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Engendering Rural Information Systems in Indonesia



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ABBREVIATIONS AND ACRONYMS

BAPPENAS	National Planning Agency
BKKBN	National Family Planning Coordinating Board
CTC	Community tele-service center
CLC	Community Learning center
CTLIC	Center for Community Training and Learning on Information Technology
DAFEP	Decentralized Agriculture and Forestry Extension Project
FAO	Food and Agriculture Organization
GOI	Government of Indonesia
ICT	Information and Communication Technology
ISP	Internet Service Provider
ITU	International Telecommunication Union
IT	Information Technology
KIPP	Office of Information on Agriculture and Forestry Extension
KUB	Community Business Group
KUD	Village Cooperative Unit
NGO	Non Government Organization
MCI	Ministry of Communication and Information
MDG	Millennium Development Goals
MOWE	Ministry of Women's Empowerment
OBA	Output based aid
PDII LIPI	Center for Scientific Documentation and Information, Indonesian Institute of Sciences
PUSTEKIM	Center for Community Training and Learning on Information Technology
PUSTEKOM	Center for ICT for Education
PUSKOWANJATI	Provincial Women's Cooperative in East Jawa
SMS	Short Message Service
SLTP	Junior high school
S&T	Science and Technology
UNDP	United Nations Development Program
VOCM	Voice of Concern Mother
Warintek	Information Technology Kiosk
Warnet	Internet kiosk
WSIS	World Summit on the Information Society

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EXECUTIVE SUMMARY

Over the past decade, there has been a growing understanding that information and communication technologies can be powerful instruments for advancing economic and social development, including gender equality and women's empowerment.¹ However the benefits of ICT have been unevenly distributed among sectors and socio-economic groups, between urban and rural areas and among women and men. Poverty, illiteracy, lack of computer literacy and language barriers are among the factors impeding access to the ICT infrastructure, especially in developing countries. Specifically, women's capacity to exploit the potential of the new information and communication technologies as tools for social and economic empowerment is constrained in a number of ways, such as social and cultural determinants, income levels, education levels and illiteracy, lack of knowledge on the potential of ICT, among others.

Women play pivotal roles in the agriculture sector in Indonesia. Rural women's labor force participation in the sector is sixty-one percent (61%), and it is estimated the women carry out 75% of the farm work in rice production.² However, there is still a long road ahead before all Indonesian's can benefit from the full potential of ICT. That road seems even longer to rural women. Despite some improvements in access and the rapid deployment of lower cost wireless technologies, not much has changed in rural areas of Indonesia. Infrastructure in rural areas is limited and existing services are expensive and practically outside of rural women's reach. Women still face enormous barriers and access to communications, and information relevant to their realities is very limited.

According to Indonesia's Ministry of Communication and Information (MCI)'s E-Strategy Report (2004), many women's groups in rural areas are organized around thrift and assistance provided to them in terms of micro-credit, technology and marketing initiatives. Survey of these groups show that women have been able to earn additional incomes and women's cooperatives have proved to be "model borrowers with a virtually unblemished record of repayments to banks and financing institutions". The report also makes the point that a number of these women's groups have begun to use computers for maintaining their accounts for acquiring skills in manufacturing superior products or providing services.³

Currently, the main sources of information for women are their family and community networks (including community organizations and cooperatives), the community radio (when there is one), television, and printed media (including informational pamphlets distributed by the government's ministries and disseminated by health workers or others). However, these sources are more likely to be simply distribution agents and not producers of information. It is the production of relevant local, regional or national content that needs urgent attention. ICT can facilitate the production of local content and the frequent updating of such content.

To ensure that country's rural ICT policy and programs address the particular needs of rural women and gender equality goals are integrated in Indonesia's national E-strategies, the report presents recommendations in four main areas.

Connectivity and access to information

¹ UN-DAW, Information and communications technologies and their impact on and use as an instrument for the advancement and empowerment of women, report of the Expert Group Meeting, Seoul, Korea, 11-14 November 2002.

² FAO. Fact Sheet Indonesia: Women in Agriculture, Environment and Rural Production.

³ Ministry of Communications and Information, "Final Report: Indonesia's E-strategy, Jakarta, December, 2004.

It is critical that any infrastructure development policy and program consider that gender analysis be integral part of any policy and program design and that it be clearly aware of gender considerations for implementation purposes (for example, in defining proposed funds disbursement criteria, or in establishing program policies to promote women's ownership of productive resources, among others).

In addition, policies and programs need to reflect a long term commitment to gender equality in all aspects of ICT policy development, through, among other things, ongoing monitoring and impact evaluation efforts that can document and assist policy makers in ensuring that Indonesian women, particularly poor rural women, are given equal and affordable access to ICT.⁴

Capacity building and ICT in education. Greater attention should be paid to recognizing women and the poor as information producers, providing relevant training in collecting, packaging and disseminating local knowledge, ensuring that new technologies, such as the computer and Internet, are combined with technologies that reach more women, especially in rural areas, such as radio and print. The provision of relevant local language content, via affordable and easy to use technologies that are accessible to an audience with few or no reading skills, is crucial if ICT are to meet the needs of women in rural areas of Indonesia.

Use of ICT for grassroots women's organizations. ICT interventions that are directed at economically empowering women capitalize on the potential of these technologies as knowledge and networking tools for women as producers and distributors of goods. The women's cooperative network in Indonesia offers great opportunities and could very well become a critical player in the provision of effective and sustainable ICT access and related programs if support for a selected number of rural women's organizations, including well established cooperatives, to expand their activities to the provision of network services as well as ICT services in their areas, is provided.

Gender mainstreaming and ICT. In 2000, a Presidential Instruction on Gender Mainstreaming in National Development was issued by the Indonesian national government that instructed all "departments and non department government agencies, provincial and district governments to implement gender mainstreaming in planning, implementation, monitoring and evaluation of all development policies and programs"⁵. Engendering Indonesia's National E-strategies is the key in ensuring that gender equality goals are embedded in ICT policies, programs and projects in the country. Prioritizing gender mainstreaming within government institutions responsible for information and communication is a key component in engendering national ICT policies and programs that will be critical for rural women. Improved processes of consultation and participation need to be developed and more women should be involved at decision-making levels.

⁴ The Gender Evaluation Methodology (GEM) for ICT initiatives is a resource for ICT practitioners can be used for this purpose. GEM has been tested in 27 ICT projects in over 19 countries in Africa, Asia, Central and Eastern Europe and Latin America in projects such as community telecenters, education and training initiatives for women, employment projects, networking and community building projects and women's ICT media, information and advocacy projects. APC WNSP Gender Evaluation Methodology www.apcwomen.org/gem

⁵ Ministry of Women's Empowerment, "Technical Guideline for Implementation of Presidential Instruction Number 9 Year 2000 on Gender Mainstreaming in National Development, Second Edition, Republic of Indonesia, 2002.

I. Introduction

The current study by the World Bank on **Strategies for the Development of Rural Information Systems in Indonesia**, aims at identifying policies, technologies, institutions and investments needed to improve access to information and communication technologies (ICT) in rural areas in Indonesia. A critical part of this study is a gender specific component, to ensure that the strategies developed and recommended are informed by a comprehensive gender analysis, and further integrate gender considerations into national ICT policy, planning and implementation. While it is fully recognized that ICT cannot be a panacea, it is expected that the development of an engendered rural ICT strategy will empower rural Indonesian women by improving their access to information and communication, expanding the market base, enhancing access to education and training, enhancing employment opportunities and ultimately contributing to gender equality in access to ICT. The strategies developed by this gender analysis follow four broad aspects:

- *Policy dialogue*: Where gender experts facilitate the development of gender-sensitive strategies for rural information systems through outreach to potential partners, and provide recommendations for interventions to facilitate the development of shared perspectives and priorities between the Government of Indonesia (GOI), civil society, the donor community, and the private sector.
- *Leveraging resources*: To identify opportunities for collaboration with the private sector in resource mobilization, as well as establishing multi-stakeholder partnerships that can contribute to the successful implementation of ICT access projects in rural areas.
- *Institutional Strengthening*: To ensure that Government, national regulatory and other entities involved in the governance of the ICT sector have the necessary capacity to analyze and incorporate a gender perspective in the policy making and planning processes.
- *Improving Livelihoods of Rural Women*: To examine and identify innovative ways in which ICT can be used to improve income-earning opportunities for women entrepreneurs in small and micro-enterprises in rural areas as well as women farmers. This includes a focus on two important aspects: a) development of relevant local content; and b) choice of technology, including innovative ways to combine traditional technologies such as radio, video, CD-ROMs, and printed matters to reach the illiterate and the poor in rural community tele-service centers (CTCs).

The practical and feasible recommendations proposed here provide a clear map of actions that once implemented will make a positive impact on rural populations' livelihoods, without discriminating any particular group or region. The study's participatory approach and methodology also serve as a valuable capacity building opportunity for all stakeholders involved. By committing to gender equality in ICT development policy, the Indonesian government has the opportunity to become a global reference point in the area.

II. Gender and ICT for Development: the Rationale

ICT are not gender neutral.⁶ In fact, access to and uses of ICT are greatly influenced by socially constructed views of technology, who uses them and how they are used.

ICT comprise a complex and heterogeneous set of goods, applications and services used to produce, distribute, process and transform information. The ICT sector consists of segments as diverse as telecommunications, television and radio broadcasting, computer hardware and software, computer services and electronic media (for example, the Internet and electronic mail).⁷

Over the past decade, there has been a growing understanding that these technologies can be powerful instruments for advancing economic and social development, including gender equality and women's empowerment.⁸ However the benefits of ICT have been unevenly distributed among sectors and socio-economic groups, between urban and rural areas and among women and men. Poverty, illiteracy, lack of computer literacy and language barriers are among the factors impeding access to the ICT infrastructure, especially in developing countries. Specifically, women's capacity to exploit the potential of the new information and communication technologies as tools for social and economic empowerment is constrained in a number of ways, such as social and cultural determinants, income levels, education levels and illiteracy, lack of knowledge on the potential of ICT, among others. According to a recent report, the following are some key socio-cultural factors that constrain women's use of ICT, particularly in rural areas:⁹

- “Cultural attitudes discriminate against women's access to technology and technology education.
- Women are less likely to own communication assets – radio, mobile phone.
- Women in poor households do not have the income to use public facilities.
- Information centers may be located in places that women are not comfortable visiting.
- Women's multiple roles and heavy domestic responsibilities limit their leisure time. Centers may not be open when it is convenient for women to visit them.
- It is more problematic for women to use facilities in the evenings and return home in the dark.”

Policies and projects that address access to ICT must consider the above constraints if they are to provide equal and universal access to ICT. In fact, recent research and analysis shows that they must consider gender from the start and need to ensure that gender analysis is an integral component from the planning stages, and only then will they indeed make a contribution to gender equality in access to ICT.¹⁰

While ICT can deliver potentially useful information, such as market prices for women in

⁶ Nancy Hafkin, “Are ICT gender neutral?” Lead report for the UN-INSTRAW discussion list on gender and the digital divide. July 2002.

⁷ Gillian Marcelle (2000). “Transforming Information & Communications Technologies for Gender equality.” Gender in Development Monograph Series #9. New York: UNDP

⁸ UN-DAW, Information and communications technologies and their impact on and use as an instrument for the advancement and empowerment of women, report of the Expert Group Meeting, Seoul, Korea, 11-14 November 2002.

⁹ Anita Gurumurthy, Gender and ICTs, Overview Report, Bridge Cutting Edge Pack, September 2004, page 24.

¹⁰ Nancy Hafkin and Sonia Jorge, Get in and get in early: Ensuring women's access to and participation in ICT projects, Women in Action, No. 2, 2002.

small and micro-enterprises or health care guidance in terms of current diseases, it is only one element in a longer chain of resources necessary to affect sustainable development. Where there is no access to roads, transport, and clean water, and women have limited access to credit and other development inputs, the access to and use of ICT will be limited in its impact. It is therefore important to complement the provision of ICT facilities with additional services and training that will build the capacities of women as well as men to act on the information and knowledge accessed through ICT. ¹¹ ICT will not be useful tools unless planners and policy makers are clearly aware of the socio-economic and cultural context of women's lives, particularly poor rural women, and are able to provide for ICT access that responds to their specific development needs both in the short and long terms.

This view is reiterated by recent analysis conducted by the UN Food and Agriculture Organization (FAO), which points out that it is important to review the potential of ICT from two broad approaches. First, their application directed to rural women as primary users of these technologies, and second, their application directed to improving the quality of life in rural communities, which in turn will assist rural women to improve their lives. It is therefore necessary to adopt a more holistic view of rural life, rural community service and resource needs, as well as rural women's role as stakeholders in rural enterprises and related services.¹²

Experience has indicated that reaching women, particularly in rural areas in developing countries, is facilitated by using multiple forms of media and communications technologies, such as radio (e.g., the Development through Radio program in Zimbabwe, which facilitates listening clubs to ensure exchange of relevant information), CD-ROMs (e.g., the "Rural Women in Africa: Ideas for Earning Money", which provides business information in the local language using audio technology and reaching rural poor and illiterate women), and video (e.g., women associated with SEWA in India have produced videos documenting rural women's lives and used them to influence policy makers and to educate others on women's lives and socio-cultural environments).

Investment in content development at the local level based on local information needs is key to facilitating increased women's access and relevant use of ICT. Greater attention should be paid to recognizing women and the poor as information producers. Capacity building programs are central in this context and may focus on such activities as collecting, packaging and disseminating local knowledge. Equally important is the task of ensuring that new technologies, such as the computer and the internet, are used in combination with existing and widespread technologies, particularly those reaching rural women, such as radio, television, and print media. The provision of relevant local language content, via affordable and easy to use technologies that are accessible to an audience with few or no reading skills, is crucial if ICT are to meet the needs of women in developing countries like Indonesia.

