreneurs have. Women are likely to face different constraints from men in setting up and running their business, depending on the general entrepreneurial and social climate of the country. Projects should be particularly careful to avoid inadvertently focusing on men, by the way they define their target community, to ensure that businesswomen are included in the target group and information network.

#### **2.3.5 Projects for youth**

Awareness of gender is particularly important in projects that target youth. Given the low participation of young girls in computer use, special activities for girls in projects targeting school-age children are crucial.

### **2.4 Conclusions of the Desk Review**

As *infoDev* has not previously referred in its guidelines to gender as a critical project consideration, it is not surprising that most project documents reviewed do not make reference to gender issues. Neither do they report on gender aspects in monitoring and evaluation. It is therefore difficult to assess to what extent projects in effect incorporated gender concerns.

The overall conclusion of this review is that gender awareness and incorporation of women's concerns and perspectives have been lacking in most *infoDev*-funded projects. Despite this unfortunate finding, some 12 % of projects funded (one in eight) nevertheless do address gender in an active and potentially gender-transformative way. An additional 7 % of projects recognize the importance of addressing gender. It was also noted that documents of projects funded since 2000 more frequently make references to gender, which could be a result either of greater awareness of gender issues in the ICT for Development community as a whole, or as a result of increased selection of those projects that target women or have a stronger poverty-reduction component.

Finally, gender-disaggregated data and evaluation have not been required of *infoDev*-funded projects. Requesting sex-disaggregated data is a simple and straightforward method of promoting gender awareness. If *infoDev* were to specifically request in its proposal guidelines gender-disaggregated data and discussion of strategies to ensure women's participation in projects, more information on women's participation would likely emerge.

### 3 Field Studies of *infoDev* Projects from a Gender Perspective

#### 3.1 Objectives and Methodology

As part of its gender analysis of projects, six field studies of on-going and completed *infoDev* projects were commissioned. Projects were selected from different geographical regions (two each were chosen from Africa, Asia, and Latin America) and different kinds of projects (field projects, policy projects and technical projects). An attempt was also made to have representation of projects with varying degrees and kinds of gender focus, including projects where women were the specific focus group, projects that appeared to transform traditional gender roles, projects that made efforts to benefit men and women equally, and projects that had no stated gender issues. The final list of projects was determined by available research resources and feasibility of the study.

Projects selected dealt with both classes of *infoDev* projects: those promoting the development of *ICT infrastructure* and those promoting *sector applications* of ICT. The projects chosen included two technical training projects (one women-only), one project introducing a new technology, one project using technology to facilitate employment, one project developing rural community information services and one project promoting national development of e-commerce. Overall, the projects reviewed dealt with all the categories of classification of *infoDev* projects as presented on the *infoDev* website<sup>4</sup> (e-commerce, education, environment, government, health, Internet and telecommunications) as well as the *infoDev* classifications of *policy and strategic activities* (China), *networking and consensus building* (Panama and Peru), *human capacity development* (Ethiopia and Kenya) and *pilot or demonstration projects* (India).

In the absence of any field research guide for gender analysis of ICT projects, the project developed its own, entitled “Gender Review Framework for Field Studies of *infoDev* Projects”<sup>5</sup> and tested it through application to the six case studies. For each of the projects, a local consultant was selected to conduct the study on the basis of the framework. As the projects chosen for study were very highly varied and geographically widely dispersed, researchers had to make adjustments to deal with the realities they confronted, as well as time and resource constraints. The resultant studies are thus not fully comparable, but they have a richness of first-hand observation and analysis. They also meet the objectives that were set out of being able to discern gender elements of the project, differential benefits of the project for men and women, and lessons that could be learned for future projects.

In choosing consultants to undertake the studies, criteria included experience with gender analysis; experience in project evaluation and familiarity with the cultural context of the project by virtue of long-term residence in the country of the project; and ability to speak the local language. Pluses were a knowledge of or substantial familiarity with information technology.<sup>6</sup> Both men and women researchers were selected (two men and four women). In terms of academic qualifications, a minimum of an M.A. was required, but three of the researchers had Ph.D.s in relevant fields. All had many years of work in project evaluation in developing countries.

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<sup>4</sup> [www.infodev.org](http://www.infodev.org)

<sup>5</sup> The full text of the framework is included as Annex IV.

<sup>6</sup> Two of the researchers were experienced in both information technology and gender.

The projects selected for study and the researchers who undertook them were:<sup>7</sup>

- Prof. Rahel Bekele  
Training for African Women in Internet Working Technology
- Mr. Michael Clulow  
The National Graduate Registry in Panama - Partners for Employment
- Prof. Karen Odhiambo  
InfoDev Health Information Training Center
- Prof. Liu Meng  
Exploring Adequate Reform Models for the Telecom Sector in China
- Ms. Norma Puican  
Information Systems for Rural Development: A Demonstration Project in Cajamarca, Peru
- Dr. Shiraz Wajih  
India Health Care Project - Use of Information Technology for Delivering Quality Health Care to the Rural Population

The purpose of the field studies was to review projects from a gender perspective, focusing particularly on:

- *If and how* women benefited from the project;
- Any gender issues that affected implementation and results;
- How the project outputs affected women's situation;
- How women could have benefited more from the project;
- How a positive impact of the project for women could be communicated
- What lessons should be learned by other *infoDev* projects on the involvement of, and benefit to, women.

The purpose of this section is to present the findings of the field studies and to draw general lessons from each. It will present the findings of each of the case studies and then proceed to detail some lessons and conclusions.

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<sup>7</sup> Thumbnail biographical sketches of the researchers are contained in Annex V.

## **3.2 Technical Training of African Women in Ethiopia**

***“Review on Training of African Women on Internet Networking Technology: A Project Carried Out by UNECA Funded by infoDev” by Prof. Rahel Bekele***

***Implementing Agencies: UN Economic Commission for Africa (ECA) and Cisco Systems***

### **3.2.1 Summary of the Gender Review**

The project was jointly sponsored by the United Nations Economic Commission for Africa (ECA), located in Addis Ababa, Ethiopia, and Cisco Systems. Cisco Systems has some 8,000 networking academies worldwide, but this was the first outside the U.S. exclusively for women. Additionally, it is the only regional academy involving trainees from an entire continent. The project awards full scholarships to young women who come to ECA in Addis Ababa for training in Internet networking technology. The training course follows the established curriculum of the Cisco Networking Academy Program. It covers six months and 280 instructional hours and leads to independent certification as a Certified Networking Associate or a Certified Networking Professional.

At the same time as receiving technical training, the trainees also receive training in management and entrepreneurship and on gender issues. Additionally, since the training takes place at the ECA, they are exposed on a daily basis to analysis of African development issues and have the opportunity to meet African policy and decision makers. At the end of the project, the young women are expected to return home and find employment (self-employment or salaried) in the informal technology field. Africa is the region of the world with the lowest percentage of women studying and working in scientific and technical fields. It is also the region of the world with the lowest penetration of information technology. Given the constraints that African women face, the barriers to their entry into this important field are enormous. Thus, it was hoped that this special program would allow a number of young women to surmount the barriers and become role models for others to follow. The expectation was that this project would be gender transformative.

The first course took place from August 2001 to February 2002 – for 27 English-speaking women. The second course, taught in French, began in March 2002.

The reviewer interviewed twenty-three of the participants in the first course, three trainers and one of the project coordinators. Women had been consulted in project design from the outset, in identifying the problems women in Africa face in entering information technology and in preparing the project proposal for funding. According to the ECA, the women planning the project were instrumental in incorporating modules on gender issues and entrepreneurship in the curriculum. Also notable was that half of the participants said that they were aware of gender issues before they came for the training. The course devoted nine sessions (totaling 14.5 hours of class time) to gender issues. The lectures were reinforced by training material, including Internet resources, on gender issues. Following the presentations, according to the reviewer, the participants “not only became more aware of gender issues, but because of related presentations, most have come to realize that women have major roles to play in the application and advancement of ICT in their respective countries.” After the training, they said, they no longer considered computer networking as a man’s field. They

now thought that in entering such a technical field, the most important thing was “convincing and committing oneself as well as hard work.” They also felt that gender training should not be a one-time activity, but rather needed reinforcement and repetition at more advanced levels.

Trainees said that they did not encounter any negative gender attitudes in the training or during the course of their stay in Addis Ababa (the trainers in the first course were male). As to whether the training would change their lives and help transform women’s position in society, they reserved judgment, saying that they would see for themselves once they returned to their home countries. The trainees regarded the training as highly beneficial. They said that:

- The training had increased their confidence in working with computers;
- Their knowledge of networking had increased, and they had become familiar with network technical terms;
- The training facilities at ECA, which included fast and unlimited Internet access, increased their knowledge about the services available on the Internet;
- They had become more aware of gender issues.

The review appears to bear out the expectation that this project would be gender transformative. The training increased the self-esteem and promoted the self-confidence of the young women participants. The reviewer felt that the gender-awareness training was as important as the technical training in achieving this. Among the recommendations of the reviewer was that future training should include even more gender-awareness modules. She recommended better selection of future candidates, to ensure their success (the first selection had been rushed). She emphasized the importance of follow up, both in terms of assistance to the young women once they return to their countries so that the benefits of the training would not be lost, and in tracer studies. She also urged that the women have increased exposure to the work of ECA – to the various divisions, as well as to its meetings and conferences.

Although it is too soon to evaluate the role model effect (the first group of trainees graduated at the time this report was being written), the reviewer concluded that the project was beneficial and gender transformative. The reviewer encouraged *infoDev* to undertake other similar projects to increase the number of women in technical levels of ICT in Africa.

### **3.2.2 Summary of benefits to women**

- The trainees clearly gained increased knowledge in four areas: in Internet networking, gender issues, management and development issues.
- The trainees gained enormously in self-confidence and self-esteem.
- It is likely that the project will have role model and multiplier effects on other young women in Africa. A United Nations Volunteer (UNV) working with the course did a survey of the twenty-seven young women in the first graduating class.<sup>8</sup> In response to open-ended questions about their future plans, seventy-one percent of the gra-

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<sup>8</sup> Adam, Nasri, UNV, “Profile on UNECA/Cisco Trainees on Internet Networking for African Women,” November 2001.

duates said that they intended to encourage other women to enter IT and to promote women in IT; forty-one percent said that they intended to become IT entrepreneurs; while fully 82 percent said they intended to work in the IT field.

