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Gender Mainstreaming Case Study - India: Chhattisgarh Irrigation Development Project

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Gender Mainstreaming Case Study - India: Chhattisgarh Irrigation Development Project

Abstract

Project Goals and Results

- The Chhattisgarh Irrigation Development Project (CIDP) aimed to increase agricultural productivity, improve rural livelihoods, and reduce poverty by improving irrigation delivery, enhancing agricultural practices, and strengthening water resource management.
- The CIDP supported the rehabilitation and upgrading of irrigation systems that serve more than 150,000 households; strengthened government capacity to assist water users' associations (WUAs); and trained 1,250 out of 1,324 WUAs in Chhattisgarh based on the Participatory Irrigation Management (PIM) Act, a legislation that mandated the roles and responsibilities of WUAs, including the membership of women in irrigation management. It also trained 191 WUAs on how to improve agricultural techniques and how to be more effective in general. It offered opportunities for collective actions by communities, such as joint purchase of seeds, fertilizers, and pesticides, and joint marketing of produce. Overall, participants reported improved crop yields and higher household incomes.
- Building on the new PIM Act, the CIDP strengthened women's participation in WUAs. A widespread education campaign raised awareness on the importance of women's participation in decision making and encouraged women to become active in these associations. In the 2007 WUA elections, women were elected in one-third of available positions.

Processes and Management Tools

- The PIM Act was passed through the CIDP. With this new law, the CIDP promoted PIM, especially women's participation. The project predated the requirement for a Gender Action Plan and gender targets and indicators in the Design and Monitoring Framework (DMF) outputs. Gender-related strategies and targets were indicated in the Summary Poverty Reduction and Social Strategy.
- All irrigation upgrading and rehabilitation activities included contractual obligations to offer "equal pay for equal work" to men and women.
- Technical assistance supported activities to promote women's participation in irrigation management and their election to WUA committees.

Keywords

gender, India, irrigation, Asian Development Bank

Comments

Suggested Citation

Asian Development Bank. (2015). *Gender mainstreaming case study—India: Chhattisgarh irrigation development project*. Manila: Author.

Required Publisher's Statement

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GENDER MAINSTREAMING CASE STUDY

INDIA

CHHATTISGARH IRRIGATION DEVELOPMENT PROJECT

GENDER MAINSTREAMING CASE STUDY

INDIA

CHHATTISGARH IRRIGATION DEVELOPMENT PROJECT



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Printed in the Philippines.

ISBN 978-92-9254-977-0 (Print), 978-92-9254-978-7 (e-ISBN)
Publication Stock No. RPT157203

Cataloging-In-Publication Data

Asian Development Bank.

Gender mainstreaming case study—India: Chhattisgarh irrigation development project.
Mandaluyong City, Philippines: Asian Development Bank, 2015.

1. Gender. 2. India. 3. Irrigation. I. Asian Development Bank.

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Contents

India: Chhattisgarh Irrigation Development Project	1
Summary	1
Project Overview	2
Main Aims and Approaches	3
Relevant Gender Equality Issues	4
Involving Women and Addressing Gender Disparities	5
Gender Equality Achievements	6
Lessons Learned	12
Results Assessment	13

India: Chhattisgarh Irrigation Development Project

Summary

PROJECT GOALS AND RESULTS

- The Chhattisgarh Irrigation Development Project (CIDP) aimed to increase agricultural productivity, improve rural livelihoods, and reduce poverty by improving irrigation delivery, enhancing agricultural practices, and strengthening water resource management.
- The CIDP supported the rehabilitation and upgrading of irrigation systems that serve more than 150,000 households; strengthened government capacity to assist water users' associations (WUAs); and trained 1,250 out of 1,324 WUAs in Chhattisgarh based on the Participatory Irrigation Management (PIM) Act, a legislation that mandated the roles and responsibilities of WUAs, including the membership of women in irrigation management. It also trained 191 WUAs on how to improve agricultural techniques and how to be more effective in general. It offered opportunities for collective actions by communities, such as joint purchase of seeds, fertilizers, and pesticides, and joint marketing of produce. Overall, participants reported improved crop yields and higher household incomes.
- Building on the new PIM Act, the CIDP strengthened women's participation in WUAs. A widespread education campaign raised awareness on the importance of women's participation in decision making and encouraged women to become active in these associations. In the 2007 WUA elections, women were elected in one-third of available positions.

