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**WOMEN IN WATER-RELATED PROCESSES IN LATIN AMERICA.
CURRENT SITUATION AND RESEARCH AND POLICY PROPOSALS.**

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Abstract

In this article, the principal themes which link the relation of gender with the water issue are shown, either as a resource or as a service, centered in the situation of poverty which affects an important portion of the feminine population in Latin America, such as access to drinking water, community actions carried out and methodologies elaborated in order to increase the active participation of women.

On the other hand, new areas where the application of gender analysis are integrated, such as the impact of the global processes on public policies, water rights, the investments and infrastructure carried out, and the access and participation of women in the training of human resources and the processes of adoption of decisions in the sector.

Finally, some central aspects for generating the mainstreaming process of the gender issue within the social, political, economic and environmental problems of water are presented.

Introduction:

One of the four principles in the Dublin Declaration (1992), which guide recommendations for action at the local, national and international levels, refers to the important roles played by women in the provision, administration and conservation of water, and to the need for these roles to be reflected in official measures to develop the sector. Again, the Beijing Platform for Action (1995) points out how important it is for women to have equitable access to water, to protect their health (paragraph 92), ensure that their priorities are included in public investment programmes for water and sanitation infrastructure (paragraph 167.d), and promote the roles played by indigenous and rural women in irrigation and the management of river basins (paragraph 256.f), among other objectives.

Although the countries of Latin America have signed up to these international instruments, little progress has been made in incorporating these recommendations into public policies. One impediment to their being applied on a large scale has been the fact that in general these and other agreements, such as Agenda 21, have laid stress on the situation of poor women, without considering the obstacles that prevent women in other sectors of society from achieving equality with men, or have tended to cast women in the role of "guardians of the environment", without realizing that this is a task for society as a whole.

At present, the linkage or lack of it between the issue of water and the gender system shows that, in Latin America, policy-making is being hindered by a lack of suitable theoretical frameworks, reliable scientific data and institutional and political mechanisms capable of integrating these two areas. Again, from a methodological point of view, insufficient diagnostic work has been done and the necessary indicators are still rudimentary. The reason for these shortcomings is that we are dealing with concerns that are only now coming to the surface and being properly explored.

The result is that serious problems arise when areas of government action to design and implement water policies and programmes with a gender perspective have to be prioritized. Even in this multi-faceted region, however, two issues directly associated with a lack of equity are central in all the countries: i) the poverty that affects a large part of the population, and women in particular; ii) the obstacles that hinder women from obtaining access to productive resources and to scientific and technological training in hydrology, and from participating actively in decision-making processes relating to the control and management of water. Likewise, the gap between the contribution that women make to the development of the countries and the benefits they derive from this process reveals the existence of problems of inefficiency in the development styles adopted.

Among the different ways of looking at gender issues and the situation of women in public policies, two are of particular relevance. One of these is to concentrate on the differential impact of policies on men and women and to identify what changes are necessary to achieve equity. The other is to diagnose the implications of gender relationships and inequalities for economic and social analyses, and examine the resultant policy options, this being an approach

that brings analytical precision to the effort to achieve the objectives of equity, efficiency and growth.

In response to these concerns, ECLAC, as part of its strategy of gender mainstreaming (Rico, 1998), has initiated a study whose primary objective is to diagnose the situation of women in the social, economic and political processes associated with water and to identify gender biases in both the planning and the impact of government policies dealing with water resources, with the aim of identifying areas of priority for research and policies.

The overriding interest is in ensuring that analyses are not restricted to the microsocial level, but also include factors of a global nature. This involves bringing in new subject areas to supplement those for which ample information is already available. In this connection, the questions on which our work is based and which are indicative of the issues to be researched and addressed are:

- i) how women in general, and different segments of the female population in particular, are affected differently from men by current water resources policies;
- ii) how gender inequalities contribute to the lack of equity and the inefficiency that affect the water sector;
- iii) how the economic, social and political empowerment of women can contribute to equitable and sustainable development in this sector.

1. Women in water-related processes:

1.1 Poverty and reproductive roles as initial determinants

In Latin America hitherto, analysis of the gender-water linkage, whether water be regarded as a resource or a utility, has centred around the poverty-women-access to drinking water issue, primarily in relation to the processes of social reproduction and the needs of households.

