and evaluation data. disaggregated, including both baseline and project monitoring be especially important to capture information that is gender based gender policy for Peru’s irrigated agriculture sector, it will targeting in the Peruvian highlands. In order to provide further implementation of PSI Sierra in the 12 WUOs that the project is will have to be further monitored and analyzed during the These observations made at the pilot level of only two WUOs users and their ability to avoid or resolve water conflicts. reportedly aided by the greater management capacity of female the Gender Pilot, rationalization in the use of water was observed, are considered in decision making. During the implementation of PSI’s greater training through the Gender Pilot, has evolved and their position of women in WUOs, as a result of treasurers, deputy treasurers, secretaries, committee members, and delegates). The position of women in WUOs, as a result of management positions in WUOs. Their improved technical skills, has made it possible for women to be nominated and elected for impacts on women’s income. Likewise, better technical training production (considering individual needs) has had positive water resource management and in agricultural and livestock communities involved in the project.

Female irrigation users valued positively their participation in the Gender Pilot. The development of women’s skills in management positions in WUOs. Their improved technical skills, has made it possible for women to be nominated and elected for impacts on women’s income. Likewise, better technical training production (considering individual needs) has had positive water resource management and in agricultural and livestock communities involved in the project.

Empowering Women in Irrigation Management
The Sierra in Peru

Marie-Laure Lajaunie
Erwin De Nys edenys@worldbank.org

For more information on the project, please contact:

Nations (FAO), and International Fund for Agricultural Development (IFAD). 2008.

Empowering Women in Irrigation Management: The Sierra in Peru

© 2013 International Bank for Reconstruction and Development / The World Bank
Empowering Women in Irrigation Management

The Sierra in Peru

Erwin De Nys, Senior Water Resources Specialist, World Bank
Carmen Hidrogo, Anthropologist, Consultant, World Bank
Marie-Laure Lajaunie, Senior Water Resources Specialist, World Bank
Lara Chinarro, Irrigation Specialist, Consultant, World Bank

Abstract

This report tells the story of a Gender Pilot that was carried out in water users’ organizations for irrigated agriculture in the Peruvian highlands or Sierra region. It was designed upon the request of Peru’s Ministry of Agriculture, with the objective to strengthen the role of women in water management and to improve their condition as agricultural producers. At first, a gender diagnostic was carried out to better understand the different barriers that hinder the attendance and thus equality of participation of women in trainings and meetings. After this diagnostic, a discussion followed about the importance for a community of including women in water management. In response to these diagnostics and subsequent discussions, the water users resolved to set specific targets for becoming more inclusive organizations, and shaped the content and timing of their activities to allow a greater number of women to participate. The Pilot, carried out between 2007 and 2009, improved women’s technical skills, self-esteem and position in the water users’ organizations, and has raised awareness among the community members about women’s specific needs and expectations related to water management for irrigated agriculture. The participatory methodology used in this Pilot was designed with the support of the World Bank Group Gender Action Plan, and is currently being scaled up in the World Bank financed Sierra Irrigation Subsector Project (PSI Sierra).
The Role of Women in Water Management

In Peru, over 75 percent of management positions, at all levels of public and private enterprises, are held by men. In water users’ organizations (WUOs) for irrigated agriculture in the Peruvian highlands or Sierra region, the situation is no different. A variety of cultural and structural limitations restrict women’s participation in water management in ways similar to what has been observed in other irrigated areas around the world (World Bank 2012).

The aim of this occasional paper of the Latin America and Caribbean Regional Environment and Water Resources Unit (LCSEN) is to highlight, within the context of a Gender Pilot of the Peru Sierra Irrigation Project, how women’s different needs were identified to facilitate their access to training and to increase their participation in the management of WUOs.

Women’s empowerment can have a great impact on productivity and the economy of a country. As stated in the 2012 World Development Report, gender equity is not only necessary, it is also smart economics (World Bank 2011). Participation of all members of a community in water management has several positive impacts: first, the inclusion of women provides a different perspective on the needs of the community; second, once all stakeholders interested in water are considered, there is less chance of water conflicts occurring; and third, having more people with different views increases the number of ideas and approaches to help solve a problem.

During the 10 years of implementation of the World Bank-financed Irrigation Subsector Project (Proyecto Subsectorial de Irrigación, PSI) on the coastal strip of Peru, it became clear that social and technical barriers for women existed. These barriers hindered the attendance and participation of women under conditions of equality in WUO meetings and training events. The government of Peru decided in 2007 to expand PSI to the Sierra region, also with World Bank financing, with the objective of improving the technical level of irrigation systems and infrastructure, thus increasing the profitability of the agricultural sector. A major objective of the project was to strengthen WUOs, this time incorporating a gender dimension.

