

Mexican Rural Women's Knowledge of the Environment

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La revisión bibliográfica y el trabajo de campo en cuatro comunidades del sureste de México establecieron que la forma en que se relacionan las mujeres rurales con los recursos naturales que las rodean es muy variada y se vuelve específica dependiendo de su cultura, area geográfica que habitan, edad, clase y hasta de sus características individuales. Sin embargo se vió que existe cierta continuidad en las actitudes de las mujeres hacia el medio ambiente, quiza por el papel de "cuidadoras" que tienen.

Introduction

Much research has been conducted on the loss of genetic material in the Third World (Altieri and Merrick, 1987). Traditional agriculture is an important way of stopping this loss, because it constitutes a "repository of crop germoplasm" (Altieri and Merrick, 1987:87). However, traditional agriculture is being "modernized" and to prevent this transformation from happening is not only technically complicated but also a politically sensitive issue. Growers will accept new varieties of seed if they are better and sometimes even when they are not. This modernizing trend already has been the cause of a significant loss of germoplasm.

An effort to stop this loss of genetic material must be linked to rural development programs that give equal importance to local resource conservation and to sustainable food self-sufficiency and/or market participation. "Any attempt at *in situ* crop conservation must struggle to preserve the agroecosystem in which these resources occur" (Nabham 1979, 1985). But this preservation cannot be achieved if there is no effort to maintain the sociocultural organization of the local people. To accomplish that goal, it will be

necessary to utilize and promote autochthonous knowledge such as valuable crop germoplasm and essentials like firewood resources and medicinal plants. That effort, although rarely specified, includes preserving the valuable knowledge rural women possess, as they are in charge of many of the activities in which this information is used.

Most international scientific and development communities have not emphasized the importance of conserving and rescuing indigenous knowledge, especially women's experience. As Rocheleau (1989) has shown, they have largely ignored rural people's science. Some scholars consider that information an "unconscious ecological wisdom" (Rocheleau, 1989) that could be useful for the generation and introduction of new technology. However, even these potentially "practical" aspects of rural people's science have not been properly studied and understood. Rural women's interests and knowledge have been explored even less. Research on conservation of genetic diversity seldom, if ever, deals with gendered knowledge.

Some of the valuable information women possess is related to the varieties of staples that could eventually constitute a germoplasm bank. One of these staples is corn, or maize, the main ingredient of tortillas, the principal staple in almost the entire country. Mexico, which is believed to be within the center of the region in which *Zea mays* originated, has the highest levels of genetic diversity of maize in the world (Brush, Bellon Corrales and Schmidt, 1988). Little work has been done, however, in relation to the maintenance of its intraspecies diversity (Brush, Bellon Corrales and Schmidt, 1988). A systematic study of the manner in which farmers identify and select maize varieties does not seem to exist (Brush, Bellon Corrales and Schmidt, 1988). Although seldom mentioned, it is likely that much or all of this selection is practiced by women. The ability to select varieties of maize is linked to experience with indigenous agroecosystems that maintain not only the germoplasm, but also the human knowledge base, and the behavioral practices required by that form of agriculture.

Women's Realms: Home Gardens and Agroforestry

Home Gardens

A home garden (patio/solar) is defined as "an area around the peasant's house where he cultivates a complex vegetation to satisfy his needs" (Lazos Chavero and Alvarez-Buylla Roces, 1988:45). In

Mexico borne gardens are considered a women's realm. Internationally, "their form and function have been intimately related to the evolution of society, culture and agriculture" (Lazos Chavero and Alvarez-Buylla Rocas, 1988). Such gardens have played an important role in the domestication of grain and root crops, and continue to serve as an avenue for the introduction and adaptation of new crops (Johnson, 1972; Nuñez, 1984). Home gardens receive great international acclaim from agronomists. They serve important economic, nutritional, and social functions, not only in largely agricultural, developing countries, but also in the rest of the world. "Gardens should be examined as alternative use of scarce development resources" (Cleveland and Solari, 1987:259).

"Production advantages cited for household gardens include efficient use of soil, water, and sunlight, continuous harvesting, high and sustained yields, and utilization of labor supplied in small amounts integrated with other household tasks. Gardening is even reponed as improving subjective feelings of well-being" (Cleveland and Soleri, 1987:263). Other advantages of the traditional style of gardening include preservation of diverse genetic resources adapted to local conditions, minimized pest and weed problems, a mixture of many different crops providing other products in addition to food, and little, if any, cash investment (Alcorn, 1984; Altieri, 1983; Binkert, 1981; Gliessman et al., 1981; Moreno, 1985; Soemarwoto, 1981; Sommers, 1982).