Generally speaking, it may be said that although substantial efforts have been made in the region over recent years, as has vital progress in extending services, the goal of supplying drinking water in an efficient and equitable way to the entire population has still not been achieved. In rural areas, the percentages of the population without access to drinking water are still alarming. As regards urban areas we find that, although the percentage of people living in housing that has no drinking water supply is lower than in the countryside, the figures are nonetheless high in some countries, standing at 34.0% in Paraguay and 17.1% in Brazil, for example. The extent of this problem differs very greatly by social stratum, with the negative effects increasing and culminating in the poorer sectors. For example, the percentages for the two countries referred to are far higher in the first two quartiles, at 85.5% in Paraguay and 48.6% in Brazil (ECLAC, 1997).

Water supply in urban areas likewise shows an inequitable pattern of distribution. In the case of Mexico, the Metropolitan Area Development Programme (ZMCM) indicates that the higher-income strata consume approximately 40 times more water than do the poorest strata, and a mere 9% of users consume 75% of all the water supplied. This has encouraged speculation, the result of which has been settlements that are lacking in home supply infrastructure, arbitrary pricing, irregular supply, and despotic practices by those holding concessions to distribute water by tanker (Massolo, 1992).

Just as access to drinking water is conditioned by variables such as social strata, the impact of this problem differs between women and men. This becomes accountable when we analyse people's degree of exposure to environmental hazards, their ability to cope with these and the costs they thereby incur, as a consequence of their greater or lesser biological and social vulnerability. Likewise, the different positions held by women in society and their relationship with the men in their families determine the practices that govern access, ownership, control, use and management of environmental resources and services such as water.

At the user level, it is poor women who have to cope on a day-to-day basis with shortages of water and problems of access, and who actually resolve this family need, since water is of great importance in the everyday work that is assigned to women in the home. Water is vital for preparing food, washing clothes, cleaning the home, family hygiene, the production of foodstuffs and, in many cases, for income-generating activities.

For the poorest households, the obstacles to obtaining drinking water may include one or more of the following: a large distance between the home and the source, very rough terrain in between (steep slopes, rocky or sandy ground), and a supply that is insufficient for the number of people living in the household or is available only for a few hours a day or at inconvenient times (the small hours of the night or very early in the morning).

The task of carrying water from the source to the home is one that takes up a great deal of the time and energy of many poor women and impairs their physical and mental health, in the form of problems with the vertebral column and stress, and on their ability to carry out other activities, be they productive or recreational. A study carried out in Honduras showed that in most cases it is women, boys and girls that carry out this work, and rarely men. Water collecting takes between 3 and 12 journeys a day, filling receptacles or hauling them along in improvised vehicles (Whitaker et al., 1991).

In Latin America, furthermore, water contamination is on the increase due to urban, industrial and agricultural discharges, resulting in adverse effects on the health of the population and a need for greater public and private spending to cope with diseases arising from this cause (ECLAC, 1991). Since caring for the health of the family is one of the reproductive tasks that women perform, it is once again women who take the necessary environmental control measures to deal with water-borne diseases such as zoonoses or diarrhoea, for example by boiling or chlorinating water, and who devote time to attending to and caring for the sick (Vega, 1997). This situation came clearly to light during the cholera epidemic that recently broke out in the

region. In this respect, it is important to distinguish between the availability of water for domestic use and access to drinking water, since in many places, particularly in the countryside, the water that is used for household tasks is not necessarily fit for human consumption.

Women in poor areas also participate actively in local initiatives to improve the quality of life of their families and neighbourhood. This involves unpaid, group and cooperative work, through which they attempt to compensate for existing deficiencies. Despite this contribution, their efforts do not always give rise to the same opportunities as those of men when it comes to controlling the water supply service they have helped to build and deciding upon its characteristics (location, technology, type of supply, costs, benefits and constraints of the system). In Costa Rica, for example, women have provided labour for the construction of rural aqueducts, but once the work is completed they are conspicuously absent from the Administrative Associations that run these. It is thus often found that women are made use of so that the objectives of infrastructure projects can be achieved more efficiently, but that this does not result in consideration being given to their interests and needs in respect of decision-making processes that affect their quality of life. To improve this situation, it is important to secure greater participation for women on "water boards" and "users' committees", acting as channels for information, opinion, action, decision-making and education.

Poor women have also, on occasions, taken the lead in urban protests against the lack of water, the poor quality of services and the high prices charged, as the only way of making their voices heard. In some cases, such as in Monterrey, Mexico (Bennett, 1996), their action has had a positive effect on the direction of investment in infrastructure, revealed the relationship that exists between the microeconomic and macroeconomic levels, and brought to light the issue of power, since controlling water also means controlling a territory and the productive activities that are carried on there.