PSI Sierra and its Gender Pilot

Prior to the start of PSI Sierra, a Gender Pilot was carried out from September 2007 to June 2009, involving the WUOs of Chonta and Colca, located in the regions of Cajamarca (northern Sierra) and Arequipa (southern Sierra), respectively. The objective of the Gender Pilot was to contribute toward improving the position of women as members of WUOs and strengthening their status as agricultural producers. The methodology to strengthen women’s positions included participatory tools (for example gender diagnostic, workshops, focus groups, and presentations) and demonstration techniques (for example study tours to other regions in Peru, sharing experiences with WUOs in which women had achieved leadership and active participation in management). The strategy promoted the following goals in WUOs:

- Establish clear, precise rules for incorporating women in water management;
- Strengthen the role of women, improving their ability to enhance their self-esteem, degree of integration, and position, and increasing their democratic participation in water management;
- Train women in production issues;
- Highlight and value women’s contribution to their household’s economy.

The Gender Pilot used a participatory methodology for inclusion of women that started with a gender diagnostic, making it possible to design, validate, and execute training and awareness activities aimed to allow women and men to participate in equal capacities in water management (Figure 1).

**Figure 1. Participatory Methodology for Inclusion of Women**

Bring women and men together to create mutual trust. Facilitate knowledge about: What do they do? Who does it? How do they do it?

- Gender diagnostic to identify interests, needs, limitations, and expectations by collecting and analyzing data differentiated by gender
- Design and execute training and awareness activities, first separated by gender, then...
- Facilitate joint activities that allow women and men to participate under equitable conditions

**Gender Diagnostic**

The Gender Pilot conducted in the Chonta and Colca WUOs started with a gender diagnostic that aimed to identify roles, interests, needs, limitations, and expectations by collecting and analyzing data differentiated by gender. The key conclusions were similar in the two WUOs:

- There was a marked division by gender, according to traditional social roles in the Sierra.
- There was a differentiated appreciation of the roles of women and men. Household chores (the duties of “the wife and mother”) and contributions to agricultural production were generally considered supporting roles and undervalued compared to men’s because they did not generate income (except for cattle

---

2. PSI is an entity under the Ministry of Agriculture that has the mandate to promote the modernization of irrigated agriculture in Peru. The World Bank-financed project that targeted irrigation schemes along the coastal area of Peru had an investment of $95 million and closed in 2009.
3. PSI Sierra ($48.33 million) was declared effective in 2010.
4. A video on the Gender Pilot, which preceded the PSI Sierra, can be viewed at http://www.youtube.com/watch?v=-Z68ZVw6w.
raise). Furthermore, work by men that required physical strength (men working as unskilled laborers) was appreciated more than work by women that involved some skills (for example milking) and thus there was little recognition given to women’s participation in the productive process.

The representation of men versus women in WUOs was linked to land ownership. The Organization for Economic Co-operation and Development (OECD 2010) found that less than 25 percent of the land in Peru was female-owned. The proportion was increasing, but remained limited due to several constraints, such as higher rate of illiteracy among women, or the fact that women who were not married but in consensual unions had no right to own the land of the household.

There was a lack of structured skills development programs which prevented purposeful participation by women in WUOs.

There were generally only a small number of women managers and leaders, and few of them held relevant positions for decision-making. Most held lower positions, and in some cases their involvement was limited to their names being listed on the management committee.

There were cultural limitations in the two WUOs. Women had insufficient information on WUOs and especially on the rules governing water management. Thus, their opinions were not valued in decision-making forums and they were believed to have nothing interesting to contribute. Often, the men in their families attended meetings on their behalf.

There were also structural limitations to women’s participation. They were less prepared to hold management positions and they felt inhibited to participate. Moreover, WUO meetings were scheduled according to men’s time preferences, thus reflecting the WUOs’ limited support for women’s participation.

The diagnostic also showed that in some WUOs, male leaders were willing to support a training program that provided equal opportunities.

Presenting and discussing the gender diagnostic with the WUO members led to their increased awareness about the underrepresentation of women in the WUOs and their lack of participation in WUO meetings, trainings, and workshops. WUOs also realized they had no training plans to address the specific needs of female water users. In response to this, WUOs resolved to set specific targets to improve this situation in the short term (table 1).

