

**Paper sent for presentation in the**  
**11<sup>th</sup> ICA Asia Pacific Regional Research Conference on**  
**Co-operatives And Sustainable Development**  
**(15<sup>th</sup> November, 2016 – Hotel Ashoka, New Delhi, India)**

**Thematic Stream: Promote inclusive and sustainable economic growth**

**Title of the Paper: Sustainable Development of Women-The Dairy Cooperatives way**

***By***  
***Dr. Sudha Kornginnaya***  
***Associate Professor, Department of Commerce***  
***Besant Women's College***  
***M.G. Road, Mangalore 575 003***  
***Karnataka***  
***India***  
***E mail: sudhak20@gmail.com***  
***Ph.0091-824-2224471 (Residence) 2492206 (College) Mobile:9945740633***

# **Sustainable Development of Women-The Dairy Cooperatives Way**

**1.0 Introduction:** Prioritizing sustainability as the key aspect of India's development, Government of India aims to encourage education, skill development, digital connectivity and entrepreneurship in a sustainable manner (IBEF, 2016). However, similar efforts are wanting in Bharath, (Rural India) where poor and the deprived women are mired in abject poverty and reeling under its concomitant ramifications. They lack organizing ability and are excluded from the mainstream of growth trajectory. However, they have latent vocational skills and commitment to secure livelihood to achieve their socio-economic empowerment. Given the motivation and guidance by the proactive leadership, the poor women can prove their mettle for achieving self-reliance and testify their lifelong allegiance to their cooperatives (Bibby and Shaw, 2005; Chhabra, 1978; Lorraine Corner,1997; Ela Bhatt, 1994; Renana, 1994; Sudha, 2010). It is they who need to reap the benefits of the growth process but know least of their potentialities to scale up the economic ladder from the bottom of the pyramid through their collective action.

## **2.0 The Research objectives**

The research paper provides an overview of the member centric strategies adopted by the leaders of women dairy cooperatives and elucidates how these inclusive initiatives could contribute to the realization of the sustainable development of their members in the dairy cooperatives and explains policy implications towards this end.

The study findings would contribute new knowledge to the cooperative literature continuum and to the policy makers in strategizing the activities that promote the livelihood security, social inclusion, access to economic opportunities and social services, underlying the sustainable development of the women members. It also provides insights to the leaders on the perceptions of their members regarding the efficacy of the activities initiated. Besides, the study intend to help the management to prioritize the activities that promote the sustainable development of both the members and the dairy cooperatives. The findings of the research may provide implications to other cooperatives to replicate the strategies in the dairy spectrum.

The paper is structured as follows. In the third section the earlier studies are reviewed to strengthen the theoretical underpinnings. The research methodology is explained in the fourth

section. Fifth, strategies of the leaders are discussed in detail. Sixth section presents an overview of pro-member inclusive initiatives contributing to the sustainable development of the members. The presentation of the results and a discussion on them follow. Finally policy implications of the study are mentioned and suggestions for further research are made.

**3.0 Literature Review:** Numerous theoretical and empirical studies were documented on different strategies, elements and dimensions of sustainable development of women members in dairy cooperatives.

The term sustainable development of women in cooperative lexicon assumes different perspectives in different contexts. It includes: women empowerment, gender equality, women development, right to freedom, gender inclusion, self-reliance. UN (2001, p.26) defined women's empowerment in terms of five components: "Women's sense of self worth; their right to have access to opportunities and resources; their right to have the power to control their own lives, both within and outside the home; and their ability to influence the direction of social change to create a more just social and economic order, nationally and internationally". When women develop the "ability to formulate strategic choices and to control resources and decisions that affect important life outcomes" they are said to be empowered (Malhotra et al, 2002, p.9). In cooperative 'octavo' sustainable development means the ability of women to exercise their choice of organizing themselves into cooperatives to fulfill their common socio-economic and cultural needs, to assert collective right and control resources and decisions for the greatest good of large number of members through their enlightened participation in all social, economic, cultural and political activities of the cooperatives leading to their self-reliance and elimination of their subordination. (Sudha, 2015).

The on-going debate on the post 2015 development agenda reaffirms the relevance and importance of cooperatives in the realization of the proposed sustainable development goals. They offer self-employment opportunities that contribute to women's social inclusion and empowerment as they are capable of addressing all dimensions of reducing poverty and exclusion (ICA 2013; ILO, 2014; UNGA, 2012).

