Tackling Poverty and Gender Inequality through Agricultural Commercialization in Rural Sri Lanka: a case study

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Abstract

Agriculture is the basis of the rural economy and household livelihood strategies in Sri Lanka, where gender inequality and poverty is widespread. This paper analyses the impact of a series of IFAD interventions in the period 2001-2007 in the Matale region under the Matale Regional Economic Advancement Project (MREAP). The focus of the project was on poverty reduction through providing expanded options in agriculture. The premises on which the project was founded were twofold. First, encouraging a shift from subsistence farming to agricultural commercialization can be an important way to address poverty in a sustainable manner through capital mobilization, partnership and capacity building. Second, different types of interventions and the linkages between different interventions can expand employment and economic opportunities for the poor, particularly for women, and resolve issues of inequity, deprivation and social exclusion.

For the analysis of the program impact, data were gathered through a household survey and through participatory appraisals. The paper explains the ways by which the women farmers made use of the "family-focused" interventions through their consistent engagement in farming. Five categories of project interventions namely agro-wells, micro-irrigation, soil and water conservation with cash crop cultivation, enterprise development and micro credit are used effectively by women to enhance and expand production, employment, income and to build their own capacities to reduce gender gaps. By comparing the pre-project situation with the survey data the changes in employment, earned income, income distribution and assets are discussed. Fourteen indicators of change selected by women are used to relevant inferences.

Findings reveal that project financing, capacity building and vocational training, and women's social capital provided a 'triple lane pathway' for women to tackle the issues of poverty and gender gaps. Modern technologies - the agro-wells, conservation measures and irrigation – enable women to expand the area under cultivation and capital investment in agriculture resulting in increased production, reduced risk, increased control over market crop production and increased income. The direct results of the interventions as perceived by women themselves include significant enhancement in solidarity, self-confidence and social recognition; increase in knowledge and awareness regarding technology and markets; increase in financial strength, income and management capacities; and increase in entrepreneurial skills. Findings suggest that the 'triple lane pathway' provides a package for reducing poverty and gender gaps in the rural agrarian economies.

Key Words: Sri Lanka, agricultural commercialization, capacity building, gender, poverty.

1. Introduction

Agriculture being the basis of the rural economy of Sri Lanka has gone through a wide range of transitions in relation to various interventions. The interventions were associated with service, technology, market expansion and also land alienation for peasant settlements introduced at various scales, which were in the range of village settlements to Mahaweli Settlement Schemes commissioned under Mahaweli Irrigation Development. Interventions, in many circumstances were driven by the persistent poverty and landlessness experienced by those who were engaged in agriculture in rural areas, those who were unemployed and also those who experienced low productivity and unreliability of their sources of livelihood. Attempts made by the state in addressing these issues are diverse in approach and quite impressive with regard to the institutional arrangements made to facilitate the process of development. For instance, the Integrated Rural Development Projects which have been implemented since late 1970s used district administration as a framework with fully equipped institutional arrangements in around 19 administrative districts out of a total of 25. The interventions were centred on "rural unemployment", "poverty" and "low productivity". The spatial imbalances that have been established over the years were to be resolved or reduced. However, in relation to gender specific gaps in labour allocation, disproportionate distribution of assets, employment options and opportunities some serious negative implications impinged the economic advancement.

The Regional Economic Advancement Project in the Matale district (MREAP), funded by the International Fund for Agricultural Development(IFAD) has been designed, taking into consideration its greater growth potentials in agricultural production and marketing, and the need for promoting non-farm avenues with financing and capacity building initiatives to generate income and employment opportunities. Matale District was the second poorest in the poverty rank, and its persistent poverty demanded attention on poverty reduction through expanded options in agriculture. Agricultural commercial development, enterprise development and employment, rural financing, grants and company support activities were the main components of the project. Agricultural commercialization was to create multiple options for farm families including women and men and to contribute to the rural economy and livelihood. The project strategy was to work "beyond subsistence" and to connect rural farmers with the growing markets. The MREAP was designed to address the issues and concerns of the farm families and to solve the problems related to rural development. Its strategies were also designed to provide wider options for women with special grants and capacity building activities to create significant transitional effects in regard to gender equity in the agrarian economy. Its implementation strategy established and strengthened women's social capital enabling them to have their own capacity to reduce the gender gap.

The underlined first hypothesis suggests that agricultural commercialization has potentials to provide options for women to earn an income and address poverty in a sustainable manner through their access to capital, technology, partnership and capacity enhancement. The second hypothesis suggests that credit, training and skill development and their organizations are more likely to create linkage effects because in traditional subsistence agriculture women do not have such opportunities due to persistent inequity, deprivation, and social exclusion.

This paper presents from a gender perspective, the findings from a series of evaluation studies conducted on the activities introduced under agricultural commercialization and on women organizations, and also an evaluation of the IFAD intervention in the Matale District. It also discusses the effectiveness of the interventions and gender specific changes that had emerged in relation to the project interventions perceived directly by women.

2. The Background and the Project Area

The Matale District is located in the central province of Sri Lanka, and it consists of 11 Divisional administrative divisions and 545 Grama Niladari Divisions which are the lowest level administrative units. Its population is unevenly distributed with a low density in the dry areas with harsh climatic conditions - droughts and no irrigation. Its multi-ethnic composition, rugged mountains and lowland terrains, agrarian economy which includes plantation agriculture and subsistence farming, climatic conditions with specific rainfall regimes and also the disparity in socio-economic conditions are quite visible. These highly diverse phenomena with spatially significant features indicate the spatially varying development needs and prospects. The overall profile of the district constructed at the project inception showed that nearly 70 percent of the population derives its livelihood from agriculture, and out of about 100,000 households, nearly 40,000 live on farming. Rainfall is the limiting factor affecting farming, production, agriculture based employment and the farm income. Where irrigation is not available farming is confined to the major rainy season and during the remaining period it is affected by the unreliable and low rainfall. So prospects for farming, depends on supplementary irrigation from tanks, anicuts and agrowells and from irrigation water supplies.

Analysis of available data at the project preparatory mission estimated that, according to poverty line some 70000 rural households are poor; at least 15000 female headed households live below the poverty line. The rural poor households live on multiple sources; including labour work, farming, migratory work, micro enterprises, and on the free subsidy -'Samurdhi' payments given by the state. Small farm holdings, poor investment capacity, low productivity of crops, poor access to extension services, lack of training, and skill development, information, credit and market centres in particular are the main causes of poverty. The rather weak rural organizations for organizing production and marketing, unemployment and lack of employment opportunities attribute to poverty among the poor and the farmers. Employment opportunities for women, particularly for the poor in remote areas are limited to their family farms and labour work available at low wages within their villages and in the neighboring areas during the peak seasons in agriculture.

3. The IFAD Intervention

The IFAD supported Matale Regional Economic Advancement Project (MREAP) implemented activities for poverty alleviation and subsequent economic advancement. A wide range of economic activities with a real promise for expansion, upkeep and improvement with remunerative returns to the participants were introduced with a focus on poverty alleviation. In this connection many small scale farm families,

recognized energizing farm production as a solution to the income and employment problems. The project also attracted attention to the expansion of areas pertaining to non-farm activities, commercial and enterprise development. Implementation was facilitated through an alliance of producers and producer groups and their links with the private sector, trading, processing, marketing and input supply companies. The situation at the baseline in 2001, showed that nearly 62 percent of the households lived in poverty receiving less than Rs. 4,000/= per month (approximately to US$ 40); 32 percent landless; 28.4 percent without the basic facilities; 27 percent without permanent houses; 22 percent households with more than two unemployed persons; 10.9 percent without an education up to the secondary level, 15 percent female headed units and 22 percent in acute poverty. Secondary information also revealed that over 33 percent of the labour is provided by women, mostly engaged in irregular sources with low wages. In reality the total contribution made by women in family-based small scale farm operations, where gaps in farm labour allocations are stemmed by women's exclusively high engagement in providing unpaid labour, and the work done for subsistence has been exclusively high but not fully recognized.