PROCESSES AND MANAGEMENT TOOLS

- The PIM Act was passed through the CIDP. With this new law, the CIDP promoted PIM, especially women's participation. The project predated the requirement for a Gender Action Plan and gender targets and indicators in the Design and Monitoring Framework (DMF) outputs. Gender-related strategies and targets were indicated in the Summary Poverty Reduction and Social Strategy.
- All irrigation upgrading and rehabilitation activities included contractual obligations to offer "equal pay for equal work" to men and women.
- Technical assistance supported activities to promote women's participation in irrigation management and their election to WUA committees.

Project Overview

Chhattisgarh has abundant agricultural land and rainfall. However, agricultural productivity was low because only wet season rice (or paddy) was grown in most areas. The Chhattisgarh Irrigation Development Project (CIDP) improved irrigation. Dry season (*rabi*) cropping became possible and gave many farmers the opportunity to improve their livelihood.

Water users' associations (WUAs) were established in Chhattisgarh in 1999 to manage local irrigation initiatives. Their first year, however, was relatively unsuccessful. Members lacked skills in managing water systems, and WUAs had insufficient funds.

In 2006, through the CIDP, the State of Chhattisgarh adopted the new Participatory Irrigation Management (PIM) Act, which set out important changes for irrigation management and had significant implications for women's participation in irrigation systems. These included

- Extending WUA membership to spouses, thus opening up avenues for women's participation. Both men and women—not just women with land titles—are now full WUA members with the right to attend meetings, stand for election, and vote.
- Establishing reserved seats for women and underrepresented groups, including scheduled castes and tribes. WUA subcommittees are to be composed of at least 33% women.
- Expanding jurisdictions for WUAs to include minor irrigation systems and lower parts of medium and major irrigation systems.
- Allowing government to share a quarter of the water fees collected from users with WUAs, which is used for small repairs and system maintenance.

With the PIM Act, the CIDP improved farm productivity and increased the participation of women in farm decision making. The CIDP was the first irrigation project in Chhattisgarh that worked within a participatory irrigation management framework and strengthened WUAs. See Box 1 for basic information on the CIDP.

Box 1: The Chhattisgarh Irrigation Development Project: Basic Facts

Loan Number:	2159
Loan Approval:	March 2006
Closing Date:	March 2013
Executing Agency:	Water Resources Department, Government of Chhattisgarh
Overall Project Cost:	\$66.60 million
Financing:	ADB loan: \$46.10 million Project Beneficiaries: \$0.60 million Government: \$19.90 million
Gender Classification:	Effective gender mainstreaming

Note: In this report, "\$" refers to US dollars.

Source: Project records, Project Management Unit.

Main Aims and Approaches

The overall goal of the Chhattisgarh Irrigation Development Project (CIDP) was to improve agricultural productivity and rural livelihoods, and reduce poverty through improved irrigation delivery, enhanced agricultural practices, and strengthened water resource management. The project was designed to help the State of Chhattisgarh rehabilitate and upgrade irrigation systems, strengthen the Water Resources Department (WRD), empower WUAs, and promote the adoption of improved water management and agricultural practices among farmers.

The main project components were as follows:

Component 1: Institutional strengthening and capacity development for the WRD, which aimed to strengthen the department and improve its ability to develop and manage irrigation systems.

Component 2: Improved institutional framework and capacity development for WUAs, which used a PIM framework to develop the capacity of WUAs to play a meaningful role in the rehabilitation, management, operations, and maintenance of irrigation systems.

Component 3: Rehabilitation and upgrading of existing irrigation schemes leading to improved performance, which sought to rehabilitate and upgrade minor and medium irrigation systems through a participatory process directed by WUAs.

