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# Sustainable development, water resources management and women's empowerment: the Wanaraniya Water Project in Sri Lanka

Seela Aladuwaka and Janet Momsen

*Water is one of the most important natural resources, and its effective management is essential given its scarcity. In rural Sri Lanka, the management of available water resources needs special attention because investment for water resource improvement is hard to obtain, and water itself is relatively scarce in the drier areas of the country. The Wanaraniya Water Project pipes water 6.5km from its source to individual houses in the village, saving women daily time and effort. The project is founded on commitments to community participation and the adoption of local knowledge. It was initiated by women, and has been operated and managed by them for the last six years. This study argues that the project can serve as a model for better planning of water management, and focuses on the unique strategies and innovative methods that have been used. In particular, it shows the impact of involvement in the project on women's empowerment. The implementation of the project has helped women to improve their leadership qualities, confidence, self-reliance, and gain more power in the community through their successful establishment of a village water supply.*

*Key words:* Sri Lanka; water; community; participatory development; women's empowerment

## Introduction

The gendered nature of water use and management is a problem for effective and sustainable water resource management (Coles and Wallace 2005). Provision of water for the family is a responsibility of women in most parts of the world. Women make the primary consumer and resource-use decisions for their families and their community, and women in all cultures serve as managers of fixed resources (Domosh and Seager 2001).

Women's experience and knowledge should, therefore, be recognised and factored into development projects aiming to manage and conserve water resources. Sustainable development requires women's full and equal participation in resource management,

and hence the issue of women's empowerment is of central importance. In many parts of the world, the daily search for pure drinking water is becoming an ever more time-consuming task, leaving less time for household work and child care (Momsen 2004). Thus, women and children benefit most from water projects, since it is their time that is, in the main, taken up with collection. Studies in Ethiopia, Ghana and Tanzania show that once water is easily available to villagers, the time previously spent on water collection is diverted to income-generation and school attendance. Ultimately, the gender division of labour may change as a result of water provision: 'in some cases, gender roles have become more interchangeable, as women have become empowered' (Momsen 2004, 117).

Yet, how can water projects be empowering to women if women continue to have a very limited role in water management beyond their immediate family and community? Globally, the leading organisations engaged in water management are very male-dominated. As stated by Kusum Athukorala (2007): 'the water world is almost solidly made up of men'. At worldwide symposia and fora on water, there is usually a marked discrepancy between the number of women and number of men participating. Women constituted only 20–30 out of the 503 participants involved in the Marrakesh Forum in 1997, and women numbered 10 out of 115 people attending the Consultative Group meeting of the 1997 Global Water Partnership (GWP). The World Water Council has 32 board members, of whom 3 are women; the International Water Quality Association has no women on the board; and the Steering Committee of the Global Water Partnership includes only 2 women and 17 men (Athukorala 2007). Nationally, there are very few women involved in the water sector at all levels of government.

In the field of Gender and Development (GAD), writers have discussed the empowerment of women extensively, and identified elements in it, including 'power within'. Through achieving 'power within', women reflect, analyse, and assess what they have taken for granted, and become aware of socially constructed and socially shared biases. Being aware of 'power within' is essential if women are to attempt to change their position. Naila Kabeer (1994, 229) states that 'this kind of power cannot be given, it has to be self-generated'.

Kabeer (1994) sees it as crucial for women to command resources – both tangible and intangible – if they are to become more empowered. 'Power within' arises out of 'women's newly acquired access to intangible resources of analytical skills, social networks, organizational strength, solidarity and sense of not being alone' (Kabeer 1994, 246). An empowering water project would, therefore, consider the potential that the project has to challenge unequal gender power relations, through meeting not only women's practical needs (Moser 1989) for water – a tangible resource – but also their strategic needs (Moser 1989) for time to spend in more potentially transformative activities, including education and income-generation, but also building their sense of power within through providing opportunities for women to think about their lives and build their consciousness of the challenges they face and how to address these.