### **3.2.3 Lessons learned on gender**

Among the gender lessons derived from the project:

- The need for follow up once the women return to their home countries is crucial, so that they do not lose momentum or skills and so that they receive encouragement to overcome social and cultural obstacles. If this is done, there will be large multiplier effect payoffs.
- Single-sex training can be beneficial for women in information technology. Women tend to perform better in scientific and technical fields when they are not in competition with men.
- Gender awareness and management training provided important complements to technical training in information technology in terms of moving the trainees to a desire to enter IT and/or become IT entrepreneurs.

## **3.3 Web Site to Facilitate Employment in Panama**

***“Field Study of infoDev project #323 ‘National Graduate Registry in Panama’ Panama City: Report for WIGSAT and infoDev, “Gender mainstreaming/Digital Divide” by Michael Clulow***

***Implementing Agency: EDUC-INTER, Quebec, Canada***

### **3.3.1 Summary of the Gender Review**

This project aimed at setting up a national Internet-based employment system in Panama by introducing an expanded version of the National Graduate Registry (NGR), an employment creation tool used by the Canadian Government to bring together university and college graduates and prospective employers. It was hoped that the project would improve the access of Panamanian university graduates to employment information. It was also expected that it would diminish unemployment and assist private sector firms by increasing the number of qualified job candidates.

The project was implemented from March 2000 to late 2001 by a small, locally hired team supported by EDUC-INTER staff based in Canada.

The reviewer examined the gender aspects of the project through interviews with stakeholders – in person, by telephone and by e-mail. Attempts to conduct a gender analysis of the project were difficult, *inter alia*, by the absence of sex-disaggregated data. According to the reviewer, “almost no gender related information had been collected and no gender analysis conducted.” It was not possible to track the sex of users of the site.

Given the demography of Panama, there was excellent potential for women to benefit, since two-thirds of university graduates are women, with percentages as high as 70 percent in

some universities (higher in business schools, lower in technical ones). Poor women are also prospective beneficiaries, since many of the students at some of the universities are from low-income families, and since the poor and women would be less likely to rely on networks and connections to seek employment.

The project director suggested that women were major beneficiaries. He said that when the project was publicized at colleges, women were more interested than men, and maintained that the majority of those registered were women. He felt that the major benefit for women would be to level the playing field, to present their resumes to employers before they were aware of their sex.

However, an analysis of the Panama cultural context suggests that getting their resumes on employers' desks would be sufficient for women to obtain desirable employment in Panama. According to the reviewer, employer's attitudes are strongly influenced by "machismo." Educated women tend to get hired for service-level rather than managerial jobs, and employers frequently make hiring and salary decisions based on gender stereotypes (such as: women's place is in the home; men are the breadwinners; men don't take orders from women). The project did not consider these serious obstacles that educated women face when seeking employment.

In the end, the reviewer concluded that it was not possible to demonstrate whether or to what extent the project actually benefited women, because of the limitations on available information sources. It was unclear to what extent the project affected women's situation: either through increased levels of women's employment or through more use of ICT to create sustainable linkages between the worlds of education and employment. Neither could the project be said to have increased women's use of ICT; the target population of women university graduates was already using ICT.

The reviewer made some specific recommendations about how employment websites could combat gender-based employment discrimination. He felt that:

- Those using the site should indicate their sex, so that this information could be tracked but not revealed to employers. Instead of first names, candidates names could be referred using initials.
- Married status information should not be collected at all.
- Employers should be encouraged to post job listings with details of remuneration, to limit possibilities that women would be offered the post at a lower salary than men.
- Job-education modules should include material on sex-based discrimination in employment.

Despite the lack of data, there are grounds to believe that the project could have delivered benefits for women. There was no gender bias in access to or use of the technology among the target population, and women made up a majority of graduating professionals. The exclusion of information on the sex of the candidates and the automatic matching of job requirements with candidate characteristics should reduce the possibilities of gender screening in the early stages of recruitment. However, the factor of widespread machismo would still

have to be addressed, and this is probably the most important factor limiting women's professional employment in Panama.

The reviewer recommended that inclusion of a gender-aware individual (not necessarily a woman) on the project planning team would have been helpful. There were few women staff on the project, and those on its advisory board were not consulted on gender issues.<sup>9</sup> He also suggests that the project management could have developed targets for the registration of women on the site, their use of its services and their hiring by employers. Specific measures were also needed to either block or delay disclosure of the sex of individual jobseekers.

The reviewer concluded that to ensure more benefits for women:

- Gender considerations should have been incorporated from the beginning. As noted, the *infoDev* application format does not request information on inclusion of gender issues. The format also does not include any questions about the involvement of beneficiaries in the design process.
- He suggested that deliverables to *infoDev*, such as quarterly reports, mandate the sex disaggregation of statistics on project users/beneficiaries.
- The reviewer maintained that a gender analysis of the employment of young men and women would have uncovered some of the cultural factors identified in this study and could have helped the project focus better on women's reality.

### **3.3.2 Summary of benefits to women**

- Although the project director maintained that women benefited because their resumes reached the desks of employers, there was no evidence to show that women were hired as a result of the project.
- Given the lack of data, it was also difficult to assess how many women obtained increased access to employment information.

### **3.3.3 Lessons learned**

- The project would have benefited from gender analysis from its inception. The elements of gender relations in Panamanian society were very important; gender discrimination in employment could not be overcome by technology alone.
- The project would also have benefited from sex-disaggregated statistics. Such statistics would likely have shown that benefits derived from the project were not distributed equitably to men and women.

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<sup>9</sup> The reviewer noted that one of the women on the board had suggestions for increasing women's employment through the website, but had not been consulted on this issue during project implementation and design.

### **3.4 Health Information Training Center in Kenya**

***“Gender Review for Field Studies of Information Development: Regional Information Technology Training Center (RITTC), Kenya” by Prof. Karen Odhiambo***

***Implementing Agency: RITTC***

#### **3.4.1 Summary of the Gender Review**

The project assisted in establishing a pilot East African Regional Information Technology Training Center (RITTC) in Nairobi, Kenya. RITTC offered two courses for individuals recruited from health-related institutions and organizations in Eritrea, Ethiopia, Kenya, Tanzania and Uganda. The first course was a three-day introduction to information technology and its health applications to empower health professionals in East Africa engage in global knowledge sharing through the efficient use of ICT. The second was a one-week training course designed to create a cadre of information technology trainers (ITTs) – health professionals skilled in information technology and able to train other health professionals in their home countries. RITTC was administered by Satelife with assistance from the network management team of HealthNet Kenya (HNK) in planning and implementing the project.

Evaluation was done through face-to-face interviews, telephone and e-mail. A questionnaire was also administered by e-mail. Making contact with trainees was difficult, given communication problems in Africa and the fact that participants were now spread out over five countries.

Although the number of women trained was not large (84 in total, comprising 28.6 percent of those in the trainees’ course and 20 percent of those in the trainers’ course), those women who participated gained an increased awareness and appreciation of ICT. On the personal level, women participants came from the course with a sense of fulfillment. A number of the female participants said that they felt proud that they had completed the training and that it had made a difference in their lives. While male respondents tended to say that the main benefit of the course to them was increased knowledge of the subject matter, female respondents focused on their improved ability to use ICT. The course also created role models for other women in the region to take up ICT. Upon their return, twice as many of the women as the men said that other women were showing an interest in ICT as a result of their influence. Only one of the men said that others were acquiring ICT interest following their lead.

#### **3.4.2 Gender issues affecting implementation**

There was no awareness or incorporation of gender concerns or perspectives to ensure the equitable participation of women in the design or implementation of the project, even though the planner of the course was a woman. The project document contained no references to gender. There were women among the instructors, but no women in the management of the course. This example demonstrates that awareness of gender concerns, more than the sex of the person or people designing a project, determines the inclusion of gender analysis.

There was no sex disaggregation of data on participants. The reviewer had to determine for herself which participants were female (which was hard in the case of Ethiopians and Eritreans where the names are not easily known outside of the countries and where names are sometimes not gender-specific). No special efforts were made to recruit women or to en-

courage them to apply – in contrast, the mode of advertisement was gender-biased in its reach. Recruiting took place largely over the Internet, to which few women in Africa have access. In this way women were disadvantaged in learning about the opportunity for training. This was evident especially in the course for trainers, which had technically selective criteria. Special efforts would have been necessary to increase the pool of eligible women.

Virtually all of the women interviewed felt that the time allotted for the courses was insufficient. This may have been because the IT skills of the women were lower than those of their male peers. Thus, assessment of participants' skills levels is a necessary element, and corrective measures should be introduced where needed to level the playing field. The need for remediation in information technology frequently correlates with sex because of the weaker scientific and technical knowledge of women. Several women participants felt that the courses should have been divided into two levels to accommodate differences in skill levels.

### **3.4.3 Sustainability**

Once they returned to their homes and jobs, many more of the women lacked regular access to information technology. In particular, few of the women had Internet access after their return, with the result that their continued and intermittent use of the technology was confined largely to personal e-mail. The high cost of public access restricted access for those women who did not have Internet connections at work.

A serious outcome was that none of the women trained to be IT trainers was able to conduct training upon return to her workplace. The reasons given were either lack of computers, lack of confidence, or lack of support from administration. All of the women trained to be trainers said that their organization had not facilitated any training of colleagues upon their return!

Another detriment was a lack of follow up to the training. This is particularly important for the women trainees, as their skills levels were lower upon entrance and they faced more obstacles in keeping up the skills upon their return.

Timing and contact hours during workshop training should have taken into account women's multiple roles. Some of the courses were spread out over two weeks. For those from other countries, a more intensive schedule would have shortened the period required to be away from home. Additionally, the women who commuted back and forth to the training facility every day were unable to practice on the computers at the facility after hours. This put them at a disadvantage in comparison with other students.

#### **3.4.4 Summary of Benefits to Women**

- Increased awareness of and appreciation of IT by the women trainees.
- Gains in self-esteem and self-confidence by the women trainees.