Studies on white revolution reviewing the performance of Operation Flood on a national scale had critiqued on the success factors and critical issues underlying the development of the rural masses in terms of marketing infrastructure, price stability, productivity of livestock, milk

production and adoption of technology (Acharya, Huria and Vinodh,1986; Doornbos, Martin and Nair, 1990; Nair, 1985; Parthasarathy,1991, Shanthi George,1985).

Plethora of research articles have examined the need and the role of dairy cooperatives in alleviating the poverty of the landless and marginalized women. The dairy cooperatives are vital to overcome the impediments such as illiteracy, economic ignorance, social handicaps and have a potential for promoting socio-economic development of the women and their poverty alleviation (Allie Irvine, 1997; ICA, 1975; Mascarenhas,1988; NCUI,1987; Riba, 1980). Members' active participation in organizing, leadership, cooperative democracy, education, training, self-help groups, employment and livelihood opportunities is found paramount for their self-reliance(Anitha Manchanda, 1998; Gunadasa,1980; ICA,1997; Renana Jabvala, 1994; Roy, 1994; Sudha, 2005). Women's access to resources including credit, education, health, training facilities and involvement in income generating activities help in realizing their holistic empowerment(Anula, 1980; Aruna, Kumari.1990; Ela, Bhatt, 1991; Gurusurthy; 2000). Need for the gender integration and equality is also reiterated in the cooperative critique of many co-operators (Sandhya Neb,1998; Ranjana Devi,1999; Annie Bril Nippierd,1999; Dash, 2007).

Practical exposure to clean milk production and training to milk a high yielding crossbred cow for deprived women members have helped them to imbibe a culture of profitable dairy farming leading to their sustainable economic development(Shah, Verma, Mehta and Patel, 2015). The integrated system approach of collection, processing and marketing of milk and dairy products by their Federations with an assured market, remunerative prices and other input services in terms of veterinary services for livestock health are imperative for the development of members (Bowonder,et al.1985; Shah,1997; Shivaraman,1973).Women dairy cooperative societies are heralded as pioneers of a silent rural change in India by upgrading skills for self and wage employment through Support to Training and Employment Program for women, Government of India initiated programme(Meera and Gowda,2013; Sudha,2015). Congruent studies are also documented describing the socio- economic role of the dairy cooperatives bringing the positive impact in their economic, physical and socio-cultural life (Chaudhary and Upadhyaya, 2013, Joshi, 1990, Nadkarni,1987; Sheela and Ramegowda, 2013). Thus many studies have uncovered the role of dairy cooperatives in achieving the socio-economic progress of their members in general in a particular region. There are dearth of empirical studies on the role of leadership initiatives in women driven dairy cooperatives contributing towards the

inclusive and sustainable development of their members and the current study is an attempt in this regard.

**4.0 Research Methodology:** This study is descriptive and exploratory in nature and is a part of minor research project based on the empirical survey conducted in Dairy cooperatives in the erstwhile Dakshina Kannada District in the State of Karnataka during 2014-2016 (March). D.K District has a diverse socio-economic conditions, geophysical features and demographic factors influencing the working of the Cooperatives. A purposive sampling is done for the selection of areas and the dairy cooperatives. However stratified random sampling is adopted for the selection of the office bearers and the member respondents totalling hundred in number from the ten dairy cooperatives. Both primary and secondary sources of data collection are used along with the field observation. Primary data from both the organizations and the women members are collected through personal interviews by administering the semi structured interview schedules and through focus group discussions. In addition, organizational data are also collected from the official records of the cooperatives such as Annual Reports, Balance Sheets, e-reports and magazines.

**Measures:** A structured construct containing close ended questions was used to extract information needed for the analysis keeping in mind the objectives and design of the study. For the purpose of analysis, interpretation and presentation of the data statistical methods such as scaling technique, correlation, factor analysis, regression and non-parametric statistics tools are used. The scale of measurement was tested by using Cronbach alpha to assess internal consistency and reliability. Cronbach's alpha coefficient values for the sixteen variables ranged from 0.726 to 0.920 indicating that the scale had acceptable reliability (According to Nunnally (1978) Cronbach's alpha coefficient > 0.7 is considered acceptable).