In this article, we aim to show how in the Wanaraniya Water Project, women not only managed to fulfill their practical day-to-day need for a safe and convenient water supply, but also made progress in satisfying their strategic needs, by getting increased respect from men in the community and taking decisions on behalf of the community. The next section discusses the Wanaraniya Water Project further. The final section of the article analyses what is unique and innovative about the case study in terms of the methods that the women have used to make the Wanaraniya Project a success. We also consider what can be learnt from challenges faced during the project.

Fieldwork for this research was conducted in the Wanaraniya Gramasewa Niladhari (GN) Division (a Grama Niladhari Division is a government small administrative unit)<sup>1</sup> in Rattota, Matale. The purpose of this research was to learn about the water project, which was widely recognised as an innovative and women-run/community-based project. The field study was part of a Gender and Development course offered by the Department of Geography, University of Peradeniya Sri Lanka. Several teams of students from the class visited and conducted fieldwork.

The methodology used in this research took an ethnographic approach. Primary data were collected using several qualitative methods including key informant interviews, focus-group interviews, field observation and informal interviews. All quotations in this article draw on this research. A certain amount of cross-checking of the information supplied was possible by talking to officials and villagers. Several field visits to the village were made and a good rapport was built up with women in the village. Field observations of the water project and its structures (water tank, the dam and pipelines) were also undertaken.

## The context: Wanaraniya

The Wanaraniya Water Project is located in Wanaraniya, a GN Division in Rattota, Matale district. The Wanaraniya GN Division has 283 households, of which 13 are Tamil and Muslim families, and the rest Sinhalese. The total population in the village is 964 (485 women and girls, and 479 men and boys). The majority of families – 173 out of 283 – in the village are *Samurdhi* (the National Poverty Alleviation Programme) recipients.<sup>2</sup> Those who qualify for the *Samudhi* are from low-income families, and, therefore, the number of families receiving help from the *Samurdhi* is a good indicator of the level of poverty in the area.

### *Livelihoods and the gender division of labour*

Villagers first settled in this area in 1962, and the land given at that time to each family was half an acre of hilly terrain, and a quarter of an acre of flat land. The amount and quality of land limits agriculture. As indicated in Table 1, the main source of income for the majority of the villagers is labouring outside the village, while a considerable number of both men and women are unemployed. As shown in Table 1, the female

Table 1: Employment for men and women in Wanaraniya Gramasewa Niladhari Division

Employment	Female	Male	Total
Agriculture	–	08	08
Government employment			
Teacher	04	02	06
Police/military services	–	29	29
Clerk and other	01	–	01
Self-employment			
Small shops	10	03	13
Animal husbandry	–	30	
Carpenters	–	10	10
Masons	–	25	25
Entrepreneurs	30	01	31
Foreign employment	18	04	22
Labourers	05	200	205
Unemployed	90	76	166
<i>Source: Rattota District Secretariat Division, 2008</i>			

unemployment rate is higher than the male rate in Wanaraniya GN Division. Employed women are in the informal sector, mostly running small shops or businesses. Many women in this village have migrated to work in Middle Eastern countries. Of the 22 people from the village who work abroad, 18 are women. In general, people find it difficult to secure jobs during the rainy season in Wanaraniya.

### *Water in Wanaraniya*

People in the area lack most basic facilities, including water. Prior to the water project, the village had only three wells and three streams, all of which dry up during the drought season. The nearest perennial water source – the river Bambara Kiri Ella – is 6.5km from the village over hilly terrain. Obtaining water was a daily struggle for women and young girls.

In 2000, women in the village formed a society called the Vishaka Women's Society, and registered it with the District Secretariat (DS) in Rattota. The Women's Society is a voluntary organisation operating under the Women's Development Officer in the DS Division. The objectives of establishing a Women's Society were to improve women's economic status as well as women's leadership development. Such women's societies

operate in many GN divisions, supported, and advised by Provincial Councils (Regional Political Unit). The Vishaka Women's Society has 136 members. It began with small income-generating activities such as rice-processing, dressmaking and petty trading for poverty alleviation in the village. It was through this society that the water project was initiated.