#### **3.4.5 Lessons learned**

- IT human resource development projects implicitly deal with gender. Thus, gender analysis should be incorporated from the beginning.
- The need for specific strategies to ensure women's participation, since the pool of women (particularly in Africa) eligible for technical training is small.
- The need to involve women in the design, management and planning of training to ensure that gender needs are addressed.
- The need for sex-disaggregated data on projects, especially those involving training.
- The need to correctly assess skill levels before training, as more women than men may have a low level of skills in information technology and adjust training accordingly.
- The need to take into account gender-specific cultural constraints, such as women's family responsibilities and their difficulty in attending evening training sessions.
- The need for after-training follow up to ensure access, combat cultural constraints and promote skills retention.

### **3.5 E-commerce Policy in China**

***"Report of the Gender Evaluation in China" by Prof. Liu Meng***

***Implemented by Ministry of Information Industry, People's Republic of China***

#### **3.5.1 Summary of Gender Review**

In its original formulation, the project was to focus on the reform models for the telecom sector in China, building consensus among key decision makers on adequate policies and strategies to successfully push China Telecom into a more competitive market. As the project went into implementation, however, the focus narrowed to an examination of e-commerce and its regulation in China, with a view to putting forward policy recommendations to the government. This project is initiated and implemented by the Ministry of Information Industry of China.

The reviewer conducted interviews with members of the managing group; regrettably, the project manager was not available during the period of the research. Administrative control was strong, and staff were hesitant to grant permission to the reviewer to conduct interviews. Due to the nature of the project (policy development), it was difficult to identify or interview beneficiaries. The project design and project document contained no references at all to gender.

### **3.5.2 Gender and project management**

The management of the project was equally divided between men and women (two of each). The research group, to which the revised project (consisting mostly of research activities) was contracted, consisted of two-thirds women. Despite the fairly large participation of women in the project, the reviewer felt that no one connected with it understood or had an awareness of gender. As she wrote:

In the research process, nothing has been designed to get data from women consumers about their situation, their special needs and so on. No specific suggestions have been made to encourage women to participate more in this industry. It can be inferred that both the designers of the project and the participants of the project do not have the awareness of how to benefit women through this project.

### **3.5.3 Policy and gender**

The general attitude of project management was that macro-policy projects, particularly those in technical areas, were gender neutral and did not need to incorporate any special concern for women. It was considered that the development of e-commerce in China, the anticipated project outcome, would benefit many people in China and “. . . so, automatically, women will be half of the beneficiaries.” As a result no particular note was made of women’s needs or interests.

The same attitudes carried over from the project managers to the research team. They viewed the field as highly technical, in which it was not necessary to differentiate by gender. In addition, the principle of “If you ask for gender, you get gender. If you do not, you will not” appeared to apply. They said that they had not thought of gender in dealing with the project, but, more importantly, as contract researchers, they had not been asked to look at gender.

### **3.5.4 Project outcomes**

A fascinating aspect of the review was that as the interviewees discussed the benefits that the project would bring to people’s lives in China, they in fact articulated a number of ways in which the project could positively affect women’s lives. Among these were the beliefs that the project could:

- increase employment opportunities for women, especially as e-commerce was not a field requiring physical strength or endurance and would thus be a field that many women would seek to enter,
- decrease women’s domestic workload (by their being able to do shopping online) and increase their available time for leisure and career development and give women with small children or living in remote areas the possibility to continue their education online (through distance education).

The reviewer questions the reality of some of these possibilities, such as how many women would be sufficiently educated and Internet-connected to become e-consumers. The majority of Internet users in China to date have been single men. As for reducing the amount of time women spend shopping, she notes that this does not challenge the traditional role of women as domestic laborers. She also questioned the possibilities of dissemination of dis-

tance education to women in rural and remote areas of China in the near future, given that Internet users are very heavily concentrated in major cities. However, the interesting point is that upon examination a project that had been unaware of gender was found to have significant gender aspects that those involved in the project had not previously realized. One idea that did not emerge, nevertheless, was that women might enter e-commerce as entrepreneurs.

An unintended but direct effect of the project was that the women participating in the project research found their participation empowering and their understanding of this aspect of IT greatly enhanced. These women said that they had gained a deeper understanding of the social reality of their country through the project, that it had concentrated their research interests, that they gained more confidence in themselves in information technology – an area that they regarded previously as a male preserve – and that they also gained confidence by working at a professional level with men. The reviewer regarded this group as “the authentic women beneficiaries of the project.” She commented:

Despite the fact that the project was not designed to empower women, women still have some gains from participating in it. The empowerment can be taken as the real impact this projects brings to women.

Three of the women researchers said that they would examine gender issues in their future research.

The reviewer concluded that women’s special needs and interests must be covered in policy projects. The expectation that a policy would benefit “the people of China” was not a guarantee that the benefits would be equitably distributed by gender. She also recommended that further study was needed of women’s special needs for e-commerce in China and how these needs could be matched. She requested further examination of how ICT, through e-commerce, could be gender transformative by challenging traditional role expectations for men and women in the home and in society at large. She also encouraged study of how to encourage women to enter the IT industry and how IT could influence women in poor and remote areas.

### **3.5.5 Summary of Benefits to Women**

- The women who participated in project research and designed benefited by the acquisition of knowledge, self-esteem and self-confidence. They also gained a desire to learn more about gender and IT.
- The realization on the part of project planners that there were gender aspects to a project that they had regarded as “gender blind”.
- The realization that there could be gender-differentiated benefits in distance education and e-commerce, and, in particular, that women could profit from the development of these areas in China.

### **3.5.6 Lessons learned**

- The need for gender analysis of projects. The reviewer recommended that this could be encouraged by including gender monitoring in project evaluation by *infoDev*.
- Seemingly “gender-blind” projects frequently have important gender aspects that gender analysis elucidates. In this case, the process of gender review of the project brought out these aspects.
- Hierarchical decision making, with individuals unaware of gender concerns at the pinnacle, can lead to the neglect of women’s interests.
- Substantial numbers of women participants in a project does not guarantee benefits to women. If projects are genuinely intended to bring changes to women and empower women, project managers and participants, male and female, would profit from gender sensitivity training.
- “If you ask for gender, you get gender. If you do not, you will not.”
- Evaluation is a reciprocal process that can empower both the evaluator and project participants. Gender evaluation in particular can bring out existing gender issues and lessons of which participants may not be aware and that would otherwise be hidden. All *infoDev* projects would benefit from gender evaluation.

## **3.6 Rural Community Information Services in Peru**

### ***Gender Review in the infoDev project “Information Systems for Rural Development: a Demonstration project” in Cajamarca, Peru” by Norma Puican***

***Implementing Agency: Unit for Information and Communication Technologies, Information Technology Development Group, UK (InfoDes)***

#### **3.6.1 Summary of Gender Review**

The general objective of this project was to contribute to rural development in Peru by increasing the productive capacity of the small farmers and to improve management skills among the local authorities in Cajamarca, Peru. This was intended to be accomplished by the design and installation of an information system for small producers and local authorities (municipalities). A methodology would be developed based on the results obtained by the pilot project in order to replicate the information service in other rural areas in Peru and in other countries. ITDG’s local counterpart was a consortium of producers’ organizations, local governments and NGOs. The latter two groups would also contribute the provision of information services to the local population. The resulting information system was called InfoDes.

In conducting the gender review, the researcher interviewed two managers of ITDG, the coordinator and project team in Cajamarca (the name of the district, as well as the capital city in the Andes of northern Peru, 545 miles [870 km] from Lima), local government representatives, information promoters and potential users of the project products. As with most of the other projects reviewed, there was little quantitative and qualitative data disaggregated

by sex. No records of project users were kept, so gender breakdowns of usage were not possible.

ITDG did not incorporate a gender perspective in the original design of the proposal, which is somewhat surprising because ITDG has been known for its work in gender and technology for more than three decades. One reason for this, was said to be that the *infoDev* proposal submission guidelines did not stress the gender dimension. Additionally, although ITDG's central office was well aware of the importance of gender in information and information technology for rural development, the same level of awareness was not present in the regional and local offices.

Prospective users were defined as “small producers” and local authorities. The project designers assumed that both were all-male groups, being unaware of the economically productive farm activities of the women in the area. . As a result, in reality women were part of the defined target group, but lack of gender awareness prevented project designers and implementers from recognizing women's economic roles.

As the project continued, several gender issues arose which were dealt with to varying extents. In the early stages of design the system proposed was inappropriate to the users, regardless of gender. It was based on library services and Internet access that were inaccessible to the potential users for reasons of low levels of literacy and lack of Internet infrastructure in the community. Despite the fact the many of the originally designed services were not appropriate to the locale, the reviewer felt that women's groups could have used several of them, such as the specialized library and video services.

In the implementation of the project, the information services became simpler and more functional. Women continued to experience disadvantages in access, since not enough attention was paid to achieving outcomes that would directly benefit women of the community. Disadvantages to women included:

- social factors that constrained women from using the services: a high degree of illiteracy and heavy domestic workloads.. The project tried to adapt to this, by implementing more flexible access schedules.
- Meetings and training constrained women's participation. In joint meetings and training the men tended to mock the women, who were shy to start with. Women reported that their greatest difficulty with the training courses was not the level or the specialization but men's attitudes towards their participation! The project team realized that the project was better served by setting up separate training for men and women.

By the second year of project implementation, increased diversification of activities had occurred and the gender awareness of the implementation team had increased. The reviewer attributed this to the gender awareness of the community radio project leader – a woman – and the fact that in the second year staff were able to deal with issues other than simply setting up the centers. Some new information centers were set up on enterprise models, and both young men and women from the communities were selected for training. In the implementation of the community radio project set up in the second year, the project team was

aware that appropriate program content could do a lot to build gender equity, and the women of the community were eager to participate in developing program content.

How could women have benefited more from the project? According to the reviewer:

- the proposal objectives should have included the strengthening of women’s capabilities as well as those of men
- the project objectives could have included equity for men and women
- the training could have been designed and conducted separately for men and women, especially in helping them to identify business opportunities in order to generate additional income sources for the household.