Rural Women in Indonesia: Some key considerations

Women play pivotal roles in the agriculture sector in Indonesia. Rural women's labor force participation in the sector is sixty-one percent (61%), and it is estimated the women carry out 75% of the farm work in rice production. ¹³

¹¹ Primo, Natasha (2003). "Gender Issues in the Information Society", UNESCO: Geneva.

http://portal.unesco.org/ci/en/file_download.php/250561f24133814c18284feedc30bb5egender_issues.pdf

¹² Revathi Blakrishnan, "Harnessing ICTs for the Advancement of Rural Women: FAO Perspectives and Strategic Actions, Working Paper, November 2002.

¹³ FAO. Fact Sheet Indonesia: Women in Agriculture, Environment and Rural Production.

Surveys¹⁴ at the village level indicate that women work more hours than men. One such study found that adult men work an average of 8.7 hours per day, while women work 11.1 hours. Men tend to spend significantly more time than women in formal social and religious activities.

Because of Indonesia's high population density, large inequalities of land ownership and increased landlessness, rural people can no longer rely on agriculture alone. Increased numbers of rural women engage in wage labor, non-farm or off-farm income generating activities.

The most common income generating activities that women undertake are livestock, small enterprises, agricultural processing, home gardens and small agricultural plots. The government promotes income generation through micro-credit schemes such as Kelompok Usaha Bersama (KUB) funded by the government owned commercial bank, the National Family Planning Coordinating Board (BKKBN) and the Village Cooperative Units (KUD).

The economic crisis of 1997 severely affected women and children with drops in education, health and nutrition. In order to increase family income for food security, women have taken additional jobs. This is indicated by statistics that show that women's housekeeping work decreased by 2.7% and their participation in the labor force grew from 1.8% to 4.2%, post-crisis.¹⁵

Owing to women's substantial contribution to the family resources through independent income generation, they hold greater influence over household expenditures than they might otherwise have. Thus, women tend to play an important role in decisions about the allocation of household resources in Indonesia. This is also strongly reinforced by prevailing cultural attitudes concerning the reputation of women for economic acumen, thrift and foresight, and trustworthiness in putting family interests before their own desires.

Outside the household, however, women remain generally subordinate to men. They are unlikely to be represented in the planning and implementation of development projects at the local level. This is also true in the case of political leadership at the community level, but it extends also to economic relationships in important areas.

Women face a number of constraints in obtaining access to capital and credit. According to a World Bank study¹⁶, there is significant demand among rural women for working capital and investment credit for their businesses. Collateral for loans tends to be a problem, especially if land titles are required, since these are most often in the name of the (male) head of household. Although there is no legal gender discrimination in land ownership, the traditional social norms and customary laws constitute a barrier to women's equitable access to productive resources.

And while women carry major responsibilities in farm management decisions and actual labour, there is very little opportunity for training and limited access to agricultural extension services. Most of Indonesia's agricultural research has been on rice production, with very little attention to other crops, and almost none directed to the "home garden". Customarily,

¹⁴ The World Bank. 1992. "Indonesia: Women in Development, a Strategy for Continued Success".

¹⁵ FAO, *op.cit.*

¹⁶ The World Bank, *op. cit.*

only male heads of households are invited to training sessions and research results is normally targeted to “lead farmers”, few of which are women. Hence, despite the active role that women play in agriculture – as decision makers and as labourers – they are most often excluded by default from direct access to extension services.¹⁷

According to the Ministry of Communication and Information (MCI)’s E-Strategy Report (2004), many women’s groups in rural areas are organized around thrift and assistance provided to them in terms of micro-credit, technology and marketing initiatives. Survey of these groups show that women have been able to earn additional incomes and women’s cooperatives have proved to be “model borrowers with a virtually unblemished record of repayments to banks and financing institutions”. The report also makes the point that a number of these women’s groups have begun to use computers for maintaining their accounts for acquiring skills in manufacturing superior products or providing services.¹⁸

However, the use of ICT by women in rural areas is currently very limited due to problems of access and lack of capacity. Experience in other countries illustrate that strategies for reaching women in rural areas effectively use multiple forms of media and communication. A project in Malawi called Farmwise is a project involving a database system, an online input calculator, and email, which is helping women farmers in rural village of Mwandama in Zomba district, to improve agricultural production. The project developed a computer database system with a web interface and email facility to help women farmers determine what they can expect to harvest from their land, which crops they can grow given the soil type and fertility, and what inputs they should use.¹⁹

As in many other regions in the world, Caribbean women play a vital if under-recognized and unsupported role in food production. They are less likely to have access to land, extension training, affordable credit and loans than men, yet studies indicate that they make up to 65 per cent of agricultural production and 80 per cent of marketing decisions. There is a growing market for organic products. Organic farming is highly knowledge-intensive, however, and women farmers often lack the means to learn more about organic production methods. While opportunities exist to tap into local and even regional markets, women farmers tend to be isolated from market information. To overcome these challenges women farmers were trained to take advantage of the internet to access and exchange information about organic farming methods, promote their business, and market their product through tapping into networks that already exist on the Internet, and were trained in participating in online user groups.²⁰

These experiences are valuable and illustrate just a few ways in which rural Indonesian women can also benefit from ICT and learn from other rural farmers from around the world.

III. Research Background and Methodology

The methodology of this study involved a participatory process where major stakeholders

¹⁷ Ibid

¹⁸ Ministry of Communications and Information, “Final Report: Indonesia’s E-strategy, Jakarta, December, 2004.

¹⁹ Bessie Nyirenda (2004) “Malawi: Farmwise”, ICT Update, Issue 21.

<http://ictupdate.cta.int/index.php/article/articleview/366/1/69/>

²⁰ Source: Nidhi Tandon (2004) “The Caribbean: ICT tools for women organic farmers: the Knowing & Growing Network”, ICT Update, Issue 21. <http://ictupdate.cta.int/index.php/article/articleview/367/1/69/>

(national government agencies, local governments, civil society organizations, women's organizations, academia, rural women) were actively consulted through a bottom-up process involving public consultations, stakeholder analysis, and focus group discussions to identify the (gender disaggregated) needs of rural communities to ensure sustainable livelihoods. Select field visits were carried out to assess information needs of rural women to provide practical recommendations to policy makers on mainstreaming gender considerations into strategies for rural information systems.

The gender team, composed of three gender and ICT specialists²¹ with international and local expertise, met with various Indonesian government departments and visited several projects run by both government and NGOs to investigate how gender concerns are considered, particularly in addressing Indonesian women's developmental needs, and to assess the current efforts towards gender mainstreaming.²² These missions were done over four weeks from December 2004 -February 2005.

The team met with representatives of Ministry of Communications and Information BAPPENAS, and Ministry for Women's Empowerment, Department of Social Affairs, Department of Agriculture and Ministry for Research and Technology.

The projects visited by the team included the following (see Appendix for detailed field reports):

- a radio community station in Kamal Muara
- a Computer and Learning Center in Pawenang, Sukabumi
- the regional cooperative Puskowanjati and a primary cooperative called Citra Lestari located in Malang
- a WARINTEK in the local library of Sleman
- SLTP Alternatif Qaryah Thayyibah and the Serikat Paguyuban Petani in Salatiga
- an NGO called Indonesia Women's Study in Sukoharjo that runs an information project about migration located in Ngandong Wonogiri
- the Indonesian Agriculture and Forestry Information Office in Magelang
- a telecenter at the Pabelan Islamic School

The study was conducted in conjunction with an overall study on **Strategies for Rural Information Systems in Indonesia** where academics, researchers and representatives of the private sector such as ISP operators were interviewed. Gender related findings from the overall study have also been included in the analysis and recommendations presented in this study.

The report will be widely distributed within government circles, the private sector, NGOs, academia, and most importantly to the women in the rural communities. A CD-ROM will also be produced with key messages using a graphic approach²³ so as to serve both as a literacy tool as well as a source of information and to facilitate networking and support among women's organizations working in ICT for development. Finally, the report will be disseminated at the World Summit on the Information Society (WSIS) to be held in Tunis in November 2005.

²¹ The team consists of Chat Garcia Ramilo, Sonia Jorge and Wati Hermawati.

²² Gender mainstreaming refers to a strategy and methodology to achieve gender equality, by ensuring that programs, projects and policies reflect the gender dimension of the issues and therefore develop solution that lead to greater gender equality.

²³ Similar to the UN Women's Tribune Centre CD ROM called "Rural Women in Africa: Ideas for Earning Money".

IV. ICT in rural Indonesia: a gender perspective

There is still a long road ahead before all Indonesian's can benefit from the full potential of ICT. That road seems even longer to rural women. Despite some improvements in access and the rapid deployment of lower cost wireless technologies, not much has changed in rural areas of Indonesia. Infrastructure in rural areas is limited and existing services are expensive and practically outside of rural women's reach. Women still face enormous barriers and access to communications and information relevant to their realities is very limited. This section of the report provides a gender perspective on the status of ICT in rural areas of Indonesia and presents the main findings of our gender analysis. The discussion is illustrated by case studies developed by the team and based on the field research. These findings focus on the four main areas:

- Connectivity and access to information
- Capacity building and ICT in education
- Use of ICTs for grassroots women's organizations
- Gender mainstreaming within the Government: the Ministry of Communications and Information and the Ministry of Women's Empowerment

These areas were identified as priority areas and do not reflect an exhaustive analysis of all issues that could be considered. Instead, these areas reflect the urgency of issues as expressed by women and organizations, as well as the teams' expert analysis of gender and ICT issues.

A. Connectivity and Access to Information

Availability and affordability of telephone connections, especially at the village level, remains the major barrier for access in rural Indonesia.

Access to basic telecommunications services is very poor, particularly in rural areas, and outside Java with over 150 million Indonesians--75 percent of the population--have yet to benefit from access to basic fixed line, mobile or other electronic communication. Only four out of every 100 Indonesians have access to fixed telephone lines. Mobile access is increasing, but is very limited outside major urban centers. Rural telecommunications access is very limited with 65 percent of all villages outside Java without access to telecommunications and information services while the Jakarta metropolitan area enjoys about 40 percent household teledensity.

There has been limited interest among telephone operators to provide fixed line telephone access in rural areas, primarily due to high cost of serving those areas and resulting low returns on investment. Public telephones are scarce and often do not function. Internet services are limited to a handful of cities and service fees are still high for most rural poor women.

Finally, less than one percent of the population has access to the Internet. Internet access in eastern Indonesia is extremely limited and prohibitively expensive due to long-distance connection charges. Excluding Bali and Sulawesi, Eastern Indonesia has fewer than 15 public Internet kiosks. Of 35 operating ISPs, few provide access to the Internet in remote locations

due to the prohibitive costs associated with connectivity.²⁴ According to a UN E-readiness report, the proportion of female internet users in 2000-2001, among the 39 countries for which data was available ranged from 51 percent in the US to 35 percent in Indonesia."²⁵

With the exception of the Farmers Federation in Salatiga, all projects and sites covered by this study had limited or no connectivity available.²⁶ In general, the most common mode of communication, aside from face-to-face, is through cell phones and handy-talkies. Internet access is extremely limited and mainly available to and used by students, teachers and other professionals, government officials and employees, village council officials and staff, and farmer organizers (see table 1).

Almost no sex disaggregated data was available that can accurately measure the differential access between men and women in Indonesia especially in rural areas. Based on interviews conducted, one can easily conclude that women have far less access to ICT than men.

²⁴ The Ministry of Communications and Information, "Final Report: Indonesia's E-strategy, Jakarta, December, 2004.

²⁵ UN E-Government Readiness Report 2004, p 98, <http://www.unpan.org/egovernment4.asp>

²⁶ In Salatiga, the Farmers Federation and its alternative schools have 24-hour internet connection provided by the local ISP.

Table 1 Comparative access to connectivity and information in six study sites

	Sukabumi	Malang, East Java	Salatiga Farmers Association and Alternative school	Sleman Warintek	Magelang District office	Wonogiri
What type of access is available?	Cell phones Internet connection through flexi – at the training center	Cell phones Landline Internet through training center	Cell phone Landline Handy-talkie Internet connection- 24 hour connection	Internet connection through Warintek	Cell Phone Handy-talkie Internet connection through E-Pabelan telecenter; District office	Very poor cell phone connection Handy-talkie No internet connection
Who has access?	Cell phones – trainers, local government officials. Internet – only the trainers, mostly female.	Cell phones – cooperative staff, organizers and some members, who are mostly female.	Cell phones – association staff, farmer organizers and some staff. Internet connection – Farmer association staff and farmer organizers, most of who are male. Teachers and students where differences in male/female are insignificant.	Internet connection – students, teachers/professionals, some government employees and other community members who use the Warintek. The head of the library estimates that 60% of users are males and 40% females.	Cell phones –district office employees, extension workers, entrepreneurs and some farmers, mostly male. Handy talkie – local government and district office Internet connection – some district office staff and extension workers, mostly male.	Cell phone – extremely limited to community leaders. Handy talkie – local government office that are mostly male.
How is connection being used?	Cell phone are most commonly used for communication The internet is only being used by trainers of the center mainly to send reports to partners and funders and occasionally to look for information.	Cell phones are used by workers and organizers for regular communication within the cooperative. Internet is only seen as a part of a training activity and neither used for information nor communication purposes.	Cell phones are used by workers and organizers for regular communication within the cooperative. Internet is only seen as a part of a training activity and not yet used for neither information nor communication purposes.	Internet is used mainly by students, professionals and government employees for email communication and for accessing information.	Cell phones and handy talkies are used extensively for regular communication and monitoring of market prices of produce among the district extension workers. Internet use is limited to use once a week by only a few staff members due to the high costs.	Cell phones are extremely limited in use. Handy talkies are used for official communication between the village council and the District government office.

Information and content for rural women

Aside from expanding connectivity, the lack of relevant information in the local language (e.g., information useful for women's needs with respect to their productive roles) presents a key challenge. As pointed out earlier in the report, women participate in agriculture as well as non-farm or off-farm income generating activities in very significant ways in rural Indonesia. Access to information, agriculture or otherwise, that can support their economic activities is a critical need.