### The Wanaraniya Water Project

Women in the Vishaka Women's Society decided to initiate the water project because of their desperate need for water over many years. Their original plan and vision was later translated into a successful water project. The women's plan was to build a dam across the perennial stream of the Bambara Kiri Ella, 6.5km away from the village, and bring water through a pipeline to the village. Then, they requested that the Rattota Pradeshiya Sabha (PS) (local government unit)<sup>3</sup> estimate the cost of the water project. At the women's request, a technical officer (TO) examined the proposed water project and gave the costing. The total cost estimated by the technical officer in the Pradeshiya Sabha for this water project was four million rupees. Then the Women's Society requested that the PS provide some funds for this water project as the PS helps villages when funds are available. Even though PS promised the Women's Society that it would provide financial support for the water project, funds from PS were never available. The women felt that they could not wait until the government built the pipeline to supply water because, from their experience, they knew it would not happen. According to the Secretary of Vishaka Women's Society:

*We worked so hard to get water, because we suffered from not having water for many years. We did every thing we could to get water. Women worked so many days with lots of sacrifices, and we never worked for money, but we made sure to pay men who helped us. That way, they cannot blame us later. When we built the small dam, we carried heavy materials on our heads in very difficult terrain. It was not easy, but we knew we would have water to our homes, if we worked hard.*

The Society worked closely with women and men in the village, sharing and listening, and holding meetings to take decisions with the villagers. For example, they consulted villagers (including both men and women), before they decided on how much each household should pay as a down-payment for a connection to the pipeline. Taking into account various considerations, they agreed to charge 1000 rupees (about US\$10) per household. That payment was an advance, and once water pipelines were ready, connections were given to those people who had made the initial payments. With the collection of down-payments from households, the project's initial preparation was begun in July 2001, with the technical support of the Sarvodaya Rural Technical Services (SRTS). This is the technical division of Sarvodaya which is one of the largest non-government organizations (NGOs) in Sri Lanka. It has an established rural network and provides a wide range of services to the rural poor including social,

educational, health, agricultural, and financial and energy-related activities. The SRTS provides technology and technical assistance in areas appropriate for rural development. As the project progressed with technical assistance from SRTS, the women faced the problem of finding funds to buy materials to continue the project. In the search for financial assistance for the project, the Women's Society was fortunate to get financial support from the Ecumenical Loan Fund, Sri Lanka (ECLOP), a Christian organisation. The ECLOP gave them loans at 12 per cent interest. With financial support from ECLOP, the Women's Society managed to build the dam and a village water tank.

In the meantime, the women faced the difficulties of repaying their loans to ECLOP. They knew if they did not repay on time they would not be able to get additional loans to complete the project. When they were unable to get any support from local politicians or local organisations, the women found alternative ways to raise funds to repay the loans. They used a lottery to collect money and so were finally able to raise the funds that they needed to repay their loans. One of the members of the society stated:

*When we could not pay our loans back on time, we decided to raise money by having a lottery. Some of our members walked daily for about a month to sell lottery tickets. We walked so much during that month, we literally had to replace our shoes weekly. It was so hard, but we never gave up. Somehow we sold our tickets and collected money to repay our first loan. If we did not pay our first loan on time, we could not get loans again.*

Construction of the dam and the pipeline was a massive task, involving village women carrying heavy building materials uphill, and laying the pipeline. Women also got help from men in the village to carry materials and do other required work. However, men were paid for their work. The women acquired technical assistance from SRTS, while the women themselves did much of the planning for the project. After seven months of work, the dam was completed, the pipeline laid and connected to individual houses in February 2002. Initially, the project provided water to 147 houses in the village. Later, as other households in the village wanted a water connection, they were given it at a higher rate, as they had not paid the original down-payment. Some women mentioned that they were unwilling to pay the down-payment at that time assuming that the Women's Society would never get this water project done or that women were not capable of doing such work. Even if the rates were higher for new connections, they are low when compared with the cost of a normal water connection and are still affordable for villagers.

## The impact of the project

In this section, we discuss women's perceptions of the impact that the water project has had in the village.