The goal of the MREAP was to raise the income of the poor rural and farm families enabling them to sustain their income permanently above poverty line. The target was to reach over 9,000 households over a six year period paying attention to women and youth, creating opportunities for them to have profitable economic opportunities in agriculture, non-farm employment and in non-farm enterprises. The total cost of the project was US$ 14.7 million and was allocated for 4 major components. 32 percent – US$ 4.6 million for agricultural commercial development, 17 percent – US$ 2.5 million for enterprise development, 33.3 percent – US$ 4.4 million for rural financing and 20.7 percent – US$ 3.0 million for project and company management.

The project strategy consists of three key elements; partnership, project management autonomy, participatory and process approach. Partnership was to promote, instigate and directly support actions for livelihood improvement and enterprise development. In this regard business partnership among farmers and the private sector facilitated the link between producers and the markets and also helped small scale producers to organize their production in connection with the markets. The project management autonomy allowed an executive and catalytic function, with significant powers. It allows the project to ensure fair distribution of benefits and protection of the disadvantaged. The project was committed to consult the participants to identify any actions to be included in the Annual Work Plan and the Budget; the private sector and the NGO linkages with the producers and the communities; and punctual delivery of funds, materials and services to the end users. The participation and the process approach were followed in economic planning, implementation and monitoring. Village level participation enabled farmers to involve themselves in planning, and monitoring project activities while the private sector participated in the project management as business partners and beneficiaries. The women were able to grasp enabling opportunities as farm operators and producers, and their organizations as village level focal points.

The project introduced four major components with sub components.

1. Agricultural Commercial Development

    - Seed Production and Quality Improvement – seed and planting material production, multiplication and distribution; seed quality control and certification – institutional strengthening and commercialization of the regulatory agency;
    - Land and Water Management – rehabilitation of tanks and anicuts; development of agro-wells and soil conservation and water management;
    - Soil and water conservation- conservation of critical watersheds, cashew farming, development of degraded uplands with soil and water conservation measures;
    - Marketing and Technology Development – marketing initiatives and support, applied research and development, studies, demonstration and training; dairy development, agro-processing, agri-business villages, and Integrated Pest Management for vegetable production.

2. Enterprise Development and Employment

    - Micro/Small Enterprise Promotion and Private Sector Linkages – brokerage/fostering of links between Medium and Small Scale Enterprise (MSEs) and large companies, technology transfer, business, marketing training studies and counseling;
    - Rural Income Generation – entrepreneurial and skills training, marketing development through company linkages and development of group enterprises;
    - Vocational Training – institutional support and upgrading of training and employment information centres, entrepreneurial, skills and in-job training.

3. Rural Financing

    - Enterprise Development Credit – Loan funds and financial intermediation for farm, agricultural and general business enterprise development; micro credit to strengthen Women CBOs;
    - Group and administrative support- capacity building prior to granting seed money to CBOs including women CBOs;
    - Discretionary Funds – grants, deferred repayment and equity funds for planning, feasibility studies, seed capital assistance and sub-project support; marketing facilities for entrepreneurs of women organizations; agro-wells for women headed families; equity capital for income generating activities for the poorest of the poor and grants for small entrepreneurs; gender equity fund for providing seed-money for women CBOs to start

revolving fund and development of business skills of seed money recipients.

4. Project and Company Management

- Service Provision – service provider contracting, including intensive evaluation;
- Project Executive – project/company management, systems and services for promotion and marketing, operational direction, beneficiary and official liaison, work planning/budgeting, monitoring and evaluation.

The total profile of the direct project beneficiaries shows that at the implementation more women have been enrolled (See Table 1).

Table 1. The beneficiaries of the project by gender

Component	Number of beneficiaries		
	Female	Male	Total
1. Agricultural Commercial Development (agro-well, vegetable seed production, planting material, micro-irrigation, seed paddy, maize cultivation, mushroom. Inland fisheries, mango, red onion).	267 (23%)	917 (77%)	1184 (100%)
2. Enterprise Development & Employment (enterprise orientation, training – vocational, entrepreneurial & skills, nursing etc.).	5329 (61%)	3449 (39%)	8778 (100%)
3. Rural Financing & Grant Fund (credit, grant, WCBO seed money).	2899 (54%)	2498 (46%)	5397 (100%)
Total	8495 (55%)	6864 (45%)	15359 (100%)

Source: MREAP monitoring and evaluation unit, 2007.

4. The Methodology and the Field Data

Two sources, with further analysis are used as the base in preparing this article. The first includes a series of impact evaluation studies conducted by the author on a micro-finance programme for women; the development of degraded land by soil and water conservation measures; micro-irrigation systems and agro-well programme implemented by MREAP. The second source is the field survey conducted for the final impact assessment conducted in 2007, covering the project area and all the components. The data is further analysed in examining the effectiveness of the interventions in reducing the gender gaps and the changes. For all impact evaluation studies, household surveys were conducted to gather information from beneficiaries selected at random by administering pre-prepared questionnaires. Participatory rapid

appraisals, group discussions and interviews were used as instruments to gather information interactively. For the Impact evaluation study on a micro-finance programme for women organizations, 114 women organizations which benefited by the project grant and also the beneficiaries of women organizations representing a range of activities like commercial vegetable production, dairy farming, tree/fruit farming, agro-processing, packaging, sewing, small business, bakery industry etc. were surveyed (Wickramasinghe, 2005). Same methodology was used for the impact evaluation study on development of degraded land by soil and water conservation measures with budded cashew. Out of a 2,310 farm families involved in implementing this component, 509 families selected at random were covered. In addition, the farmers in one village cluster benefited by the Integrated Pest Management (IMP) intervention, and one village cluster which benefited through catchment development intervention were also surveyed (Wickramasinghe, 2006a). For the impact evaluation of the agro-well intervention, out of a 756 farm households which benefited by this, 123 including 100 male headed families; 18 women headed and 5 groups of farmers who established wells for collective use were surveyed administering a questionnaire (Wickramasinghe, 2006b).The impact evaluation on micro-irrigation systems was based on the information gathered on a pre-prepared questionnaire covering 107 farm families selected at random out of a total of 252 which benefited by the intervention (Wickramasinghe, 2006c).

The in-depth analysis presented in this paper is based on the information gathered in 2007, on a comprehensive field survey. A sample survey was conducted covering 1,118 beneficiary households and 55 non-beneficiary households selected at random from 11 Divisional Secretariat Divisions of the Matale District. Gender disaggregated data was gathered on a wide range of aspects pertaining to respective households. This data included demography, socio-economics including income and its sources, household assets and ways of their acquisition, property ownership, housing conditions and facilities, use of labour and its allocation patterns, household expenditure and decision-making, involvement in project activities, benefits and the level of satisfaction, access to services and past trends. Since the project had not established a baseline, the information on these was generated through recalled memory of the respondents to compare the pre-project situation with the after project situation. The data was computarised, tabulated and summarized by gender to examine the effect of MREAP intervention on women and in addressing gender related issues and women's poverty. A pre-project and after- project comparison was difficult due to lack of a baseline, at least to give a picture on changes, the comparison was made using the experience of the beneficiaries. A brief comparison of beneficiary and non-beneficiary households was also made to examine the gender implication of the MREAP interventions.

The 1,118 households surveyed for the final evaluation consists of 964 male headed and 154 female headed household units. The total population of these beneficiary households is 4,413, and it includes 2,265 men and 2,148 women. The per capita income of the beneficiary households is Rs. 3,871/= per month and the average family income is Rs. 15,280/. The approximate average household income prior to the project intervention was reported to be Rs. 11,250/=. The average household income of non-beneficiary households is Rs. 11,875/=.