**5.0 Strategies of the Leaders:** The leaders of all the dairy cooperatives have pro-member attitude and are truly representing the gamut of members. They are more focussed on the four Ps- people, purpose, plans and the performance. They have viewed their dairy cooperatives not as mere business entities but as a collective action of the *people* for the *purpose* of their upward economic mobility through the pro-member *plans* for achieving the optimal *performance*. Discerning the necessity and importance of the sustainable economic development of the women

of their locale and the community, the progressive women leaders have pioneered to leverage on the following strategies:

**a) Economic Empowerment Strategies :** Poor women reinforce their faith in their organised effort only when they reduce their poverty through secured livelihood. Continuous interface of the leaders with the poor rural women have helped them understand their pulse who were aspiring to secure economic emancipation. The frank discussions, continuous analysis and focussed research on the ground realities of the conditions that the women faced helped the leaders understand the fact that the economic necessity is the mother of invention of livelihood security. “Low capital intensity, a short operating cycle and steady returns” make dairying a feasible activity for the illiterate and the landless women dependent for fodder on common grazing and forest land (Amul,2004). Hence the leaders have considered dairying as an important means of *augmenting income and providing livelihood securities* for the resource poor women members of the locale.

Dairying not only serves as the means by which household women make a living over time but help women realise their dreams of right to work and right to development in a simple and dignified way. It provides the forum to connect to the market, access to opportunities to participate in social, cultural and political development process, which individually they could not have availed. Besides, women will get sustainable access to resources to meet basic needs such as food, water, health facilities, housing, educational opportunities and other sources of entitlement as well as to develop the power of resilience to face unforeseen risks(CARE, 2002).

**b) Association Strategies :** The leaders have prioritized the association needs of the members to win their long term allegiance. They have adopted inward looking approach laying focus on the members with the forward thinking mindset. “A co-operative is a symbiosis: a union of an association of people and a business, both of which have to keep healthy for the organism to thrive” (Fairbairn, 1994,p.18). Cultivating the responsiveness to the economic and social needs of the members as well as articulating the cooperative vision help them reach success excelling in serviceability and business viability with social orientation.

During the period of establishment, the leaders of Handattu, Hemmadi, Kanyadi, Soorinje and Permanki co-operatives have instilled confidence among the women, informed them about the potentialities of their organised effort and motivated them to set up a cooperative. This was mainly due to the fact that women lacked the basic knowledge of animal husbandry and dairying

skill and were from poor economic conditions, doubtful of their potential to garner the support required to start a venture. In addition majority of the respondent women were constrained by the patriarchal domination, orthodox customs, social practices and inferiority behaviour impeding their economic advancement and social mobility.

Currently, the leaders have devised innumerable needful initiatives that respond to varying and demanding needs of the members, which are beyond their rudimentary commercial or conventional business activities. Members identify the essence of cooperation and its outcome, rather than trace only the commercial sinews. Activities binds the members and the management through the bondage of faith, which is essential to enlist member participation. “To the extent, cooperatives show a concern for the people and are conscious of their needs and aspirations, they will have created conditions for developing human resources within the boundaries” (Taimni, 1993, p.232). Leaders meet their members at regular intervals, interact with them and integrate their needs with social and business activities and thus vouch that they value all the members. They opined that the overall performance of the cooperatives depends upon the extent to which these resources are utilized, developed and satisfied though they are not explicitly shown in the Balance Sheet.

**c) Inclusive Participatory strategies:** Members yearn for equitable opportunity to articulate their economic needs and to strengthen their socio-cultural solidarity (Krishnaswami, 1976; Sudha, 2007). But the status of ownership per se does not deliver any benefits(Parnell, 2014). So there arises democratic participatory eco system that fosters member inclusion. The leaders through their non-discriminatory policies and adherence to equality and mutuality are able to mobilize winning stakes of their members. The constant support and the motivation of the leaders have kindled the cooperative spirit among members and boosted their participatory culture undermining their caste, class and cultural differences and political distinctions. The study unearthed the fact that the Board decisions were never been related to power and wealth centres but for the egalitarian causes of the larger member community.

## **6.0 Overview of the Pro-member Inclusive Initiatives Contributing to the Sustainable Development of the Members.**

All the women dairy cooperatives under study have moved towards women-led development through women specific inclusive development initiatives. They have provided a concerted and

organized forum that provides a stable productive work and access to economic resources for the marginalized and asset less women irrespective of their caste, creed and their status. Work is central to the lives of the poor women who have suffered discrimination and loss of freedom at every stage (Bhatt, 2016). Dairy farming is the mainstay of livelihood of three fourth of the women respondents in the study area.