### Impact on health

Access to water has led to significant improvements in the village in many aspects. The water project has various health benefits. The community's new access to safe drinking water has resulted in improvements in villagers' basic sanitation and hygiene. Many of the households now have their own tap water for the first time. The use of water for domestic purposes (drinking and cooking) has increased and their personal hygiene has improved. We observed in several houses that they have built their own water tank, and water is readily available to their houses and is enjoyed by both men and women. One of the women who showed us her water tank (a comparatively larger tank built next to the kitchen) told us:

*... we are pleased that we have water to our houses, we do not have to walk far-away to get water anymore and carry water on a daily basis, and we have sufficient water for all our needs now. Before the water project, it was a struggle.*

Only a few houses still use wells which dry up in the dry season (Table 2).

The community's sanitation has improved through the water project because now they have better toilet facilities. Table 3 indicates the type of toilet facilities in the Wanaraniya GN Division. The majority of the households now have septic tanks. Out of 283 households in the GN division, 240 households now have septic toilets. This was only possible with access to water through the project. Lack of toilets is a severe risk to health and to the environment. It is an important aspect because it has led to a decline in childhood diarrhoea and other waterborne diseases. Improved access to water has brought better health for people in Wanaraniya. Access to water has led to significant improvements in the village in many aspects.

### Impact on livelihoods

Not only does the improved water supply provide for villagers' water needs, but it has also led to them being able to engage in different income-generating activities. For example, families were able to earn an income through vegetable cultivation after they had access to water for irrigation (Table 4). They are also able to work in brick-making

Table 2: Drinking water source in Wanaraniya Gramasewa Niladhari Division

Drinking water source	Number of households
Tap water	189
Well	12
Common well	20
River/stream	03
<i>Source: Rattota District Secretariat Division, 2008</i>	



Table 3: Toilet types in Wanaraniya Gramasewa Niladhari Division

Toilet type	Number of households
Septic toilets	240
Pit toilets	16
No toilet facilities	26
<i>Source: Rattota District Secretariat Division, 2008</i>	

and poultry and mushroom production. Access to water for these activities is especially important during the dry season.

Women are also empowered through the project since they now have more time for paid work. These new activities help to improve their family income and their status within families and their community. Women now have taken up income-earning work such as opening up small shops, with more than ten in the village run by women. With the increased time available because they do not have to walk many miles and spend time to get water, women have found different sources of income such as fruit-picking. They collect jackfruit from village trees, boil, dry and pack the fruit and sell it to office workers as a snack. In general, better access to water has made it possible for women to think of innovative ways of increasing their income.

The Vishaka Women's Society also started a small loans scheme/revolving funds after they had repaid their loans to ECLOP, and began to provide more water connections and collect monthly water bills for each house. With some savings, women were able to put aside funds for a loan scheme. Loans are very small amounts, with the highest being 5000 rupees (or US\$50). However, with the revolving funds, women members now can take loans, and the society provides women members with credit facilities. It has helped them to improve their assets by embarking on income-generating work. The society provides loans only to the members, so the membership also increases

Table 4: Income-generating activities after water project

Income-generating work	Number of families
Brick-making	6
Vegetable gardening	3
Poultry farming	3
Mushroom farming	4
Rice mill	1
Bakery	1
<i>Source: Field data, Wanaraniya Gramasewa Niladhari Division, 2007</i>	

through these strategies. Having access to small amounts of credit for their projects at low interest helps women because otherwise they would be paying high interest to money lenders as is the case in many rural societies. Women in Wanaraniya benefit from this small loan scheme initiated by the Women's Society and find the loans very useful. Women in Wanaraniya do various income-earning work using materials/resources available in their own community. They boil, dry and package locally grown fruits and vegetables and sell them to city/office working people as snacks. Village women themselves take these products to offices to sell and this has been very effective according to one of the field officers in Rattota DS Division. This type of income work is made possible with the small loans women get from the Society as they need to invest in packaging material for their products.