5. Agricultural Commercialization in the Context of Poverty and Gender

Commercialization of agriculture in which a majority of the rural poor including women are being engaged is intended to promote farming activities and related business to create farm enterprises that offer self or wage employment to rural-particularly poor farm families. In the project design this component was directly and strongly justified in relation to the local context, which was dominated by the agrarian and rural features including family-based production operations. The major sub components include a wide range of activities; the production and distribution of improved seeds and planting material primarily onion and paddy, improved land and water management, irrigation, soil conservation measures including cashew farming on degraded land and risk prone areas, tenure arrangements, mushroom cultivation, micro irrigation and agro-wells. The principal trust was to promote aggregation and commercialization of the smallholder agriculture sector, develop integrated production and marketing chains in business partnership among farmers with the private sector; facilitate the expansion or establishment and operations of agro related enterprises such as input supply, processing, produce trading, manufacturing and credit provision; promote and foster similar development in the non-agricultural business sector, as a means of expanding employment opportunities.

Services were delivered through extension in partnership with the state agencies facilitating linkages with the private sector, state agencies and the community organizations, key instruments like provision of credit funds for farm, agribusiness and enterprise expansion, support for distribution and management down to the target groups; and availability of discretionary funds as grants or equity to facilitate enterprise development and associated facilities. The perspectives related to poverty and hunger is connected with this intervention. For instance, the recent World Development Report (The World Bank, 2008) looking at the Millennium Development Goal of reducing extreme poverty and hunger by half by 2015, called for renewed effort in promoting agriculture for development. It identified farming, waged labour and migration as the key pathways out of poverty. Experience gained in Sub-Saharan Africa shows that multi-stakeholder involvement enabled women to gain income by shifting from subsistence to cash crops (Lynn Brown, 2008). Collaboration between producer organizations and the private sector is critical in linking small farmers to the market (Umali-Deininger, 2008). Past experiences are quite crucial in designing and implementing strategies for poverty alleviation and reducing gender gaps.

At the inception of the IFAD funded project Matale District, it was realised that for many small farm families application of commercial agriculture is part of the solution to economic and unemployment problems. To raise and sustain the income of the poor and the farm families above the poverty line, farm-based occupations which were conventionally performed for subsistence were to be transformed into a profitable economic activity for providing consistent and remunerative returns. Commercialization of production was initiated through improved technology, financial allocation, extension, market linkages and partnership. The project focused on ‘farm families’, to provide opportunities for them to engage themselves in the process of commercialization and to ensure ‘reliability’, ‘stability’, and ‘regularity’ of income of the farm families.

In the project design, emphasis is given to female headed households, and as a result female headed households are included in the target group. The Project Appraisal Report stated its concern over women's engagement in the rural economy. It shows that women are major borrowers in many NGO and public sector micro-enterprise credit schemes; there remain as serious bias differential payment of men and women for a day's work; women are increasingly assuming the crucial roles of both providing most of the labour and effectively managing the farms; at the same time they contribute about six hours a day of the domestic and household labour; and women are not fully represented in middle or senior management in either the private or the public sector, nor in local community affairs. While the family focused intervention provided opportunities for the members of the family, the project also provided some special provisions for women allocating grants to provide seed money for women organizations, training on enterprise development, financial and business management, equity fund, discretionary fund, and funds to start-up their own enterprise development to cater for women's needs. The implementation process has facilitated mobilization of women to organize them to establish and operate credit schemes, farm enterprises for expanding remunerative returns to their labour, and to build their capacities and skills.

The productivity enhancement measures pertaining to agricultural commercialization are interrelated. Improved irrigation through technology and conservation measures; establishment of agro-wells to provide reliable sources of water supply; social capital, and partnership building and also company formulation; production diversification through dairy, horticulture, and commercial crops; agro-processing and value addition played significant roles in this endeavour.

Three project interventions focused on agricultural commercialization which contributed directly to reduce gender gaps and poverty are analysed in detail.

1. **Agro- wells** – The project has extended its support to establish 756 agro wells to increase crop production and thereby to increase farm income while facilitating the process of commercialization. Out of 756, 122 agro-wells are established by women-headed farm families. Women were able to get the full estimated cost of Rs. 100,000/= each for construction, while male-headed families received about Rs 80,000/= each. This intervention enabled the families to have their own water sources to enhance production, crop rotation and intensity and to reduce crop failures, and seasonal fluctuation. These were to establish links and trust between the market and the small and medium scale farmers. The findings of the field research conducted covering 123 beneficiaries of agro-wells are given in Table 2.

Table 2. The outcome and the impact of the programme

The outcome	**The impact**
<u>Physical changes</u> ▪ 105 farm families (out of 123)have expanded the land area under crops in the range of 0.5 to 03 acres; ▪ Fallowing is reduced, regular farming established and all 123 produce a second crop in the dry season; 32	▪ More land for family farm production; ▪ Increased production/productivity by almost 20 to 160 between base-line and the present; ▪ Low income receiving families, earning less than Rs. 5,000/= are reduced from 45 percent to 15 percent

percent families produce a third crop; ▪ Reduced risk of crop failure- during the rainy season paddy is produced, and 98 percent of the families engaged in producing a second crop- commercial vegetable farming for the market; ▪ Farmers supplied vegetables- knoll-khol, beet-root, fuffa, string beans, cucumber, bottle-gourd, bitter-gourd to the whole sale markets; ▪ Changed cropping pattern across space and over time; ▪ Enhanced vegetation cover and cropping intensity ;	between pre-project and post project period; ▪ Improved quality of farm produce through regular water supply; ▪ 71 percent of the farmers reduced seasonal hardship by producing reliable crops off the rainy season; ▪ Enhanced labour involvement, self-employment and labour opportunities by 45 percent; ▪ Secured more food for family without scarcity in the dry season; ▪ Enhanced purchasing capacity and investment on land; ▪ Market linkages through regular supply of farm produce; ▪ Increased number of vegetable crops, varieties; ▪ Improved quality of housing, sanitation etc. and household assets; ▪ Established a regular source of income; ▪ Expanded use of water for health and sanitation and off farm activities like brick making and dairy farming; ▪ Settlement of standing loans.
<u>Social and attitudinal changes</u> ▪ Created an interest in investing in farming; ▪ Land-based livelihood is accepted as a reliable source with remunerative benefits; ▪ Attitude over farming is changed with focus on commercial benefits; ▪ Resource management and sharing through group intervention; ▪ Self reliance and confidence.	▪ Reduction in family unemployment; ▪ Increase in labour involvement and readiness to work in family farms; ▪ Increase in self-interest on farming; ▪ Change in family status from subsistence farmers to commercial suppliers of farm produce; ▪ Women's labour and time used in fetching water is reduced; ▪ Social links are enhanced through market channels; ▪ Services are provided for a wider community with an authority over production; ▪ Water use for health and sanitation increased.

Source: Wickramasinghe, 2006b.

2. **Micro-irrigation –** 252 micro-irrigation systems; 60 sprinkler system and 192 drip irrigation system were installed through the project intervention. These were installed to enhance farm production; primarily vegetables and fruit crops like melon, pineapple banana and papaya for the market to realize the goals of agricultural commercial development through enhanced water use efficiency. The

findings of in-depth study of 107 micro-irrigation systems are synthesized in Table 3.