An advantage of traditional style household gardeners is that they rely primarily on cultivation practices rather than toxic chemicals to control weeds, pests, and diseases. Consequently, there is little risk of poisoning people or the environment (See also Bull, 1982; Moreno, 1985). Products from home gardens are not dependent on high energy inputs, transportation, marketing, or on bureaucratic infrastructures. Gardens can be socially and environmentally sustainable food systems, combined with energy-efficient cultivation techniques which maintain and mercase fertility while conserving soil and water (Cleveland and Soleri, 1987:263).

Home gardens play a very important role with regards to nutrients available for the household. "The availability of nutrients within the household may be related to social and cultural patterns of distribution of foods" (Cleveland and Soleri, 1987:265). In many rural areas of Mexico working men will be fed first, then older women followed by younger women and their children. Such an eating hierarchy is due probably to the "weaker bargaining power [of women and children] within the household" which, as a consequence, results in decreased nutritional levels for them in relation

to men (Cleveland and Soler, 1987:265). However, when women control the home garden, as they usually do, more food is likely to be available to them and their children. Indeed, studies indicate that home gardens can have the effect of improving the diet. In Tabasco, Mexico, for example, fruits and vegetables are not eaten, unless grown in home gardens, because they are too expensive to buy (Dewey, 1981).

It is, therefore, possible to say that home gardens are better for improving household nutrition "than strategies that rely upon increased income or large scale agricultural production" (Cleveland and Soler, 1987:264). It also appears that "three of the four most important nutritional problems in the Third World: protein/energy under-nutrition of infants and children; vitamin A deficiency, and anemia resulting from lack of iron and vitamin C (Latham, 1984), may be assessed by gardens." To a great extent, this occurs because most of the fruits and vegetables can be eaten soon after having been harvested, when nutrient content is high.

Gardens are important for women because many of the products grown there would be otherwise unobtainable. "They [women] are frequently the principal gardeners as well as being responsible for providing weaning foods, condiments, relishes and sauces" (Smale, 1980). Gardens can also become a useful source of cash income for women when they can sell surplus products. However, problems may arise because, in the event that women's gardens become successful, "men may use their superior social position to usurp women's control" over them (Cleveland and Soler, 1987: 266). Such mastery is crucial because gardens have become one of the few sources of cash for women, who have lost authority over other resources they once could use. Some researchers have argued that "horticulture needs to be preserved as an enterprise of the poor, most of whom are women" (Duggan, 1985:18). However, others maintain that reliance on home gardens is a strategy of exploitation of the poor. They believe that by reducing substantially the amount of income the poor need to spend on food, it is possible for them to survive on less money, thus encouraging the further reduction of wages (Deere and de Janvry, 1979; Painter, 1984). When women experience loss of control over economic resources, the effects are worse for them than for men, since they bear the principal burden of subsistence (Nash, 1986:16).

Agroforestry

Agroforestry is often considered a good alternative for women since they are almost universally responsible for the provision of

fuel, fodder, fibre, and animal protein for themselves and for their families. As caretakers of the household vegetable or farm plots, they generally are highly skilled in plant husbandry and, working side by side with men, also have acquired knowledge of changing agricultural techniques (Rocheleau, 1988:149-51). Women's control over the components (animals, crops, trees, shrubs, pasture) and the products (food, fodder, fuel, timber, cash, medicine) of agroforestry systems is often subject to rules distinct from those governing men's action. They are generally directed to supporting the household. "Agroforestry is ideal in these circumstances because it] is people oriented and ecoresponsive" (Bagchi, 1989:3). Since women are the most adversely affected by the degradation of their immediate environment, they must also devise ways to make do with minimal and inferior material substitutes. "The connections are clear, an agroforestry project goal should be so tailored as to address the primary needs articulated by the female members of the community" (Bagchi, 1989:5).

Men's and women's separate roles and activities can be complementary or shared and interchangeable. While "differences might be limiting the scope and nature of agroforestry technology and project design, there are also distinct advantages and opportunities for agroforestry within women's separate domains of space, time, activities, interests, and skills. Women may also have special knowledge, rights, and obligations to certain categories of articulated (tools), natural objects, and phenomena (water, fire, plants, animals)" (Rocheleau, 1988:149-51). Although agroforestry may impose new demands on women, such as the need to negotiate new arrangements for use and management of shared labor, lands, or capital inputs, it will also enable them to learn new skills or to improve the ones that they already possess, like management of soil, water, plants, pasture, and boundary lands. Agroforestry may also validate women's land use rights or ownership, increase production and decrease gathering time, and reconcile conflicting objectives for shared household or community plots (Rocheleau, 1988:151).