Currently, the main sources of information for women are their family and community networks (including community organizations and cooperatives), the community radio (when there is one), television, and printed media (including informational pamphlets distributed by the government's ministries and disseminated by health workers or others). However, these sources are more likely to be simply distribution agents and not producers of information. It is the production of relevant local, regional or national content that needs urgent attention. ICT can facilitate the production of local content and the frequent updating of such content.

In 1996, the World Bank conducted a social and gender analysis study to provide background information on the social and agricultural profile, and the gender relations in the existing extension support services for a five-year capacity building project in the country. The study indicated that women's contributions are important in agricultural production, but they hardly participated in extension activities because their contribution was not socially recognized. Some gender issues identified in the study at the time that may influence the effectiveness of extension delivery were group meetings which were considered men's business; meeting schedule conflicts with women's regular/domestic work; women do not talk in mixed groups, etc. Since gender relations and issues were considered specific for each community, it was recommended that gender-related issues be identified in all participating districts.

The gender team visited one of districts included in this project and information gathered identifies some of the continuing barriers in accessing gender related information that rural women face.

Box 1 KIPP Kabupaten Magelang, West Java

The KIPP Kabupaten Magelang, West Java is one of the sites of World Bank funded project **Decentralized Agriculture and Forestry Extension Project (DAFEP)**. DAFEP was a capacity-building project with the objective of enhancing the farmers' capacity to participate in and to lead in extension activities, and to strengthen the capacity of the district level integrated agricultural and forestry extension system. The project strategy was focused on farmer participatory approach.

At the onset of the study, it was noted that there was a lack of capacity in the extension system to assess and analyze social and gender issues in the field. This limitation resulted in the failure of extension programs to address the location and gender specific needs and opportunities within their districts.²⁷

The DAFEP project included a media dissemination component that was implemented at the district level. According to the project's media team, media resources such as fliers, radio, books, journals, posters, VCD and newspapers included sex desegregated data and gender responsive information relating to the results as well as other information related to the project. Some of this information is online.

In Magelang, officials and staff of the district office identified two gender-related activities, one being poor farmers training program where 80% of members are women and the other is the establishment women's groups by extension workers. However, it was evident that specific efforts that specifically aimed at facilitating women's access to relevant agricultural information continued to be a critical need in the district. Much of the information that comes from the district office of the Ministry of Agriculture for rural communities are related to topics such as organic farming, horticulture, fisheries and forest management. For example, a topic that could be relevant to women is about "home gardens". Women contribute considerably to household income through farm and non-farm activities. Kitchen gardens, which are managed by women, contribute to 20% of household income and 40% of domestic food supplies.

Access and information via the internet

Data from a survey conducted of 270 users of 15 Warnets in Yogyakarta carried out in November-December 2003 gives an indication of differential access of women and men to the internet.²⁸ The questionnaire respondents were all customers in Internet cafés in Yogyakarta. Game centers and university-owned Internet cafés were excluded from the sample.

Data collected showed a split of 32% female and 68% male users. The researcher noted that teenagers (students) and women could have been underrepresented in the sample, as a result of the higher morning sampling rate. Use by these groups tends to be higher in the afternoons and evenings. The data also revealed that both women and men had very low access from their homes (7% male and 5% female) and workplaces (12% male and 9% female). Women used the internet mostly to search for information, email, chatting and reading news online. Most of the users come from the 20-29 age range with a very small number who are between 30-39 years old.

²⁷ These history and observations were derived from a meeting with the Ministry of Agriculture.

²⁸ The survey was carried out by Fathul Wahid, of the Department of Informatics, Faculty of Industrial Technology, Islamic University of Indonesia. The survey was carried out in connection with research under way by Kristiansen, S., Furuholt, B., Wahid, F. (2005), "Cyber cultural diversity: The use of Internet cafés in Indonesia", Working paper. School of Management, Agder University College, Kristiansand, Norway.

Two projects that are attempting to provide connectivity to the internet for rural communities as well as content on rural development are the Sleman Warintek and the E-Pabelan Telecenter in Mungkid, Magelang. Both of these projects do not have well-defined plans to identify and address women's needs. The Pabelan center illustrates the need for having the intended beneficiaries more fully involved in the planning and implementation stages of the project from the outset (Box 3) *.

** Note: The information gathered from the staff at Pabelan as well as UNDP and Bappenas staff was supplemented by Alex Robinson, University of Huddersfield, U.K who is currently engaged in ethnographic action research in Pabelan. The sections on Pabelan draw from Robinson, Alex, 2005. ICTs and development in Indonesia: information, markets and livelihood options, Interim research report 2 prepared for Lembaga Ilmu Pengetahuan Indonesia (LIPI), Jakarta, Indonesia. March 2005 and personal communications with the author.*

Box 3 E-Pabelan Community Telecenter

The e-Pabelan telecenter, is a pilot project being implemented by the United Nations Development Program (UNDP), in conjunction with the National Planning Agency (Bappenas, Badan Perencanaan Nasional). It is a community development initiative using information and communication technology (ICTs) to improve the lives of the poor.

The objectives of e-Pabelan are as follows:

- To empower the poor in Pabelan with access to basic information such as market, farming, trading, education, and health information;
- To enhance the capacity of Pabelan people in accessing information, computer skills, telecenter management, etc. through trainings;
- To mobilize Pabelan people to improve their economy with community development initiatives using information and communication technology; and
- To build partnerships with stakeholders to develop the community in Pabelan.
(Bappenas/UNDP)

Currently, around a dozen students are recorded as using the center per day. These are largely students from the pesantren who access the centre at all hours - much to the dismay of some of their teachers who would prefer they attended their classes. At the moment, the public generally don't access it at night (when they would have the free time to access it) because either the center is occupied by students from the Pesantren or students from the English course. The experience of e-Pabelan does not suggest that low participation is due to illiteracy and low educational attainment. Of course, if the point of reference is the head of the household this could perhaps be argued. However, within poor households in Pabelan (and elsewhere in Indonesia) educational attainment has increased significantly over the past few decades. For example, within poor households in Pabelan there are a few family members that are educated to degree level- however, they still do not use the telecenter. Interestingly, some computer owners and some poor individuals with previous computer experience do not use the center either. The rise in educational attainment should, in fact, be a plus for the use of ICTs in Indonesia. The reasons for low participation, especially by the poor, in Pabelan are varied and complex. Regarding awareness of the telecenter, just under half (46%) of the 216 poor households surveyed knew that there was a telecentre in Pabelan but only 3% of those households with knowledge of the telecenter thought the project was owned by the community. This stresses the fundamental lesson that the intended beneficiaries must be more fully involved in the planning and implementation stages of the project from the outset.

For the first year of operation (until about August 2005) all connection costs for Internet will be paid for by Bappenas to PT. Telkom. During this time, the center provides free of charge Internet connection for the users. The sustainability of the center is in doubt because the question of who will pay for connectivity charges after August 2005 has not been resolved.

B. Capacity Building and ICT in Education

According to an East Asia Update recently prepared by the World Bank²⁹, girls' educational attainment in terms of increased literacy rates, enrolment rates, or completion rates particularly in primary education has seen significant achievements in East Asia, including Indonesia. The report point out that equality at secondary level has been harder to achieve and the bigger issue is the gap for both boys and girls between urban and rural areas. The greatest gaps are found in tertiary education, suggesting a perception of higher opportunity costs associated with remaining in school, and the seemingly low returns on education for girls – or in some countries, boys – at that level. The report points out increasing the number of access to secondary education for both boys and girls through an increase the number of schools in rural and remote areas will go a long way in boosting their human capital and securing greater returns to education.

Women and girl's high illiteracy rates and the lack of ICT training are two of the most serious barriers that prevent them from entering the information economy. Continuing gender gaps in education, due to domestic responsibilities, lack of mobility and socio-cultural practices that downplay the importance of education of girls, constitute enormous challenges for women and girls. Language and basic computer literacy are pre-requisites for women and girls to benefit from the use of ICT for education.

According to a 2003 report on ICT for human development in Asia, detailed sex-disaggregated data on formal ICT education in Indonesia is not available apart from university and college enrollment that show that males outnumber females by 50% while among faculty in ICT colleges and universities, the ratio is 1 female to 3 males³⁰.

Nevertheless, Indonesia's E-strategy Report puts emphasis on addressing the Millennium Development Goal related to eliminating gender disparity in primary and secondary education and identifies ICT education as a strategy for closing this gender gap. As part of this strategy, the Indonesian government has launched several special initiatives by emphasizing on computer and computer aided education in schools such as MCI's "One School and One Lab" (OSOL) program. This program aims to increase the capability of Indonesian students in using ICTs and is now in 52 schools in the country (see Table 2). MCI, as the implementing agency, hopes that the program will help schools in providing ICT infrastructure as well as to facilitate schools (students and teachers) in their learning and teaching process particularly in access to information. This education project can potentially benefit girls and boys if gender considerations are included in its design and implementation. In many developing countries, computers are being introduced in schools as a tool to support the learning process. Research has shown that classrooms are not free from gender bias and therefore gender-sensitive planning of ICT interventions is a precondition to ensure equal access and effective use by girl students of computers in the classroom environment. An evaluation of the experience of introducing ICT education in four African countries shows how gender inequalities plays out in classrooms between boys and girls.

²⁹ This Special Focus was prepared by Gillian M. Brown, Laila Al-Hamad and Carmen de Paz Nieves of the World Bank's East Asia and Pacific Region Social Development team.

³⁰ Promoting ICT for Human Development in Asia: Realizing the Millenium Development Goals – Indonesia. APDIP, APRI-HDRs and UNDP, pp73-74

Box 4 ICT for education in African countries

World Links, an organization that promotes international tele-collaboration among secondary school teachers and students in developing countries, commissioned a gender assessment study in 2001. The research focused on male and female students in four African countries: Senegal, Mauritania, Uganda and Ghana. The evaluation found that despite efforts to make the programme gender-sensitive, gender inequalities in access persisted. In some schools in Uganda and Ghana, girls do not enjoy equitable access to the computer labs. High student-to-computer ratios and first-come-first-serve policies do not favour girls who are typically heavily outnumbered by boys at the secondary level. Girls have earlier curfew hours and domestic responsibilities that limit their access time. Proposed measures to correct this gender bias included encouraging schools to develop “fair use” policies in computer labs, conducting gender sensitivity sessions and advocating for reducing after-school duties of girls to give them more time.

Source: Anita Gurumurthy, Gender and ICTs, Overview Report, Bridge, September 2004, <http://www.bridge.ids.ac.uk/reports/CEP-ICTs-OR.pdf> and Victoria Tinio, ICT in Education, e-ASEAN Taskforce and UNDP-APDIP, May 2003.

No.	Districts	Total
1.	Batam	6 School
2.	Tanah Datar	3 School
3.	Samarinda	8 School
4.	Penajam Paser Utara	3 School
5.	Balikpapan	15 School
6.	Kutai Kartanegara	2 School
7.	Bontang	4 School
8.	Jakarta Utara	1 School
9.	Garut	3 School
10.	Aceh Utara	4 School
11.	Aceh Timur	1 Pesantren 1 Madrasah
Jumlah		51 School
Source: MCI data		

The experience of ICT socialization among junior high schools in Salatiga, Central Java clearly demonstrates the value as well as the complexities of such a strategy. Computers and internet access were freely provided to junior high schools and several alternative schools (run by a farmers association) to develop the capacity of both teachers and students in using computers for teaching and learning as well as accessing information via the internet. Interviews with the proponents of this initiative reveal that the successful uptake of new ICT requires champions particularly among decision-makers in schools. For the junior high schools in Salatiga, the account below shows the pivotal role of headmasters in this experiment.

Box 5 Salatiga Alternative School

The SLTP Alternatif Qaryah Thayyibah is an alternative junior school that operates under the open school program of the government. The school is one of the 5 alternative schools being run by the Farmers Federation, SPP Qaryah Tayibah in Salatiga. The schools are:

Name of School	Address	Number of Student		
		F / Girls	M / Boys	Total
SMP Alternatif Qaryah Thayyibah Kali bening	Kali bening Village, Tingkir, Salatiga	10	15	25
SMP Alternatif Qaryah Thayyibah Candi Laras	Batur Village, Ngelo, Getasan, Semarang	2	3	5
SMP Alternatif Qaryah Thayyibah Otek Makmur	Kendel Village, Kemusu, Boyolali	32	53	85
SMP Alternatif Qaryah Thayyibah Bondongan	Bondongan, Magelang	--	11	11

The students in these alternative schools all live in the communities, most of them are children of farmers. The buildings being used as schools either belongs to the federation or by members of the community. These schools have become popular within the communities due to the high quality of education and teaching provided and lower costs because the kids no longer have to incur travel cost.

A unique feature of the schools is that all are equipped with computers and all have 24 hour connection to the internet. The connection is provided free by a company called Indonet Salatiga, a local ISP owned by entrepreneur and an educator, Mr. Roy Budhianto.

In the Salatiga school, the dedication of the teachers and the enthusiasm of the students were very evident. All the teachers are volunteers who donate their talent and time because they believe in the school's philosophy that derives from the principle of "education for all". The school has been running for two years and their experience in using computers and the internet on a regular basis have positively contributed to the teaching of the teachers as well as the learning of students. The school has four computers, which are being used for:

- Finding information relevant to all subjects being taught in the school
- Email communication among the students and between teachers and students. Students send their homework to their teachers
- Meeting other children online
- Learning applications such as word processing
- Learning English

Both girls and boys were equally engaged in all these activities.

The remarkable thing about the school is that all students have refurbished Pentium 2 personal computers in their homes. PCs are considered as a necessary educational "equipment" by the head of the school and have made the computers available on three-year loans to the families of the students. Payments of 1,000 rupiah are included in daily expenses for each student.

The head of the school Mr. Bachrudin, believes that they are now seeing the effectiveness of their educational approach, of which the use of ICT is a critical part. For the first time, the students in his school were evaluated by the Department of Education and the results were above the national average.