The reviewer felt that insufficient participation of the intended beneficiaries (women in particular) in the design of the project was the major factor in limiting positive gender outcomes. She recommended that as the consortium extends its information services to other areas, gender awareness should be incorporated, and that the ICT unit at ITDG adopt a gender perspective as the rest of the organization has done. More generally, she recommended that gender awareness be part of required training for project implementation teams.

### **3.6.2 Summary of benefits to women**

- As the project advanced, young women were trained in management and information technology to manage enterprise centers.
- Women came to assume leadership roles in the community radio activities.
- Content of some community radio programs was directed at building gender equity.

### **3.6.3 Lessons learned**

- Projects need to be designed with reference to the social and cultural issues and levels of education within the target population.
- Community information centers need to target the differing concerns, resources and perspectives of all the sectors of the population, taking into account the specific circumstances or restrictions of gender, age and/or ethnicity. The original focus of InfoDes had identified a user group that effectively excluded women. The targeted male small farmers and local government officials were not the only ones in the community with information needs, nor were they the only ones with a stake in the economic progress of the area.
- Women must be consulted as users of information services or in training, in order to determine the constraints they face in participating in projects, and projects should take steps to try to adapt to them, e.g. through flexible schedules for training and access.
- Training and meetings need to take into account cultural contexts – e.g. whether men and women are comfortable meeting together, and whether the presence of men constrains the participation of women.

- Gender analysis should take place from the design phase of the project to ensure gender equity.
- Gender analysis can reveal economic roles of women which were not apparent to project planners.
- Sex-disaggregated statistics are indispensable for effective project planning.

### **3.7 Using Handheld Digital Assistants for Health Data Collection in India**

***“Gender Review of India Health Care Project (Andhra Pradesh, India): an infoDev-supported project” by Dr. Shiraz Wajih***

***Implemented by CMC Limited***

#### **3.7.1 Summary of Gender Review**

The stated objectives of the project, based in the Nalgonda district of Andhra Pradesh state in India, were:

- to provide support tools that would allow Auxiliary Nurse-Midwives (ANMs) to reduce time spent doing paperwork.
- to increase the accuracy of the data flowing up from ANMs through the healthcare reporting structure.
- to provide a means for getting health care data at village level into electronic form.
- to provide ANMs with information that helps them to provide more effective service to the villages within their responsibilities.

This was to be accomplished through the use of personal data assistants (PDAs). The objectives underline the technology focus of the project.

Initiated in October 2000, ANMs were trained and then provided with PDAs for data entry and linkage with primary health centers. It was expected that substantial time savings would result for ANMs, in doing away with the necessity of filling registers manually which in turn would result in better interaction between ANMs and the community, and improved services to the population.

The study was conducted while the project was still in the initial stages of implementation. The reviewer identified and interviewed main stakeholders. He noted that although Andhra Pradesh is known for its progressive stance on gender equity, and the project was designed to benefit ANMs (all of whom were women), gender was not an articulated part of the objectives of the project. The focus in the project document was on the convenience of the technology and the possible resulting improvements in service. Most notably, no target groups (neither the ANMs nor the population they work with) were involved in planning and design of the project. Only the government health workers were informed of it; the community was not even aware of it.

Almost as soon as the project started, gender issues arose. When the PDAs (a novel technology in the region) were distributed to ANMs, their male counterparts (Male Health Workers – MHWs) protested that they had not been given PDAs. The introduc-

tion of a new and desirable technology only to women caused some offense. Following the protest, PDAs were also made available to MHWs.

By failing to involve the target population in the planning and design of the project, the project collected data that had been designated by the central office as important to women, but which according to the reviewer did not reflect the health concerns of the women of the area. While national and district-level medical officers were intent on data collection on family planning and immunization, women's health priorities in Nalgonda were concerned with joint pains, reproductive-tract ailments, anemia and related problems, childbirth and infant health issues.

The data collection and the health program treated reproduction as purely a women's issue, when in actuality it is very much an issue of gender relations. Women's reproductive health is very much determined by men's attitudes, behavior and the general level of inequality between the sexes. Few men in the area accept permanent methods of family planning; thus, their on-going cooperation is very important to the success of family planning. The reviewer suggested that the ANMs should work with MHWs on these issues to focus on problems that the women identified.

Additionally, in data collection only the father's name appeared in the data. It would seem useful for the mother's name to appear as well.

As observed in other projects presented above, women found the association with new technology empowering. The ANMs also reported feeling pride in being in possession of the PDAs.

### **3.7.2 Summary of benefits to women**

- Women health workers who received the new technology gained knowledge, self-esteem and status.
- The project was not far enough along to determine whether projected time savings gained by the women health workers would result in improved services to community women.

### **3.7.3 Lessons learned**

- While the focus of the project was on technology, it was soon learned that the intended objectives would not be met unless gender considerations and social equity were introduced into the project design.
- The introduction of information technology can affect gender relations, especially when it is introduced only to men or to women. Project planners need to recognize that technology is not gender-neutral, but operates in a social context.
- Targeting projects at women is not gender mainstreaming. Men's attitudes and behavior and the socio-cultural context determine outcomes for women as much as inputs directed solely at women.

- Project design which did not involve beneficiaries and which was undertaken outside the region did not correctly identify the real health concerns of target beneficiaries in the region. Awareness of the community can pay dividends in information collection, analysis and identifying solutions.
- Dissemination of the technology to both men and women health workers who could have complemented each other in collecting locally appropriate data would have been beneficial.

## 4 Gender Impact: Lessons Learned

An overview of the gender analysis of the six *infoDev* projects shows a number of common themes emerging. These include:

### 4.1 ICT Projects Empower Both Women and Men

*In virtually all projects in which women were involved, they emerged not only with greater knowledge but also with enhanced self-esteem.* This was seen in projects where women were researchers, where women were trainees, and where women received technology equipment. The empowerment effect was universal in all the projects examined. Additionally, many of the women who gained information technology skills were anxious to pass them on to other women, both promoting a multiplier effect and becoming role models.

However, we also observed that *while technology empowers, it also very much affects and alters gender relations.* The India project is a case in point, where men health workers protested when they didn't receive the new technology. In Peru, where women were already marginalized, they felt more so when information technology services were directed only to men. Diffusion of technology needs to be seen in its gender context.

The tremendous importance of the **socio-cultural context of technology** was apparent throughout. Technology does not operate in a vacuum. Information technology in itself cannot combat the constraints of socio-cultural forces (such as machismo and negative male attitudes towards women and stereotypes about women), but needs to be complemented by gender analysis and corrective measures. This was seen in every one of the projects. It was particularly well illustrated by the Panama project, where the technology in itself could not correct extensive gender discrimination in employment. In Peru, lack of awareness of gender roles meant that the economic roles that women play and the ways in which they could benefit from the new technology were overlooked. In Ethiopia, the presence of gender analysis in the project helped the women get beyond their fears, to master networking technology. In India, a lack of gender analysis prevented an understanding of the relations between the sexes on the vital issue of reproductive health. In China, the absence of gender analysis led to a blind spot concerning the differential effects of the proposed policy on men and women. In Kenya, a lack of gender awareness prevented the initiation of measures to recruit women and an understanding of the difficulties women would experience with respect to scheduling and access.

### 4.2 ICT Projects that are Particularly Attractive to Women

The Chinese study found that *certain aspects of e-commerce make it particularly attractive to women entrepreneurs.* E-commerce was not introduced in the Cajamarca project, but planners have become aware of the possibilities. ICT makes it possible to reach consumers (both retail and business) without travel, which is difficult for many women. It masks the shyness that women might face in direct sales. It provides a means of overcoming geographic isolation or distance from markets (the latter two factors being particularly prevalent in Peru). This is not to overlook the many difficulties inherent in e-commerce, such as the need for quality control, credit and banking problems, the same infrastructure difficulties

that any exporters in developing countries face. However, its potential makes it an area worth investigating.

Annex VI provides a brief overview of projects and components that are particularly beneficial to women; including some sector-specific considerations for implementation.

### 4.3 Gender is omnipresent

The most evident conclusion from the field studies is that *it is nearly impossible to find a project without gender issues*. In China, the project designers thought that theirs was such a project, but upon further examination, many gender aspects came to light. Virtually every project is effected by its socio-cultural context, among which gender issues are central. Failure to consider these will inevitably have negative effects on project outcomes. The assumption that some information technology projects would be “gender-neutral” and yield symmetric benefits for a population regardless of gender is erroneous, because of the impact of gender relations on technology and the societal constraints that women face in accessing and using information technology.

### 4.4 Soliciting Participation and Addressing Gender in its Societal Context

It became clear from the studies that in technical fields (this would include meetings and technical training), *projects should actively ensure the participation of women as well as men*, because the pool of eligible women in these areas (particularly in Africa) is small. Sometimes corrective measures may be needed to include women as well as men. For instance, in technical training (such as that offered by RITTC in Kenya), the women trainees may have lower skill levels than men and some remediation may be necessary.

Some projects focused solely on women, such as the Internet training in Ethiopia and the PDA training in India. It should be noted that all-women projects do not equal gender awareness nor do they necessarily ensure gender equity. In Ethiopia, gender awareness resulted from a conscious result of its inclusion in the technical curriculum. In India, when the project concentrated only on women, some project objectives were not met because of the exclusion of men; gender conflict developed.

*Gender awareness does not mean counting the number of women in a project activity but taking into account societal relations between men and women and the impact of these relations on other areas of community life.* To ensure that gender needs are addressed it is important to involve both men and women in design, management and training. Similarly, we have also seen that gender awareness on the part of management is more important than the sex of management personnel (e.g. the China case). In all the cases examined, gender awareness training would have proven highly beneficial.

*The societal context is of overriding importance in ensuring the participation of and the distribution of benefits to both men and women.* In some cases, this could be achieved by ensuring that men and women work together (as in the case of male and female health workers in India). In other cases, it means separation of the sexes in training and meetings (as in the community information services in Peru).

In a third instance, it means attempting to cover up sexual identity and especially marital status (as in the case of the employment registry in Panama). Frequently, special accommodation will be needed to ensure that women as well as men are able to participate (e.g. attention to course and meeting scheduling to recognize women's multiple roles, as in Kenya and Peru). The most important consideration is that the societal context need to be taken into consideration in the diffusion of information technology.