Women and men often have distinct skills and knowledge in the use of natural vegetation in forests and rangelands. They may each have different information about the same plants and places, or their experience may be divided by species or by ecosystem (Rocheleau, 1988:160). Therefore, "women's knowledge as consumers and processors of many tree products should figure strongly in any user-focused program of germoplasm selection and improvement" (Hoskings, 1983).

Both home gardens and agroforestry seem on the whole a good option for poor rural Mexican women to engage upon. 1 (Townsend

with Bain, 1991) was able to see home gardens in Balzapote and La Laguna (Veracruz, Mexico), and agree with María Elena Alvarez Buylla et al. (1989) who suggest that their benefits are great. Home gardens may be considered a germoplasm reservoir (of a small number of wild species but of a large number of cultivated ones) and good for soil preservation. In the social sphere, "the home garden cropping system constitutes an adequate area to develop various domestic tasks and to conduct social and leisure activities in tropical rural areas" (Alvarez-Buylla et al., 1989:152). Not all observers agree that home gardens will improve women's and children's nutrition. Some indicate that "there is little evidence on this point, and no justification for assuming that project gardens will automatically be controlled by or benefit women" (Piwoz and Viter, 1985). Nevertheless, I believe that, at least, they provide food otherwise difficult to obtain.

Case Study. Women in the Rain Forest: Four Communities

The points discussed above raise a number of issues. Are rural women more interested than men in the conservation of natural resources? Do they have special knowledge about them? Is there a unique affinity between women and the environment? In order to answer these questions, Janet Townsend and I interviewed sixty women in four rural communities.

We spent three weeks in two different areas of land settlement comprising four new communities (Los Tuxtlas and Uxpanapa, Veracruz, and Oaxaca, Mexico). We used questionnaires and life histories to learn about women's problems in land settlement programs. We also asked most women interviewed and some men about their knowledge of the surrounding environment and about their gardens: Who tended them and what plants grew in them? How could they be used as food for home consumption and as sale products (as food, as medicine, as decoration, and as shade)? We conducted the study in the area of Los Tuxtlas, in the villages of La Laguna Escondida and Balzapote (both land reform *ejidos*), and in the region of Uxpanapa, in Francisco Javier Jasso (*ejido*) and Cuauhtémoc (*colono/da* with privately owned land) (Townsend with Bain, 1991). Fifteen households in each settlement were chosen at random for the investigation. We selected Los Tuxtlas specifically because María Elena Alvarez-Buylla, Elena Lazos Chavero, and José Raul García-Barrios of the Universidad Nacional Autónoma de México had documented the achievement of the gardens (Lazos Chavero and Alvarez-Buylla Roces, 1988; Alvarez-Buylla Roces, Lazos Chavero, and García Barrios, 1989).

In Los Tuxtlas, our inquiries indicated that there is an amazing reserve of skill and knowledge in the development and maintenance of home gardens which imitate the forest. Although we observed this phenomenon mainly in Balzapote, it was also evident in La Laguna. The gardens are the only fully sustainable production in these settlements (Townsend with Bain, 1991:4; Alvarez-Buylla Rocés et al., 1989; Lazos Chavero and Alvarez-Buylla Rocés, 1988). The home garden is "the only dual purpose alternative that peasant families manage. It offers a production option, and therefore means of work, where animal and plant species are managed, and at the same time it serves as the peasants' habitational unit, giving it a peculiar vegetation structure and a physical arrangement in three components: the backyard, the garden, and the orchard, each one fulfilling different aspects of the dual purpose" (Lazos Chavero and Alvarez-Buylla Rocés, 1988:47). The home gardens, which are also called "multispecies agroforestry cropping systems," consist basically of perennial self-generating species which allow a continuous extraction of products (Alvarez-Buylla Rocés et al., 1989:34).