### Gender Focus in the Participation of Water Users

During the development of the Gender Pilot, various activities were conducted to improve the position of women, including (a) technical training on irrigation management, roles and responsibilities of WUOs, and water regulations; (b) specific “self-esteem” workshops for women to improve their leadership and communication skills, to counteract the common perception of men as being better leaders; (c) workshops with the joint participation of women and men to raise awareness on the contribution and value of the work of female users; and (d) study tours to share experiences with women from Peru’s coastal region who hold decision-making positions in WUOs.

Finally, dissemination efforts were carried out, such as the organization of a national “Gender and Water Management” event, in which women leaders presented the experiences gained during the development of the Gender Pilot, disseminated their results to over 200 female water users in Peru, and prepared and distributed the brochure Los roles de varones y mujeres en las actividades productivas y en su organizacion del riego (“The roles of men and women in productive activities and in their irrigation organizations”) to acknowledge and value the work of women.

Male leaders and users participated in workshops to raise awareness of the importance of the gender focus in WUOs, and in workshops on water polices with gender equity, in order to define procedures that facilitated the inclusion of a gender focus. Finally, brochures with information on WUOs and water regulations were distributed to reinforce conceptual aspects. Table 2 shows the number of participants in the Gender Pilot activities at the various locations.

It was observed that women restrict themselves (due to shame or fear) from expressing their ideas when men, especially their husbands, are present. It was therefore decided to form separate women’s users’ committees to help them become leaders and producers, thus strengthening their self-esteem for participation later on in groups comprising both genders. This initiative was well received.

### Table 1. Gender Diagnostic Baseline Values (2009) and Targets (2011) set by WUOs

<table>
<thead>
<tr>
<th>Baseline values</th>
<th>Targets to reach by 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition of WUOs: 7 of every 8 members are men; women rarely hold a management position</td>
<td>The WUOs have at least one woman in a relevant management position (President or Treasurer)</td>
</tr>
<tr>
<td>20 percent of women attend meetings</td>
<td>30 percent of women attend meetings and present their opinions</td>
</tr>
<tr>
<td>Fewer than 10 percent of women participate in training</td>
<td>Over 60 percent of women participate in training; men support women’s skills development</td>
</tr>
<tr>
<td>Only 20 percent of women leaders perform their duties in WUOs</td>
<td>40 percent of women leaders perform their duties and assume decision-making positions</td>
</tr>
<tr>
<td>The WUOs’ policies do not include specific conditions for improving women’s participation</td>
<td>The 2011 annual plan specifies means of increasing women’s participation</td>
</tr>
<tr>
<td>Female users are not specifically recognized in WUO activities</td>
<td>Men and women are specifically recognized, thus avoiding exclusions</td>
</tr>
</tbody>
</table>

Source: Gender diagnostic in Chonta WUO, 2009.

### Table 2. Participants in Gender Pilot Activities

<table>
<thead>
<tr>
<th>WUOs</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
<th>Water users’ commissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chonta (northern Sierra)</td>
<td>728</td>
<td>786</td>
<td>1514</td>
<td>La Colpa, Tres Molinos, Carhuanga, Tartar Grande (Chonta and Mashcón)</td>
</tr>
<tr>
<td>Colca (southern Sierra)</td>
<td>229</td>
<td>243</td>
<td>472</td>
<td>Yanque, Achola, Pinchillo, Coporaque</td>
</tr>
</tbody>
</table>

Source: Reports of Gender Pilot consultants, 2010.
Conclusion

In different regions of the Peruvian Sierra, the Gender Pilot has made it possible to design, implement, and validate a participatory methodology that promotes the inclusion of women and young people in decision-making forums on the use and management of water resources.

Female irrigation users valued positively their participation in the Gender Pilot. The development of women’s skills in water resource management and in agricultural and livestock production (considering individual needs) has had positive impacts on women’s income. Likewise, better technical training has made it possible for women to be nominated and elected for management positions in WUOs. Their improved technical skills, self-esteem, and position in WUOs have raised awareness of their specific needs and expectations for water management in the communities involved in the project.