Innovative self-employment opportunities are also generated to augment the subsidiary income of the members. Permanki WDCs has set up cattle feed preparation unit, community fodder grass cultivation in barren leasehold land, vermi compost unit, entrepreneurial developmental activities, supported allied value added dairy activities, promoted a horizontal integration to form a business venture. The cattle feed preparation unit has promoted the productive engagement of the members, fostered the health of the livestock, increased the milk production and also income of the cooperatives. Every process in the dairy management has added economic value to their labour reflecting in the enhancement of capacity building and revenue spinning. For instance, all the women members have economical and sustainable bio fuel energy units augmenting green energy in their locale on the one hand and the enhancement of their well being on the other. The productive use of slurry manure for the horticulture and floriculture activities have proved very lucrative for the member respondents due to good demand for the same, stable returns and served as a subsidiary occupation for them.

Effective implementation of the Central Government sponsored programmes such as Support to Training and Employment Programme (STEP) in different phases and Ksheera Sanjeevini project have played a catalytic role in the transformation of both the cooperatives and the life of the members. It promoted an integrated package of inputs for the self-reliance and empowerment of women through sustainable income generation activities. The sequence of activities under STEP include mobilizing women in viable groups to form women dairy cooperative societies(WDCS), providing margin money, improving skills, arranging for productive assets, creating backward and forward linkages, improving/arranging for support services, visiting Amul in Anand, Gujarat, providing access to credit and awareness generation programmes in gender sensitization, nutrition education, legal literacy and sensitization of project functionaries. The project also includes computer and managerial training, organic manure unit, installation of fodder production machine, solar green energy and fodder processing unit in WDCs.

Marketing infrastructural services, extension activities, logistic support and regular incentives provided by the District Federation has added fillip to the women to take up dairying as entrepreneurial vocation leading to the expansion of white revolution in the region. Dairy farming has transformed them from the status of homemakers to the producers of dairy products and services in the supply chain of marketing. To promote self-reliance of the poor, WDCs have also initiated micro credit, micro insurance activities through the formation of self-help groups that provide socio-economic safety nets. Floating of Cooperative Bank and setting up of multi-purpose cooperative society by Hemmadi and Handattu dairy women members respectively exemplify their innovative entrepreneurial culture. Soorinje WDCs has organized computer training classes for the women promoting the computer literacy among them. All the aforesaid initiatives have drawn members' active participation and justify that they are the harbingers of prosperity to the rural economy.

## **6.1 Results and Discussion**

The present research measured the perceived determinants of the development of the members which are sixteen in number on a five point Likert scale ranging from 1 to 5 and analyzed to explore the factors in the scale. In order to test the suitability of the data for factor analysis, the correlation matrix is computed and examined. The results indicated that there are enough correlations to justify the application of factor analysis. Data were analysed using factor analysis in SPSS Version 20 and Principal Component Analysis with Varimax rotation was carried out as a method of multivariate data processing to analyze the factors contributing to the sustainable development of the women members. The Kaiser-Meyer-Olkin (KMO) (Table No.1) measure of sampling adequacy was 0.852(>0.50) and Bartlett's test of Sphericity was significant at .000 levels, which shows the sampling adequacy for conducting factor analysis(Malhotra,2005). In the results of factor analysis shown below (Table No.2) we identified three factors with each having Eigen values greater than 1. The Eigen values of three factors are 3.979, 3.868 and 3.645 and explain 71.827% of total factor variance. This is acceptable and thus establishes the validity of the measures.

Table No.1

## KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.852
Bartlett's Test of Sphericity	Approx. Chi-Square	1062.239
	df	120
	Sig.	.000