Table 3. The transitional effects of micro-irrigation

The outcome of the project intervention	The impact of the micro-irrigation system
Changes in farming	
• Farms with modern irrigation systems/water; • Additional extent of 32 acres of land at least 0.5 acres of land is cultivated by each family; • 6.5 acres of shrubland and 13.5 acres of farmlands fallowed during the dry season were turned into regular farms, • Cropping intensity across space by growing ¾ crops per year; • Cropping pattern over time/(annual) rotation; • Intensity and length of service delivery (irrigation/per day); • Reduced risks of crop failures; • Crop composition/selection; • Reduced vulnerability; • 30-40 percent reduction in water extraction from wells; • Increase in crop production and market.	• Confidence on land- based livelihood. Familiarity with and added advantage of modern farm irrigation; • Lack of "bottle-months" (months with acute hardship) – 88% reduction in seasonal imbalance; • Net monthly income increase by Rs. 8,000 to 10,000; • All 39 percent of the farmers who received less than Rs. 5000/ per month increased income by at least 8000/ • Added financial and purchasing capacity; • New elements in crop calendar/farming systems – 3 to 4 crops per year; • Self-employment throughout the year; • Added labour opportunities due to expanded area, elimination of fallowing and crop intensity; • Family food and income security gained through profit crops; • Improved solid investments and quality of life;
Changes in farm management • Labour use/savings from irrigation; • Multi functions of the irrigation system (irrigation, fertigation); • Water management through irrigation; • Conservation through enhanced water use efficiency/water extraction; • Reduced cost of energy use for pumping water.	• Labour savings through fertigation and irrigation – 40 to 50% reduction in labour and reduced metabolic energy used in flooding the fields; • Alternative use of time saved by women on commercial crops; • Reduced irrigation time – 3 to 4 hours per day; • Savings on cost – 40% reduction in energy expenditure; • Enhanced water use efficiency – 30 to 40%;
Attitudinal aspects • Interest in ivesting in technology; • Interest in replicating or scaling up; • Knowledge in water use/requirements and efficiency; • Market linkages.	• Confidence, enhanced family capacity and capability; • Involvement in commercial supply system through regular supply; • Proportion sold for the market – 60 to 80% increase; • A place in the market economy.

Source: Wickramasinghe, 2006c.

3. **Development of degraded land through soil and water conservation measures** – Land development measures included physical and biological measures which

were integrated into the process of agricultural commercial development to improve land-based livelihood systems for poverty reduction. This includes:
- Rehabilitation and restoration of land that has been already degraded due to unsustainable farming practices;
- Stabalisation of the risk prone areas that are vulnerable to land degradation were introduced through project intervention.
- Enhancement of production by introducing cashew into small scale farm operations. Technical support, planting materials, in-situ training, extension services and awareness raising were the key areas covered by the project involving the partner organizations. Three major measures enhanced biological productivity by introducing cashew; soil and water conservation to tackle erosion problems and restore degraded land, and Integrated Pest management (IPM). 2,310 farm families were engaged in implementing the first; 143 in the second where measures were introduced in selected catchment areas and 109 were engaged in IPM. The first measure was mainly due to wide adoption and the effort made in expanding cashew farming (See Table 4). Stabilization of the base of farm production the - land, and reduced risk and low cost of these measures were of greater interest, and of long-term effects.

Table 4. The indicators on outcome and impact

The outcome	The Impact
• Conservation measures established; • 2310 cashew farming in over 1300 acres and among small scale farm operators; • Land use systems with perennials and conservation measures; • 2310 farm families established perennial systems through project activity; • Additional land converted to cultivation by farm families; • Replaced seasonal crops with perennial commercial crop cashew; • Perennial vegetation established in marginal lands; • Technical know-how promoted among 2562 farmers in the remote areas; • Soil conservation measures and IPM integrated catchment development initiatives	• ½ an acre to two acres of land area brought under commercial crop by individual families; • Additional source of income; • Enhanced production and family income; • Established a new and stable source of income; • Reduced plant diebacks; • Adoption of soil and water conservation measures; • Reduced labour requirements; • Links with the market economy; • Changed attitudes towards conservation farming; • Interest in resource conservation.

Source: Wickramasinghe, 2006a.

The Project Supervision Report, without differentiating gender specific impact stated that:

Agricultural productivity has been substantially enhanced by the commercial agricultural development activities in seed production and quality improvement, improved land and water management including irrigation development and rain-fed upland stabilization, and marketing and technology improvement, while value addition to agricultural produce was enhanced through the enterprise development and employment generating activities, and increased coverage by rural financing services under the discretionary fund. The poor have thus been able to increase their income in large quantities through micro tanks and agro-wells and raise their level of food security and nutritional status in general beyond initial expectations (MREAP, 2006).

The analysis of gender impact shows that farm-based livelihood expansion and commercialization which is rationalized in relation to 'farm families' are of positive implications for women who are engaged in agriculture. The benefits reaped by women through these components of the agricultural commercial development are multiple (see Table 5). The transitional effects of the benefits extend beyond women's work reducing gender gaps and relations. In regard to agro-wells women reap the benefits of project support and technology under all 3 beneficiary categories; as members of male-headed farm families; women headed family units and also of the common wells established for collective use. The second area of direct gender implications is the micro-irrigation system which was introduced covering both male headed farm operations and women headed units. The third was the conservation related intervention which includes soil and water conservation for cashew farming, and development of catchments areas. The fourth is the areas related to employment generation though agro-processing like cashew processing and dairy farming.

Table 5. Benefits of other project activities to women

Activity	Benefits derived by women
Agro-wells	• Women of all beneficiary families secure their own source of water for growing crops for the market and for household use during dry season; • Reduced drudgery of providing water from outside sources (2/3 hours/day) and external obligation of using others' sources; • Reduced vulnerability to water scarcity enabled women to engage themselves in farming as a promising source of self-employment; - 0.5 acres of land turned into agriculture and 1/2 additional crops grown in former farmlands help to produce in excess, particularly varieties of vegetables, for the market for an income of at least Rs. 3,000/= per month, and assure diversity in family diet.

Micro-irrigation	• Drudgery of watering crops is eliminated. 3/4 hours of women's labour daily used in irrigating the farms are available for other use; • 0. 5 acres of land served with irrigation was intensified, an additional 3 hours is spent by women in commercial crop production. This gave them a minimum of Rs. 4,000/5,000/= per month. More spare time for market crop production for income. • Exercise an authority over farm management and with confidence they gain the capacity to invest in farms, for purchasing quality seeds (80 percent), hire labour for intensive work(by 20 percent) during the peak seasons; • Number of crops in irrigated fields increased from 2 to 6 per annum, for cash and domestic use. This allowed women to engage themselves in farming more consistently.
Soil and water conservation with cashew cultivation and cashew processing	• Women are able to establish an income source for long term benefits by converting under-utilized land; • Perennial crop cover reduce the drudgery of clearing and burning shrubs for seasonal crop cultivations; • Women of all beneficiary families reported additional benefits of improved environmental condition, shade in particular which allowed wild species with food and medicinal uses to integrate for local use; • Stabilization of eroded land; • 8 cashew processing centres provided employment for 16 village women throughout the year and 48 women during the harvesting period; • Processed and packeted cashew became value added products providing a cash income for women; • Women as producers, collectors, and processors established links with the market chain.
Dairy and improved cattle sheds and biogas	• Dairy farming helped to develop a source of additional income which was in the range of Rs 8,000/= to Rs.15,000/=;

	• Establish links with collecting and processing centres; • Technical knowledge and management experience are shared with others through women organisations; • 20 families established biogas units for lighting and domestic cooking. It was a facility for education enabling children to spend 3/4 hours on reading and women to have pleasant evening hours ; enhanced labour efficiency and mobility; • Work is extended 2 to 3 hours per day; • Reduced drudgery of fetching fuelwood for domestic cooking; pollution free household environment is secured with the source of clean energy for cooking.

Sources: Wickramsinghe 2005, 2006a, b and c; and 14 PRA sessions (2007).