#### **4.5 Sustainability**

The studies uncovered a number of lessons concerning *the importance of follow up for the success of project endeavors*. In the ECA-Cisco course, we see the need to follow up with graduates upon their return home so that they can enter the networking field despite societal obstacles. Follow up is also needed to reinforce skills' retention and to help graduates continue to access information technology.

#### **4.6 Gender Needs to be Considered from the Beginning**

“If you don't ask for gender, you don't get gender.” Nearly all the reviewers reported that the *project designers had not incorporated gender into their analyses and design because infoDev had not asked for it*. There were almost no references to gender in the project proposal format instructions, and there were no references either to sex-disaggregated data or gender analysis in the reporting requirements. Thus, not surprisingly, virtually none of the projects attempted to collect sex-disaggregated data and virtually none had considered gender elements in their project design.

The review elicited some lessons about how to successfully incorporate gender into project design and implementation. It should start with the *imperative involvement of the beneficiaries in project design*. Although this has become a truism and almost a cliché of project design, it is evident from the projects reviewed that in most cases it does not happen. The difficulties resulting from a failure to involve beneficiaries were apparent in a number of the projects, most notably those reviewed in China, India and Panama.

*Gender considerations need to enter from the beginning of project design* and not added in hindsight or as mid-term correction. Several of the project reviews noted that no gender-aware persons were involved in either planning or design. It should be noted that having women involved in project design and implementation, or as participants, is not a guarantee of gender awareness. We saw several projects where women featured prominently in design and implementation teams, but where there was no gender awareness.

## 5 Conclusion

### 5.1 Summary of Findings

The most evident conclusion from the project reviews contained in this report is that it is nearly impossible to find a project without gender implications. In those projects where participants and designers are not aware of gender concerns or gendered distribution of resources and benefits, upon examination gender aspects of the project generally do come to light, in terms of:

- who participates (i.e. men or women);
- who uses the technologies or information generated from the project directly and indirectly;
- who benefits directly and indirectly from the project training and results.

Gender awareness and incorporation of women's concerns and perspectives have been lacking in *infoDev*-funded projects, which is probably a result of the absence of any instruction from *infoDev* to consider gender issues. Projects initiated since 2000 are more gender-oriented than earlier projects, which may be explained by increased attention to gender in the ICT for Development community at large.

There is little information on the results of *infoDev* projects in general, and on the effects on women in particular. Since no sex-disaggregated data is collected, little is known about the value of *infoDev*-funded projects for women. Collection of project data along gender lines can help greatly in increasing the ability to draw conclusions about gendered benefits in the future. This is critical, as women will not receive equal benefit from ICT projects at large unless they are actively consulted and their participation is targeted.

Further, project follow-up is important for long-term sustainability. In developing follow-up it is important to understand the differential access between men and women to equipment and resources, as well as differences in opportunity – or obstacles – to use skills gained in the project.

In terms of gender effects of ICT Projects, this study showed that in all ICT activities in which women were involved, they emerged not only with greater knowledge but also with enhanced self-esteem. Contrary to accepted notions that technology is neutral, the reviews found that while technology empowers, it also affects and alters gender relations. ICT in itself cannot combat constraining socio-cultural forces, but needs to be complemented by gender analysis and corrective measures for both women and men. The *societal context* is of overriding importance in ensuring the participation of and the distribution of benefits to both men and women.

## 5.2 Recommendations for Increasing Benefits to Women of *infoDev* projects

Including a greater number of gender-specific or gender-transformative projects in the *infoDev* funding portfolio will contribute to a higher rate of successful projects and a greater impact on poverty eradication. Conversely, failure to address gender concerns in ICT projects may conceivably contribute to increasing the gender component of the digital divide by further disadvantaging women in the knowledge society and, by extension, increasing global poverty.

Every ICT project should include an understanding of the potential gendered benefits of the project; a strategy to ensure that the concerns and perspectives of all strata of the target population are incorporated, and strategies to ameliorate the resource disadvantage of the poorer members of the target population.

Project design should recognize that women have less access to training and education in general. To support their participation, it may be necessary to set up separate literacy, training and education programs for women. In addition, the deployment of technology is likely to be more effective when implemented to address the restrictions faced by women, which include socio-cultural barriers to use of technologies, restricted financial resources, restricted time availability, illiteracy, language and geographical location.

Proposal forms and guidelines should request information on women's active participation in project planning, design and implementation. The presence of women should not be considered sufficient, since it has been demonstrated in this study that the presence of women does not guarantee gender awareness. It is often more effective to provide project personnel (male or female) with training in gender issues. On the other hand, the inclusion of this question may be sufficient to bring out gender strategies which already exist, and to encourage participants and project proponents to understand the gender effects of a proposed project.

Proposals should include plans for sustainability of project activities after the end of the project, with respect to how women especially will be supported in maintaining and using skills obtained during the project.

Gender awareness should include the effects on social relations of focusing on women or men to the exclusion of the other group, including the potential negative effects to the project if the impression is that women are given preferential treatment. Factors that should positively influence project selection include that the proposal demonstrates:

- potential to benefit women equally with men
- the active involvement of women in planning, design and implementation
- key areas/sectors that support women's participation in the digital society and address poverty eradication
- active measures to mitigate key limitations for women
- understands the potential implications for gender relations of focusing on either men or women.

Finally, sex-disaggregated data should be a baseline component of project design and evaluation. At a minimum, projects should count the number of men and women that are involved in and benefit from various activities, in order for project leaders to be able to address any imbalances.

## Annex I: *infoDev* Projects Analyzed from a Gender Perspective

No.	InfoDev project no.	Project Title	Organization
1	008-950920	Demonstrating in Indonesia a Generalizable Model for Introducing Technologies to Expand and Strengthen National Reproductive Health Training and Service Delivery Systems	John Hopkins Program for International Education in Reproductive Health
2	010-950920	Economic Toolkit and Workshops for Internet Connectivity in Africa	Africa Internet Forum (AIF), c/o The World Bank
3	014-950925	The National Information Infrastructure of Mexico: The Environmental Link	Consortium for International Earth Science Information Network (CIESIN)
4	01A-950804	African Virtual University	The World Bank, AFTHR
5	023-950925	Project SITA (Study of Information Technology Applications): Computer Skills Training for Low-Income Women in India	Jawaharlal Nehru Centre for Advanced Scientific Research
6	025-950924	Regional Distance Learning Network for Information Technology	Regional Information Technology and Software Engineering Center - RITSEC
7	03A-950831	Telematics for African Development	Telematics for Africa, Development Consortium
8	041-950930	Promotion and Development Of Telematics In the Public Sector In Ghana.	UNESCO
9	074-950927	Physician-Based Sentinel Surveillance System for Emerging Health and Disease problems in the Caribbean	PAHO/WHO Caribbean Epidemiology Centre (CAREC)
10	075-950922	Increasing Electronic Connectivity Between Strategic Allies in the HIV/AIDS Field in South East Asia	SEA HIV/AIDS Project
11	078-950922	Jamaica: Partnership for Technology in Basic Education	Jamaica Computer Society Education Foundation
12	090-951031	PROYECTO CONEXIONES	Universidad EAFIT
13	097-951031	InfoDev Health Information Training Center	Satellife
14	103-951203	Sixth ITU Regulatory Colloquium	Latham and Watkins, Attorneys at Law
wo me n15	114-960125	Workshop on Information Dissemination for Sustainable Development of Industrial Minerals Resources and Environmental Constraints	British Geological Survey
16	120-960208	Toward an Open, Informed Telematics Policy Debate in Russia	The Freedom Channel
17	127-960307	Wise-Dev: Web Integrated System for Environment and Development	ORSTROM Laboratoire ERMES
18	134-960418	Connectivity Information & Training Center for Internet, Cameroon (Internet CITI Cameroon)	UNITAR
19	136-960424	Information Systems for Rural Development: A Demonstration Project in Cajamarca Department, Peru	Intermediate Technology Development Group (ITDG)
20	147-960612	China's Industrial Pollution Projection System (CIPPS): New Information Tools for China's Environmental Agencies	National Environmental Protection Agency of China (NEPA)
21	150-960726	Linking Poor Producers to Global Markets	PEOPLink
22	151-960806	Rural Telecommunications Field Trial and Commercialization Pilot	Kenya Posts and Telecommunications Corporation (KPTC)
23	153-960815	Program to Enhance Participation of Emerging Economies in WTO Telecommunications Negotiations	International Institute of Communications
24	154-960909	A Demonstration Project with the Global Environment Facility (GEF) to Create an "International Waters Learning Exchange and Resources Network (IW:LEARN)"	The Tides Center
25	157-960911	Reference Model for Government Treasury Systems	Crossings Development Corporation
26	162-960926	The US/Russia Child Health Care Telemedicine Network	Vishnevskaya-Rostropovich Foundation
27	163-961002	The Baltic Sea Information Society Project - Start up: Northwest Russia	Eurofacts Oy