In Balzapote "a large number of plants are grown" and used for a variety of purposes. Some species are even "multi-purpose plants" (Lazos Chavero and Alvarez-Buylla Rocés, 1988). More than 300 useful varieties have been found (Lazos Chavero and Alvarez-Buylla Rocés, 1988; Alvarez-Buylla Rocés et al., 1989) in these gardens in this village, "providing food, firewood, medicines, shades, dyes, glues, building materials, animal fodder, ritual plants, ornamental species and even a tiny cash income!" (Townsend with Bain, 1991:6). Of the 337 species grown, 127 have an ornamental use while 86 are used for nourishment, the majority of these being fruits. Thirty-one species are raised for their curative powers and the rest are distributed irregularly among other categories of use (Lazos Chavero and Alvarez-Buylla Rocés, 1988:49). "Food species have the highest densities and the highest frequencies of appearance in the home gardens" (Lazos Chavero and Alvarez-Buylla Rocés, 1988:49). Of the 337 species, 35 percent have secondary uses, 39 percent for medicine and the rest to "create shade, for construction, for firewood, to serve in rituals, as edible fruits, or as seasonings in food" (Lazos Chavero and Alvarez-Buylla Rocés, 1988:49).

Food and ornamental plants were the ones most often found in the gardens. Although it is not stated explicitly in the literature (Lazos Chavero and Alvarez-Buylla Rocés, 1988), one can conclude that women must also play an important role in the use of the products. It is they who decorate houses and churches and who prepare the meals, and mainly they who use the medicinal plants, as they are in charge of the family's health.

There is a great variety of plants in Balzapote because its people are "heterogeneous in their geographical and cultural origins and date of establishment" (Lazos Chavero and Alvarez-Buylla Rocés, 1988:52). They came from different places at different times bringing with them all sorts of plants which they try to adapt to the new environments.

In Balzapote, the family is a socioeconomic, productive and consuming unit. Ah I decide on the management of their different economic options; and this administration is based "in a sexual division where the role of each family member is stipulated" (Lazos Chavero and Alvarez-Buylla Rocés, 1988:56). The family

is also a cultural unit, something which can be appreciated in the knowledge implied in the use and management of plants. This knowledge is not a static phenomenon, instead it is a continuously changing process according to family needs. Different aspects of it are taken by different members of the family. The father and the older sons are in charge of acquiring the knowledge involved in the handling and use of the cultivated trees. The mother and the older children are in charge of obtaining the plants for the garden (mostly ornamental, medicinal, and seasoning spices), as well as investigating the way of growing and utilizing them (Lazos Chavero and Alvarez-Buylla Rocés, 1988:56; Alvarez-Buylla Rocés et al., 1989).

The children play a very important role in horticulture. They introduce, sometimes even unconsciously, some plants like fruits when they carelessly throw seeds about. They learn also from their parents the different agricultural practices. In home gardens, "the father tests new cultivars that are later introduced to crop fields and the mother generally selects the best food and ornamental varieties" (Lazos Chavero and Alvarez-Buylla Rocés, 1988:56). Still, it is important to note, according to Lazos and Alvarez-Buylla (1988), that the role played by the home garden production in the household economy is therefore specific to each family (Lazos Chavero and Alvarez-Buylla Rocés, 1988:57). Knowledge about plants is rich and diverse, mainly due to the different cultural origins of the people. For some, the environmental conditions in which they now live are totally different from those in their places of origin; to others, they are familiar. From these two groups, then, a flow of information has been passed that has enriched them both, and has helped to create home gardens with a ver' diverse structure, a diversity which implies knowledge of a broad range of plant species and systems. In the home gardens, plants with a "different mode of propagation, different life forms, different origins and a variety of uses are managed. Within this mosaic, peasants utilize knowledge of specific bio-

logical processes in their management practices" (Alvarez-Buylla Rocés et al., 1989:147).

Home gardens imitate the forest. This enables rural people to grow species that adapt to specific and different microclimatic conditions to elaborate a management calendar independent of the climatic fluctuations, and to experiment with new varieties (Alvarez-Buylla Rocés et al., 1989:147). Home gardens are a means of producing both plants and animals (pigs and chickens) that complement the family diet and are also either a small source of cash income or savings. The primary production in the home garden is diverse, grown in small amounts almost all year round and raised mainly for family consumption.

Our investigations confirmed all these earlier findings (Townsend with Bain, 1991). However, the situation is changing. All knowledge about these plants may soon be lost, as young people are not learning it; they do not seem to see much future in their gardens except for ornamental purposes, mainly because there is almost no market for the products and the young now prefer purchased goods to home grown grain for home consumption. Investigators have noticed a gradual disuse of medicinal plants in the community (Lazos Chavero and Alvarez-Buylla Rocés, 1988:57); they explain the phenomenon thus: "Balzapote is a mestizo population without a strong ethical-cultural background" which has been influenced by the capitalist system, economically, culturally, and ideologically.