Table No.2

Rotated Component Matrix<sup>a</sup>

Factors	Rotated Component Matrix with factor loadings	Component		
		1	2	3
Economic Development	Provided gainful employment	<b>0.920</b>	0.033	0.051
	Increased savings	<b>0.918</b>	0.086	-0.037
	Entitlement to assets	<b>0.892</b>	0.081	0.024
	Access to micro credit through SHG Initiatives	<b>0.875</b>	0.071	0.004
	Increased profit	<b>0.799</b>	0.155	-0.103
Social Development	Food security and nutrition	0.081	<b>0.846</b>	0.044
	Enhanced cooperative participation	0.035	<b>0.815</b>	-0.103
	Micro insurance gave access to health care	0.107	<b>0.805</b>	0.074
	Generated livelihood activities	0.215	<b>0.774</b>	0.018
	Access to resources for education	0.077	<b>0.758</b>	-0.020
	Enhanced social inclusion	-0.037	<b>0.726</b>	0.051
Human Resource Development	Increased the functional skill	0.033	0.011	<b>0.913</b>
	Ability to communicate	-0.019	-0.061	<b>0.899</b>
	Inclusive decision making role	-0.091	0.086	<b>0.840</b>
	Enhanced leadership ability	-0.043	-0.041	<b>0.837</b>
	Community Participation	0.073	0.290	<b>0.754</b>
	Eigen Values	3.979	3.868	3.645
	Percentage of Variance	24.869	24.174	22.784
	Cumulative Percentage of Variance	24.869	49.043	71.827

Extraction Method : Principal Component Analysis

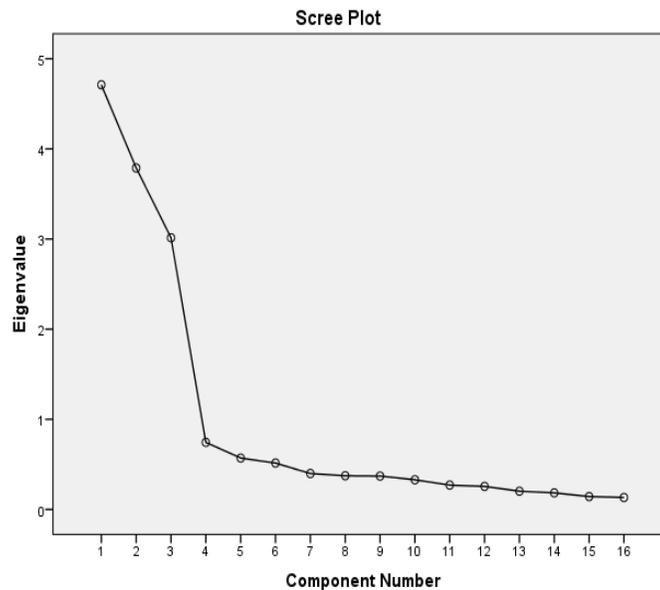
Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in 5 iterations

The first factor is 'Economic Development' with five items having factor loading between 0.799 to 0.920 and explains 24.869% of variance. Next six items are related to the second factor 'Social Development' having factor loading ranging between 0.726 to 0.846 and explains 24.174% of variance. The third factor 'Human Resource Development' constitutes five items, explaining 22.784% of variance with factor loading between 0.754 – 0.913. In the rotated

factors, gainful employment, increased savings, entitlement to assets, access to micro credit and increased profit to the cooperatives have high positive loadings(>0.50) on the first factor namely 'Economic development'; food security and nutrition, cooperative participation, micro insurance, generation of livelihood activities, education to children and enhanced social inclusion have scored high positive loadings on the second factor i.e 'Social Development' and the items such as increased the functional skills, communication ability, inclusive decision making role, enhanced leadership ability and community participation - all these variable have clubbed together indicating the 'Human Resource Development' of the members. All the three factors are the different perceived dimensions of sustainable development of the respondent women members. From the above description of the analysis it can be deduced that members value economic factors that contribute towards their development as a principal component followed by the social factors and in factor three, they value the capacity building inputs that influence their human resource development.

Figure No.1



The Scree Plot shown above displays the eigenvalues associated with a component in descending order and indicates that the three of those factors which are above eigenvalue 1 explains most of the variability in the data.

Table No.3

Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	F	Sig.
1	.910 <sup>a</sup>	.827	.822	.201	2.141	153.418	.000 <sup>b</sup>

a. Predictors: (Constant), Economic development score , Social development score and Human Resource Development score

b. Dependent Variable: Provided gainful employment

The regression analysis(Table No.3) was carried out and the  $R^2= 0.827$  indicated that the regression model explained 82.7% of the variance in the predictor (dependent) variables as evidenced by  $F=153.418(p=.000)$ . The Beta coefficients of 0.892, 197 and 0.180 with their respective 't' value 19.705, 10.581 and 10.211 indicates that the gainful dairy activity is positively related to the three dimensions of the development issue.