In Latin America, various methodologies have been developed to encourage women to play an active role and participate in decision-making with respect to water projects in order to ensure that they are sustainable, i.e. that they are maintained and have continuity (Whitaker, 1992; INSTRAW, 1994). In Bolivia, for example, training programmes have enabled 20% of the committees responsible for administering, operating and maintaining the water systems installed in rural areas to be staffed by women, and these committees have proved more efficient than those run by men, who do not feel the same urgency about repairing pumps when these develop faults (Yankson et al., 1996). The efforts of women from poor sectors have also been harnessed to promote a culture of environmentally sound water use, and communications projects have been implemented to transfer technology, in the sense of a systematic, planned and managed social process whose aim is to transfer the ability to apply knowledge, tools, organization and techniques from those who generate it to a given social group, in this case women. Administrators, however, are often strongly opposed to methodologies and training of this kind being implemented, and these are highly vulnerable since their implementation and success depend, in most cases, on the will of individuals and not on clear-cut policies on the issue. There is a widespread but mistaken perception that projects and programmes are "neutral" and that their benefits are spread evenly among all members of a community, and that therefore there is no need to introduce the gender variable.

The aspects referred to need to carry on being addressed and considered explicitly when public policies are devised in the region, until it has been ensured that all households have access to drinking water. But analyses and proposals must not just concentrate on the reproductive behaviour of women or the situation of poverty that affects them; they also need to focus on their economic role as consumers of resources and users of services, as well as on their training and the contribution they make to solving problems relating to water resources and the decisions that influence the development of the sector. As regards policy orientation, women should not be regarded merely as a "resource" for the conservation and improvement of the environment, the transmission of a new environmental culture, or the success of projects.

1.2 New areas for gender analysis

The complexity of the different social, economic and political processes that surround water resources, and the demands for sustainability, efficiency and equity in the development style being followed in Latin America, raise the need for new and better analytical approaches that reveal the diversity of the needs that exist within the population. Again, the different processes take on particular forms when we consider the social status and situation of women in relation to men.

In Latin America, efforts have only recently been made to apply gender analysis to issues where the importance of the roles and status of women is not so obvious, and there are not yet many studies or data available to sustain policy initiatives that are thoroughly informed by this approach. Nonetheless, we consider it indispensable for work to be commenced in this direction. For example, we believe that the macroeconomic dimension of the regional and national situations, and the limitations stemming from indebtedness, financial crises and budget restrictions, provide a much firmer basis for gender-oriented research on water services, state regulation mechanisms and the rights of the population.

2. Global processes and their impact on national policies

The growing and now crucial importance of macro-global processes for the economies and environmental policies of the countries raises a new challenge, that of establishing links between this sphere of action and the gender-water resources situation in Latin America.

The profound changes that are taking place in the "water policy" of the region are indicative of a desire to involve different sectors in the management and financing of these, on the basis of allocation mechanisms that seek to incorporate the logic of the marketplace. Historically, water has been regarded as a gift or as a public good that is virtually limitless and cost-free. Now, however, it is increasingly being viewed as a finite resource that needs to be preserved, and as an economic commodity, and this is leading to increasing involvement by private agents in the administration of services, and to a growing debate about their efficiency.

There is evidence to show that a great deal of wastage occurs in the water supply systems currently in place, and it is estimated that from 30% to 60% of the water that is treated and distributed through the mains never reaches the consumer because of leaks and illegal connections. These losses represent a cost of between US\$ 1 and 1.5 billion a year, which is roughly the amount needed to provide proper water and sanitation services by the year 2000 or so to all citizens who do not currently receive them (Hameed Khan, 1997). The inefficiency of the bodies responsible for providing drinking water and sanitation services has created an environment favourable to the present tendency to give a greater role to the private sector. In most of the region's countries, however, this sector is only just beginning to be involved in public water provision services, and the public sector still administers most of the infrastructure. As the situation stands, decentralization of operating functions and the establishment of a properly structured system of regulation are regarded as efficient ways of improving the workings of public services (ECLAC, 1998).

For water to be managed in an equitable and environmentally sound way, however, it is not enough just to have new rules; the actions taken by new agents in the sphere of water management, and the perceptions these have about the whole issue, are also of crucial importance. Women in different social segments need to be consulted about their requirements and interests in this area, and their right to information about the way pricing and investments are decided upon needs to be enforced, so that they too can exercise the rights they have as consumers to efficient service provision.