#### *Impact on education*

Women felt that the process of constructing the dam and pipeline has played a significant part in building more solidarity, which has led in turn to more innovative activities being adopted by the Women's Society. Women now have initiated an 'after-school teaching programme'. The President of the Vishaka Society told us that they started this system because many parents in the village have no basic education, and so are unable to help their children to do their homework. For a small fee, a woman member of the Society teaches these children and helps them to complete their homework. She did not have regular employment before, and now she gets an income to support her family, while the children get assistance to complete their daily homework. We were witness to one session and we feel it is an innovative effort and a very useful one at that. The water project has had a positive impact on girls' education because now they have more time to attend to their homework and can stay in school instead of having to spend hours every day carrying water a long distance to their homes.

Furthermore, adult women are using their time to get vocational training that can help them to start new income-earning work. Rattoa DS Division has a unit in the Science and Technology Training Unit that offers courses and women from Wanaraniya get opportunities to attend these programmes because they have more time now. Because of the Vishaka Women's Society's successful projects the Wanaraniya women are also more motivated to attend these training sessions than women from other women's societies.

#### *Impact on women's sense of 'power within'*

Women in Wanaraniya have shown that, not only can they solve their water problem, but also ultimately they can stand on their own feet. These women now have dignity and strength. They no longer have to go to politicians to get assistance for their water needs; politicians now come to them to request water for their supporters. Politicians now request women leaders to join them and help in their campaigns. Women now can deny such requests with dignity and authority. They enjoy the strength to say no to

people who exercise traditional local power. No one can now influence them. The project can, however, expand to adjacent villages if they request water.

The water project helped to create strong female leadership in the village and people have trust in the women leaders in the village. It also helped to increase the confidence of the younger male and female members of the community. Women and young male members of the community now are willing to take leadership roles and this will help to empower them.

The leaders of the Women's Society now have worldwide connections, which are expanding their opportunities for networking and solidarity, and also have tangible effects. A group of women from Australia and from Colombo, the capital of Sri Lanka, now help in other aspects of the daily needs of the village, not just the water project. The leader of the Women's Society was invited to Australia to talk about her experience. These Australian women now help the Women's Society annually by providing them with uniforms and books for village school children. The President of the Women's Society stated: 'We distribute those items among poor children equally and it is such a great help for parents'. She said that when they get clothing such as shirts from Australia, they are distributed among the men in the village without any discrimination. She said that the men enjoy those gifts, but do not truly appreciate how they have got them.

#### *Challenging gendered norms in households and community*

When we had discussions regarding the project, Rattota Deputy DS also stated that the Vishaka Women's Society has shown the rest of the villages in the area that women are capable of carrying out successful and useful projects. He also mentioned that their hard work paid off by having more recognition in other districts in the Central Province of Sri Lanka because the Vishaka Women's Society won an award for the best women's project in the Central Province in 2006.

The Secretary of the Vishaka Society mentioned during our interviews that she was asked to lead the Funeral Assistance Society for the first time in the village. Such male-dominated societies now recognise the ability of the women in the village. After she joined the Society, she said there was a great improvement in funds and activities. Women stated that villagers, including male members, now have more trust and respect for them as they make decisions for their village now. The Women's Development Officer in Rattota said that:

*I am so proud to work with women in the Vishaka Society; these women are role models for other women's societies in our District. They are well experienced now and have a voice, participate in our meetings and share their views. I encourage other women to learn from the Vishaka Society.*

The most important aspect for some of the women consulted in our research was that many of their husbands also supported them after seeing their successful efforts. The leader of the group said:

*We are also fortunate to have our families and husbands who support our work. My husband gives his full support to us. I spent countless hours initiating and organizing water project. My husband has given me his fullest support. I have high regard for his help with our work.*

Women have been given the jobs of reading the water meters, collecting money and the purification/cleaning of the water tank. All this has created employment opportunities for women and for some men as well. When male members try to sabotage the work; the women warn them of the risk of getting disconnected from the water sources. Because of the project, solidarity among women has developed, and they have gained respect from villagers. A few older men are still hostile to women leaders, though they enjoy having access to water. However, women handle them tactfully, while also warning them about disconnection of the water facilities.