No.	InfoDev project no.	Project Title	Organization
28	167-961028	The Establishment of a Technical, Operational & Legal Framework for the Management of Geographic Information in the Philippines	National Mapping & Resource Information Authority (NAMRIA)
29	169-961126	Autonomous System for Interactive Electronic Commerce (ASIEC): Phase 1 - Computerized Mobile Bank (CMB) – Ghana	AEDAR Corporation
30	170-961203	India Health Care Project - Use of Information Technology for Delivering Quality Health Care to the Rural Population	CMC Limited
31	182-970210	The Internet Society 1997 Workshop on Network Technology for Countries in the Early Stages of Internetworking	McGill University
32	186-970212	(Senegal Health) Informatisation du Système d'Information à des fins de Gestion (SIG) du Ministère de la Santé Publique et de l'Action Sociale (MSPAS) de la République de Sénégal	Ministère de la Santé et des Affaires Sociales
33	187-970215	SOLARIS - Solidarity Information System (global)	Solagral Montpellier
34	191-970303	Czech Tobacco-Control Training and Communications Program	Center for Communications, Health and the Environment (CECHE)
35	192-970311	InfoCaffé Project (interregional)	The Foundation for the Future of Youth
36	193-970317	AFCOM '97: The Sixth Annual Conference on Telecommunications, Informatics, and Broadcasting (Africa)	AFCOM International Inc.
37	196-970319	IBBC-NET & TIN, Trade Information Network of CIIs, G77 China & UN	Global Management Center
38	203-970423	Knowledge Network For Augmenting Grassroots Innovations (Honeybee)	Indian Institute of Management
39	204-970424	Empowerment Network in Information Technology (Africa)	Fondation du Devenir
40	205-970428	Cyberschool Africa	Cyberschool Africa
41	207-970508	Developing User-friendly Data Products For Sale and Distribution to Agricultural Data Users In Central America and the Caribbean	Centro Internacional de Agricultura Tropical
42	213-970619	WTO 2 - Assistance to Emerging Economies to Participate in the WTO Telecommunications Market Liberalization Process	Caribbean Telecommunications Union (CTU)
43	215-970623	UrbanDataLink	The Global Urban Observatory United Nations Centre for Human Settlements (Habitat)
44	220-970825	Strengthening Electronic Communications Capacities of Womens' Organizations in Africa	ABANTU for Development
45	220A-970730	Africa Global Connectivity Conference	BMP International, Ltd.
46	221-970804	Business Plan Development for Telecommunication and Information Centers in Ghana	Info/Mart Foundation, Inc.
47	224-970910	Interactive Workshop and Conference on "Emerging Global Electronic Distance Education	University of Tampere, Hypermeida Laboratory
48	228-970923	Development of Web Site and Online Services for ITU Regulatory Colloquium	Analysys Ltd.
49	229-30-971003	MetaBase de Datos: Improving Public Access to Central America's Bibliographic Resources Via the Internet	Fundacion Acceso
50	231-971003	Second Annual BALLERINA Meeting: Support to CIS and CEE Participation	UNEP/GRID-Arendal
51	240-971117	ITU Seventh Regulatory Colloquium, ITU Headquarters, Geneva	Friedrich Ebert Stiftung
52	243-971124	Support to International Telecommunication Operators in Emerging Economies to Make Adjustments Necessitated by the Inevitable Reduction in International Telecommunication Settlement Revenues	Commonwealth Telecommunications Organisation
53	244-971125	The Environment and Information: Building Capacity in Mexico	CICEANA
54	248-971211	Networking for Innovation in Technology and Teacher Training	Institute for International Education (IIE)
55	249-971219	The Environment and Information: Building Capacity in Central America for the Management of Electronic Information.	Asociacion de Investigacion y Estudios Sociales (ASIES)

No.	InfoDev project no.	Project Title	Organization
56	256-980116	Enhancing Transparency in Local Government: Management Information System for the Municipality of Sofia	Applied Research and Communications Fund (ARC Fund)
57	257-980121	From Accounting to Accountability : Managing Accounting Records As a Strategic Resource	International Records Management Trust (IRMT)
58	259-980121	Stories Exchange NET	Fund for New Performance/Video
59	260-980204	Information for Collaborative Planning : Global Knowledge-Activity Information Management System (GK-AIMS)	Bellanet International Secretariat
60	261-980206	Conducting a Series of Demonstration Project-Workshops on Telecommunications (Internet, Computer Networks, Information Creation, Utilization/Management) in Georgia	ITIC (International Telecommunications and Information Center, not for profit NGO)
61	270-980226	Conference and Workshops on Global Electronic Commerce in India	Co-Grantees: Infrastructure Leasing and Financial Services (IL&FS) and the Confederation of Indian Industry (CII)
62	277-980406	FORWARD: a Project to Foster a Wide and Rational Development of Telecommunication Infrastructures (Latin America)	TELECOM ITALIA LAB S.p.A.
63	289-980521	Implementing a Global E-Commerce Network of Artisan Groups	PEOPLink
64	300-980731	INDEV: India's Development Information Network	The British Council, Delhi
65	306-980811	Online ICT Resource Centre for the Global Development Community	Association for Progressive Communications (APC)
66	312-981014	Connectivity and Commerce : Accelerating Electronic Commerce in Uganda and Tanzania	PERWIT International Management Consultants
67	314-980930	Preparation of a Practical Handbook for Telecommunications Regulators	McCarthy Tetrault
68	319-981113	PlaNet U. Information System	PlaNet University
69	323-981118	The National Graduate Registry in Panama - Partners for Employment	EDUC-INTER
70	324-981119	Development of an Information Infrastructure Agenda for Uganda	Institute of Computer Science, Makerere University, Uganda
71	326-981214	Information Strategy Tool Kit (ISTra)	United Nations Institute for Training and Research (UNITAR)
72	334-990121	Creating a Global Information Network on Distance Education	Commonwealth of Learning
73	341-990113	Briefing Report for the 8th ITU Regulatory Colloquium, to address the topic of Regulatory Issues for Electronic Commerce	David N. Townsend & Associates
74	342-990219	21st Century Communications: GMPCS for Africa	The African Connection
75	348-990309	LAC Regional Journalists Y2K Awareness Seminars	Dante B. Fascell North-South Center, University of Miami
76	349-990310	Kidlink Houses and Families in Brazil	Pe. Leonei Franca Foundation (FPLF) of the Pontifical Catholic University of Rio de Janeiro (PUC-Rio)
77	353-990323	Y2K and GPS Bug Web Site	Grand River Informatics Inc. (GRI)
78	356-990405	A Year 2000 Problem Awareness and Preparedness Campaign in Russia	Committee 2000 Foundation
79	365-990604	IYCC- Health Sector Coordinator (global)	IHSD Ltd. (Institute for Health Sector Development)
80	375-990628	Information Infrastructure Indicators, 1990-2010	Pyramid Research
81	380-990706	Asia-Pacific Telecommunications Regulatory Forum	Asia-Pacific Telecommunity (APT)
82	400-990805	Characterizing the Challenges and Opportunities Arising from the Networking Revolution in the Developing World (RFP)	Analysys Ltd
83	412-990914	Experimentation and Application of Adequate ICT To Contribute to Internet Access for Third Sector organizations	RITS - Rede de Informacoes para o Terceiro Setor (Information Network for the Third Sector)
84	433-991122	Global Knowledge for Development Online Forum	Education Development Center, Inc.

No.	InfoDev project no.	Project Title	Organization
85	444-991221	Data Fusion for Flood Analysis and Decision Support (ANFAS)	MA Songde President Institute of Automation P.O. BOX 2728 Beijing 100080 – PR China
86	454-000223	Guatemala MicroNet	La Fundacion Guatemala 2020
87	455-000223	IT: Employment for People with Disabilities	Trust for the Americas, Organization of American States
88	461-000301	Visiting Scholars Fellowship Program (global)	Motorola University
89	466-000317	Intercity Marketing Network for Women Micro-Entrepreneurs	Foundation of Occupational Development (FOOD)
90	483-000501	Training for African Women in Internet Working Technology	Economic Commission for Africa
91	486-000516	Tuition-Free Telecommunications Training	United States Telecommunications Training Institute (USTTI)
92	494-000615	Improving Healthcare and Education through shared ICT Resources	FANTSUAM Foundation
93	514-000907	Exploring Adequate Reform Models for the Telecom Sector in China	Ministry of Information Industry (MII)
94	520-001002	e-Maroc: Morocco in the Global Society	Secretariat d'Etat chargee de la Poste et des Technologies de l'Information (SEPTI)
95	532-001204	e-Readiness Assessment for (SME) in Egypt	Ministry of Communication and Information Technology

## **Annex II: List of Projects that Made Reference to Gender**

### ***Projects with Active Gender Components or that Focus on Women's Needs (11)***

- Global Knowledge for Development Online Forum GKD online (global)
- Guatemala MicroNet
- Improving Healthcare and Education through shared ICT Resources (Nigeria)
- India Health Care Project - Use of Information Technology for Delivering Quality Health Care to the Rural Population
- Intercity Marketing Network for Women Micro-Entrepreneurs (India)
- IT: Employment for People with Disabilities (Latin America and Caribbean)
- Knowledge Network For Augmenting Grassroots Innovations (Honeybee) (India)
- The Environment and Information: Building Capacity in Central America for the Management of Electronic Information
- Training for African Women in Internet Working Technology (Cisco-UNECA)
- ABANTU-Strengthening Electronic Communications Capacities of Women's Organizations in Africa
- Project SITA (Study of Information Technology Applications): Computer Skills Training for Low-Income Women in India

### ***Projects that Mention Gender but have No Active Gender Component (7)***

- Demonstrating in Indonesia a Generalizable Model for Introducing Technologies to Expand and Strengthen National Reproductive Health Training and Service Delivery Systems (JHPIEGO, Indonesia)
- SOLARIS - Solidarity Information System (global)
- Czech Tobacco-Control Training and Communications Program
- Stories Exchange NET Czech Roma
- Online ICT Resource Centre for the Global Development Community (APC)
- Connectivity and Commerce: Accelerating Electronic Commerce in Uganda and Tanzania
- The National Graduate Registry in Panama

### Annex III: Gender Analysis Indicators for *infoDev* projects

The table presents the overall results of the review of the 95 projects by selected indicators.

No.	QUESTION	Scale	no. 0	percent= 0	no. 1	percent =1
1	WOMENINPRODOC	0/1	69	72.6	26	27.4
2	ACTPASSIVE	0/1	80	84.2	15	15.8
3	DATACOLLECT	0/1	86	90.5	9	9.5
4	POVERTY	0/1	61	64.2	34	35.8
5	LITERACY	0/1	81	85.3	14	14.7
6	LANGUAGE	0/1	63	66.3	32	33.7
7	ETHNICITY	0/1	78	82.1	17	17.9
8	GENDERINEVAL	0/1	87	91.6	8	8.4
9	WOMENCONCERNS	0/1	79	83.2	16	16.8
10	EQUALOPPTOBENEFIT	0/1	78	82.1	17	17.9
11	INCOMEIMPROVE	0/1	85	89.5	10	10.5
12	TECHWORK	0/1	82	86.3	13	13.7
13	ICTUSE	0/1	79	83.2	16	16.8
14	GENDERMAINSTREAM	0/1	91	95.8	4	4.2
15	PRODUCEPRODUC	0/1	84	88.4	11	11.6
16	TOOLS-TRAINING	0/1	92	96.8	3	3.2
17	MOREINFOACCESS	0/1	69	72.6	26	27.4

**Annex IV  
Gender Analysis Framework**

**Gender Review Framework for  
Field Studies of infoDev Projects**  
[Abridged version]

**November 19, 2001**

*Louise Chamberlain  
Nancy Hafkin  
Sophia Huyer*

## **Background**

### **INFODEV ACTIVITIES**

*infoDev*'s key areas of intervention are:

- Pilot and demonstration projects – new applications of technology to facilitate economic and social development;
- Policy-focused activities – enabling environment, market reform, access; and:
- Capacity building – enhancing local expertise on the use of ICT for development, including training, networking, building communities of interest.