Component 4: Improved capacity and willingness of farmers to engage in *rabi* (dry season) cropping and diversified farming, which provided support to enhance WUAs' and farmers' capacities for improved agricultural practices.¹

The project employed a range of activities including civil engineering works, support for institutional and policy changes, capacity development (including organizing farmer field school extension), farmers' mobilization, public education campaigns, and the development of a monitoring and evaluation program. Nongovernment organizations (NGOs) were contracted with technical assistance from ADB to develop the capacities of WUAs, provide agricultural support services (especially for the newer *rabi* crops), and increase awareness and education among WUA members. CIDP also linked WUAs with the Department of Agriculture and other service providers from the private sector, and helped the WUAs establish marketing partnerships. The project also eased access to seeds, farm equipment, and fertilizer.

¹ *Rabi* cropping refers to agricultural crops sown in winter and harvested in the spring (November/December to March/April). These crops generally require irrigation and include wheat, maize, pulses, gram, mustard, vegetables (eggplant, tomatoes, cauliflower, chili peppers), etc.

Relevant Gender Equality Issues

During project implementation, there was a growing recognition of the importance of taking into account gender issues in water resources management in general, and irrigation initiatives in particular. Gender differences and inequalities, as well as cultural stereotypes and norms, were assessed to determine the extent of women's participation in irrigation management. Specific gender issues identified include²

- Access to resources, assets, and labor, and responsibility in decision making are dominated by men. Thus, women have little or no access to land other than through their relationship with male family members. As landownership was a condition for membership in many water management bodies before the enactment of the PIM Act, many landless women farmers and agricultural workers were excluded from participating in decision making and management of water resources. Participation is important to women because of their various uses of water, such as for crops, livestock, economic activities, and household use. A holistic view of women's need for water and their important role in its management is thus important.
- The division of labor, which is prescribed by social norms and tradition, limits women to the immediate household area. Hence, irrigation infrastructure design needs to adopt technologies that match with the preferences and capacities of users, and enable rural women to benefit fully from them.
- The social norms limit women's participation in political and other forms of decision making that affect their lives. The restrictions are particularly hard to overcome for women who head households, whether as widows or through divorce or abandonment. Women workers earn considerably less than male workers. Women also have lower average calorie consumption, indicated by higher malnutrition, mortality, and morbidity rates for girls and women than for males.
- Women's needs as farmers are not always addressed by agricultural extension services. Sociocultural restrictions also limit their capacity to control the proceeds from their labor or to access extension services, especially when male officers deliver these services. Given these factors, their contributions to agricultural production, such as caring for livestock and crop production, are not always supported by new technologies and training opportunities.
- Women's membership in WUAs or committees does not always translate into effective participation. Even with reserved seats and/or mandatory membership, women may not be full partners with men. They may be uncomfortable speaking; when they do speak up, they are not listened to. Gender stereotypes, power imbalances, and lack of confidence affect women's ability to take full advantage of legal openings. Women may also be held back by lower literacy levels, lack of information on agricultural techniques, leadership gaps, and lack of experience in conflict resolution. To be effective, legal instruments often require supporting measures such as capacity building for women, awareness raising for men, and learning new ways of working together.

² This section draws on ADB. 2013. *India: Gender Equality Diagnostic in Selected Sectors*. Manila; and ADB. 2006. *Gender Checklist: Agriculture*. Manila.

Involving Women and Addressing Gender Disparities

The project acknowledged institutional, social, and cultural barriers to women's empowerment and provided measures to promote the interests of women. One measure was pushing for the passage of the new PIM Act 2006 through which women became eligible both for WUA membership and for election to WUA governing bodies and committees. In accordance with this law, in 2007, for the first time in WUA elections, seats in the WUA management committee were reserved for women and less represented and socially excluded communities (Scheduled Tribes, Schedule Castes, and "Other Backward Classes").

CIDP's Summary Poverty Reduction and Social Strategy (SPRSS) included various measures to support women's participation and gender equality outcomes as listed below.