In contrast to the alternative school, the experience of government run junior high schools in Salatiga has not been as positive. Twenty-two schools benefited from a project implemented by Indonet Salatiga and were equipped with at least one free PC and a similar 24-hour Internet connection. Out of this number only 5 schools have ended up using their PCs and connection. In the rest of the schools, the equipment is kept at the headmaster's offices, off limits to both teachers and students. According to Indonet head, Mr. Roy Budhianto, the main reason for such limitation is the resistance from headmasters who have no experience in using the tools available to them, or who believe that these tools are more appropriate for secondary students. He believes that a mind shift among headmasters about the use of ICTs and the internet has to occur before the full potential of these technologies can be realized in Indonesian schools. Schools have to be offered incentives for integrating ICT tools in their educational programs and services and educators have to be convinced about how ICTs can empower the teaching and learning process.

Computer literacy and Capacity Building for Women in Poor Communities

According to MCI there are currently 1600 community learning centers (CLCs) in Indonesia. CLCs are defined as "local educational institutions outside the formal system providing a variety of learning opportunities for community development and improvement of people's quality of life".¹

Initiatives that focus on educating women in poor communities and teaching them computer literacy have demonstrated the value of ICT for women. For example, a recent study of nine projects with a specific focus on women and youth in South Asia showed that ICT use is valued for providing a different model of teaching and learning which is practical, functional and hands-on. These projects contribute to women's access to information that is useful for their livelihoods. 31

A community training and learning initiative of an Indonesian women's organization included in this study illustrate the value of capacity building for women in rural areas. Preliminary evaluation of the impact of its work shows that the benefits to the community, and particularly to women, include increased capacity of girls in using computers supporting their education, development of local content on women's concerns such as reproductive health of women in the village, collection and computerization of sex disaggregated election data, strengthening of social networks as demonstrated by voluntary support by villagers and in extending the resources to other villages, and finally personal empowerment of the coordinators of the center who are recognized as role models in the community.

³¹ Don Slater and Jo Tacchi, 2004. "ICT Innovations for Poverty Reduction". UNESCO. p 89.
<http://www.bellanet.org/leap/docs/136121e.pdf?OutsideInServer=no>

Box 6 Community Learning and Training Center

PUSTEKIM (Center for Community Training and Learning on Information Technology (CTLC) is a project initiative of an NGO called Koalisi Perempuan (Indonesian Women's Coalition). Koalisi Perempuan Indonesia (Indonesian Women's Coalition for Justice and Democracy) is a women's mass organization with individual members base established in 1998.

The CTLC is a 2-year pilot project, funded by Microsoft Indonesia, that provide training for women in mostly Microsoft applications (Word, Excel, PowerPoint, internet use, Encarta). The project started in December 2003 and is being implemented in five provinces namely West Nusa Tenggara, Bengkulu, West Sumatera, Jambi and West Jawa. The objective of the project is to encourage the communities, women and girls in particular, to use and benefit from ICT in their daily lives.

In West Jawa, a Pustekim is located in the village office of Pawenang, Nagrak, Sukabumi District. ICT literacy for women is very low in this area and women have less access to resources, including technology, as compared to men. Like many others villages in West Jawa, women and girls in Pawenang face constraints including lack of education, due to poverty. Older and less educated women are mostly employed in vegetable farms, food processing, households and as traders. Those who have completed high school, work in factories in nearby industrial areas.

There are six computers from Microsoft in the center. More than 340 (60% females and 40% males) have completed training. The demand for training in the community is high. The center has a waiting list of trainees and there are courses that run till midnight. Aside from Pawenang, the center has had to expand its coverage 4 other nearby villages. The trainees are a mix of students, employees, housewives and others. The computers are also rented out to the community and other users include local government staff, farmers and fishermen living in the area. Internet connection is very limited because connection is only through a scheme called Flexi, which relies on cell sites, and is very expensive. Therefore, only trainers use the internet and only to send reports to Microsoft and the Koalisi Perempuan.

A critical issue for the CTLC are building sustainability beyond the support of Microsoft which will end by March 2006. Aside from equipment support, Microsoft finances 50% of the operational expenses of the center while the center's income from training fees covers the rest. Sustainability strategies that are being explored can potentially expand the CTLC's service to the community. This include moving beyond software training and building capacity to use the tools for different purposes, including new business opportunities, finding better jobs, development of more local content and generally more support on how to use ICT/computer skills for greater social and economic impact. The local government unit has realized that the Pustekim has helped a lot in advancing its women empowerment program, particularly in the village level and has approached government training authorities for possible support.

C. Use of ICTs by grassroots women's organizations

ICT interventions that are directed at economically empowering women capitalize on the potential of these technologies as knowledge and networking tools for women as producers and distributors of goods. The tools are used to connect women to new and wider markets, broaden their social networks and provide them with information that opens up important economic opportunities. ICT can provide new opportunities for women's economic empowerment by creating business and employment opportunities for women as owners and managers. Such economic activity can lead to some of the following results:

- creating an environment where women feel comfortable participating in community development activities and advocating for their needs and priorities;
- developing ICT-based tools that address women's specific needs and that are run by women (e.g., literacy programmes, business planning courses, ICT training, access to market and trading information services and e-commerce initiatives);
- offering economic opportunities in salaried employment and entrepreneurship, as well as in the ICT sector itself and in jobs enabled by ICT.

There are numerous women's organizations in Indonesia, a few of which are investing in ICT for development or in ICT for their own organization's strategic use (communications, information, etc.). Such organizations include the network of strong and well established women's cooperatives that reach a great number of grassroots women. These organizations present a great opportunity to facilitate greater knowledge for development as they could naturally develop into community access points or even ICT service providers. Puskowanjati and Suara Ibu Peduli are good examples of organizations with incredible experience in the financial field, trusted staff and proved management skills.

Suara Ibu Peduli or the Voice of Concern Mother (VOCM) has about 10,000 members in Jakarta, Bogor, Tangerang and Bekasi (Jabotabek) area. Out of this number, about 700 are members of cooperatives. The cooperative provides cash credit for small business ranging from Rp. 500,000 up to Rp. 3, Million with the interest 2% per month. The VOCM office has not used internet yet for their communication with the members as well as to gather information related to their work. Six extension workers who work six days a week bridge the main mode of communication among the members as well as with the board members of the organization. Computer use in the head office is mainly for word processing, particularly related to the secretarial work, such as writing letters and articles. The VOCM realizes the importance of ICT for their work and they expressed the desire to take advantage of ICT for their networking with the field coordinator of the cooperatives.

However, the same case studies show that there is a lack of awareness and knowledge about the full potential of ICT for development. In fact, most training activities focus on learning software and very little time is devoted to networking skills, advocacy, information and content development, and use of different technologies. There is clearly a need for training in this area, and it is fundamental that trainers be trained to open the possibilities and facilitate strategic use of ICT for development purposes. The case studies presented here demonstrate how ICT applications and content can be useful to rural populations, such as farmers, small business owners, community health centers and schools.

Box 7 Puskowanjati, the Central Women's Cooperative in East Java

Puskowanjati, the Central Women's Cooperative in East Java is a secondary cooperative with a current membership of 43 primary cooperatives in the East Java region. Each primary cooperative has 300 to 11,000 individual members, with a total current membership of 45,000 women among all primary coops. Of these, 54 percent are reported housewives, 19 percent micro business owners, 6 percent active in agriculture, 1 percent active in animal husbandry, 1 percent active in handicrafts, and 20 percent miscellaneous activities.

The Cooperative is a well organized and trusted institution, with years of experience in servicing their members. Puskowanjati has implemented several programs in its area and has developed into a strong organization capable of managing a substantial micro financing program in addition to several support programs to its members. *Training* women was always a focus of Puskowanjati. A new ICT project that is a recent initiative of the cooperative has already trained 60 women (from primary cooperatives) on computer skills (focusing on Microsoft software applications and basics of the internet) in a period of six months. Training focuses on software applications for financing and management activities. The current trainers are from other cooperatives and include three men but no women trainers.

Currently, information dissemination methods are mainly done through staff and extension workers that provide training, guidance and information at cooperative premises, face to face help and assistance, particularly with illiterate members and quarterly publication with news on cooperatives' activities.

Most cooperative offices have one basic telephone line but fax machines are not common. There is no internet connection at the primary cooperatives. Some micro credit loans have been used to acquire computers but most cooperatives operate without any computers. There is no community radio used for information sharing. Members use basic telephone and, increasingly, cell phones. Cell phones are bought by individuals and SMS is the most common service used. Some micro loans have been used to buy cellular phones.

The expansion of Puskowanjati's communications strategies particularly connecting its primary cooperatives to the internet where it is possible and training its staff and members in the use of ICTs can have a significant contribution in the delivery of its services. These services include training its members in the areas of education, leadership, health, and management skills, providing information on health and enhancing its micro financing program increased accessed to market information.

A primary cooperative of Puskowanjati that has benefited from the use of computers is the **Citra Lestari Primary cooperative**. With over 3,500 members, Citra Lestari is a primary cooperative which started a micro credit program in 1991. In addition to the micro credit, it also operates a cooperative retail store, where members can sell their products. With regular meetings among its members and a global meeting every semester, Citra Lestari has successfully implemented a large micro credit program with currently 162 coordinators managing the credit system. Members include small entrepreneurs, construction workers, catering businesses, farmers, etc. Micro loans have been used for business improvement as well as household expenses, such as education, renovations, purchase of appliances, and--in a number of cases--computers and cellular telephones.

As a cooperative, Citra Lestari has invested in ICT by acquiring computers to assist in the maintenance of the cooperative retail store inventory, as well as to better manage the micro financing program information and details. The organization staff includes women trained with computer and accounting skills.

D. Gender mainstreaming within the government: the case of the Ministry of Communications and Information and the Ministry of Women's Empowerment

In 2000, a Presidential Instruction on Gender Mainstreaming in National Development was issued by the Indonesian national government that instructed all “departments and non department government agencies, provincial and district governments to implement gender mainstreaming in planning, implementation, monitoring and evaluation of all development policies and programs”. According to the Ministry for Women's Empowerment, the body tasked to oversee the Indonesian government's gender mainstreaming efforts, the country's development approach at that time had not specifically considered development benefits for men and women equally, inadvertently contributing to gender inequality and inequity. In its technical guideline for implementation, the Ministry went on to say that, “gender inequality in various development sectors is indicated by lack of opportunities for women to work and perform business, and their low access to economic resources such as technology, information, market, credit and capital.” An aggravating factor that contributes to this condition of inequality is the lack of participation and involvement of women in decision-making in public policy demonstrated by just 7% representation of women in the top echelons of the national government executive.³²

Prioritizing gender mainstreaming within government institutions responsible for information and communication is a key component in engendering national ICT policies and programs that will be critical for rural women.

Gender Mainstreaming in MCI

MCI's initiatives that respond to gender issues have focused on two initiatives, gender mainstreaming within the Ministry and a socialization project that aims to empower women in using ICTs.

To follow up on the Indonesian government's gender mainstreaming policies, MCI issued Ministerial Act No. 31/Kep/M.Kominfo/8/2002, to form a gender mainstreaming team within the ministry. The team's main task is to ensure gender mainstreaming within the “telecommunication and communication society through mechanisms such as mass media, digital media, etc.” The main aim of the Ministry's gender mainstreaming efforts is to ensure that men and women participate in all development activities and have equal access to the benefits derived from information and communication technologies.

With the formation of the Ministry of Information and Communications on Feb 7, 2005, the Ministry intends to conduct a training session on gender mainstreaming for all new managers as well as decision makers and policy makers. Gender mainstreaming in its programs and projects needs attention and will be a challenge for the new Ministry.

The Ministry for Women's Empowerment identified two areas to strengthen in the MCI's gender mainstreaming program. The first is in providing a comprehensive report of its gender mainstreaming program and initiatives to make monitoring more effective. Secondly, it emphasized the need for high officials from the Ministry, with significant decision-making portfolios, to participate in high level monitoring meetings that the Ministry of Women's Empowerment calls twice a year. MCI officials who are tasked with gender mainstreaming

³² Ministry of Women's Empowerment, “Technical Guideline for Implementation of Presidential Instruction Number 9 Year 2000 on Gender Mainstreaming in National Development, Second Edition, Republic of Indonesia, 2002.

functions have indicated commitment to increasing efforts to cooperate with the Ministry.

Currently, MCI has one significant project that focuses on women empowerment through facilitation of access to information.

Box 8 Women’s socialization to ICTs

In 2004, MCI initiated one project that aims to increase women's socialization to ICTs. This includes four 2-day regional training workshops where women's leaders, government workers, religious leaders and spouses of government officials have participated.

The training was done in several provinces: West Jawa Province and DI Yogyakarta in 2003 and West Kalimantan and East Jawa in 2004. Additional workshops are planned for the provinces of South Kalimantan Province and North Sulawesi in 2005.

Total participants in each province for the training of women empowerment through ICT is 60 come from various institutions and organizations as shown in the table below:

Participants	No.
Women NGOs	6
Dharma Wanita	6
Women Business Group - IWAPI	6
Women’s Movement - PKK	6
Women Journalist	6
Employees at the Local Gov Office	6
Women’s Cooperatives	6
Education Leaders	6
Religious Leaders	6
Others women organizations	6
Total	60

Ministry of Women’s Empowerment: finding its way through ICT

ICT has not figured prominently in the Ministry of Women's Empowerment’s technology focus. The Ministry’s direct involvement in ICT is limited to two areas: first, in relation to it’s gender mainstreaming oversight of MCI and second, through the socialization project described in Box 8. The Ministry has also indicated the need to expand its own use of ICTs to enhance its own work, in relation to facilitating reporting mechanisms, using online tools to facilitate communications with other government departments and other partners and the use of web-based information for promoting women’s empowerment programs within the country.

Currently the Ministry has set indicators for gender equality largely based on human development indices, gender empowerment measure and those set through the Statistics Department of Indonesia. In addition to these indicators, the Ministry is planning to develop indicators in line with the 12 critical areas of the Beijing Platform for Action. This may be positive for ICT since Section J of the Platform refers to recommendations on media and ICT.

V. Towards a gendered development of ICT in rural Indonesia: Key action items

It is crucial to frame the objectives of any ICT policy and program within the framework of the Millennium Development Goals (Mugs). The following strategies for engendering rural information systems are closely tied with development goals of the country in relation to gender equality and empowerment of women.