When the colonists first arrived, the home gardens complemented the milpa (cultivated plot) where food and cash crops were grown. Now there are few milpas, the land is pasture and most food must be purchased. Although the economy of the area is largely commercial, there is little market for the products of home gardens. Nevertheless, women in Los Tuxtlas much prefer the milpa to family ownership of cattle because, while they can store crops as food, men may deny them access to the cash earned from selling the cattle (Janet Townsend, personal communication).

In La Laguna, people are poorer than in Balzapote. Here women have no role outside home and garden; they do not work in the fields or with the cattle" (Townsend with Bain, 1991:6). It is impossible for a woman to earn a living in La Laguna; only a man can do that. Widows and single older women leave. Nevertheless, women do have home gardens, and as in Balzapote, they possess the knowledge to tend them and make use of what they grow.

Ironically, although a wide variety of medicinal plants are grown in home gardens, patent medicines are now more commonly used. Faith in traditional knowledge is diminishing and, as in Balza-

pote, may soon be lost. (Carole Browner [1991] also reported similar findings from her research in Oaxaca.) La Laguna home gardens, together with those in Balzapote, are the only sustainable agroecosystem of the region, but their importance "is unfortunately not highly regarded and is un the wane" (Townsend with Bajo, 1991).

Gardens in La Laguna are cared for mainly by the women. When asked, however, the women indicated that men also intervened, for it was they who often brought plants from far away places to which they had traveled. Again, men often tested plant varieties in the home garden before cultivating them in the fields (Townsend with Bajo, 1991:6). Women devote much time to their gardens, and care for them with the help of their children. And since they must prepare meals and home remedies for their families, they know what to grow in the gardens and what is useful. Women exchange information with their families and neighbors and often too, they told us, it was they who carried plants from their places of origin and tried to raise them in this new location: often they did grow, but not always.

Francisco Javier Jasso (an ejido in the Uxpanapa region, where soils are much less fertile) had a collective program of joint work by men and women in agriculture and cattle raising, which, by male choice, was recently abandoned. Women are concerned by the decision since it is likely to result in more forest being cleared and "soon there will be no more resources and no more work. When there is no more forest, [they declared] we will be unable to grow food or to work for pay" (Townsend with Bain, 1991:7). Economic survival on a woman's labor in Jasso is difficult, though Mixe and poor Spanish-speaking women work on the land, trade door-to-door, and make tortillas. Here the home gardens are not as rich in plant varieties as those in Los Tuxtlas, but "ornamental plants have a meaning to those women who have nothing" (Townsend with Bain, 1991:7). Ironically, the most beautiful flower garden we saw in Jasso was tended by the man in the family, a fact which illuminates the dangers of generalizations.

Cuauhtémoc is a colonia (of private farms) with an economy based on timber. There still are crops, but they yield very little. Cuauhtémoc is a larger settlement than the others; a few women there—those with access to education or to some income—are more economically active either as entrepreneurs or, when they are very poor, in paid work. A ban on timber cutting has drastically reduced male employment, resulting in considerable poverty. We saw the most destitute people of all the areas studied in this community;

they have no food, are sick, and launder their clothes with no soap. We noticed some women working the land, although only when forced to do so by their situation; they have either no male partner or no sons. Others mainly stay at home and work in their gardens. They possess knowledge of natural processes and plant properties and use it when necessary, although, when questioned, they tend to answer that they know little or nothing at all.

The people of these four communities have worked the once forested land in different ways. Over the years they have attempted to grow a variety of crops that have failed for a number of reasons. When there is no more forest left to fell and the land stops producing crops without fertilizer, cattle ranching is the solution. Then far less labor is needed, paid labor becomes scarce, and many adults are left without work. The children, who had been assets until then because of the need for workers, instead become burdens—extra mouths to feed. And women, who raise children, care for the household, and practice horticulture, cannot prepare for cattle ranching because they themselves lack the knowledge necessary to work in that nontraditional field. In the past, people in these circumstances developed new lands in order to obtain food and money. But that option is now being eliminated as the state increasingly protects the forests.