- The revised participatory irrigation management policies included several key changes such as (i) membership in the WUA is on a household basis so that both women and men can become members with the right to attend meetings and vote; and (ii) all women (not just women property owners with a title) who are part of a WUA member household can stand for election and be elected into the WUA management committee and any subcommittee.
- The WUA management committee was required to have at least two women members.
- The PIM Act set a target of 33% women membership in all subcommittees, including the water allocation and distribution committee, the dispute resolution committee, and the financial audit committee.
- Women subcommittee members were encouraged to attend training offered by the participatory irrigation management unit for WUAs. For general training offered to all WUA members, 50% of the slots were initially reserved for women members. Training on improved agricultural methods, irrigation systems, and WUA-managed collective actions (on irrigation and other agricultural topics such as seed production and joint marketing) were provided to members.
- Women heads of households were granted priority in services provided by the project.
- As policy, women workers to be contracted under the project were to receive equal pay for equal work.
- The project required that the Project Implementation Unit have at least 10% women staff initially and 20% by the third year. The participatory irrigation management unit was to have at least 10% women trainers (consultants and NGOs) in the first year and increase to 20% not later than the third year of the project.
- The project design (not the PIM Act) required each WUA to have a gender subcommittee with the following functions: (i) address the needs of women title holders and WUA members, and women farm laborers in the irrigation system; (ii) develop and protect the use of and access to irrigation water for alternative purposes such as home gardens, livestock, washing, and other domestic uses; and (iii) create capacity development and livelihood programs targeting women (to be explained in the latter part of this paper; this element was, however, not implemented).

Moreover, the outreach and education component developed specific materials (e.g., presentations at fairs, written comics, and campaigns) to address women's participation and encourage women to become more active in WUAs. This was part of a statewide awareness campaign to educate farmers (including women) on the rights and responsibilities of WUAs that was carried out prior to the 2007 elections. In 2012, a grant was given to create awareness among WUA members, especially women, on elections to be held the next year.³

Gender Equality Achievements⁴

The project rehabilitated and upgraded 144 irrigation systems spread over 25 districts of Chhattisgarh, which benefited approximately 150,000 households and covered nearly 174,000 hectares (ha). Other key results included

- Strengthened capacity of the WRD and its officers in improving water management practices by establishing new units;⁵
- Strengthened implementation and institutionalization of the PIM Act;
- Improved capacity of the WUAs, including managing the irrigations systems, providing sustainable maintenance of the irrigation systems, and supporting both *rabi* crops and more diversified crops. The PIM Act requires the government to share a quarter of the water fees collected from users with WUAs. This was increased to half during project implementation to allow WUAs to carry out small repairs and maintenance of the system and increase sense of ownership of the irrigation systems among members.
- Increased participation of women in water resources management systems, and more WUA members from largely ignored castes and tribes;
- Rehabilitation and upgrading of existing irrigation systems, involving the WUAs in needs assessment, design, and construction supervision;
- Improved capacity, productivity, and income of farmers. For example, *rabi* cultivated areas increased from 598 ha in 2007–2008 covering five schemes to 53,388 ha in 2012–2013 covering 50 schemes under the intensive intervention program. Average paddy yield also increased from 2.8 tons/ha in 2006 to 5.9 tons/ha in 2012 for schemes under the intensive intervention program. During the focus group discussions, participants noted that the increase in crop yields, which resulted in increased farmers' income, was facilitated by the repair and upgrading of irrigation schemes, improvement of agricultural and water management techniques (demonstrated through farmer field schools), capacity building of WUAs, collective action, and better marketing of produce.

Project gender strategy strongly emphasized women's participation in WUAs as project staff, trainers, and training participants. Results relevant to gender equality include

- **Increased participation of women in water resource management.** Building on the new legislative framework (the PIM Act), the CIDP supported major

³ Elections were postponed and scheduled to be held in 2015.

⁴ This section draws primarily on research conducted in 2014, which involved document review, discussions with project staff, key informant interviews, focus group discussions with beneficiaries, and field visits.

⁵ These units are the PIM unit, Social Development unit (SDU), Design unit, and Dam Safety unit.

improvements in women's participation in the formal irrigation management structures, primarily the WUAs. The project sponsored various training programs and awareness-raising campaigns on the significance of women's participation in WUAs. NGOs were engaged to support these community mobilization initiatives. The results were positive: in the 2007 elections, out of 1,320 WUAs with 7,622 committee members, 2,598 (34%) of those elected were women. There were 24 elected women presidents (2% of the total number of presidents).⁶

- **Changes in the gender division of labor.** With the changing agricultural practices, focus group participants noted that there have been changes in the division of labor among women and men. In some cases, women have taken over field responsibilities primarily done by men, such as land preparation. On the other hand, men are now more involved in nursery preparation and transplanting, which were previously the work of women. See Box 2 for a list of project benefits according to focus group women participants.