A. Facilitating rural access through community access centers

The deployment of adequate ICT infrastructure in rural Indonesia is of high priority. There is ample evidence both from Indonesia and around the world that ICT are a powerful tool for development, however, about 65% of the Indonesian population has no access to ICT services and consequently have not had the opportunity to rip any of the potential benefits afforded by the technology. It is therefore clear that, if ICT are to make a valuable contribution to rural development, infrastructure needs to be in place to guarantee that access to affordable services becomes a reality (see the chapter on infrastructure in this report for a comprehensive discussion of the current status of access in rural areas and specific recommendations to address lack of access). In fact, as suggested in the chapter on infrastructure, affordable broadband solutions are now available and these are critical to facilitate the use of an array of ICT services, including multimedia applications (which are indeed powerful to reach, inform and communicate with largely illiterate populations, such as women).

From a gender perspective, and recognizing that women make up a significant majority of the rural population in Indonesia, it is critical that any infrastructure development policy and program consider the following:

- That gender analysis be integral part of any policy and program design and that it be clearly aware of gender considerations for implementation purposes (for example, in defining proposed funds disbursement criteria, or in establishing program policies to promote women's ownership of productive resources, among others); and
- That policies and programs need to reflect a long term commitment to gender equality in all aspects of ICT policy development, through, among other things, ongoing monitoring and impact evaluation efforts that can document and assist policy makers in ensuring that Indonesian women, particularly poor rural women, are given equal and affordable access to ICT.³³

There is a great opportunity to ensure that the country's rural ICT policy and programs be properly designed from the initial stages of the process, by integrating gender equality goals and objectives at all levels of development. Indeed, Indonesia could become a model in the region, and the following recommendations, together with others suggested in this study, provide guidance as to how to approach these efforts and achieve tangible results.

³³ The Gender Evaluation Methodology (GEM) for ICT initiatives is a resource for ICT practitioners can be used for this purpose. GEM has been tested in 27 ICT projects in over 19 countries in Africa, Asia, Central and Eastern Europe and Latin America in projects such as community telecenters, education and training initiatives for women, employment projects, networking and community building projects and women's ICT media, information and advocacy projects. APC WNSP Gender Evaluation Methodology www.apcwomen.org/gem

Opportunities for infrastructure deployment

Rural areas are generally considered high costs areas to serve (with associated lower returns). In addition, low incomes limit potential demand and consequently the size of the market. Although fixed telephone lines are still a generally preferred communication method, the rapid expansion of cellular telephones demonstrate that demand for communication is high, continues to increase, and that, when affordable communications services are available (e.g., SMS), demand and use grow quite rapidly, including in rural areas.

As reported in the chapter on infrastructure, there are a number of technology options (e.g., affordable broadband IP platforms) and key policy issues that must be addressed to facilitate infrastructure deployment in rural areas. Nevertheless, specific actions and policy decisions must take place to ensure that women and some men are not left without access to ICT. In fact, unless policy makers make a clear commitment to rural ICT development, universal access will never be a reality in rural Indonesia. The following recommendations address those concerns.

ICT services must be recognized as public goods. This must be the fundamental basis for all ICT policy development. It is important therefore that, ICT policies reflect a commitment to universal access to ICT, regardless of income, geographic location, and population group, among other things. Indeed, the public good paradigm warrants a vision where access to the specific goods can and should be subsidized and new models must be promoted to ensure that access is available, which may require, in some cases, that services be provided at very low nominal prices or even free of charge (in those areas where incomes are so low that would prevent any user to benefit from ICT). For example, community telecenters deployed in numerous communities in Korea provide ICT services free of charge to users to guarantee access to all. Services are subsidized by a number of sources, from ministry's budgets to municipal funds. In South Africa, telecom operators provide "community tariffs" to tele-shop operators in poor communities, which increase their ability to resell services at competitive prices.

Community access centers are essential to facilitate rural access to ICT and must be a top priority for Indonesia's rural development strategy. Low incomes and limited infrastructure provide the perfect scenario for the development of community access centers (or telecenters), where rural populations can have access to an array of ICT services (including community radio, TV, videos, telephones and the internet) at affordable prices or even free of charge (see above). Community telecenters offer great opportunity for women in rural areas, particularly if they are located in strategic locations and managed on a gender sensitive basis. For example, centers should: be managed and run by teams of women and men from the community, provide appropriate training for women in the use of ICT, provide content that is relevant to women's lives, and provide subsidized, low cost or free of charge ICT services.

By focusing on community access solutions, it is critical that a rural development strategy recognize that there will always be a significant percentage of the population, particularly in rural areas, that will not afford to pay for ICT services. In these circumstances, access should be subsidized and never denied, at least in the short term. Specific criteria can be developed to address the Indonesia context, but the goal is to facilitate access where lack of individual income is a major barrier. It is important to facilitate access accompanied by a strong capacity building program, where users are made aware of the benefits of all ICT, trained in the use of the technologies, and provided continuing support in the development of their own ICT related activities and uses. This will strengthen demand and gradually decrease the need for subsidization. However, it is important to note that community access can be

subsidized in many ways, and sources of funds may include government payments for the centers' work in disseminating information, sharing community data, providing a reliable means to communicate with village and municipal governments, and in many cases, operating as intermediaries for government services.

Lessons from evaluating the experience of Internet Kiosks (Warnets) in the country are valuable and should also be used to develop a telecenter program that addresses access from a gender perspective. Such program should consider, among other things:

- Support the development of a network of telecenters to provide community access to ICT, by providing initial capital financing; facilitate provision of donors' contributions, and developing a telecenter implementation plan to guide implementation of the project initiatives.³⁴
- Ensure that such issues as location, ownership and management (i.e., 50% of owners and/or managers are women, women community organizations, or organizations committed to gender equality), marketing efforts and services are developed to address the specific needs of women in the community (i.e., start by surveying the community). Such services can include capacity building activities and business support services to assist rural women operating micro and small businesses.
- Make policy provisions that allow for the establishment of community tariffs or discounted tariffs for non-profit centers to provide affordable services to the community.

Despite the pressure for telecenter sustainability (which should indeed be a goal), it is important to recognize income limitations and therefore allow for such a program to benefit from a number of resources, such as the rural development fund (or universal access fund), universal service obligations and "output-based-aid" (OBA) approaches to development. As discussed in the infrastructure chapter, the World Bank's experience with OBA projects in Latin America and most recently in Africa and Asia has been positive and offers a good model for Indonesia. However, we recommend that any approach used be thought through from a gender perspective and consequently allow for a gender analysis of the proposed plan. For example, minimum subsidy auctions tend to focus only on the amount of subsidy requested and potential population reach. While this may be important, it is absolutely critical that the organization or institution that is awarded the subsidy have a gender policy in place that relates both the operation of the organization and its service provision plans (i.e., plans that ensure targeted efforts to facilitate women's access to services). The ITU has developed a set of gender aware licensing guidelines that can be used for reference.³⁵

³⁴ The Telecenter Implementation Plan in South Africa, used by the Universal Service Agency in the implementation of its telecenter program, is a good tool and resource.

³⁵ <http://www.itu.int/ITU-D/gender/pdf/GenderAwarenessGuidelines.pdf>

Box 9 Community telecenters – Beyond Access

Beyond generating new jobs for women, ICT are being used in projects that address other gender and development issues related to poverty reduction. For instance, projects in South Asia that focused specifically on income generating activities and direct employment benefits for women created a space for information exchange, provided support networks and developed a range of interrelated social, technical and economic skills. Participants acquired the confidence for autonomous activity that made a significant contribution to their empowerment. Although ICT have not yet had significant impact on creating employment and generating income for very poor and marginalized women, there is potential through increasing their engagement with ICT to expand social networks and introduce new modes of learning which can play a key role in overcoming poverty in the future.

Nabanna is a project located in Baduria, in West Bengal, India. Women in Baduria did not have structured local communication networks that promoted access to information or provided spaces for sharing information and knowledge. Many of the women involved in the project report that they have gained more respect in their local communities as a result of the ICT skills learned at the Baduria ICT centre – both learning to use a computer and accessing and distributing information to local people. This has resulted in greater respect at both family and community level. Younger women feel they are able to approach the job market with greater confidence. There has also been an emergence of solidarity - since women learn to use computers together at the ICT centre, they also often discuss their problems, creating a sense of unity among them and also bringing forth inherent and latent leadership qualities.

<http://www.bellanet.org/leap/docs/136121e.pdf?OutsideInServer=no>

B. Strengthening Content Development

Experiences in many countries have indicated that using multiple forms of media and communications technologies facilitates reaching women, particularly in rural areas in developing countries. Investment in content development at the local level based on local information needs is also a key to facilitating more women's access and relevant use of ICT. The findings of this study revealed that there is a lack of relevant information that supports women's productive roles in agriculture in the local language.

Greater attention should be paid to recognising women and the poor as information producers, providing relevant training in collecting, packaging and disseminating local knowledge, ensuring that new technologies, such as the computer and Internet, are combined with technologies that reach more women, especially in rural areas, such as radio and print. The provision of relevant local language content, via affordable and easy to use technologies that are accessible to an audience with few or no reading skills, is crucial if ICT are to meet the needs of women in rural areas of Indonesia.

A rural strategy must look at community radios as major sources of information, and in many cases the only source on information in local languages available to illiterate populations, many of whom are women. Supporting and strengthening the role of community radios that makes use of digital technologies and the internet is a key strategy in combining use of more accessible communications technologies. Below is an example of an innovative initiative that is bringing community radio to women in rural communities in Fiji.

Box 10 Fiji Suitcase Radio

FemLINKpacific (Media Initiatives for Women), a women's community media in Suva, is pioneering a community radio project using mobile suitcase radio equipment with a 100-watt transmitter. FemLINK trained young women in secondary schools as its broadcast team. The first broadcast in May 2004 coincided with the International Women's Day for Peace and Disarmament. This radio project is a proactive response to the commercialization of radio waves in Fiji that resulted in a loss of space for women who wish to raise their issues, in their own way, in their local communities. The mobile radio project hopes to steadily address these gaps in information to and from women in rural communities, especially to strengthen women's participation in decision-making, and the overall peace process for Fiji.

SUVA (*Fiji Times Online/Pacific Media Watch*): The inaugural Fiji broadcast of fem TALK has been aired live from Saint Joseph's Secondary School, the Fiji Times reports.

In Indonesia, the community radio of Kamal Muara, a sub district in West Jakarta with 4600 households, demonstrates the power of this medium in communicating locally relevant content in a community setting. It is also an excellent example of an initiative that relies extensively on community resources to keep it going.

The community radio started in 2001 with a monthly Bulletin/Magazine disseminated to all households. By the end of 2003, active broadcasting was launched and programs ran between 3 p.m. and 12 midnights. The station is run from a room located in the village center; next to the station is the kindergarten. The radio has a 5 kilometer range which is what is legally allowed under the law. The radio has one permanent broadcaster.

At the beginning, the community radio aimed to connect fishermen with their families when they are out fishing. Fishing is the livelihood of most of the residents of the community. Later on, the contents of the broadcasts were broadened to answer to other needs such as information on education, health, family planning, and market information. There are 55% women and 45% men living in this community. Most of the women in the community are housewives. There are a number of micro-credit activities managed by women in the community. Apart from low levels of education, women in this area are also less mobile or have less access to other areas in Jakarta. Participation of the community in the radio program, particularly women, is still very low. Most of the women remain as listeners. The station has a Saturday program for girls. The radio program has also covered issues of domestic violence.

The proliferation of "community radio" is new in Indonesia. Previously, they mostly operated as hobby-based, local, or simply "illegal" radio programs. Since the enactment of Indonesia's Broadcasting Law #32 – 2002, which acknowledges of community broadcasting that is limited in power and broadcast radius, many of these community radio initiatives have adopted a community service orientation.

Efforts aimed at building networks and collective strengthening among community radio initiatives are increasing with the establishment of the Indonesian Community Radio Network (*Jaringan Radio Komunitas Indonesia*) in 2002, a federation of provincial community radio associations. Some provinces, such as West Sumatra and South Sulawesi, recently had their association's first conference.

Community radio initiatives that are affiliated with the national network are estimated to be

in over 500. For example, West Java and West Sumatra each has registered membership of about 40 community radio initiative while Central Java has around 30. Community radio initiatives that are not affiliated or registered with the network are estimated to number over 1,000.

Community radio initiatives are normally found in rural and isolated areas, especially where no or very few commercial broadcasting is available. They are mostly motored by hobby groups, and run by a coalition of volunteer core groups and community members. Being a community radio model means that they are "owned" by the community, and they are expected to be accountable to a multi-stakeholder community (village) broadcasting body.³⁶

Box 11 Rural Community Radio Initiatives in Indonesia

The list below documents the value that community radio provides through citing actual services of specific programs in various parts of Indonesia:

- They provide entertainment not normally provided by commercial radios, such traditional music and (oral) theatre.
- Almost all radio stations provide a medium for community messages to each other (whose baby is born today).
- They provide a check and balance to the local government by announcing what the village government is doing, what projects are ongoing, which families will get which development aid, and similar information (Most prominently Angkringan in Jogjakarta).
- Almost all help local government with their programs, some radio programs in Lombok, West java, Central java, and Aceh are now working with the World Bank to monitor the loan programs.
- They build community cohesion through live talk shows and facilitating phone in/text message comments from community members, government officials.
- They provide services for the community. A radio program in Lombok allows the use of their bank account for remittances from migrant workers abroad to their families who don't have their own bank accounts.
- They help connectivity and communication outside of the village. A radio initiative in Central Java broadcasts messages to from villagers working in Jakarta to their families in the village.

It is important to support capacity building initiatives that focus on content development that responds to critical development needs of women, particularly in areas such as migration.

The case study of the community training center in Sukabumi is a good example of how capacity building in the use of computer skills among women in a community has led to the production of content that are clearly addressing the development needs of the community.