Some points became clearer as we interviewed women from these four locations of southeastern Mexico. The communities vary in geography and the population belongs to different cultural groups. The responses to the questionnaire also varied. When asked, "What do you know about the natural resources of the area?" the general answer was that they knew little about their environment. But when asked about their home gardens, women gave enormous lists of plants that they have grown and tended and their medicinal, cooking, and ornamental uses. (Men have sometimes been involved to a degree in caring for the gardens.) Women are also in charge of collecting the firewood necessary for cooking and of collecting plants that grow wild. Some women displayed concern when asked, "What will happen if the forest disappears?" They worry that their sons would not find jobs in the future. Others do not seem to make a connection between their present situation (number of children) and the future (no forest means no land for agriculture). Still others do not seem to care. In a subsequent project by Janet Townsend, also in southeastern Mexico, the general response to the question, "Do you worry that the forest is disappearing?" seemed to be, "I don't care."

Women in these communities, however, are well aware that if the Mexican government's legislation to stop cutting the forest is actually put into practice the area in which they can grow food will diminish. In Cuauhtémoc, Cristina (a woman of seventy-three years) said, "If the forest was left to grow, what would there be to eat?" She was among the first pioneers that came to the rain forest to cut it down and open land for milpas. Her concern is not for the conservation of the forest, it is for the conservation of her people and their way of life. And Flora Gómez, in Laguna Escondida, told us, "We don't have enough to buy anything, but we do have enough to eat," because at least there is still forest land to grow food.

Most women in these communities regarded themselves as ignorant about natural resources. Yet it was clear that, in various degrees, they all possess the knowledge that enables them to keep a home garden. Those who have them are provided not only additional nutritional intakes and an opportunity to earn extra cash, but a place to "be" that is, for the most part, theirs and their children's.

Those women in Jasso, and even more in Cuauhtémoc, who have no home gardens seemed to be the poorest of women. Knowledge of gardens is either lost already or in the process of being lost altogether, as daughters are not learning it from their mothers. In these cases, women's relationship and knowledge with "nature" is almost nonexistent ("almost" because there are still some women working the land who possess this knowledge).

The gender ratio of adults "always participating" in agricultural and other tasks that involve knowledge of natural processes and plant properties in the aforementioned communities in Mexico is:

*Gender Ratios of Adults 'Always Participating' in Tasks
(Females to Males, Thirteen Years of Age and Over)*

Make family meals	83:	1
Feed hens	15:	1
Fetch water	11:	1
Feed pigs	6:	1
Fetch wood	1:	3
Garden	2:	1
Milk	1:	2
Farm	1:	9
Tend cattle	1:	5

Source: Townsend with Bain, 1991:10; table 2.

Conclusion

These cases demonstrate the way in which geographical and cultural conditions affect the lives of the people studied. Women's relationship to the environment is basically determined by political, cultural, and social realities, as well as aspects of class. Rural women have a different relationship towards their environment than urban women in Mexico. They possess knowledge of natural resources which has not been made explicit in the literature; their activities require the use and therefore the knowledge of natural resources. This relationship to the environment varies among different groups of rural Mexican women, by class, age, geographical distribution, ethnicity and, of course, personality.

Rural women depend on natural resources for their survival more immediately than urban women. The knowledge rural women in Mexico possess and the use they make of it relates them directly to natural resources. Since they have the social and cultural role of caretakers, it is their duty to know and use medicinal plants to treat diseases. They grow fruits, vegetables, cereals, legumes, and herbs to feed themselves and their families. They cut the best firewood with which to cook, gather flowers for decoration, and raise a variety of plants used for healing, calming emotions, or providing shade. Such activities will sometimes provide an extra income to help with the household expenses.

Although knowledge of natural resources is not exclusive to women, it is used differently by women because of their culturally determined role. Such knowledge is also quite varied and, at present, probably very much intertwined with "modern" Western knowledge. However, part (or in some cases most) of that information may be lost by changes in habitat when migrations take place. Masculine and feminine perceptions probably differ widely because the two sexes use and therefore understand natural resources differently. However, since much of this knowledge is a part of traditional culture, influences from market economies (capitalist and/or Western influences) seem to be having a negative influence on both sexes.

Researchers, therefore, need to investigate more fully women's knowledge about the environment in Mexico. They should conduct studies to determine not only how women's knowledge of natural resources differs from that of men, but also how it varies among women of different social class, race, and age. Such research would be useful not only in developing programs targeted towards specific groups of women, but also crucial in preserving valuable knowledge that may otherwise soon be lost.

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