## Challenges

### *Financial sustainability*

Financial difficulties potentially threaten the sustainability of the water system. The Society depend on the money they collect from the water users; but they charge very little. The women said that they cannot just increase the charges because, according to the constitution made by the women themselves, they have to discuss changes with the villagers and get their consent. Since most villagers are poor, increasing charges is not an easy solution. However, they have found an alternative way to deal with costs by charging increased payments for new water connections as a temporary solution.

### *Male resistance*

The fact that a minority of men can end up resenting women's projects has been noted elsewhere in Sri Lanka (Casinadar *et al.* 1987). During the focus-group interviews with villagers, it was clear that younger men in the village appreciated the effort made by the women of the village. Young men in the village have positive attitudes towards women's collective work and openly support them. One of the boys who participated in our discussion mentioned that:

*We are very happy to have a good women's society in our village and they are very active. Many people in our village now have access to water because of their effort. Villagers should recognize their hard work.*

However, a few men have put up resistance to the project. The leader of the society mentioned that they constantly have to go to the police:

*I have had to go to the police more than 13 times to answer various petitions sent by some men in the village. There is no basis for these petitions except for false accusations. A small number of men in the village try to find fault with us and try to destroy our strength.*

Only a few men are unhappy about the progress made by women. With women's efforts, the whole village benefits and certainly women generally get respect from men. The jobs created by the water project were not just limited to women. Men engage in income-earning activities enabled by easier access to water, with both men and women involved in brick-making. Men in the village also got some employment opportunities directly with the water project.

### *Resisting the influence of local leaders*

Now that the water project is completed and the infrastructure is in place and well-maintained, many groups would like to own the project. Women leaders said that they would not let anyone (politicians or local-level groups) take over the project. They said: 'this has to be our project and we must have control and it should remain as it is'.

We were told that the Society constantly has to deal with local politicians, but now feels strong enough to reject political requests. According to one of the women leaders in the Society:

*We got several letters from local political members requesting us to give water connection to their friends. We will not do that because we still remember how badly they treated us when we asked for help. Not only they did not help us, but also they insulted us. For so many years, they took our votes promising that they would provide water to the village, but they never did. It is our turn now.*

The local PS had also requested that the Society hand over the project to them. The women refused that proposal as well.

### Factors in the success of the project

In the research, women were consulted about their views on the factors contributing to the project's success. These are outlined here.

Women's commitment to hard work has been a key factor of the success of the water project. Women leaders described the almost unimaginable hard work involved, and the fact that the project went through various ups and downs. Sometimes they faced harassment from various people when they tried to get support for the project. Some politicians even threatened the women leaders.

The women to whom I spoke in our research felt that the water project had brought them together, and kept the women energised. The need to raise funds was a particular aspect which demanded a great deal of commitment and creativity.

Women's approach to handling planning in a participatory way was simple, but highly effective. Earlier we detailed how women consulted villagers to fix the down-payment rate for water connection. Women were aware of their unequal status in the village, so they planned accordingly, ensuring that men were fully involved, in order to avoid problems with men in the village in the process of construction. They also

ensured that men involved in the work were actually reimbursed, to ensure that goodwill was generated. A very important factor in the success of the project was working in partnership with others. The society worked with other organisations, government bodies, and NGOs. Through constant interaction, the women leading the society are now well-versed in how to approach and deal with officials and outsiders, and know how to get things done. This is a great achievement, and has had a considerable effect on their sense of 'power-within'. They are now in a position to challenge officials, and communicate with more confidence. Furthermore, because various different organisations also got involved in the project, women leaders and women in general in the village are more aware of the issues they hold in common, and are better able to connect with each other, with local groups, and with community leaders and officials.