For rural women in Indonesia, one critical information need is in the area of labor migration. Labor migration is associated with increasing vulnerabilities for women, including trafficking, violence and sub-normal working conditions. Migrants' income is often significantly reduced when they are forced to pay illegal fees to agents, facilitators and immigration authorities. Women enter informal services such as domestic work, or commercial sex industry more than men, and are more vulnerable to isolation, abuse and

³⁶ Mulya Amri provided the information on the status of community radio in Indonesia through an email interview.

trafficking, particularly in East Asia, which accounts for one third of the global trafficking trade (World Bank 2004c).

Latest figures from Indonesia (2004) indicate that while there are more males registered formally as migrant workers (5,000 females and 100,000 males) women far outnumber men in informal labor migration with a staggering 350,000 females compared to an estimated 15,000 males. Informal migrants have the least access to information about destination countries, labor contracts, workers rights and where and how they can communicate with their families, embassies and organizations that can assist them. This makes them extremely vulnerable to abuse.

Findings from an ongoing World Bank study on female labor migration in the country estimates that out of about 1 million Indonesians who work abroad annually, 80% are women. Around 90% of these women are working in the informal sector and are not documented. According to the study, these illegal migrants are statistically “invisible” and suggest that this information can be recorded at the village level. The research team found, through focus group discussions, that the community, especially the village councils, understood the importance of these statistics. What they lack are know how and tools to collect records of the incidence of migration within their villages.

The most common source of public information in the villages included in the study is television. Villagers do not have access to newspapers. Almost all the household that we interviewed owned a TV set, but very few had radios. Only very few households have fixed telephone lines. Usually, a wartel or public telephone kiosks can be within the village. The study observed that wartels mushroomed in the villages because of the growing demand from the villagers. Wartel owners sometime play the role of "interpreter" for the migrant families by dialing up the destination number and asking (in Arabic or Mandarin or English) to speak to the women migrant working in that household. Households who owned fixed lines also "share" their phones with others in the neighborhood to contact family members who are working overseas.

Interviews with the villagers revealed that they knew very little about the process of migration and the possible difficulties and abuses that they need to avoid. The study points out that apart from brochure/flyers, what the villages badly need is a ‘user friendly facility’ that can help provide critical and accessible information at the village level.³⁷

The challenges in communication and information are vividly seen in the example of Wonogiri, a village in Yogyakarta. The village council provides proactive information about the dangers of trafficking through a community bulletin board. Printed information is posted near the village council office. While the information raises awareness of possible dangers that migrant women may face, this initiative clearly lacks the ability to assist women who may already be in vulnerable situations. A strategy that can connect villages where migrant workers come from (such as Wonogiri) to community telecenters may be able to provide the critical link between families and workers overseas. These telecenters can also provide much more up to date information about the migration process, workers’ entitlements and where to get assistance. It may also be instrumental in the collection of migration data at the village level.

³⁷ The information from the World Bank study was provided by Chitra Buchori and SH Ningsih who are both in the Bank’s research team.

C. Supporting rural women's cooperatives as potential rural service providers

The cooperative movement is not new and it is indeed well established in Indonesia. The government has supported and strengthened the network and there is a Ministry for Cooperatives. With approximately 1,300 active cooperatives and over 360,000 members³⁸, the network of women's cooperatives is strong, has an expanding presence, and has demonstrated its ability to manage and implement large scale programs to benefit poor rural women and their communities, particularly through micro-credit lending schemes. As presented above, some of the regional cooperatives have now engaged in ICT projects to train their members in the use of computers and the internet. In spite of the fact that these projects are new and evolving, they are already in great demand and have accomplished much in the short term.

The women's cooperative network in Indonesia offers great opportunities and could very well become a critical player in the provision of effective and sustainable ICT access and related programs (capacity building, improved micro and small business support services, among others). The case of Puskowanjati is encouraging and other women's organizations in Indonesia may also have established similar programs. The experience of the Self Employed Women's Association (SEWA) in India, which has provided access to ICT to its members as well as an array of ICT related tools, services and capacity building programs, illustrates the potential when women's organizations are supported to develop and implement these types of activities.

Box 12 Self Employed Women's Association

SEWA, India, is a member-based organization of poor informal sector women workers. Two-thirds of their members live in rural areas and are home-based workers, vendors, manual laborers, service providers, and producers. SEWA's ICT unit has been exploring the use of ICT as a tool to increase the efficiency of rural micro-level enterprise activities to secure poor women's livelihood. SEWA has successfully taken an integrated and holistic approach to the use of ICT for rural development, such as providing its members with access to information; training them with communication tools and customized software; technical training on repairing their tools; generating job opportunities; and also by providing child care and health care. Some of their current activities on ICT include:

- Imparting basic computer training for semiliterate women before they are introduced to communication tools such as Internet and customized software for their micro-enterprises,
- Providing technical training such as maintenance and repairs of their tools,
- Providing loans for mobile phones for informal sector workers, i.e. vegetable vendors,
- Providing health advice and nutritional information by linking with hospitals via video conferencing for villagers who are laborers and service providers who do hard physical work to earn a living and survive, i.e. construction workers and salt workers, and
- Exploring various partnerships with different medical institutes and organizations for providing better access to health care services for its members, i.e. telemedicine.

Source: Financing ICTD: a review of trends and an analysis of gaps and promising practices, the report of the Task Force on Financial Mechanisms for ICT for Development, UNDP, December 2004, citing Dhara Patel, Coordinator, ICT, Self Employed Women's Association (SEWA), India, presentation at the World Bank, July 2003. <http://topics.developmentgateway.org/ict/rc/ItemDetail.do~356172>.

³⁸ Data provided by the Ministry for Cooperatives. Women's cooperative's data for the year 2000.

This is particularly important in the rural context where cooperatives and other sizable community organizations have an established presence and, in many cases, the ability to expand as rural service providers. This is exactly what happened in countries like the US, Bolivia, Peru, and Poland, where rural cooperatives became involved in the provision of telecom network services, particularly by connecting rural populations to the nearest backbone access point.

BOX 13 Cooperative Networks in Poland

In Poland in 1991, two pioneering local cooperative networks, WIST and Tyczyn, were joined by numerous private-investment local networks, which meant they were directly comparable. However, many of the private networks found that they could not offer the level of return demanded by their investors and were forced to sell, sometimes at a loss, to the national telecommunications provider. According to a comprehensive review in 2003:

“Unlike investor owned companies, [the cooperatives] were able to build out their systems, pay off their loans rapidly, and prosper while many investor-owned systems - dependent on outside capital and profit, rather than service as their motivation – have been less successful or failed. A critical element in the success was their community ownership. (NTCA 2003 p14)

Both cooperatives grew by means of both extending into unserved areas and poaching customers from the state provider TPSA using incentives such as immediate repairs as against the weeks or months it took TPSA. The cooperatives also boosted revenues and clients through household enterprises, farm processing and businesses attracted business relocating into the service area, underlining the importance of a good quality, reasonably priced and responsive system to business development. The cooperative are credited with having given a major boost to business as a whole.

But the spin-off benefits were also important.

“The projects proved the importance of telecommunications for community strengthening and local economic development. In both cases, their success resulted in the formation of relationships among local mayors and *gminas* [county] that lead to other important public services, including wastewater treatment and household natural gas networks. The cooperatives spurred enterprise development, helped in the formation and success of a credit union and large dairy cooperative. (p15)”

Source: *Financing ICTD: a review of trends and an analysis of gaps and promising practices*, the report of the Task Force on Financial Mechanisms for ICT for Development, UNDP, December 2004, adapted from case study on the cooperatives, http://www.ntca.org/ka/ka-3.cfm?content_item_id=1599&folder_id=324 and

The experience with community owned networks has been impressive and owes its success to community ownership and its not-for-profit model of operation. In the US, for example, close to 1,000 rural cooperatives still operate and depend on universal service funds to run their operation (i.e., the cooperatives receive universal service subsidies to ensure proper broadband access in their rural service area).

The Bank recommends that **MCI consider supporting a selected number of rural women’s organizations, including well established cooperatives, to expand their activities to the provision of network services as well as ICT services in their areas.** MCI can work in collaboration with the Ministry of Cooperatives and the women’s cooperative regional offices to develop a pilot plan and facilitate implementation. Based on the results, the MCI could then ensure that its universal access fund or rural development fund appropriately allocates resources to these initiatives and organizations, such as the cooperatives.

D. Developing strategies to integrate gender mainstreaming in National ICT policies, programs and projects

Engendering Indonesia's National E-strategies is the key in ensuring that gender equality goals are embedded in ICT policies, programs and projects in the country. A basic starting point for incorporating gender perspectives in ICT initiatives is the use of gender analysis to ascertain the needs and priorities of both women and men and how policy-making, planning and other activities can support equitable access, use and benefits of ICT. Improved processes of consultation and participation need to be developed and more women should be involved at decision-making levels. MCI and the Ministry for Women's Empowerment are the key institutions that can make this happen and increased collaboration between them can potentially broaden the involvement of more women's organizations and gender advocates in ICT for development initiatives.

Gender mainstreaming should be strengthened within the MCI with the view of integrating a gender perspective in the Ministry's strategies. The reorganization of MCI presents a good opportunity to appoint a high-level gender focal point with decision-making authority within the Ministry. Additionally, it is also necessary to introduce gender mainstreaming across the board to build the Ministry's capacity to ensure that all its policy and programs address gender considerations, that policy makers are able to identify projects that benefit women and other unserved groups, and consequently to increase the MCI ability to expand and improve on projects that have greatest impact (i.e., projects that facilitate access to women, and that contribute to improved content development, education and capacity building, and governance. The Ministry can further strengthen its capacity by training project developers and implementers on gender analysis and therefore ensure the integration of gender in the design and implementation of its projects.

Gender concerns have to be dealt in initial stages of ICT projects to ensure that the needs and priorities of both women and men are appropriately considered and that gender equality goals are embedded in project design. In a study done by World Bank in 2002, 39 of 80 ICT projects concluded that gender issues were rarely articulated in product design and implementation, often because donors do not request this. The study underlined the need for a proactive approach to ensure gender-balanced participation, particularly in projects in developing countries, because of the limited pool of women with skills in this area. The study also indicated that project implementers should take into account the context of gender relations in ensuring women's full participation to avoid backlash from other members of the society. Involving all stakeholders of the target community, including both men and women, in project design from the beginning, is imperative.

Broad gender mainstreaming guidelines for ICT projects are beginning to be proposed by a number of organizations with the intention of influencing project design and implementation. The guidelines build on the well-developed gender planning and gender mainstreaming tools that are now commonly utilized in different sector areas. Examples of such guidelines can be found on http://www.bridge.ids.ac.uk/reports_gend_CEP.html#ICTs

³⁹ Hafkin, Nancy. 2002. "Are ICT gender neutral?" Lead report for United Nations INSTRAW discussion list on gender and the digital divide. Available online at: <http://www.un-instraw.org>

Collection of sex-disaggregated data that will serve as baseline information in ICT for development. While the gender digital divide is recognized in Indonesia's national e-strategies, there is still a paucity of data that will help the Ministry and other policy makers to develop ICT policies, plans and strategies that take into account gender considerations. According to the MCI, the absence of sex-disaggregated data in terms on access, education and other aspects of ICT use is a barrier that makes it difficult to gauge the seriousness of the divide and shore up arguments for projects, programs and policies that specifically target women.

A recommendation that has been taken up in many international conferences including the World Summit on the Information Society is to increase efforts to compile statistics disaggregated by sex and age and to develop gender-specific indicators on ICT use and needs. Currently, the only area where International Telecommunications Union (ITU) collects sex-disaggregated Telecommunications/ICT statistics is the employment of women by telecommunications service providers.⁴⁰ While it is valuable to know that women comprise the majority in telecommunications companies, it does not take into account the type of work that women are engaged in and whether women have penetrated the higher-income, highly-skilled and decision-making positions.

In a recent meeting, ITU recognised that it is important to go beyond the numbers of women and men employed, to documenting the posts they hold and analyzing changes over time. ITU has recently embarked on a project to compile and analyse quantitative and qualitative gender-sensitive information from national and international sources. This information, which includes developed and developing countries and which could eventually be compiled into a database, will provide an important source of gender-disaggregated ICT statistics.⁴¹ MCI can work with ITU in the collection of data in Indonesia.

⁴⁰ Hafkin, Nancy (2003). "Some thoughts on gender and telecommunications/ICT statistics and indicators", 3rd World Telecommunication/ICT Indicators Meeting, Geneva, 15 - 17 January 2003. http://www.itu.int/ITU-D/ict/wict02/doc/pdf/Doc46_Erev1.pdf

⁴¹ Key points highlighted in the World Telecommunication/ICT Indicators Meeting, Geneva, 10-11 February 2005, p. 10. http://www.itu.int/ITU-D/ict/wict05/Conslusions/Conclusions_Final_WTIM05.doc

Box 14 Gender mainstreaming in Korea's efforts towards an information society

The Korean Ministry of Gender Equality has developed a basic plan for women's informatization (2002-2006). This plan includes creating a Women-net; establishing a volunteer network to increase women's access to information, retraining working women in IT occupations with high employment potential and providing professional online IT education for women; and supporting women's organizations in promoting the national IT sector. The Ministry of Gender Equality has worked with other ministries, including the Ministry of Information Technology, to facilitate gender mainstreaming activities and various relevant ministries have allocated budgets for women's IT education.