In general, the irrigation benefits and new farming practices have increased the time and amount of labor of both men and women in the fields, particularly women's tasks. Women reported that some tasks, such as transplanting, take more time while other tasks take less time and are less arduous. Previously, weeding was almost exclusively women's work. With the new farming method, mechanical weeding became possible, thus reducing women's work. Both men and women said that this additional work was worth it because of the increase in income. See Boxes 3 and 4 for stories of women members of WUAs.

- **Improved household incomes and some change in household decision-making patterns.** Women's increased participation in agricultural initiatives and overall economic contribution led to increased input in household decision making. Focus group participants noted that they had more disposable income and spent more on food, education, health, hygiene, and clothing.⁷
- **Establishment of gender-equitable labor regulations and working conditions.** The repair and upgrading contracts were governed by labor laws stipulating equal wages for equal work. WRD bid documents and civil works contracts ensured that contractors
 - complied with all applicable labor laws and followed legally mandated provisions on health, sanitation, and appropriate working conditions;
 - did not employ child labor;
 - provided equal opportunities for women;
 - provided equal pay for equal work by men and women; and
 - ensured monitoring of compliance with these provisions and termination of any contract in case of noncompliance.

⁶ The next elections were originally scheduled for 2013, but were postponed until 2015 (after project completion).

⁷ Focus group participants noted that one of the contributing factors to increased household living standards was outside the scope of the project: the state government introduced a measure to ensure rice availability at a low cost to support greater food security.

Box 2: CIDP Achievements According to Women Participants

- More democratic water management
- Enhanced role of women in water management
- Improved agricultural productivity of women through training on production issues
- Improved self-esteem and confidence (through information, education, and communication awareness campaigns, participation in meetings, training, and workshops) on the part of women
- Enhanced skills of women to negotiate in cases of conflicts
- Increased access to market information
- Equal opportunities for employment in rehabilitation and upgrading irrigation schemes contracts
- Increased household income from agriculture
- Increased knowledge on the part of women regarding irrigation management, as well as the roles and responsibilities of WUAs.

CIDP = Chhattisgarh Irrigation Development Project.

Source: Focus group discussions.

Box 3: Story of Jeevan Bai on Project Benefits



“I am preparing to grow maize in December. CIDP support has helped me increase paddy production. Where one bag paddy was produced before CIDP, the production doubled to two bags.”

— Jeevan Bai

Jeevan Bai is 44 years old and is the head of a household in Neota. Belonging to Kalar, an Other Backward Caste community, she achieved 8th Standard in school. She owns two acres of land at the lower end of the irrigation system where she practices monoculture and grows paddy. Prior to the Chhattisgarh Irrigation Development Project (CIDP), she used to sow her paddy using the traditional broadcast seeding method. CIDP introduced the system of rice intensification in the village. The farmers attended the farmer field schools and learned about the rice intensification technique and how to work collaboratively. With CIDP support, Jeevan was able to increase paddy production from 8–10 quintals to 30 quintals. Through *rabi* or dry season cropping, she grew maize for the first time and produced 70 quintals. She kept 20–30 kilograms maize and 10–15 quintals paddy for home consumption and sold the rest. Some 10 quintals of paddy was sold to settle loans. She had also sown 10 kilograms of potato and produced 1.5 quintals, which was used for home consumption. She feels that the availability of water has increased with the new field irrigation channels but that more could be done. Last year she also planted maize but, due to insufficient water, the crop did not grow. She feels that the CIDP support should have continued.

Jeevan has four cows and says, “It is expensive to maintain cattle these days. Fewer people are raising cows. This leads to a greater dependence on agriculture for subsistence and income.” Support from the CIDP also helped her establish a relationship with a bank and access credit. Prior to CIDP, she had only informal access to credit. In the case of financial shortages, paddy was exchanged at very high interest rates. Jeevan, like many others, used to take loans from local traders, but now she can access loans from financial institution such as the cooperative bank.

According to her, there is an overall improvement in the standard of living her village. People are sending children to schools. In the village of about 500 households, some 15–20 houses have been improved.

1 quintal = 100 kilograms.

Source: Key informant interview in Neota.