These were the instruments for reducing conventionally evolved gender gaps. For instance the labour intensive tasks conventionally performed by women are reduced through the construction of one's own water sources and irrigation systems. This transition has enabled women to enhance their engagement in crop production, and secure an excess production which allows them to enter into markets for income. The agro-wells which were constructed according to technical standards solved the dangers of using wells with collapsing walls and the burden of labour intensive tasks of cleaning water sources and also the recurrent expenditure for cleaning wells season after season. Irrigation systems freed them from the drudgery of watering which was exhaustive.

The commercialisation of small holder farm operations implied transitions in the primary occupational space of women and the purpose of using their labour. Technology also became an input to production enhancement, income, employment and remuneration. The women organizations, built their solidarity to realize project goals enabling women to get access to project support; grants, technology, credit, training etc.

Several conditions enabled women to reap additional benefits. The first is their greater occupation in family farming and their engagement in various regularly performed activities. The second reason is related to a much broader phenomenon, driven by a series of inquiries- who does what, when, how etc. which inculcate gendered features into farming. The third reason was associated with low migratory employment options for women and the limited freedom of mobility by which women's preference for family-based, home-based and farm-based occupations has been established.

6. Mutually Reinforced Connections Reducing Gender Gaps

The agricultural commercial development is benefited by two other project components; the first is entrepreneurial skills and capacity building; the second is financing and credit. Participatory Rapid Appraisal (PRA) sessions conducted during the evaluation showed that they were in need of financial capital to invest in production related work to reduce poverty, and also capacity to tackle poverty. Women of farm families, irrespective of their engagement in farming, traditionally have a low capacity to address the issues of poverty and gaps in earned income due to 3 major reasons. The first is their lack of investment capacity, technology, and entrepreneurial skills to produce more to the market for income and to reinvest on agricultural enterprise or land; the second is their lack of access to credit and formal financing mechanisms; the third is women's inadequate social capital or their organizations to work through to reach the financing systems.

7. Entrepreneurial Skills and Capacity

Enterprise orientation skill development including managerial skills and leadership development, agro processing and technology programmes attracted more women than men through their organizations. For instance, 63 percent of the beneficiaries of enterprise and employment development are women. The programme on Income Generating Activity (IGA) is reported to be of direct impact on women in enhancing and establishing their capacity in enterprise and promoting commercial activities. 6,101 women are benefited by the IGA. Over 2,500 women were involved in the training given on identification of business opportunities and self employment and 705 women in agro-processing and technology. Field studies revealed that women who directly benefited from the IGA programme have earned an income and increased their investments on farms by 40 to 60 percent.

Vocational training is a sub component of the IGA that has enabled 1332 women (which is 31 percent of the total) to deviate from conventional domesticity and farm work to income generating activities, particularly to processing and packaging. A major training component on technical knowledge for food-based commercial enterprise provided by Cathyreach Memorial Centre on food technology has enabled women to improve their skills for producing high quality products for the market. 150 have received training in food technology, and they have acquired commercial opportunities for the local products.

8. Credit and Enterprise Promotion

Four categories of financial support were introduced by the MREAP; the equity capital to invest in income generating avenues including agri-business, matching grants for expanding and improving ongoing enterprises; seed money for women organizations to operate their own credit schemes including a revolving fund, and also loans (See Table 6).

Table 6. Beneficiaries under four major categories of financial support by gender (in Rupees thousands)

	Men	Women	Total
1. Equity capital for IGA total	3385	6959	10344
Percentage	33	67	100
2. Loan total	164004	66481	230484
Percentage	71	29	100
3. Matching grant for enterprise development	1153	1884	3038
Percentage (started only in 2006)	38	62	100
4. Seed money for women orgs.(194)	00	8440	8440
Percentage	00	100	100

Source: MREAP unpublished reports.

Except the category on loans which is mostly handled by the 'participatory credit institutions' which implemented their loans through community based organizations and groups, all the others are heavily used by women. For instance, 69 percent using equity capital; 27 percent using loans, 65 percent using matching grants were women, while 100 percent seed money allocated for women organizations were used by them. Decisions on training, awareness raising, group formation etc. made through their organizations have enhanced women's capabilities for negotiation, bargaining skills and also their capacity to produce better quality farm products for the market. All 194 women organizations facilitated the implementation of credit and revolving fund for poor rural women. 40 percent of the credit disbursed through women organizations are used on market oriented farming, food processing and packaging.

The credit system is the foundation for creating an entrepreneurial interest including farm enterprise in women and mobilizing them to enter into the markets with various products. Of 305 women 72 percent who participated in PRA sessions, are recipients of credit. This has been used as the stepping stone to enter the formal credit system operated by the State/Cooperative Banks and Thrift and Credit societies. The grants given by the project to women organizations are utilized to start credit programmes and revolving systems. The major source of credit for women is the revolving fund and that is primarily used for establishing their own enterprises (See Table 7).

Table 7. Sources of credit and their uses

Credit source	# of women obtained Credit	Purpose		
		Self enterprise	Family enterprise	Other family matters
W. organization Revolving fund	220	202	18	--
Emergency loans	41	03	--	38
Credit from banks	34	11	21	02

Source: PRA Sessions, 2007.

Membership in women organizations enabled women to get access to credit, organize groups to share the responsibility of repayment and enter into the cash economy. The respective families also have encouraged women to enroll themselves for several reasons. The first is their easy access to credit gives them opportunities to engage themselves in production work. Credit was used as a source for various types of family-based production work like agriculture, carpentry, business, small shops, bakeries, agro-processing etc. in which men have extended their support. The women managing these enterprises and making decisions earned special recognition, deviated from the image of dependence to self employees. The second reason was their ability to obtain credit without going through difficult procedures, and the easy repayment system. The third was associated with the multiple learning opportunities and possibilities for expanding the social network.

Credit is operated under three key categories; the first is the enterprise development for income generation, operated on 2.5% monthly interest, the second is the emergency loans to meet the unexpected cash needs to deal with emergencies; and the third is the consumption loans that are given on a 5% monthly interest to meet the cash needs. Eradication of fear of credit, vulnerability, confidence in lending, local capacity for IGA, address village women's investment needs and the establishment of women's savings through revolving funds. The key features of the credit paradigm constructed through PRAs are given in Table 8.

Table 8. Inputs from the newly emerged credit paradigm

Newly emerged changes through revolving fund	**Very significant**	**Significant**	**Some changes**
• Reduced vulnerability			
• Eradication of fear of credit and financial insecurity			
• Women's decisions in financing local activities			
• Strengthened collective spirit and mutual support			
• Enhanced labour allocation to remunerative work			
• Confidence in local women's own financing and lending capacity			
• Women's saving schemes			
• Local capacity to undertake IGAs			
• Women dealing with market challenges			
• Local capacity to meet village women's investment needs			

Source: PRA on 13th September 2007.

The recovery rate of credit already implemented by women through their organizations and also credit borrowed from the Cooperative Bank, Thrift and Credit Societies and Kandurara Development Bank is exclusively high. The recovery rate is over 95 percent and there has been only 2/3 case in default of payment. The saving schemes of women organizations are used by women to save about 5 to 10 percent. A minimum of Rs. 50/= is saved to withdraw in an emergency. These saving schemes

are not used for larger savings by the beneficiaries of credit or the non-beneficiaries. The system is seen in relation to easy access and operation to enter the formal savings scheme.

Interventions in developing entrepreneurial skills and investment capacities are used as key instruments for transforming farming into a profitable enterprise, and for gaining remunerative returns for farm labour – the women. Women of the poor families grasp the opportunities to build their own capacity in commercial development. 54 percent of the beneficiaries of rural financing and grant funding are women. This demonstrates the way a crucial impediment namely lack of entrepreneurial skills and financing is redressed through project intervention which enhancing agricultural commercial development.