Source: Information and communications technologies and their impact on and use as an instrument for the advancement and empowerment of women, Report of the Expert group meeting, UN-DAW, Seoul, Korea, November 2002. <http://www.un.org/womenwatch/daw/egm/ict2002/index.html>

Korean work on gender and ICT statistics

Few countries collect gender ICT statistics, and those that do, are the ones where the gender digital divide is least marked.¹ Some of the most interesting and substantial work in gender and ICT statistics is coming from Korea. In 2001 the Ministry of Gender Equality released a research report on "Women's Informatization survey and index development" examining the gender digital divide in Korea. The Ministry based their research on five categories, from which they developed an index of women's "informatization" defined as the process by which information technologies have transformed economy and society. These categories are *awareness, access, utilization, skill* and *effects*. The index measured involvement of men and women according to the categories and then measured the comparative informatization by sex. The results showed that women's informatization measured 88 percent that of men's. Although women scored very high on awareness, skills and effect, in terms of access and usage, the situation of women was particularly deficient, with women having only 22.9 percent the access of men and using the Internet of 28.2 percent as much as men. Among the findings was that there is a serious digital divide by age, with women's scores on all categories in the index dropping with age (measured in decades, starting with those in their twenties) and a serious gap apparent for those in their fifties and older. Not surprisingly, higher income women had a higher rate of informatization than those with lower incomes.

Strengthening collaboration between MCI and the Ministry for Women's

Empowerment. Both Ministries will benefit immensely through closer collaboration in program design, implementation and monitoring and in human resource development. Such collaboration can focus on developing gender indicators for ICT programs and projects, collection of sex-disaggregated data on selected indicators and building the capacity of all government bodies involved in the country's ICT for development program in gender mainstreaming. A consultation of women's organizations and focal point representatives of a number of government bodies held to solicit input for the study recommended that a mapping of gender and ICT initiatives in the country be done. A specific recommendation arising out of discussions with both Ministries supports the holding of a workshop on "Engendering National ICT Strategies" for the concerned government bodies and other stakeholders (such as women's organizations, media groups, research institutions and relevant academic institutions). This can lead towards the formation of a gender and ICT for development network of focal points that can serve both as a monitoring as well as a forum for knowledge sharing on good practice.

Appendices

A. Case Studies

Community Radio Kamal Muara

Location: TPI Kamal Muara, Jakarta Barat

Date of visit: 3 February 2005

Interview done with: Mr. Irfan

Description of the Project:

The community radio of Kamal Muara was initiated in 2001 by young volunteers in the fishing areas of Kamal Muara Sub District in West Jakarta. At the beginning, the community radio aimed to connect fishermen with their families when they were out fishing. Later on, the contents of the broadcasts were broadened to answer to other needs such as information on education, health, family planning, and market information.

Kamal Muara has about 4600 households. Fishing is the livelihood of most of the residents of the community. There are 55% women and 45% men living in this community. Most of the women in the community are housewives. There are a number of micro-credit activities managed by women in the community, as well as income generating activities managed by community.

The main concerns in the community include the high cost of electricity, the amount of industrial waste that flows into the water near the area that has affected the villagers' health and the impending reclamation project in the area which will negatively affect people's livelihoods. This reclamation is for a planned real estate housing project. A court case is ongoing to prevent the reclamation.

The community radio started in 2001 with a monthly Bulletin/Magazine disseminated to all households in one of the sub-municipalities, RW 01 (1000 Households). By the end of 2003, active broadcasting was launched and programs ran between 3 p.m. and 12 midnight. The station is run from a room located in the village center, and next to the station is the kindergarten. The radio has a 5 kilometer range which is what is legally permissible. The radio has one permanent broadcaster.

Participation of the community in the radio program, particularly women, is still very low. Most of the women remain as listeners. Apart from low levels of education, women in this area are also less mobile or have less access to other areas in Jakarta.

The radio program is broadcast everyday with music, information about health (dengue, TB), environmental concerns and fishing. Information sources include mass media, government departments and several NGOs. Residents can request music to be played or ask for specific information and they pay 1000 rupiahs for every 3 requests. The money raised is the only source of income of the station. The radio station has two computers and basic radio equipment.

The station has a Saturday program for girls. There is also women's organization in Kamal

Muara (which is a chapter of the Koalisi Perempuan, a national mass organization of women) that has actively participated in the campaign for the domestic violence law/regulation in the country. The radio program has also covered issues of domestic violence.

The crew of the community radio consists of 12 senior graduate voluntary teenagers who broadcast on the radio, as well as design the contents of the programs. The scheme has been more effective in delivering information to the society which has very low levels of education (junior high school and lower) compared to other schemes. Capacity building of the institutions, as well as training for the management of the Radio, is conducted by an NGO called COMBINE, which provides capacity building opportunities for community radio programs in Indonesia. Funding for the community radio is obtained from coupons sold when community members request for a song to be played. One coupon cost Rp. 500. And every day, more that 100 coupons are sold.

The radio station is not connected to the internet because the community cannot afford it. Volunteers check email once a month at the local WARNET.

Telecenter e-Pabelan

Location: Islamic Boarding School, Pabelan Village, Mungkid, Magelang, Central Jawa Province.

Date of visit: 11 February 2004

Interview done with:

- 1. Ms. Nuki (Head of the Village)**
- 2. Kiayi Achmad Mustofa (religious leader)**
- 3. Mr. Mahfud – Public relations - Pabelan Islamic Boarding School**
- 4. Four organizers of the Pabelan Telecenter**

Valuable additional information was also provided by Alex Robinson, University of Huddersfield, UK during the stakeholders' workshop.

Description of the Project:

e-Pabelan: Partnerships for the e-Prosperity for the Poor

UNDP-Bappenas Pilot Project in Pesantren Pabelan

e-Pabelan, a pilot project, is being implemented by the United Nations Development Program (UNDP), in conjunction with the National Planning Agency (Bappenas, Badan Perencanaan Nasional). It is a community development initiative using information and communication technology (ICTs) to improve the lives of the poor.

The objectives of e-Pabelan are as follows:

- To empower the poor in Pabelan with access to basic information such as market, farming, trading, education, and health information;
- To enhance the capacity of Pabelan people in accessing information, computer skills, telecenter management, etc. through trainings;
- To mobilize Pabelan people to improve their economy with community development initiatives using information and communication technology; and
- To build partnerships with stakeholders to develop the community in Pabelan. (BAPPENAS/UNDP)

The main activities of e-Pabelan are as follows:

- Baseline survey of the general socio-economic as well as ICT environment characteristics within poor communities in Pabelan
- Telecenter Establishment (infrastructure preparation; HW/SW Procurement; computers, network, and internet installations) and Operation
- Telecenter Staffs and info-mobilization researcher recruitment
- Trainings (info-mobilization, computer skills, system admin and network management, internet, telecenter management)
- *Ethnographic Action Research* for e-Pabelan and Community Development Activities using ICT (for example, telecenter usage by the poor)
- Content Collection & procurement
- National ICT4PR Seminar in Yogyakarta

e-Pabelan works in close partnership with Pesantren Pabelan, the Pabelan community and village authorities. Other institutions have expressed interest in partnering with them in the

future. These include the Open Learning University (Universitas Terbuka), Universitas Gadjah Mada, Warintek (Kiosks of Information and Technology – The Agency for the Assessment and Application of Technology), PUSTEKOM (Pusat Teknologi Komunikasi dan Informasi Pendidikan – Center for ICT for Education) – Ministry of National Education, and University of Gajah Mada. The Pabelan telecentre was established in the Pesantren Pabelan school complex in May 2004.

While this is primarily a poverty-reduction project aimed at a poor community in Pabelan, it is housed in a Pesantren and the Pesantren's community development wing, BPPM manages the project. The Pesantren pays for electricity and the telecenter is housed in the BPPM building. Dial-up connectivity is provided for free to telecenter users, but only for the one year duration of the project. The center was established in May 2004 and spent the first three months providing awareness training to groups of farmers, artisans, etc. School officials report considerable initial enthusiasm, which has since waned. High connectivity costs, relatively long distance to travel from many parts of the village to the center, and a lack of familiarity with the technology by school administrators are likely to undermine the center's sustainability after the project has ended. Further, there is a degree of resentment from some members of the community who wanted their own children to participate in the English-language training which is seen as being dominated by the pesantren and non-Pabelan students⁴².

The telecenter has five computers connected to Internet. The project is still in the socialization phase and slowly, use of computers and the Internet is being introduced to the village community. Therefore, the main activities in the telecentre are English language training and computer skills building.

At the center, very little training has occurred (other than the English-language training funded by the Regional English Language Office of the U.S Embassy). Training for the wider community has been limited to initial kelompok (community group) trainings. The complete trainings (usually 3 sessions) were not always completed due to technical problems (e.g. power cuts) and administrative oversights (i.e. double booking of groups). There have been no follow-up activities. On the ground the project has been about establishing the telecentre and providing equipment i.e. primarily 'access' (in a technical sense) and secondarily training- although the latter could be disputed at this stage.

Currently about a dozen individuals use the center, mainly students from the pesantren. At the moment, the public generally don't access the center at night (when they would have the free time to access it) because either the center is occupied by students from the pesantren or students from the English course.

⁴² Robinson, pers. comm.

Suara Ibu Peduli - Voice Of Concerned Mothers (VOCM)

Location : Wisma BOR Kompleks Megaria

Date of visit : 1 February 2005

Interview done with: Ms Erlini, Ms. Jument Komalasari and Ms. Pujiwati

Description of the Project:

Suara Ibu Peduli or the Voice of Concern Mothers (VOCM) was established in 1998 during the Indonesian economic crisis. It was established by mothers in response to the high increase in the price of baby's milk. They protested to the government by holding public demonstrations. At beginning of its establishment, the VOCM's activities were limited to advocacy. Today, their activities have expanded to:

- Establishing cooperatives that lends cash for its members
- Advocacy on women's rights
- Training on education related to health issues and small scale business management
- Training on taxes, skills building in cooking, salon management, catering and handicraft
- Assisting in establishing income generating activities
- Providing some cash or technology based credits for the member of cooperatives

At present the VOCM has about 10,000 members in Jakarta, Bogor, Tangerang and Bekasi (Jabotabek) area. Out of this numbers, about 700 are members of cooperatives. The system of cooperative uses the similar scheme with those implemented by Puskowanjati (Tanggung Renteng Scheme). The members of cooperatives are formed into 32 groups. Each group consists of 20-24 members who live near each other. Membership fee is Rp. 1,000 per month. The cooperative provides cash credit for small business ranging from Rp. 500,000 up to Rp. 3, Million with the interest at 2% per month. Credit for household expenditures varies from Rp.300,000 to 1 Million with an interest 1.5% per month.

The level of education of the cooperative's members is junior high school or below. The breakdown in members' employment is as follows:

- 50 % - housewives work as maids, with average incomes of Rp. 400 – 700,000 per month
- 20 % - micro entrepreneurs with incomes of Rp. 500-1,000,000 per month
- 30% - unskilled workers at industries with average incomes of Rp. 800,000 – 1,500,000 per month

The main problems of members of VOCM are related to domestic violence, increasing drop-out rate of school girls and the lack of economic opportunities and skills to increase their livelihoods.

Communication among the members as well as with the board members of the organization is aided by six extension workers who work six days a week. Members also use fixed telephone lines and cell phones while a small percentage use fax machines. The VOCM office has not used internet yet for their communication with the members as well as to gather information related to their work. Only the head of the NGO uses the internet and a computer.

Computer use in the head office is mainly for word processing, particularly related to the secretarial work, such as writing letters and articles. About seven women manage the office and all of them (except the Director and one of the staff) have just started to learn how to use computer for work processing. There are three computers in the office, and one computer is connected to the internet and is mostly used for email. The VOCM realizes the importance of ICT for their work and they expressed the desire to take advantage of ICT for their networking with the field coordinator of the cooperatives.

WARINTEK - Information Technology Shop

Location : Sleman Library, Jl. Turgo 3, Beran, Tridadi, Sleman. Tel 62 275 868 405 ex 360

Sleman District, Yogyakarta

Date of visit : 8 February 2005

Interview done with: Ms. Herawati, Coordinator of Warintek

Description of the Project:

Warintek, a science and technology information shop, was developed by the office of the State Ministry for Research and Technology to improve and enhance the delivery current science and technology information products and services through ICTs.

Each *Warintek* shop is equipped with computers with Internet access and CD ROMs containing appropriate technology for rural communities. Since its inception in 2000, *Warintek* shops have been established in many big cities all over Indonesia such as Jakarta, Bandung, Palembang, Padang, Bukit Tinggi, Malang, Surabaya, Jember, Sleman, Kupang, Lampung dan Jaya Pura.

Warinteks are usually integrated with local government libraries, university libraries or other organizations that provide information services for communities, in order to develop a scientific society in Indonesia.

Warintek has data and information on science and technology (S&T) in the form of CD ROMs. The database is located in PDII LIPI (Center for Documentation and Scientific Information, Indonesian Institute of Sciences). The database consists of research reports (98,5000 entries), Books and Theses on gender and S&T (68,000 entries), gender papers (62,000 entries), patents in the country and international (4,200 entries), appropriate technology (15,274 entries), and a catalog of magazines (4,600 entries). Data and information available at *Warintek* include economy, agriculture, appropriate technology, agribusiness, etc. As a network, *Warintek* has networks with other scientific organizations such as Ministry of Research and Technology, universities, Library of Local Government, etc.

In Sleman District, Yogyakarta, a *Warintek* shop located at the Local Government Library, Jl. Turgo 3, Beran, Tridadi, Sleman, has 7 computers with CD ROMs of appropriate technology and a link to the Internet. *Warinteks* are mostly used by students, researchers and community in general. Many of the users access to scientific information for writing theses, research reports and other scientific reports. Users can also order data and information needed through *Warintek*. With Rp. 2000 per hour, about 10 to 20 users -- men and women -- use *warintek* everyday. Ms. Herawati and a staff of seven manage the shop from Monday to Saturday. Although there is no accurate data on men and women users, daily experience shows that there are more men users than women users.

This *Warintek*, also has a Mobile Unit - a minibus that brings books and computers with CD ROMs to the users in the village area. The Mobile *Warintek* visits different villages daily according to a pre-arranged schedule. Each village is visited once a week by this mobile *Warintek*. So far, 8 villages has been covered by this mobile *warintek*.

Puskowanjati, the Central Women's Cooperative in East Java

Location : Puskowanjati, the Central Women's Cooperative in East Java, Malang

Date of visit : February 7, 2005

Interview done with:

The gender team was accompanied by Ibu Asianti Oetojo and Ibu Sofia Kurniawati from the Electronic Data Processing Board, provincial government of East Java, Surabaya.