Box 4: Women Story About the Benefits of CIDP

Before the CIDP, the availability of water was not adequate. With the construction of the irrigation field channels, water became more available to irrigation fields. Through collective actions, we were able to reduce the cost of farming inputs. Women got an opportunity to attend meetings. We learned about the Participatory Irrigation Management Act. Our crop, which we previously sold through the middle man, is now sold directly. Five years ago, only 20% of farmers were cultivating their land during the *rabi* (dry) season. Through CIDP, about 80% of farmers cultivated their land during *rabi*. Our WUA received information and visits from many different officials, including the CIDP staff, agricultural extension officers, Water Resources Department staff, and insecticide company officials. Previously, women did not attend these meetings. During the project, 10–20 women attended the WUA meetings. The overall standard of living has increased in the village.

—Women WUA members in Ganiyari

CIDP = Chhattisgarh Irrigation Development Project.

The table below presents more information on the gender equality outputs of the project.

CIDP Gender-Related Activities and Achievements	
Activities/Indicators	Achievements/Results
Output 1: Institutional Strengthening and Capacity Development for Water Resources Department (WRD)	
Gender-sensitive training courses conducted	<p>Development of “training of trainers” modules on water management, key features of the PIM Act, roles and responsibilities of farmers’ organizations, etc.</p> <p>Other topics covered include (i) state policy for women in Chhattisgarh, (ii) PIM concepts, (iii) empowerment of women in WUAs as outlined in the PIM Act, (iv) women’s self-help groups, (v) empowerment of elected women representatives for local bodies, (vi) women’s participation in irrigation management, (vi) leadership for women, (vii) national and state-level policies on gender equality and women’s empowerment, (viii) water rights of vulnerable groups and women, (ix) change in working relationships among engineers and women members of WUAs, and (x) comparative gender analysis and monitoring.</p> <p>Education, information, and awareness (EIA) initiatives included messages to help policy makers address women’s perspectives and concerns and support women to</p> <ul style="list-style-type: none"> (i) have a voice in their communities and governance processes; (ii) increase their voice and overcome inequalities in and barriers to political participation; (iii) empower themselves politically, raise awareness and develop networks; and (iv) use innovative agricultural practices.
At least 20% of people contracted by the PIM Unit are women by Year 3	Out of 65 people in the PMU (including the PIM Unit), four were women (6.2%).
At least 20% of the trainers contract by the PIM Unit by Year 3 are women	Women accounted for 13% of all trainers up to 2013.

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Table continued

CIDP Gender-Related Activities and Achievements	
Activities/Indicators	Achievements/Results
Output 2: Improved Institutional Framework and Capacity Development for WUAs	
<p>Participatory Irrigation Management Act in place to ensure:</p> <p>(i) Membership in the WUA is on a household basis so that both women and men are members and have the right to attend meetings and vote.</p> <p>(ii) All women who are part of a household that is a WUA member will be able to stand for election (not just women who are property owners with a title) and hold office on the WUA management committee or any subcommittee.</p>	<p>The PIM Act was published on 24 May 2006 in the official State Gazette.</p> <p>Key features of the Act include</p> <p>(i) extending WUA membership to spouse to ensure nearly 50% women's representation in WUAs;</p> <p>(ii) management of minor irrigation systems and lower parts of medium and major systems by WUA;</p> <p>(iii) water fee collection by WUAs and sharing by the government; and</p> <p>(iv) reserved places on WUA managing bodies for women, scheduled castes, scheduled tribes, and "other backward classes."</p> <p>Major legal provisions in the PIM Act include</p> <p>(i) Membership in the WUA is on a household basis so both women and men are members and eligible to attend meetings and vote.</p> <p>(ii) All adult women who are part of a household that is a WUA member are able to contest elections and hold office in the WUA.</p> <p>(iii) WUA subcommittees must have 33% women members.</p> <p>After the 2007 elections, there were a total of 1,320 WUAs with 7,622 members; 2,598 of these members were women (or 34%).</p> <p>Next elections were originally scheduled for 2013 but were postponed until after the project was completed.</p>
At least 30% women representatives elected	In the 2007 elections, out of 7,622 members, 2,598 were women members (or 34%) while 24 out of 1,320 WUA presidents were women.
At least two women in each management committee	The PIM Rules and Regulations include a specific provision to ensure women's participation.
Women's representation on WUA subcommittees	<p>As of March 2013, management committees in the main CIDP areas were composed of 434 men and 199 women (or 31.4% women).</p> <p>According to the PIM Act, each WUA was to form the following subcommittees:</p> <p>(i) Finance and Resource Subcommittee,</p> <p>(ii) Works Subcommittee,</p> <p>(iii) Water Management Subcommittee,</p> <p>(iv) Training and Capacity Building Subcommittee,</p> <p>(v) Social Audit and Monitoring and Evaluation Subcommittee, and</p> <p>(vi) Dispute Resolution Subcommittee.</p> <p>Each subcommittee consists of a convener and five other members with a minimum of one-third of women members. CIDP supported WUAs in forming the six subcommittees with at least two women members.</p>