Projects and activities may cover one or many countries and address one or several sectors. *infoDev* disseminates experience and shares lessons learned with governments, the private sector, the civil society, and the development community.

### **INFODEV AND GENDER**

Like other development issues, the digital divide has a gender dimension that could be given even greater attention. During the programmes's six years of operation, *infoDev* has consolidated its experience in extending the benefits of ICT to the poor. Now is a good time to take inclusion one step further and focus efforts on women and other specific disadvantaged groups.

At present, few proposals submitted to *infoDev* include explicit gender analysis. A recent desk review of all projects in the *infoDev* core programme has shown that most projects do not take gender into consideration (in some cases even where women are likely to benefit at least as much as men). It should be noted in this context that gender has up to now not been emphasized in the *infoDev* proposal guidelines. *infoDev*'s current ambition to mainstream gender is intended to spark proponents' integration of gender in project designs, proposals, and implementation.

In a time when the digital divide is growing rapidly, more efforts must be made to ensure that men and women have equal access to technology, have equal opportunities to absorb and utilize technology, and benefit to an equitable extent from the applications of technology. It is therefore time to take stock of *infoDev*'s experience and suggest steps to ensure that the programme adequately addresses the key constraints to poor women benefiting from ICT. Increased knowledge of the issues concerning ICT and gender will enable *infoDev* to further promote the advancement of women through its ICT initiatives.

Through the *infoDev* programme, women potentially have numerous opportunities for empowerment. Not only can ICT give women access to information resources on critical issues such as health, nutrition, civil rights, etc.; but also to education and training, job opportunities, professional and personal networking; e-commerce (B2B, B2C, C2B); and cultural exchanges. Effectively, ICT can be a crucial means for women to overcome gender barriers that are otherwise present.

### **PURPOSE OF THE FRAMEWORK**

This framework will provide guidelines for how to analyse an *infoDev* project along gender dimensions. Approximately eight studies will be undertaken in the first phase. Since one project may be very different from the other, the guidelines are general and it will be up to each

reviewer to adapt the framework to the specific circumstances. Further, this framework has not previously been tested in the field, and the reviewers are encouraged to comment on its usefulness and suggest improvements.

The overall purposes of the field studies are to:

- Analyse the outcome of project activities for women;
- Identify gender issues that affected project implementation and results;
- Identify lessons learned for integrating gender in ICT projects.

In the analysis of project processes, it is essential to explore the opportunities (“how to”) for integrating women as equal stakeholders and beneficiaries, as opposed to asking why women were not involved to a greater extent. This is particularly important as infoDev has not previously had a commitment or focus towards gender equality, nor communicated its importance to proponents and grant recipients.

## **Key Principles**

### **GENDER IN RELATION TO *INFODEV*'S OBJECTIVES**

There are four cornerstones in *infoDev*'s mission:

**ICT** – All *infoDev* projects involve Information and Communication Technologies, and many are applications of ICT in sectors such as education or health. But it should be noted that *infoDev* seeks people-centred, not technology-centred, solutions.

**Innovation** – A majority of projects are “innovative” in that it applies a technology in a new context. These projects tend to fall in the category ‘Pilot and demonstration projects’.

**Economic and Social Development** – Every project applies ICT for a developmental purpose. Particular emphasis is placed on building a critical mass of people and institutions using ICT, as well as promoting knowledge dissemination and regulatory frameworks. In some projects, beneficiaries of *infoDev* projects are individuals in a small community. In others, the beneficiaries are the population of a continent whose access costs are expected to decrease, in the long run, as a result of liberalization policies developed in an event sponsored by *infoDev*.

**Special Emphasis on the Needs of the Poor** – Whether beneficiaries are found on the ‘community’ or ‘continent’ level, an objective of every *infoDev* intervention is to target the poor, directly or indirectly.

In seeking to reach more women, each the above cornerstones applies. Women can be empowered by using ICT, solutions that target women are often innovative, and increased involvement of women in the ICT-related economy will be beneficial to growth and development. Finally, women are over-represented among the poor, and it is perhaps in this context that the urgency to involve women is the greatest.

The reviewer should keep these four cornerstones in mind when analysing the gender aspects of a project.

### **PHILOSOPHY ON GENDER DIFFERENCES**

In most societies, women are at a disadvantage compared to men with regard to access to resources, opportunities, and empowerment. Fewer women than men are literate, educated,

independent, or employed in the formal sector. Most people in decision-making positions are men. The general consequence of this is that women tend to benefit to a lesser extent from many development efforts.

*infoDev* has identified women as an important group to reach with targeted efforts and is committed to integrate gender as a component in all its programmes and projects. ICT provide exceptional opportunities for 'leapfrogging', and *infoDev* will continue to seek ICT projects that leverage social and economic improvements for poor women and men.

It should be noted in this context that *infoDev*'s primary focus is not to change gender relations (although it may very well fund a project applying ICT for this purpose). A reasonable level of ambition for *infoDev* is that *all projects address gender*, that every project should *seek to benefit* at least as many women as it does men, and that *some efforts should target women* specifically.

## **Practical Issues**

### **GENDER REVIEWS OF INFODEV PROJECTS**

This framework is designed for field studies serving to illustrate gender aspects of selected *infoDev* projects. Each project review will be carried out locally and by different reviewers.

The purpose of each field study is to review a project from a gender perspective, particularly focusing on:

- *If and how* women are benefiting from the project;
- Any gender issues that affected implementation and results (for example: women could not attend the training because it is not socially accepted that they take classes together with men);
- How the project outputs affected women's situation (for example: women who trained others in the technology gained respect in the community);
- How women could have benefited more from the project;
- What lessons should be learned from this project by other *infoDev* projects on the involvement of, and benefit to, women.

The study should also seek to identify any prevalence of negative male reactions that hinder or block the benefits of a project to women.

### **PREPARATIONS FOR THE FIELD STUDY**

Before the field visit, the reviewer is expected to become familiar with *infoDev*'s mission, the overall objectives of the field studies, as well as the specific objectives.

She/he should study the project background from the following sources:

- Project proposal and related documents such as proposal reviews;
- Grant agreement;
- Quarterly reports.

## RESEARCH METHODOLOGY

The reviewer is expected to collect information by direct or indirect observations and interviews with key stakeholders. For this purpose, a list of generic questions is presented in the next chapter. The reviewer will need to dedicate some preparation time to assess which questions are relevant to the project, to whom the different questions should be addressed, as well as how they should be formulated to elicit an informative answer.

Some questions may be more appropriately answered by reviewer observation only. Essential data that illustrate/support findings should be collected if possible within the time and cost frames.

At a minimum, interviews should include:

- Project director;
- Other project staff;
- Trainers or facilitators;
- Project beneficiaries (e.g. course participants).

The reviewer should make efforts to involve *women as well as men* in the review. If intended interviewees are unavailable for in-person interviews, the reviewer should be prepared to interview some key individuals over telephone or email. In-person interviews should always be used where it is possible.

Depending on the nature of the project, it will be more or less important to include *indirect beneficiaries* in the study: Consider e.g. the improvement of a government management information system (MIS). The direct beneficiaries are government employees, nevertheless it is the improved services that they deliver to the community – who are indirect beneficiaries of the project – with the help of the new MIS, that matters.

Other potential sources of information include: government officials (local or regional), project partners, representatives of other donors. The selection will depend on availability and feasibility.

## ANALYSING THE FINDINGS

In analysing the findings, there are some key points that the reviewer should keep in mind:

- The list of questions is extensive, and not all questions are applicable to all projects. The report should shed light on *most* of the questions listed that are relevant to the particular project;
- It is natural and desirable that most of the analysis will be qualitative. Quantitative analysis would be a useful contribution where gender disaggregated data is available;
- A clear distinction should be made between research *findings* and the reviewer's *conclusions*;
- A clear distinction should be made between the reviewer's *conclusions* and any *recommendations* s/he makes.

- Finally, it is important that the reviewer describes the assumptions made and any limitations to the study (for example, if key interviewees were not available, or if most of the findings came from “one side”).

### Questions Framework

This chapter lists the questions that the reviewer should seek to answer through the field study. The framework is not a fixed structure, but rather is meant to serve as a general guide to be adapted to the specific project.

*The reviewer will need to adapt the list of question to the project, the culture or situation, and the persons interviewed.*

### OVERALL QUESTIONS

The following questions, where relevant and applicable, aim to extract information needed to respond to the overall queries outlined above.

### ACTIVITIES

- 1) How is ICT applied in this project? Is this a traditional male or female domain, and how does this affect project activities?
- 2) Are women involved actively or passively in the project? If they are involved actively, in what functions and how many?
  - a. As decision-makers in the project;
  - b. As trainers/facilitators;
  - c. Other.
- 3) What aspects of the factors below would constrain women from participating in the project? Describe the nature of any constraints:
  - a. Cost
  - b. Geography, location or time;
  - c. Education or skills;
  - d. Religious or cultural constraints to interaction between women and men, or conflict with women’s domestic tasks;
  - e. Other.
- 4) What are the consequences for women of any constraints?
- 5) What action does the project take to mitigate any constraints to women participating?
- 6) Will the project increase the number of people *using ICT*? How many of these are women?
- 7) Will the project increase the number of people *in technology occupations*? How many of these are women?
- 8) Are the tools and training resulting from this project adapted to the needs and concerns of women?
- 9) If women are not participating equally, what concrete efforts would be needed to include women more in project activities?