Description of the Project:

Puskowanjati, the Central Women's Cooperative in East Java (a member of the national women's Cooperative), is a secondary cooperative with a current membership of 43 primary cooperatives in the East Java region. Each primary cooperative has 300 to 11,000 individual members, with a total current membership of 45,000 women among all primary coops. Of these, 54 percent are reported housewives, 19 percent micro business owners, 6 percent active in agriculture, 1 percent active in animal husbandry, 1 percent active in handicrafts, and 20 percent miscellaneous activities.

Consistent with Puskowanjati's mission to improve women's resourcefulness, cooperation, and support the struggle for women's economic rights, the organization provides a number of services to its members, including:

- A micro-credit program (the largest component of the services provided)
- Business management and organizational strengthening support
- Cooperative management training and support
- Political training
- ICT training (a new program; more below)

The Cooperative is a well organized and trusted institution, with years of experience in servicing their members. Puskowanjati has implemented several programs in its area and has developed into a strong organization capable of managing a substantial micro credit program in addition to several support programs for its members. Cooperative staff appears to be well respected in their communities and has positioned the organization as a key agent of support for women within the community.

Founded in 1959 by Ibu Suradji, the Central Women's Cooperative in East Java was formed as an economic and social response to the increasing trends towards a capitalistic economic system. Based on the Danish cooperative movement, the Women's Cooperative's vision focused on providing support to women and training opportunities at different levels, including household management, working skills, business skills, etc. *Training* women was always a focus of the Cooperative.

The new ICT project is a recent initiative of the Puskowanjati. It started about 6 months ago and it has already trained 60 women (from primary cooperatives) on computer skills (focusing on Microsoft software applications and basics of the internet). Training focuses on software applications for financing and management activities. A four day package for ten people costs 3.5 million Rp. The current trainers are from other cooperatives and include three men but no women trainers. [Ibu Asianti's office has women trainers and suggested collaborating in this area.]

ICT use by the Cooperatives

Most cooperative offices have one basic telephone line but fax machines are not common. There is no internet connection at the primary cooperatives. Some micro credit loans have been used to acquire computers but most cooperatives operate without any computers. There is no community radio used for information sharing.

Members use basic telephone and, increasingly, cell phones. Cell phones are bought by individuals and SMS is the most common service used. Some micro loans have been used to buy cellular phones.

Currently, information dissemination methods include:

- Staff and extension workers that provide training, guidance and information at cooperative premises;
- Face to face help and assistance, particularly with illiterate members;
- Quarterly publication with news on cooperatives' activities;

Services to Members

Puskowanjati organizes annual programs for its members primarily in the areas of education, leadership, health, and management skills. These also include:

- Training for trainers and extension workers on specific issue areas;
- Facilitation of information exchanges among members to learn about different areas of activity;
- Capacity building activities for managers and members through specific meetings and gatherings;

Education programs tend to focus on issues related to the operations of the cooperatives. Health programs cover various areas of interest at different points in time, such as a seminar on menopause, or common diseases.

Micro credit program

Micro financing is provided from the secondary cooperative to primary cooperatives. The size of the loans is based on 10 times the size of the membership fees, plus a fixed loan fee. Interest rates are 1.25% per month and the payment period is normally 24 months. Primary cooperatives use these resources to provide micro loans to their own individual members at an interest rate of about 2.3% and loans ranging from 5 thousand to 10 million Rps.

Micro loans are used to cover a variety of activities, including household expenses, such as health fees and education, and micro business related expenses (e.g., food vendors, handcraft vendors). Household management and support is a priority area of action, since 54 percent of Puskowanjati primary members are housewives not registered in productive sectors. A large majority of these women are involved in the informal economy, however, and their loans are used to facilitate a number of household related activities and expenses.

The cooperative micro credit program is based on the 'chain system' or "Tanggung Renteng", where the obligation to a small group is based on a number of values and trust among its members.

For most members, participation in the cooperative also provides an opportunity to meet other women, exchange information, increase self-esteem, and have a source of support, among others.

Citra Lestari Primary cooperative

With over 3,500 members, Citra Lestari is a primary cooperative which started a micro credit program in 1991. In addition to the micro credit, it also operates a cooperative retail store, where members can sell their products. With regular meetings among its members and a global meeting every semester, Citra Lestari has successfully implemented a large micro credit program with currently 162 coordinators managing the credit system. Based on the Tanggung Renteng system, groups of about 15 members work together to maintain a robust relationship and consequently benefit from their engagement in the program. Members include small entrepreneurs, construction workers, catering businesses, farmers, etc. Micro loans have been used for business improvement as well as household expenses, such as education, renovations, purchase of appliances, and--in a number of cases--computers and cellular telephones.

As a cooperative, Citra Lestari has invested in ICT by acquiring computers to assist in the maintenance of the cooperative retail store inventory, as well as to better manage the micro financing program information and details. The organization staff includes women trained with computer and accounting skills.

Despite its great success in the micro financing area, the cooperative faces urgent challenges:

- Increased competition from other cooperatives and smaller banks;
- Increasing knowledge of new members (i.e., demanding more sophisticated services);
- Increasing unemployment among members.

PUSTEKIM (Pusat Teknologi Informasi untuk Masyarakat)
Center for Community Training and Learning on Information Technology

Location: Pawenang village, Nagrak, Sukabumi Distrik.

Date of visit : 4 February 2005

Interview done with : Ms. Tuti Lidjaja and Ms. Soebarjati (Coordinator)

Description of the Project:

PUSTEKIM (Center for Community Training and Learning on Information Technology (CTLC) is a project initiative of an NGO called Koalisi Perempuan (Indonesian Women's Coalition). Koalisi Perempuan Indonesia (Indonesian Women's Coalition for Justice and Democracy) is a women's mass organization with individual members base established in 1998.

The CTLC is a 2-year pilot project, funded by Microsoft Indonesia that provides training for women mainly in Microsoft applications (Word, Excel, PowerPoint, internet use, Encarta). The project started in December 2003 and is being implemented in five provinces namely West Nusa Tenggara, Bengkulu, West Sumatera, Jambi and West Java. The objective of the project is to encourage the communities, women and girls in particular, to use and benefit from ICT in their daily lives.

In West Java, a Pustekim is located in the village office of Pawenang, Nagrak, Sukabumi District. ICT literacy for women is very low in this area and women have less access to resources, including technology, compared to men. Like many others villages in West Java, women and girls in Pawenang face constraints including lack of education due to poverty. Older and less educated women are mostly employed in vegetable farms, food processing, households and as traders. Those who have completed high school, work in factories in nearby industrial areas.

There are six computers from Microsoft in the center. More than 340 (60% females and 40% males) have completed training. The demand for training in the community is high. The center has a waiting list of trainees and there are courses that run till midnight. Aside from Pawenang, the center has had to expand its coverage to four other nearby villages. The trainees are a mix of students, employees, housewives and others. The computers are also rented out to the community and other users include local government staff, farmers and fishermen living in the area. Internet connection is very limited because connection is only through a scheme called Flexi which is very expensive. Therefore, only trainers use the internet for email purposes and to send reports to Microsoft and the Koalisi Perempuan.

Preliminary evaluation of the impact of the CTLC shows that the benefits to the community and particularly to women are concentrated in the following:

- Increased capacity of girls in using computers supports their education through educational material available in the center
- Development of a database on reproductive health of women in the village (survey of contraceptive use)
- Collection and computerization of sex disaggregated election data which was recognized as the best data available in the district
- Strengthening of social networks as demonstrated by voluntary support by villagers

- and in extending the resources to other villages
- Personal empowerment of the coordinators of the center who are recognized as role models in the community

A critical issue for the CTLC is building sustainability beyond the support of Microsoft which will end by March 2006. Aside from equipment support, Microsoft shoulders 50% or the operational expenses of the center while the center's income from training fees covers the rest. Sustainability strategies that are being explored can potentially expand the CTLC's service to the community. This include moving beyond software training and building capacity to use the tools for different purposes, including new business opportunities, finding better jobs, development of more local content and generally more support on how to use ICT/computer skills for greater social and economic impact. The local government unit has realized that the Pustekim has helped in advancing its women empowerment program, particularly in the village level and has approached government training authorities for possible support.

B. Individuals and Organizations Interviewed

List of Person and Institutions visited during the World Bank Missions in Jakarta, West, Central and East Jawa Provinces

Expert / institutions visited:

1. Mr. Yappi Manafe, Ministry of Communication and Information, Jl. Medan Merdeka Barat No. 9, Jakarta 10110, Indonesia. Tel/Fax: 62 21 344 1491
2. Mrs. Kusumastuti, Deputy for Human Resources of Communication and Information, Ministry of Communication and Information, Jl. Medan Merdeka Barat No. 9, Jakarta 10110, Indonesia. Tel/Fax: 62 21 344 1491 - kusuma@kominfo.go.id
3. Mr. Charles S. Talimbo, Head of Center for Social Counseling, Department of Social Affairs, Jl. Salemba Raya 28, Jakarta. Tel 62 21 3100372
4. Mr. Benny Setia Nugraha, Center for Social Counseling, Department of Social Affairs, Jl. Salemba Raya 28, Jakarta. Tel 62 21 3100372
5. Dr. Yusuf Supiandi, Deputy Minister for Gender Equity, Ministry of Women Empowerment, Jl. Medan Merdeka Barat No 15, Jakarta 10110, Tel : 62 21 380 5563 Fax : 62 21 380 3541 - yusuf_s@indo.net.id
6. Ms. Utari Budihardjo, Assistant Deputy for National Research, Science and Technology Program, Ministry of State for Research and Technology, BPPT Building II, Jl. MH. Thamrin No. 8, Jakarta. Tel 62 21 316 9180 – Fax 62 21 310 2368 – utari@ristek.go.id ; utarib@hotmail.com
7. Ms. Pamela Fadhilah, Head of Planning Resources Sub Division, Bureau of Planning and Finance, Ministry of Agriculture, Building A Fl 4, Room 413, Jl. Harsono RM No 3, Ragunan, Jakarta 12550, Tel/Fax : 62 21 7890625 – pamela@dnet.net.id
8. Ms. Nanay Jubaida M, National Project Manager, Decentralized Agricultural and Forestry Extension Project (DAFEP) , Ministry of Agriculture, Building D, 5th Fl, Wing B, Jl. Harsono RM No 3, Ragunan, Jakarta 12550, Tel/Fax : 62 21 78834003–nanay@deptan.go.id
9. Mr. Irfan Coordinator, Community Radio, Kamal Muara, Jakarta. Cell 0818 650 429
10. Ms. Masruchah, Secretary General, Indonesian Women’s Coalition for Justice and Democracy, Jl. Siaga I No. 2B, RT 003/05 Pejaten Barat, Pasar Minggu, Jakarta Selatan 12510, Tel/Fax: 62 21 798 5110 – koalisip@uninet.net.id
11. Ms. Erlini Rosalinda, Voice of Concern Mothers Foundation, Gedung Biro Oktroi Rooseno (BOR), Lt 2, Kompleks Megaria, Jl. Pegangsaan Timur 21, Jakarta Pusat 10320. Tel/Fax 62 21 391 1231 – suaraibu@indo.net.id

12. Ir. Asianti Oetojo S, MSi, Head of BPDE Jawa Timur, Jl. A. Yani 242-244 Surabaya 60235 - Tel 031 828 1180 ; 828 0877 Fax 031 829 4517
Cell: 081 131 7153 - asianti@yahoo.com
13. Khulsum Hidayati SE, Head of Citra Lestari Cooperative Cell 081 642 925 01
Jl. Dr. Cipto No. 24 Bedali, Lawang, Malang Tel 0341 427 790
14. Ms. Tini , PUSKOWANJATI Tel : 0341 491 488
15. Ms. Herawati, Warintek, SLEMAN cell: 0813 280 156 60
16. Mr. Bachrudin, SLTP Open , Coordinator, SALATIGA Cell 0817 954 5175
17. Mr. Roy Budhianto H, Head of Indonet Salatiga, Jl. Diponegoro 35 A, Salatiga
Tel : 0298 327278 yor@indo.net.id
18. Ms. Ruth, Director, Farmers Federation, SPP Qaryah Tayibah, Cell: 0818 459 087
19. Ibu Rini, Head of KSPI – Indonesian Women’s Study Group, Jl. Jetis VIII No 2, Sukohardjo
20. Ibu Atun, Head of the Ngandong Village, Wonogiri, West Jawa
21. Mr. Giyoto, In charge of Communication Board at Ngandong village, Wonogiri
22. Mr. Wiyoto, Head of KIPP – Office of Information on Agriculture and Forestry Extension, Jl. Sendangsono Km 0.5 Progowati, Mungkid, Magelang
Tel : 0293 789 455 cell : 081 227 288 23 bipp@magelang.wasantara.net.id
23. Ms. Nuki, Head of Telecenter and Head of Pabelan Village, Mungkid, Magelang,
Cell : 0812 275 0639
24. Mr. Mahfud, PR of Pabelan Islamic Boarding School, Mungkid, Magelang
25. Ms. Tuti Lidjaja, Coordinator of PUSTEKIM, Pawenang, Nagrak, Sukabumi, cell:
081 111 5233), . Telp 0266 707 3937 - 707 3936 -- -- e-mail :
pustekim_smi@yahoo.com
26. Ms. Subaryati, Daily Coordinator of PUSTEKIM, Pawenang, Nagrak, Sukabumi,
Telp 0266 707 3937 - 707 3936 - cell : 081 311 051 983--pustekim_smi@yahoo.com
27. Ms. Sjamsiah Achmad, Gender Expert LIPI, PDII LIPI, Jl. Gatot Subtoto 10 Jakarta,
Tel. 021 – 529 64 828 Fax 529 64827 e-mail : gestgroup@yahoo.com
28. Ms. Achie Luhulima, Gender Expert LIPI, PDII LIPI, Jl. Gatot Subtoto 10 Jakarta,
Tel. 021 – 529 64 828 Fax 529 64827 e-mail : gestgroup@yahoo.com