**Interpretation:** The opinion analysis and the open discussion with the beneficiary women respondents revealed the discernible fact that their dairy collectives have been the life line for themselves, their family and the community. Dairying has been the main sources of employment for 75% of the respondents particularly for the landless and small holder farmer members in the study locale. The indomitable trust, unwavering encouragement and motivational strategies of the leaders, the support services, marketing infrastructural facilities and the remunerative prices with good incentives offered by the District Milk Union – all these have ignited the spirit of the underprivileged women to form WDCs for the secured jobs and sustainable livelihoods. The gainful employment opportunities have created enormous benefits in terms of stable work, regular income, food and social security. The jobless and cow less women who have started dairying are now owning three to five cows resulting in the increased milk productivity and profitability. They are treading on the growth trajectory due to increased wealth in terms of savings, asset base and other economic resources. They assert their rights to work and other entitlements, which they would not have done individually.

The economic prowess and the social solidarity of the members is reflected in their mobilization into self-help groups and setting up of allied entrepreneurial activities mentioned in the aforesaid section 6.0. For instance, diverse labour intensive job opportunities created by the Permanki WDCs serves as a revenue spinner for both the rural poor and the cooperatives.

They have envisaged to set up mechanized feed preparation unit using the arecanut leaves generating more jobs and income to the SHG members. The exposure to computer training by Soorinje WDCs has scaled their technical competency contributing to bridge the digital divide. WDCs also conduct tailoring, computer training to generate additional income that support their household income. This exemplify their multi tasking culture and cooperative caliber and demonstrate how women value their economic labour that prevented them from sliding into poverty and debt trap.

The daring task of setting up of Multi purpose cooperative by Handattu WDCs and the Cooperative Bank by Hemmadi WDCs testify the business expertise and financial capability leveraged by the women to meet their diverse financial needs and deepen the financial inclusion. These women were once found not bankable for they lacked collateral security due to agrarian crisis and landless status. The research also revealed the fact that the dairying also supported the horticulture and the floriculture that ensured remunerative and stable returns to the women. The sale of organic manure and the dairy cows too have augmented their disposable income. Thus the proliferation of developmental initiatives have promoted the other cooperatives from diverse sectors, attracted localization of economic activities and self-employment opportunities in the region. This has prevented the distressed rural migration, created the economic climate for an organic agricultural exodus within the rural region itself contributing to a balanced rural regeneration. Thus through cooperative efforts women have been the catalysts of socio-economic change of themselves and their cooperatives. The congruent studies have documented similar findings(Chaudhary and Upadhyaya, 2013, Meeta Punjabi, 2004; Levi,1977; Sarker and Ghosh, 2010).

“Businesses usually succeed by having ongoing relationships of trust” (Fairbairn, 1994,p.3). All the dairy cooperatives have recorded an increasing growth in terms of equity capital, number of members and annual sales turnover in the range of 25%-30%. This signifies how dairy cooperatives perform on the economic front both to themselves and their members.

Women asserted that the timely supply of credit, effective use of the same and the prompt repayment through the joint liability approach has promoted their economic resilience that address financial exigencies. The study showed that given the financial literacy to the poor they are capable in the financial decision making that empowered them to manage both household

and personal finance transforming them from the state of utter illiterates to the functional literates. Majority of women (85%) have utilized their savings and the credit for purchasing the gold ornaments, increasing of livestock wealth, education of their children, construction and renovation of their houses and other productive investment options. Women who were once dependent on their spouses or their fathers have asserted that the dairy farming has gained them financial independence so much so that they have become the economic partners in the domestic affairs. This proves that the very act of cooperation fulfills socio-economic inclusion whereby the members neither need extraneous assistance to resuscitate themselves from poverty nor they need public support to unshackle them from deprivation or exploitation (Jha,1998).

The dairy cooperatives have emerged as a model for the women integration for rural development. The economic and labour participation of women was found robust in the study area as they could meet their unmet needs and unfulfilled expectations from the dairy operations. Female agricultural labourers who were in the abject poverty and suffering from malnutrition earlier have now increased their consumption of milk, nutritional food and also their purchasing power. Besides being the important source of diet, milk is the only or highly preferred source of animal protein available to the malnourished landless women(Kurien,1983). They opined that the incidence of ill health and exorbitant medical cost has been drastically reduced reflecting in their increased productivity.