Again, although lip service is paid to community involvement as a key feature of the decentralization process, and this is even incorporated explicitly into many laws and programmes, such as the National Hydraulic Programme 1995-2000 in Mexico¹, the privatization approach tends to mean no more than the involvement of private companies in the administration of services, without any provision for participation by the community, let alone women as an interest group, in self-management processes for home use or the running of irrigation systems, or joint management of water services between the State and the civil society concerned. A lack of appropriate mechanisms to enable water users to participate in the management process is often the background against which social conflicts arise over this resource, a situation which does nothing to foster democratic processes.

In these circumstances, there is a need to assess the impact of sectoral market policies on the poorest segments of the population, and especially on women heads of households, considering that markets generate prices which do not necessarily reflect the social costs and benefits associated with the goods and services they provide. Such an assessment should make it possible to identify mechanisms capable of providing equitable access to the use and consumption of water services, and the kind of state action needed to bring about social and gender equity.

¹ This Programme states that "institutional coordination is unlikely to produce lasting results unless recognition is given to social participation" (National Hydraulic Programme, 1995-2000, Mexico, p. 57).

3. Irrigation and water rights

Capital distribution and access to natural resources, including water, are indicators of the degree of social equity that exists in a society (ECLAC, 1991 and 1992). Moreover, since natural resources are finite and subject to degradation, it is possible, by determining who has effective access to and control over these resources, to establish accountability for degradation and assess the extent to which individuals can adopt sustainable practices, to improve the quality of life and make decisions with respect to the course development should take (Rico, 1997).

Since the beginning of the 1990s, almost all the countries of Latin America have adopted policies aimed at transferring the responsibility for managing, running and maintaining irrigation infrastructure to farmers. This has involved considerable changes in related areas of legislation, an example being the holding of common land in Mexico. It has also led to the development of new markets to supply the products and provide the services needed for irrigation systems to be administered and operated, and this has meant reforms in water laws. In Chile, for example, the separation of land ownership from water rights, and the fact that after granting a right the state authority has no further influence over its allocation and the distribution of rights among users is determined by market forces (Solanes, 1996), mean that the traditional exclusion of women from land tenure is being reproduced in access to water rights, a situation that is exacerbated by the obstacles faced by rural women when they seek access to credit, training and new technologies.

There is therefore a need to examine the issue of access to and control over "water rights" by rural, indigenous and Creole women, and to take measures to ensure that these rights are exercised in an equitable fashion, considering the socioeconomic context into which they fit and the important role they play in agricultural development and the security of the food supply in these countries. The evidence shows that legal or customary ownership of water rights is generally vested in men, and this would appear to have consequences for family decision-making, and particularly for production units managed by women who are the main breadwinners in their households owing to temporary or permanent migration or the absence of a spouse.

In many of the countries, analyses relating land tenure by sex with irrigation, such as the analysis carried out on the Laja river basin in Mexico (Dávila, 1998)², show that whereas men own and work irrigated land, women are not in this same advantageous position. Again, it is often the case that irrigation is regarded symbolically and culturally as an activity for men, even though many women take part in it (Ahlers, 1998), and there is a mistaken perception about the distribution of productive tasks within rural families that causes the work carried out by women to be overlooked. These conditions mean that women are not consulted when infrastructure work to improve irrigation projects is being planned, or when grants are being allocated, and in general they are denied participation in decision-making and benefits, which further exacerbates the discrimination and insecurity that they suffer.

² Oral presentation at the Meeting "Contribuciones de las mujeres en la planeación y manejo de los recursos hídricos", 21-22 May 1998, Mexico.

3.1 Infrastructure works

A large and growing proportion of the demand for electrical energy in Latin America is catered for by constructing large hydroelectric infrastructure works. Again, state and regional authorities receive many applications for permission to build smaller hydraulic facilities designed to make use of surface or underground waters, both for domestic and industrial use and for irrigation.

To measure the social viability of infrastructure works and the effects they produce, there is a need to produce methodologies that incorporate gender indicators so that the social characteristics of users, or of those who will have to be relocated when projects are implemented or whose production activities will be affected by them, can be properly identified. This is because incorporating gender analysis is a way of predicting adverse effects that different investment projects may have on women and their interests, and it is therefore vital to give them a greater role in the drafting of regulations and in Environmental Impact Evaluation systems.

3.2 Human resources for the water sector

For a water policy to meet the requirements of equity, sustainability and efficiency, both men and women need to be trained to cope with new challenges and existing shortcomings.

If this need is viewed as an opportunity to enhance the role and participation of women, it is important to identify the ways in which they currently take part in the professional, administrative and political processes associated with water. It is also necessary to measure the access they have to human resources training for the sector, and the obstacles they encounter in seeking to obtain training or to take part in public decision-making processes in this area.