The sustainability of any project is crucial. In the case of water projects, the infrastructure which is constructed needs to be maintained after the project finishes. In the case of the Wanaraniya Water Project, it is evident that the project will continue as it was planned and implemented by its users so they are able to maintain it. It was planned with the local community, at meetings held with villagers and their consent was obtained in the process. Women themselves laid the pipelines and built all the rest of the infrastructure. Villagers have a stake in the project, and now support and help to maintain the infrastructure. They feel a sense of ownership, owing to their own efforts and struggles, and now they benefit enormously from the project.

Any alterations, breakdown or failure of the system, can be attended to by the women. They know the technology, and so they do not have to wait for outsiders to come and help them. The elements of fixing any breakdowns and managing and maintaining the project are affordable to them, as they do not have to repay any loans and they collect monthly water bill money. They also have employed two women to walk from house to house to read water meters and then calculate the monthly bill for each house. Further, since they charge a somewhat higher rate for new water connections (new customers have to lay their own pipeline from the village tank) it also helps them to afford such needs. Two men in the village do water purification and some related work. They too were employed through the water project and receive monthly remuneration.

Women who planned this project from the beginning have used very effective skills. From the planning stage of how to get water, to digging pipelines and all the other related work, it was thought out well. When they realised they did not have the money to spend for digging pipeline ditches, the women got together and drew a map of the village. They included all the houses in the village and decided where the pipelines should go, marked the boundaries of each house, and decided that house owners should dig the ditches marked by them. Once they had that plan, women leaders requested that members of the household dig the channel in front of their house. Women leaders made sure that all households completed the assigned work on

time. That task itself created a stronger connection to the project for the villagers and they became more actively engaged in the project. Women in the village also gained more skills from the responsibility of meter reading, billing and money collection. The project leadership has given these employment opportunities to poor women in the village and they are committed to their work and earn some income through the water project as well. They are also proud of their work. Women came up with a billing plan and they have also created a constitution for the water project. It is a well-planned document, and an innovative aspect unique to this project.

## Conclusion

The Wanaraniya Water Project in Rattota can teach planners some valuable lessons. Not only does it show how women can participate effectively in resource management and development, but it also proves how sustainable development can be achieved through grassroots bottom-up initiatives. The people who are best qualified to undertake projects are community stakeholders, who are most familiar with local conditions. The Wanaraniya project has had several positive outcomes which can be summarised as follows: (1) local people can participate in development and resource management; (2) women have the ability to organise and bring change; (3) the commitment and hard work of women can pay off through empowerment; and (4) needs-driven development initiatives bring spin-off benefits to communities by allowing both economic and social improvement. Wanaraniya women were the geographers who drew maps to locate houses and pipelines, the engineers who decided where to put the pipelines, the planners and decision-makers, and most importantly, they are innovators bringing sustainable development to their community.

The water project in Wanaraniya has shown that community participation is fundamentally important to the success of the project. The lesson we get from this water project is that it is not just financial or technical solutions that are needed for access to water resources. There are other equally important aspects such as participation of the stakeholders and locals who need the improvements. More often, developers do not consider the gendered nature of water use and access to control of resources. Women are rarely included in the process of decision-making in water resource management. However, the Wanaraniya Water Project illustrates that women are capable of getting work done. It is a lesson that developers and decision-makers should think about in their approach to resource management. It is also evident that the project not only fulfills the practical needs of the community, but it also helps to achieve the strategic needs of women in Wanaraniya. Women's empowerment is seen in terms of improved skills, greater control over decision-making, and their contributions to village development.

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## Notes

- 1 Grama Niladhari Division is the lowest level of administrative division of Sri Lanka.
- 2 *Samurdhi*, the National Poverty Alleviation Programme was launched in 1995 by the government of Sri Lanka. The aim of the programme is to improve 'the economic and social conditions of youth, women and disadvantaged groups of the society'. It has three components: provision of consumption grants, saving and credit programmes, and workforce and social development programmes.
- 3 Pradesiya Sabha (PS) is a local government system, mainly dealing with issues such as health, water supply, and cleaning services. Funding of activities comes from various sources such as the provincial council budget. The PS generates their own small funds through the collection of fees from markets, tax etc. However, the PS plays a limited role in development planning.

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