Although the total number of positions held by women in the WUOs has not increased significantly throughout the limited duration of the Gender Pilot, women’s voice and representation in WUOs has been strengthened. At present, women hold positions of greater importance for decision making (vice presidents, treasurers, deputy treasurers, secretaries, committee members, and delegates). The position of women in WUOs, as a result of greater training through the Gender Pilot, has evolved and their recognition is increasing among WUO members. At meetings and assemblies, it is reported that they participate more actively and play a greater role in management committees, and their ideas are considered in decision making. During the implementation of the Gender Pilot, rationalization in the use of water was observed, reportedly aided by the greater management capacity of female users and their ability to avoid or resolve water conflicts.

These observations made at the pilot level of only two WUOs will have to be further monitored and analyzed during the implementation of PSI Sierra in the 12 WUOs that the project is targeting in the Peruvian highlands. In order to provide further guidance on critical gender gaps, and to contribute to an evidence-based gender policy for Peru’s irrigated agriculture sector, it will be especially important to capture information that is gender disaggregated, including both baseline and project monitoring and evaluation data.

References


World Bank, Food and Agriculture Organization of the United Nations (FAO), and International Fund for Agricultural Development (IFAD). 2008. Gender in Agriculture Sourcebook. World Bank/IFAD/FAO.

For more information on the project, please contact: Marie-Laure Lajaunie mlajaunie@worldbank.org and Erwin De Nys edenys@worldbank.org.

Publications from the LCSEN Occasional Paper Series Environment & Water Resources

- Empowering Women in Irrigation Management: The Sierra in Peru (2013)
- Environmental Health in Nicaragua: Addressing Key Environmental Challenges (Originally Published in 2010, Republished in 2013) (Available in Spanish and English)
- Expanding Financing for Biodiversity Conservation: Experiences from Latin America and the Caribbean (Available in English (2012) and Spanish (2013))
- Overcoming Institutional and Governance Challenges in Environmental Management. Case Studies from Latin America and the Caribbean Region (2013)
- Policy and Investment Priorities to Reduce Environmental Degradation of the Lake Nicaragua Watershed (Cocibolca) (Originally Published in 2010, Republished in 2013) (Available in Spanish and English)
- Uncertain Future, Robust Decisions; The Case of Climate Change Adaptation in Campeche, Mexico (2013)

To find copies of these publications, please visit our website: www.worldbank.org/lac
and evaluation data.

disaggregated, including both baseline and project monitoring
guidance on critical gender gaps, and to contribute to an evidence-
targeting in the Peruvian highlands. In order to provide further
implementation of PSI Sierra in the 12 WUOs that the project is

These observations made at the pilot level of only two WUOs

users and their ability to avoid or resolve water conflicts.

the Gender Pilot, rationalization in the use of water was observed,

are considered in decision making. During the implementation of

play a greater role in management committees, and their ideas

assemblies, it is reported that they participate more actively and

recognition is increasing among WUO members. At meetings and

the position of women in WUOs, as a result of

treasurers, deputy treasurers, secretaries, committee members,

of greater importance for decision making (vice presidents,

WUOs has been strengthened. At present, women hold positions

duration of the Gender Pilot, women’s voice and representation in

Although the total number of positions held by women in the

self-esteem, and position in WUOs have raised awareness of their

management positions in WUOs. Their improved technical skills,

has made it possible for women to be nominated and elected for

impacts on women’s income. Likewise, better technical training

water resource management and in agricultural and livestock

Female irrigation users valued positively their participation

of water resources.

people in decision-making forums on the use and management

methodology that promotes the inclusion of women and young

Experiences from Latin America and the Caribbean Region (2010)

Expanding Financing for Biodiversity Conservation:

Enhancing the Role of Women in Water User

Overcoming Institutional and Governance Challenges in

World Development Report 2012: Gender

Equality and Development

Marie-Laure Lajaunie mlajaunie@worldbank.org and Erwin De

IFAD. 2008.

Nations (FAO), and International Fund for Agricultural Development

World Bank, Food and Agriculture Organization of the United


Atlas of Gender and Development: How Social Norms

Resources Occasional Papers please visit our website: www.worldbank.org/lac

A list of the most recent papers is on the back cover of this publication. For electronic copies of all our LAC Environment & Water

Rights and Permissions

The material in this work is subject to copyright. Because The World Bank encourages dissemination of its knowledge, this work may

be reproduced, in whole or in part, for noncommercial purposes as long as full attribution to this work is given.

Any queries on rights and licenses, including subsidiary rights, should be addressed to the Office of the Publisher, The World Bank,

1818 H Street NW, Washington, DC 20433, USA; fax: 202-522-2422; e-mail: pubrights@worldbank.org.

All images courtesy of Thinkstock/Getty Images and The World Bank