9. Gender Implications of MREAP Interventions

The analysis of field data gathered from the beneficiaries is used to discuss the implications of MREAP on employment generation, income, and in developing livelihood assets.

Employment and Income Generation

Women have established and expanded extremely diverse income generating activities and many have invested on the work that they are familiar with. The field survey of 192 income generating activities shows that the types of activities include the conventional areas of women's work such as homegardening, agriculture, livestock farming, and sewing; new commercial ventures like business/shops, production of sweets and snacks for the market, processing and packaging, and the production and service work done jointly as a source of family income and employment (See Table 9).

Table 9. Income generating activities by the type and average income

Category	# of production operations	Income/per month (Rs.)		
		2000-3000	3001-5000	> 5001
Agriculture	19	10	09	00
Home-gardening	08	06	02	00
Sewing	28	11	12	05
Business/Shop keeping	21	02	14	05
Sweets & Snacks	42	12	22	08
Livestock farming	18	02	14	02
Processing & packaging	24	13	11	00
Others (carpentry, welding, brick making etc.)	32	06	14	12
Total	192	62	98	32

Source: Filed information gathered for the MREAP impact assessment in September, 2007.

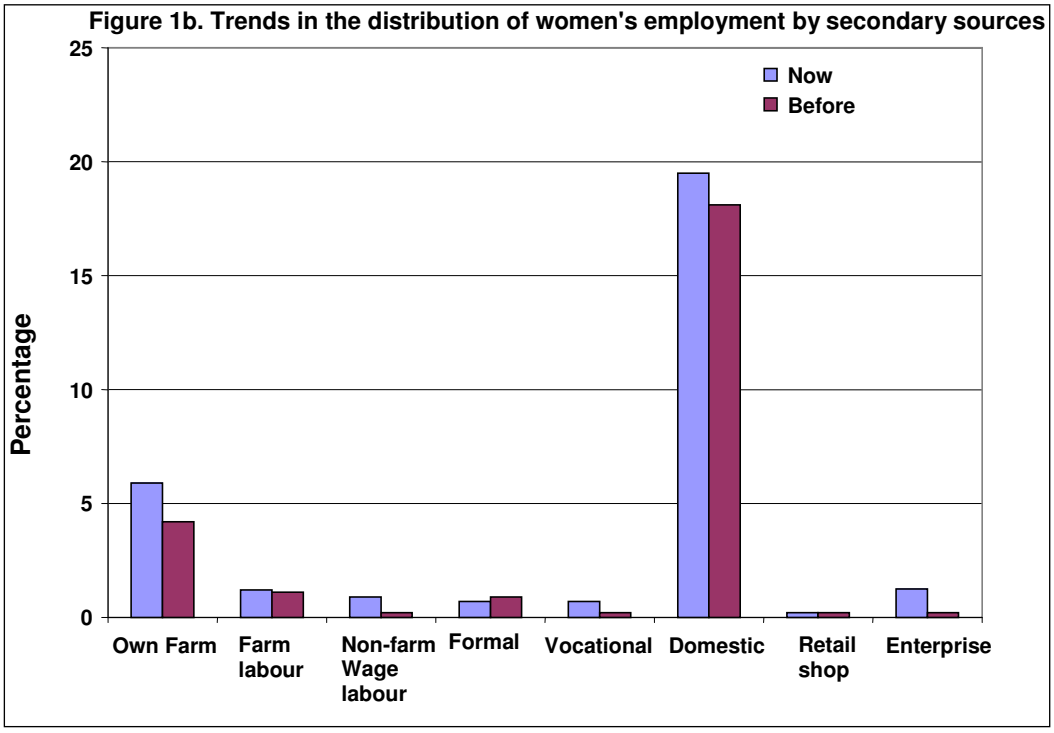
37 percent of the production operations established through project support are related to agriculture, agro-processing and livestock farming and are aimed at market production. The highest income earnings are from family based joint enterprises like carpentry, welding and brick making; followed by commercial production for direct

sale. The lowest is the conventional areas where 30 to 40 percent are used by the respective families. The renewed interest in engaging in agriculture is extremely important in sustaining the agrarian economy and also household subsistence.

Changes in occupational distribution

From 2001 to 2007 some changes have occurred in the occupational distribution of women. The overall picture given in Figure 1a and 1b depicts the following key points:

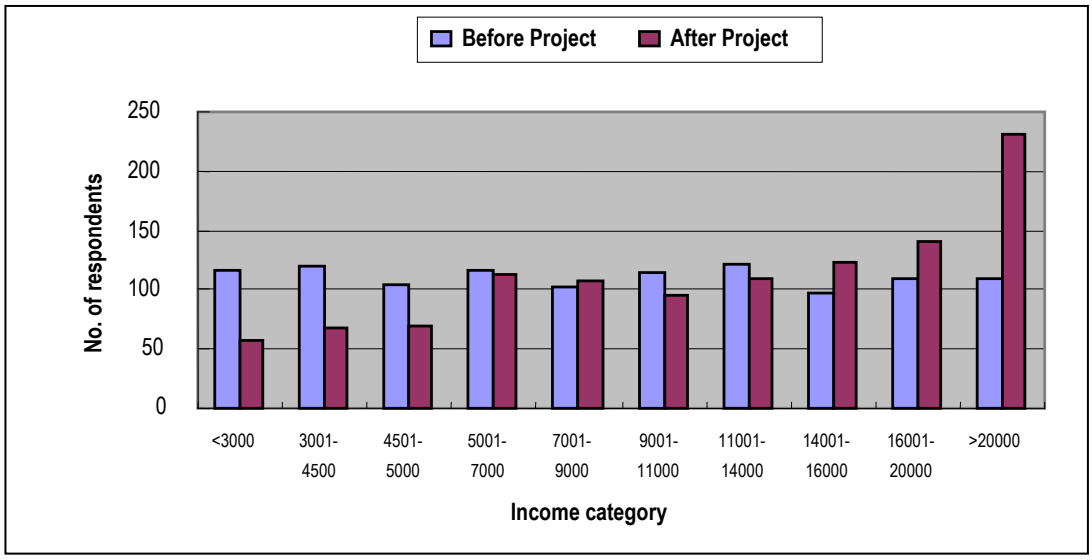
1. Women's occupation in their own farm has increased both at primary and secondary occupational levels;
2. Farm labour and non-wage occupation have decreased over the years;
3. There has been no change in their domestic occupation;
4. The highest increase is in enterprises including processing industry, vocational occupation with some noteworthy increase in retail shop keeping;
5. A decrease in male labour (young boys) engaged in their own farm work, farm labour and non-farm labour is quite significant;
6. Their occupation in formal, vocational and enterprise related work has increased substantially;
7. There is a noteworthy difference in women's occupation in formal, vocational and enterprise related work between beneficiary and non-beneficiary households. Women of the households that are not directly involved with the project are hardly engaged in vocational occupation and highly concentrated in the areas related to on-farm and domestic work.



Impact on Family Income

The total picture on the distribution of households in regard to the average monthly income shows some significant changes from 2001 to 2007. This is examined referring to the distribution of the total sample; the percentage of families falling under each income category. The situation demonstrates two transitions. The first is the decrease in households falling into low income categories. The second is the noteworthy increase in the number of households falling into the higher income categories (see Figure 2). Though this general pattern shows an increase in gross family income it is difficult to come to a conclusion using the information provided through recalled memory of the respondents, and without considering the high level of inflation experienced by the country.

Figure 2. Income distributions before and after the project



Source: Field information gathered for MREAP impact assessment in September, 2007.