continued on next page

CIDP Gender-Related Activities and Achievements	
Activities/Indicators	Achievements/Results
<p>WUA gender subcommittee formed in each WUA with the following mandate:</p> <ul style="list-style-type: none"> (i) Address the needs of women title holders, WUA members, and women farm laborers in the irrigation systems. (ii) Develop and protect the use of and access to irrigation water for alternative purposes such as home gardens, livestock, washing and other domestic uses. (iii) Create capacity development and livelihood programs especially targeting women. 	<p>No separate gender subcommittees were formed. The PIM Act was the guiding framework and gender subcommittees were not part of that framework.</p> <p>Gender equality concerns were addressed as crosscutting issues.</p> <p>Women participated in the six subcommittees. In addition, women WUA members</p> <ul style="list-style-type: none"> (i) acted as an interface between farmers and main system management; (ii) ensured water distribution to head, middle, and tail users in the scheme; (iii) engaged in operation and maintenance; (iv) collected water charges and other user charges as well as special charges levied by the WUA; (v) resolved local disputes among members; and (vi) participated in all training programs, meetings, and other interventions.
At least 30% women attendees during WUA meetings	From June 2006 to March 2013, there were 48,808 WUA meetings (including general membership meetings and management committee meetings). The total number of participants was 458,702 with 91,740 women (20%).
At least 50% women attendees during WUA training	<p>Numerous workshops and training sessions were held. Sex-disaggregated data are not available for all of these sessions. Thus, total number of women and men participants could not be computed. The following training sessions with sex-disaggregated data show that the 50% target was not met.</p> <ul style="list-style-type: none"> • 3-day residential training at the district level covering four WUAs: 30 participants, with 3 women (10%) • Twelve 1-day workshops at WUA cluster level covering 20 WUAs: 645 participants, with 80 women (12.4%) • Two 3-day workshops at training center covering 34 WUAs: 251 participants, with 51 women (20.3%) <p>There were specific sessions on women's issues, for example, International Women's Day workshops in 2011 and 2012.</p> <p>Learning materials developed include</p> <ul style="list-style-type: none"> (i) materials depicting role models for women's participation and leadership; (ii) comic materials with "Muniya" (an educated girl) to explain the PIM Act and the importance of transforming gender stereotypes; (iii) pre-WUA election awareness campaign aimed at improving farmers' (particularly women's) knowledge and ability to implement the PIM Act; (iv) mobile kiosks with audio visual aids deployed at strategic locations (such as farmers' fairs) to encourage women's leadership and people's participation; (v) street plays, posters, rallies, and group meetings with messages on women's political participation; and (vi) audio/video jingles disseminated on radio and television. <p>District-level workshops raised gender equality issues, highlighting the low representation of women in WUAs, despite the fact that 80% of agricultural work is done by women.</p>

CIDP = Chhattisgarh Irrigation Development Project, EIA = education, information and awareness, PIM = participatory irrigation management, PMU = project management unit, WRD = Water Resources Department, WUAs = water users' associations.

Lessons Learned

The PIM Act was used as an institutional framework for improving irrigation management and promoting women's empowerment. Through this law, the CIDP strengthened women's participation in irrigation management and provided support to WUAs in ensuring meaningful and effective women's participation.