In Latin America, the majority of those few women who are trained in hydrology are employed in teaching and research, while only a very small proportion carry out activities in the administration, financing and decision-making field. The region does however have a pool of women with professional experience in managerial positions in public and private institutions, and it is important to identify their contribution to policy management and to strategic organizational change within these institutions, and to the introduction of new aspects for consideration in the decision-making process.

Improved opportunities for women to participate in identifying water-related problems and in formulating and implementing policies and programmes will enable them to make a more efficient and effective contribution. To achieve this, efforts need to be made on the one hand to ensure that women receive vocational guidance that points them towards non-traditional occupations such as hydraulic engineering while, on the other hand, their involvement should not be restricted to issues relating to residential water use, but should be extended to the social and economic issues that derive, for example, from the construction of major hydroelectric dams, the workings of the water-sector market, and water pollution control, which reflect the development model adopted in each country.

Although greater quantitative and qualitative participation by women in the decision-making processes of the water sector is a necessary precondition, however, it will not by itself ensure that the gender approach is incorporated into the policies and activities of this sector. For this to happen, training needs to be given in the characteristics and benefits of the gender approach as applied to legislation, programmes and projects relating to this resource.

The conviction that the gender approach not only has positive effects for the sustainability and effectiveness of projects, but is also efficacious in preventing and correcting the inequalities that exist between men and women and the unwanted socioeconomic consequences that arise within households and communities, brings the training needs of professionals and officials into sharper focus. Just as training courses have been devised and implemented for members of the community, and poor women in particular, practical guidelines need to be developed to bring the concept of gender into the process with objectives that are within the reach of administrators and engineers, so that this aspect is incorporated into every stage of the project cycle.

4. Institutionalizing the gender approach in the water sector

Water has become a strategic resource, both because control over it is a source of power and of sociopolitical conflicts, and because it is a key element in the drive towards a policy of sustainable development.

For regional problems relating to the provision of water to be addressed, the fragmentation that has characterized studies and policies needs to be put an end to, and institutional and legal approaches need to be developed to cut across sectoral boundaries and deal with the economic, social and environmental aspects of the issue in a concerted way. As things stand, any solution will have to involve fundamental changes to the way society is organized, and not just technical modifications (ECLAC, 1991). Gender analysis needs to be incorporated into these approaches to ensure that men and women can satisfy their water-related needs and interests, and that they can participate in the development of this resource in an equitable and efficient way.

The production of data is one of the prerequisites for progress in the institutionalization of the gender approach. Before they can design strategies and tools, politicians and planners need to have reliable information on the state of the sector, on the situation and status of the women and men who participate in it, and on the manner and nature of this participation.

From the viewpoint of a policy to generate knowledge and information about the inter-relationship between gender and water, the main obstacles that can be identified are: i) the limited use made of information resources deriving from censuses, household surveys and other sources of statistics; ii) a lack of communication and coordination between the competent institutions; iii) a lack of strategically defined objectives; iv) a lack of investment and resources; v) uncharted areas and gaps in information, especially as regards comparable statistics and indicators. To address these shortcomings, sustained, organized and coordinated work needs to be undertaken in the field of statistics. Furthermore, for information to be improved, cross-disciplinary studies need to be carried out in order both to generate detailed empirical data so that water policies and

programmes incorporating the gender aspect can be developed efficiently, and to enable us to establish methodologies that are capable of dealing with the complex interrelationship that exists, and the adverse effects that this may cause.

Since not all women experience environmental degradation and shortcomings in services in the same way, and environmental problems do not have an equal impact on all of them, a precondition for arriving at a proper understanding of the situation as regards access, usage, ownership and control of resources and services is that the differences which exist within the female population, and between men and women, be identified in relation to lifestyles, geographical location, social structure and the interconnection of systems of gender, class and ethnicity. Furthermore, roles and status need to be understood in terms of the patterns governing the division of tasks and the process of decision-making within domestic and productive units and political and economic decision-making bodies. Attention also needs to be paid to the types of technology that people employ both in their homes and in their productive activities, to discover what effects these technologies have, who uses them, and what roles they are associated with.

Public information on, for example, the demand for and supply of water for household and farming use, the legal aspects associated with water rights, and the costs in terms both of money and of time and health that have to be incurred to obtain water, needs to be broken down by sex so that the appropriate gender analysis can be applied. To achieve this it will be necessary to design and combine indicators and indices that bring to light the links between the dominant gender system and patterns of access to, decision-making powers over, and use, consumption and control of water systems, and subsequently to design mechanisms to monitor and evaluate the policies implemented, as a means of ensuring equity.

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