However the key points revealed in the detailed analysis are given below:

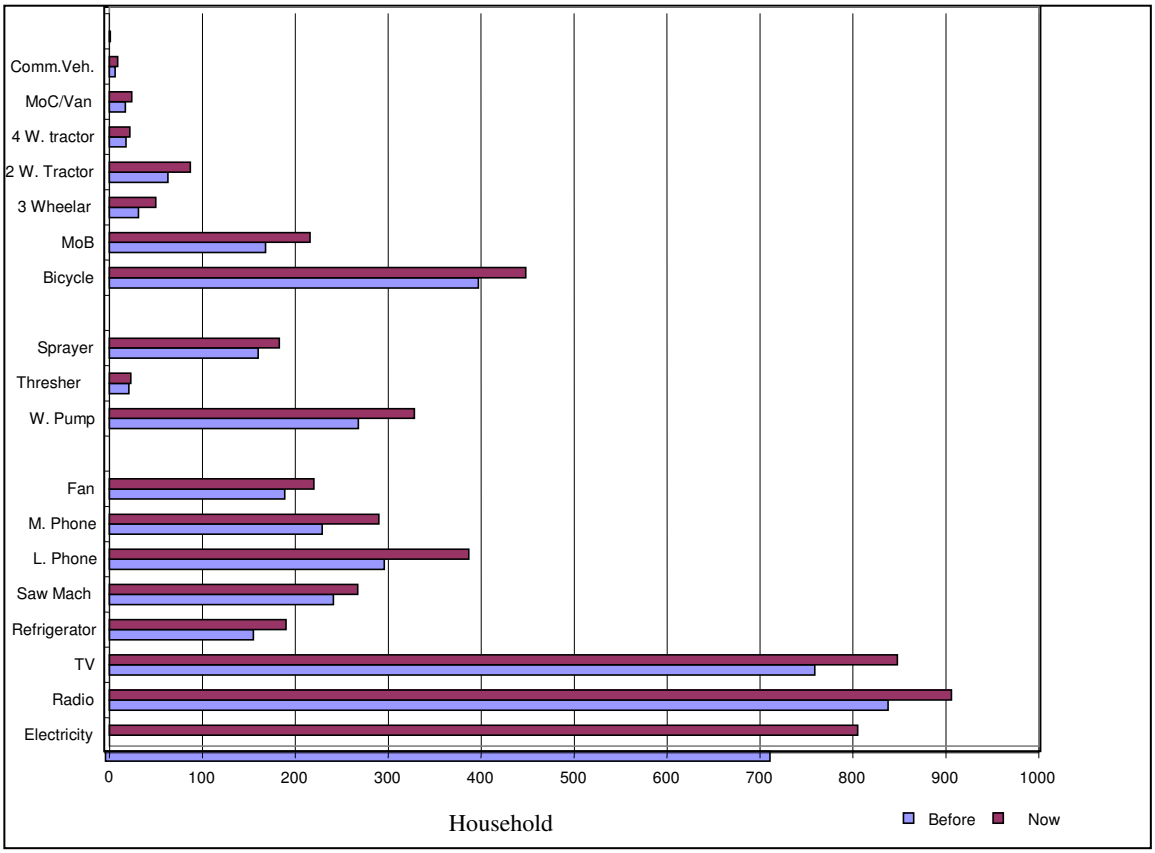
- The percentage of households in the lower income deciles has decreased by 6 percent; indicating a reduction in the percentage of households living on a low income;
- The percentage of household earning less than Rs. 3,000/= per month has reduced from 11 to 5 percent;
- A rather similar decrease has occurred in the next three deciles of the income category up to Rs. 5,001/=;
- The percentage of households in the higher income deciles has increased throughout at different rates.
- In addition out of the 154 women headed households 19 percent have earned less than Rs. 3,000/= per month prior to the
- The percentage of households in high income categories project, and that has reduced to 9 percent with the project intervention.; above Rs. 6,000/= per month shows a substantial increase;
- The percentage of women and men receiving less than Rs. 3,000/= per month has reduced from 60 to 50 percent regarding women and 56 to 49 percent regarding men.

This picture being rather crude could be used to reflect the changes but not to demonstrate direct MREAP contribution to escalate family income.

Acquisition of assets

The changes in household assets are taken as a measure of indicative effects. The acquisition of assets including farm equipments, sources of information etc. (See Figure 3).

Figure 3. The assets acquired during project period



Source: Field information gathered for MREAP impact assessment in September, 2007.

The analysis reveals that a majority of the families have secured electricity, a means to access of leisure and information- radio and TVs, and to a lesser extent water pumps, bicycles, telephones, sewing machines etc. The field information also shows a positive trend in accumulated wealth of the project beneficiaries. A comparison between this and the non-beneficiary households confirm that acquisition of assets by non beneficiary households is insignificant.

10. The transition in reducing gender gaps

The transitional effects of MREAP made through its intervention are clearly reflected in the PRAs conducted in 13 locations, where the changes experienced by the beneficiaries were discussed and decisions were made with consensus. The groups agreed to make their judgment using fourteen indicators in deciding changes and to line up their achievements. The fourteen indicators listed by women were the instruments which helped to reduce the gender gap and to introduce changes (See Table 10).

Table 10. Perceived impact and the measures reducing gender gap

Measures/indicator	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Women representation in village organization	✱	⋆	⋆	⋆	✱	✱	✱	⋆	⋆	⋆	⋆	⋆	⋆
2. Women organizations in rural development	✱	✱	✱	✱	✱	✱	⋆	✱	✱	⋆	✱	✱	✱
3. Women in leading positions in village organizations	✱	✱	✱	✱	✱	✱	✱	✱	⋆	○	⋆	⋆	○
4. Leadership in social activities	✱	✱	✱	✱	✱	✱	⋆	✱	✱	⋆	⋆	✱	✱
5. Enhanced capacities in women (knowledge, skills, confidence)	⋆	⋆	⋆	✱	⋆	✱	✱	⋆	✱	⋆	✱	✱	✱
6. Enhanced Management skills	⋆	✱	⋆	⋆	⋆	✱	⋆	⋆	✱	⋆	⋆	⋆	✱
7. Women's labour engagement in remunerative work(cash earning)	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱
8. Women's enterprises/IGAs operating	✱	✱	✱	✱	✱	✱	✱	✱	✱	○	✱	✱	⋆
9. Credit programmes/revolving fund operated by women	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱
10. Women's savings/saving schemes	✱	○	⋆	✱	⋆	✱	⋆	✱	✱	✱	○	⋆	✱
11. Women led financing	✱	○	○	○	✱	⋆	⋆	⋆	○	○	✱	⋆	⋆
12. Involvement in marketing/market decisions	⋆	✱	⋆	✱	⋆	✱	⋆	⋆	⋆	⋆	⋆	⋆	⋆
13. Enhanced authority over family decisions	⋆	✱	⋆	✱	⋆	✱	✱	✱	⋆	⋆	⋆	⋆	⋆
14. Women making independent decisions	○	○	○	⋆	⋆	✱	○	✱	⋆	○	○	⋆	○

Source: PRA sessions, September 2007: ✱= Very significant; ⋆= Some changes; ○= Not seen.
1= Dambulla, Kimbissa; 2= Laggala, Dasgiriya; 3= Galewela, Moragolla; 4= Galewela, Community hall; 5= Ambanganga Korale; 6= Ukuwela; 7= Rattota; 8= Matale, Kongahamulla; 9= Naula, Bobella; 10= Wilgamuwa, Weeragolla; 11= Yatawatta; 12= Naula, Aluthgolla; 13= Pallepola.

This shows that women's labour engagement in remunerative work and their own financial operations for income generation activities have taken place widely and have contributed towards changing the image on women and seen them as key stakeholders in financial management. A rather low profile has emerged regarding independent decision making and their representation in village organizations. Women organizations in rural development, leadership in social activities, and their engagement in remunerative work and credit operations indicate transition.