The financial independence gained by the women have improved their social status in both the family and the community. The capacity building inputs have bolstered women to assert gender equality and raise their voices against emotional, psychological abuse and domestic violence that erode their self-worth and physical wellbeing. Women who were made to hold only subservient and subordinate role in their domestic life are now found active in the cooperative governance and political life. Nearly 30% of women are active in the local panchayat, community development activities gaining political visibility and identity. Women who have suffered from patriarchal societal structures are currently capable of breaking the glass ceiling due to their economic upward mobility. When women occupy positions of power and status the incidences of their oppressions and suppressions also decline (Dubey, 2015).

Women opine that they take major decisions in most of the domestic affairs such as education of their children, management of the credit, purchase of capital assets and future financial

matters. Domestic confined women are now found micro entrepreneurs due to the improvement in the vocational skills provided under STEP and Ksheera Sanjivini programme implemented for their upliftment. In their views the dairy cooperatives transcend above all the caste, religion, class and creed as they lay thrust on the milk productivity in terms of quality and quantity and marketability of the dairy products. They categorically express that dairy cooperatives epitomize the values and principles in their operations and embody the progressive practices, conferring them the distinct status and dignity in a society free from the scourge of abuse and exploitation. Majority of women who barely spoke earlier are now actively participate either as chairpersons or as members of the managing committees of their WDCs, negotiates confidently with the District Union's officials, know the marketing strategies thoroughly and disseminate information with their fellow members.

It is apparent from the study that human resource development is prominently identified with the concept of sustainable development as it deals with the capability approach advocated by Amartya Sen (1989). The training, dairy awareness programmes and field visits have leveraged the potential of women members, converging in women collectives at both local and district levels. Their regular meeting, discussions, participation in the activities have ensured social mobilization, market linkages, vibrant networking and lobbying capability. Majority of women (91%) are capable of running the SHG operations, are very responsive, responsible and accountable to their dairy cooperatives that vouch their organizing and functional skills. Women who never had banking exposures and lacked communication skills are able to handle their personal banking and fund management dynamics. Gender sensitization programmes have promoted never schooled women (20%) to make tangible contribution to the higher education of their daughters in the areas of management, engineering and medicines. Training in intensive cattle development and veterinary practices helped them to scale up their dairying competence to address the intricacies and challenges in the dairy domain. Access to micro insurance helped them to participate in the health care measures besides availing the benefit of medical treatment. The constant inclusive member relationship management strategies of the leaders have paved a long way in the reduction of information asymmetry, motivational vacuum, and social void which speaks of growth of social and cultural capital underlying the sustainable development.

All the women equivocally expressed the fact that the increased milk output, generation of bio-gas, solar energy, slurry manure, production of green fodder, horticulture, floriculture and

other allied agricultural operations, afforestation, water harvesting, increasing milch animal population and other related nature based community development activities have contributed immensely to the strengthening of natural resource base of the rural and urban economy. These activities have thus created the environmental wealth, addressing the environmental dimension of the sustainable development.

Access to equality of opportunity, social justice and members' participation and control are the vital planks on which the cooperatives ought build themselves. They are the hallmark of good cooperative management and governance. Women demonstrated high sense of allegiance to their cooperatives as they opine positively that their dairy cooperatives have provided the best forum for moral regeneration, social fellowship and inclusive identity. When asked why they felt that way they asserted that if they are what today on the developmental trajectory, it is attributed to the progressive leaders and their participatory initiatives.

**7.0 Policy Implications:** Dairy cooperatives serves as a very good institutional base for decentralized sustainable development in economic, social, human resource development and environmental dimensions. Hence it is imperative for the Federation and the Government to provide a level playing field in terms of legal and economic protection to the domestic dairy cooperatives in the tax regime, market infrastructures and in the vectors of capacity building. The entry of private sector with their capital, technological and competitive strength may pose survival specter to the dairy cooperatives. So there is a need for establishing enabling policy environment to enhance investment in the member driven dairy cooperatives. The governance of the cooperatives need to be given a policy support to increase the benefits to the producer women members. Scarcity of fodder resources and increasing price of the fodder, inadequate veterinary staff and services, lack of policy focus on the livestock security are some of the challenges that the women face. There should be an effective and proper dairy policy and regulation structure in place addressing these issues. Though women are organized into SHGs by their District Federation at the grass root level, their functional visibility at the District and State level is waning. Direction and advisory role of the State federation in sustaining their vitality is paramount to gain the unstinted solidarity of SHG members. Strict implementation of quality regulation is vital for the sustainable development of both the members and the dairy cooperatives.