The formulation of a gender action plan (GAP) could have helped achieve more gender equality results. The GAP was not developed because its requirement predated the project. The project staff proceeded with project gender targets—specified in the Summary Poverty Reduction and Social Strategy of the project—without the benefit of a clear definitive guide (GAP with clear timeframe, indicators, and resources), training on mainstreaming gender in irrigation development and management projects, and presence of a gender focal person or assistance of a gender specialist. Despite these limitations, the project achieved a good stride (considering men's traditional dominance in this area) but below the project target.

Lessons Learned

Even though CIDP was successful in breaking new ground and achieving important gender equality results, several lessons can be identified:

- Ensuring women's meaningful participation in decision-making structures is a long-term process that can benefit from building on initial advances such as those done under this project. Additional capacity-building measures for women are important to ensure that these advances continue. Although there are now no formal institutional barriers to women's participation in WUA management and decision making, further support is required to ensure that women participate in a meaningful and substantive way.
- Strong gender equality elements in project design require sustained focused attention, investments, and support if they are to be successfully implemented. The project preparation documents envisioned the establishment of a Social Development Unit (SDU). However, the SDU could not be formed until the project is completed. There was no gender specialist proposed in the design, thus some of the gender equality elements did not have the support required. For example, sex-disaggregated data were not always collected. However, the project benefited from the recruitment of community mobilizers for social activities and linking them with the project management.
- Training on gender equality issues is important for all project staff members. Greater support could have been given to the engineers and administrators to help them understand the importance of gender mainstreaming. Some staff members considered gender as an “add-on” element and not a fundamental part of the project.

Results Assessment

The CIDP played an important role in generating support for women's membership in WUAs and their participation in decision making around irrigation and farming practices. Future initiatives could explore this participation and ponder on additional questions to better understand evolving gender relations. The results of these initiatives can be assessed based on the following criteria:

- **Quality of participation.** There is often a difference between occupying or holding a position and being an equal decision maker. Even if women are members of WUAs, this does not mean that they actively participate in discussions and share the decision-making process with their male colleagues. Future initiatives on formation of gender subcommittees or WUA women collectives could (i) address the needs of women land title holders and women farm laborers; (ii) develop and protect access to irrigation for alternative uses such as home gardens, livestock, and domestic consumption; and (iii) prepare development and livelihood programs targeting women. Preelection awareness-raising campaigns could also be conducted in communities to discuss the importance of women's participation. Male and female WUA members can be consulted on possible indicators that can be used to track this type of change in future activities.
- **Work done in the fields.** The focus group participants noted the increase of agricultural work for both women and men (but especially women) and that this extra work was worthwhile given the increase in income. In future initiatives, it would be useful to explore what particular tasks are performed by men and women; how irrigation, new crops, and new agricultural techniques influence the gender division of labor; and how is this negotiated between men and women. It is also important to note the implications of the new division of labor in agriculture on household work done by women.
- **Better sex-disaggregation of data.** Sex-disaggregation of data on all indicators were not consistent. For example, there was no overall percentage of women and men who participated in training activities. Therefore, it is not possible to say if the targeted 50% of training slots for women was achieved or not.
- **Project gender action plan.** An action plan to provide strategic direction to gender mainstreaming activities is essential. The plan can focus on the people that projects intend to serve, specifically identifying constraints on the participation of poor women and men, and developing strategies and actions to ensure equitable access to project resources, employment opportunities, skills training, capacity-building activities.
- **Institutional capacity to consistently address gender dimensions of irrigation and farming extension.** To become sustainable, government departments and units working on irrigation and related initiatives (such as the WRD) should understand and be committed to supporting women's participation in water resources management. Traditionally, the majority of staff in these units are engineers and technical professionals. They often require specific training on how and why gender dimensions are important, and what can and should be done. This is an ongoing need given that staff leave at a certain point, and new people are hired. Training cannot just be a one-time initiative. Staffing requirements

can also expand to include people with experience in social assessment (with a good understanding of gender and development) and mobilization. It is important to ensure that these units have the capacity to support positive gender equality outcomes.

This case study was produced by the India Resident Mission in consultation with executing and implementing agency. It builds on information included in the project progress reports and related gender action plan updates as well as on direct consultations with executing and implementing agency and beneficiaries, and inputs from ADB project officers.

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