The project activities being strongly associated with improving livelihood assets have been able to make some transitions leading to economic advancement and poverty reduction with a significant impact on gender. The total picture shows the development of livelihood assets under five categories (See Table 11). The enhanced capacity, human and financial, have enabled women to enter the market economy while the assets acquired using their income provided means to gain access to technology, modern energy carriers, information and knowledge.

The total picture reveals that the gender specific variations tend to contribute towards gender equity reducing gender gaps in a continuum. The percentage distribution of respondents reveals that financial and human assets are the priority areas which contribute to develop livelihood assets for both men and women, whereas young men and women are seriously concerned about human capital and financial assets (See Table 11).

Table 11. Gender specific patterns in developing livelihood assets

Livelihood assets	**Men**	**Women**	**Young men**	**Young women**
Financial	52	64	33	27
Human	21	23	59	72
Social	1	3	2	1
Physical	20	9	6	--
Natural	4	1	--	--
Total	100	100	100	100

Source: Field survey, MREAP impact evaluation study, September 2007.

This suggests that the expanded financial services enabled them to initiate new enterprises; strengthening and expanding on-going or traditional ones and also in organizing them as commercial ventures. Skill development, including vocational and entrepreneurial skills also makes a promising progress, building their capacity to lead a better economic and social life. When compared to men, women value physical assets less, and this may be due to their interest in promoting newly emerging business enterprises which will further their control over the market economy. For youth the situation has been quite different from that of men and women. The social recognition gained by women is beneficial in undertaking the challenging tasks pertaining to self, children, family and the village.

An assessment of the changes as perceived by the women who are directly engaged in project activities is also made and the final picture compiled on a web shows that approximately 50 to 80 percent achievements have been made. Knowledge and awareness, which are the resources and the instruments in making a progressive move, have increased by about 70 percent. Financial capacity, income and management capacity have increased by 60 percent. The consensus was that the vocational skills of various natures have increased by about 50 percent, and many women have become capable of establishing or expanding and developing their own income generating activities by investing in conventional areas with modern technology. The overall impact of the project, when compared with the pre-project situation points out a progressive change. The direct experience of women, who are 98 percent of the participants of PRA perceive that they have built their capacity from 50 percent to 80 percent in many aspects that could be converted into empowerment indicators (See Figure 4).

Figure 4. Overall progress reported by women (0% = the baseline)

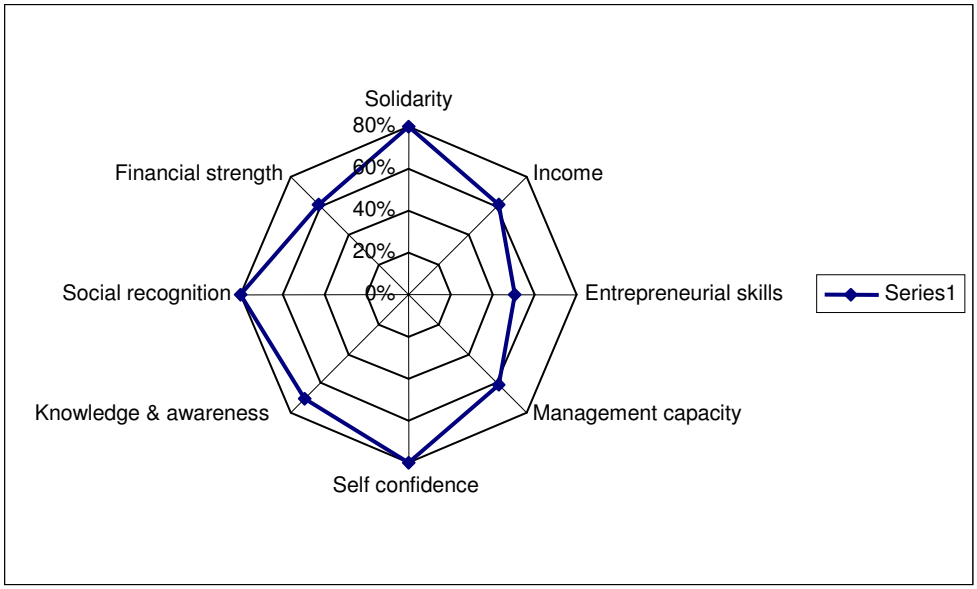


Figure 4, provides the perceived changes; in which women feel self-confident in productive, reproductive and in the public domain. The solidarity to raise a voice and work mutually in a cohesive manner is quite noteworthy.

11. Findings

Agricultural commercial development is a vehicle to reduce the gender gap. Within the rural context of this project area, in the Matale District the project has not intentionally designed to reduce the gender gaps through agricultural commercialization; instead it was designed to use farm families as its focus to implement its activities. Agricultural commercialization too has been selected as an instrument to develop farm families and to build their own capacities to address the issues of poverty. Women's engagement in family farming as the producers of crops and managers of land made women to reap the benefits of MREAP intervention, while technologies, training and financing have widened the option for the farm managers – the women. Evidences revealed that multiple windows effectively enable women to respond to the imbalance by themselves. Financing, training and awareness are used positively to transform farming where women have opportunities to exercise a greater control.

The complementary benefits of the elements focused on families and women are inseparable. Transitions made within respective families and women through enhanced capabilities and capacities work together in reducing the gender gaps particularly in agrarian economies where women conventionally work for service and subsistence which has to be improved through policies.

The findings also show the ways by which the gender gaps is addressed through a family-based economic advancement which is not concentrated purely in relation to the legal ownership of land but in relation to the occupations in farming. The strategic measures through which women become capable of moving towards

commercialization are multiple. Women become capable of turning the subsistence oriented family farming into commercial ventures with capacity building, through their financial and human capitals. Capital investments in farms assure women's right to control marked crop production and the income.

Credit, enhanced human skills with technology and knowledge, and women's social capital form a "triple-lane pathways" for women to move forward. Their move, on the one hand was facilitated by mutually reinforced benefits. On the other the multiple options in farming allowed them to earn an income and engage themselves in remunerative work. The credit and financing systems organised by the women contribute towards market crop production with significant up-scaling effects. The findings also suggest that women are extremely efficient in dealing with rather softer areas; building solidarity, confidence, social recognition etc., but require further input and support to expand the harder areas related to financial, managerial and entrepreneurship development.

12. Recommendations

The findings of this study suggest the necessity for introducing a "package system" that consists of capacity building measures, financing and credit and also social capacity building. The contents of the package should be decided in relation to the existing situation with an interest in addressing the issues and the conditions that impede women achieving the goals of equity. Rather than moving on single lanes in isolation targeting issues or problems in isolation, policies should introduce multiple lane pathway for reducing poverty and the gender gaps in agrarian economies. To reduce the gender gaps, which have been inculcated as a result of social construction, the modern interventions are to be strategically designed. Various elements are needed for tackling women's poverty, poor capabilities and capacities. 'Financing', 'capacity building' and 'social capital' are the key elements to be introduced, in a mutually nurtured manner through policy intervention. Supporting policy instruments are to be introduced to establish public- private partnership.

Furthermore, policies in agricultural commercial development are to be designed giving priority to eradicating technological, social and financial obstacles. Capacity building in women works effectively when women work through their social organizations. They work as centres of change facilitating agricultural commercialization through transformative action. In this regard a gender inclusive policy framework with extension/mobilization mechanisms should be introduced.

Policies and strategies are to be designed, taking into consideration the potential transitional effects, which are to be measured using indicators. Policies should be formulated mainstreaming gender into agriculture, opening multiple pathways for women.

In order to internalize gender, measures for monitoring and evaluation should be identified and included in the project design. Expected output and impact are to be measured and presented from a gender perspective using indicators to demonstrate the effective areas with policy options and a menu to work with.

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