## OUTCOMES AND BENEFICIARIES

- 1) Who are the beneficiaries of this project? A table like this can be used to present the distribution of beneficiaries (estimated or exact):

No. or %	Women	Men	Total
Direct beneficiaries			
Indirect beneficiaries			
Total			

- 2) Has the project changed the life of women involved? How?
  - a. How successful is this project in applying ICT in a fashion that meets the needs of women?
  - b. Has the project affected women's access to and control over resources?
  - c. Has the project increased women's knowledge, skills, confidence, and empowerment?
  - d. Has the project changed the relative societal position of women to men? How?
  - e. What role does ICT play in empowering the women in this project?

- 3) How could women have benefited even more from the project?

*For projects that target women:*

- 4) How does a focus on women (and, secondarily, the exclusion of men) affect project outcomes?
- 5) What successful approaches to involving women have been applied in this project?

*If the project objectives do not address gender:*

- 6) Are there any (unintended) negative effects of the lack of attention to gender?
- 7) Which particular aspects of the project could have benefited women more?

## EVALUATION

- 1) Are gender-specific effects of the project being tracked? How?
- 2) Have women been involved in the evaluation of this project? If so, how? If not, why?
- 3) How do local women themselves assess benefits and shortcomings of the project?
- 4) Are there gender effects of this project that cannot be verified due to a lack of data? (e.g. if it is apparent that most men who use a telecentre are men, but no statistics are available to say how many users are women/men.)

- 5) What sex-disaggregated data has been, or could be, collected in this project to measure the benefit of the project to women and men, respectively? For example:
  - a. % women in the target/beneficiary group
  - b. % women gaining access to project services (e.g. training)
  - c. % women as trainers/facilitators
  - d. Workloads and time use of men and women
  - e. Access and control of income and resources
  - f. Other.
- 6) What indicators could the project have used in order to track:
  - g. Empowerment
  - h. Perceptions of change/impact
  - i. Other.

### **GOALS AND OBJECTIVES**

- 2) Are project objectives related to women's needs?
- 2) Does the project challenge the existing gender division of labour, tasks, responsibilities, and opportunities?
- 3) If the project goals do not involve gender, how could the project goals have been formulated to articulate an intent to include women/gender?

### **PLANNING AND DESIGN**

- 1) How were gender issues analysed during the project design phases?
- 2) Were women [in the target group] involved in identifying the 'problem' that the project is trying to solve? If so, how?
- 3) Were women [in the target group] involved in designing the 'solution', i.e. project activities? If so, how?
- 4) Are/Were women involved at the management level in planning the project?
- 5) How did any involvement of women stakeholders in planning the project affect its design? How did any absence of women involvement affect its design?
- 6) Could the project design be adjusted to increase positive effects on women?
- 7) If gender is not addressed: How could we add a gender dimension to this project?

## Annex V: Thumbnail Biographies of Field Study Authors

**Rahel Bekele** is an assistant professor at the School of Information Studies for Africa (SISA) at Addis Ababa University, Addis Ababa, Ethiopia. Holding an M.Sc. in Information Science and a B.Sc. in Statistics, she had taught quantitative methods, research methods and computer programming courses in the undergraduate program at SISA since 1989. She works closely with the Center for Research Training and Information for women in Development (CERTWID) at Addis Ababa University and the Women's Affairs Office under the Prime Minister's Office, Government of Ethiopia, to develop a gender activities database and establish a resource center for gender-related activities. Her main area of research is intelligent web-based education.

**Michael Clulow** graduated from the University of Aberdeen in Scotland in 1979 with a bachelor's degree in agriculture and subsequently earned a Ph.D. in plant pathology in 1985. He has 13 years living in Latin America and working on Latin American development. His work in this area began as an agricultural extensionist in Bolivia through a UK-based volunteer agency before beginning to work directly with Latin American, US and UK non-governmental organizations (NGOs). Since 1989, his work has concentrated in the areas of project planning, monitoring and evaluation as applied to rural development, food security, grassroots organization, civil society participation, gender and women's rights. He resides in Panama where he works as an independent consultant.

**Liu Meng** is a professor in the Department of Social Work, China Women's College, Beijing. She got her Ph. D from the University of Hong Kong in 1999. Her research interests focus on domestic violence in China, group evaluation and gender research. She offers courses on qualitative research, group work and practical research of social work. She has published several papers on wife abuse and counseling evaluation from gender perspectives in the international journals.

**Karen Odhiambo** is a lecturer and consultant, specialized in research, measurement and programme evaluation at the University of Nairobi where she has taught for the last 10-years. She has a B.Ed from the University of Nairobi (1981); an M.A. in Measurement and Evaluation from University of Calgary (1987). She has completed course work for the Ph.D degree at the University of Toronto. She has worked as a teacher in secondary school; research and evaluation officer and lecturer. Her areas of interest have been education, development, gender studies, computer applications in education, programme assessment and performance management. She has had extended training in gender analysis and mainstreaming. She is Chair of the Kenya Evaluation Association and member of the Association of Women Researchers on Education.

***Norma Puican*** is an economist living in Lima, Peru, with a master's degree in Agricultural and Rural Development, from the Institute of Social Studies, the Hague, Netherlands. Most of her professional experience has been focused on research and project implementation in the rural sector. Her specialization is in design, monitoring and evaluation and gender analysis of rural development projects. She also has a special interest in participatory methodology. She has worked as a consultant to PACT, USAID and the United Nations Economic Commission for Latin America and for Care in project design. She lectures in economics at the Catholic University of Peru and has written numerous publications related to rural development.

***Dr. Shiraz Wajih*** is a development professional working on the issues of environment, gender and development issues for more than 25 years. Based at Gorakhpur (Uttar Pradesh, India), the reviewer has had long experience in training, appraisals, action research, monitoring and evaluation in the areas of sustainable agriculture, environment and health, participatory development and resource management with gender and equity as overarching approaches. Shiraz Wajih has worked with a number of nongovernmental organizations, directed a large number of projects, conducted several studies and published papers in collaboration with agencies including Oxfam, Novib, the World Bank, the Asian Development Bank, United Nations Environment Programme, IUCN and Unicef.

## **Annex VI: Types of Projects and Components Likely to Benefit Women**

Projects with a potential to benefit the greatest number of women include those that address issues of low-cost access, travel distance to access point, language, socio-cultural practices and provide flexible access times. It should be kept in mind that they will be conducive to women's participation only when combined with an articulated intent and active efforts to do so.

### **Low-cost and alternate forms of access**

- Radio is an important communication technology for women, for the dissemination of valuable information and for distance education. For teaching and information programs radio can be combined with print and face-to-face meetings.
- Low-cost computers and hand-held devices can make computers more accessible to disadvantaged groups, for reasons of cost, portability, and convenience.
- Access and use of technology could be subsidized or made available free of charge.
- The use of mobile telecenters to bring ICT on a regular basis to women who cannot travel alone or who live far from urban centers should be explored.

### **Language and literacy**

- Content should be made available in local languages
- Emphasis should be placed on technologies that can reach the illiterate – women make up two-thirds of illiterates globally – such as radio, CD-ROMs, software that includes speech and graphical software interface, and accessible technologies that put information within the reach of women regardless of level of education or literacy.

### **Access schedule**

- Information access needs to be made available at times of the day that fit into women's daily schedules. Women often work longer hours to fulfill their productive and reproductive obligations.
- Access should be made available in places where women go during the course of their day: health centers, women's centers, libraries, etc. Facilities where women can have access separated from men are often beneficial.

### **Socio-cultural issues**

- Access points should be located in areas where women feel safe and comfortable.
- For those cultures where women cannot travel alone, access should be located close to home or in socially acceptable locations.

### **Training**

- Separate training sessions should be made available for women when necessary.
- Training activities should be designed to demonstrate to women the practical value of ICT access for their particular interests and activities.
- In areas where there are cultural inhibitions against women's use of technology, or their frequenting public spaces, specific strategies will need to be implemented to encourage women's participation.

## **Sectors-specific Issues in Project Implementation**

In general, very little work has been done in identifying, developing and disseminating women-appropriate content, that is, content that is:

- developed by women and reflects their knowledge and perspectives;
- helps them more effectively fulfill their daily tasks and responsibilities thereby increasing their well-being and that of their families;
- increases their income.

Further, ICT can be conducive to women's empowerment using ICT's notably in the following sectors or areas of applications. Some particular concerns in implementation are noted.

### **E-commerce and Small Enterprise**

- Women's e-commerce information needs include: market and price information, trade information; access to support networks, training and incubation services; production technologies; supply chain links; and day-to-day businesses management.
- Support for identification and implementation of income-generating activities is an important component of e-commerce support. Information should be available in a variety of formats, in local languages, and for the illiterate.
- Telephones can be an important income-generating technology.

### **Employment**

- Women are under-represented in the computing and telecommunications industries. Programs encouraging the recruitment of women, access for women to advanced training, and retention in the industry should be supported.

### **Health**

- Women should be targeted as the main health care providers in their families and communities.
- Women should be consulted on content and type of health information as well as means of dissemination.
- Health information should be directly accessible to women in content and language.
- Include women health-care professionals in ICT projects: doctors, nurses and midwives.
- The links between women's control over their health and their status in the community and family need to be recognized.

### **Education**

- Distance learning is an important education tool for women. Curriculum and training methods should address women's perspectives and information needs.
- Radio is an important distance-learning technology, when combined with print and face-to-face meetings.
- Schedules should be flexible.
- Education offered only in languages other than the local is likely to inhibit women participation.

## **Agriculture**

- ICT projects focused on agricultural information will increase their impact if they recognize women's contributions and knowledge in the area and tailor information to women's concerns and perspectives.
- ICT can be used to assist women at the grassroots level and in rural areas to gain increased access to tools for increasing the productivity of their work and contributing more fully to economic development.
- In general, women need access to improved technologies to support their productive activities, either in the form of information on improved technologies and processes, or for developing innovative and improved products and processes on their own.

## **Local and Regional Conditions**

Conditions specific to a region or local community need to be ascertained and taken account of in project implementation. These include:

- health priorities (such as AIDS);
- literacy and education rates;
- religious or cultural inhibitions for women;
- key productive activities for women in the area;
- rates of women's participation in formal or self-employment.