## **8.0 Conclusion:**

The paper briefly delineates the strategies of the leaders that elicits participation of members. It also provides an overview of the pro-member inclusive initiatives contributing towards the cause. Based on the data analysis, this paper uncovers three factors indicative of the effectiveness of the participatory strategies - economic development, social development and human resource development. The various variables grouped under development dimensions are the reflective of the efficacy of women's vibrant participation in their cooperative strategies that consolidated sustainable development the dairy cooperatives way.

The important implications for future research are: to analyze the extent and nature of participation of women members in dairy activities across space and time; to analyze the problems and challenges faced by them in the dairy domain; to probe into more dimensions of sustainable development of women in the sphere of marketing and governance structures and to explore the appraisal mechanisms to assess the impact of sustainable development strategies on the women members and the organization.

.....

## References

- Acharya, K.T, Huria and Vinodh,K. (1986). Rural Poverty and Operation Flood. Economic and Political Weekly, September, 1651-56.
- Amul Dairy. (2004). A Note on the Achievements of the Dairy Cooperatives. Retrieved from <http://www.amul.com/m/a-note-on-the-achievements-of-the-dairy-cooperatives> on 2-10-2016.
- Allie Irvine(1997).National Dairy Development Board-Women's Dairy Cooperative Leadership Programme -A Case Study. In ICA (Ed.), Cooperative Leadership Training for Women- Report of the Regional Preparatory workshop, *Kaula Lampur Malaysia* (pp.98-104). New Delhi: ICA.
- Anita Manchanda.(1998). Development of Women Leadership in Co-operatives- Indian Profile. In ICA (eds.), Co-operative Leadership Training for Women. Report of the Regional Preparatory *Workshop* (pp.67-76). New Delhi: ICA.
- Annie Bril Nippierd,(1999). Gender issues in Cooperatives. Indian Journal of Cooperative Studies, 32(3),112-116.
- Anula, U.(1980). Income Generating Activities as a Means to Motivate Women's Participation in the Cooperative Movement In ICA (eds.), Enhancing Women's Participation in Co-operative Activities. Report of the Regional seminar held at Kandy, Sri Lanka (pp.142-149). New Delhi: ICA.
- Aruna Kumari.(1990).Women Involvement in Dairy cooperatives. Cooperative Perspective 37 (3), 15-18.
- Bibby, A. and Shaw, L.(2005). Making a Difference: Cooperative Solutions to Global Poverty, Cooperative College, Manchester.
- Bowonder, B, Dasgupta, B, Gupta, S and Prasad, S.(1985). Impact of Dairy Development Programmes, Centre for Energy, Environment and Technology, Hyderabad: ASCI.
- CARE.(2002). Household Livelihood Security Assessments: A Toolkit for Practitioners, Prepared for the PHLS Unit by TANGO International Inc, Tucson, Arizona.
- Chaudhary, Balak and Upadhyaya, Mukul (2013).Socio- economic Impacts of Dairy Cooperatives. Economic Journal of Development Issues, 15-16(1-2), 15-23.
- Chhabra, R.(1978). Dairy Development and Women, The Indian Express, July 15, 11.
- Dash, B.M. (2007). Entrepreneurship through Cooperatives- An Ideal Vehicle for Women's Sustainable Development. Women's Link, 13(2) April-June,7-9.
- Doornbos, Martin and Nair.K.N. (1990). Dairy Cooperatives and Rural Development in Gujarat in Doornbos and Nair(Eds.) Resources, Institutions and Strategies: Operation Flood and Indian Dairying. New Delhi: Sage Publications.

Dubey, Rajeev.(2015).Women in New Hindu Religious Movements: A Sociological Analysis. Women's Link, 21(4), 2-8.

Ela, R.Bhatt.(1991).Women Cooperatives. Cooperative Perspective, 26(2), July-Sep,121-123.

....., (1994). Empowerment of Women: Are Cooperative Appropriate Instruments. In Bhatia, et al (eds.), Cooperatives and Human Resource Development: Tapping Manpower Resources. Encyclopaedia of Cooperative Management, 5, (pp.111-121). New Delhi: Deep& Deep Publications.

....., (2016).Closing Remarks.Women's Voices in the Informal Economy:A Consultation of the United Nations Secretary General's High Level Panel(UN HLP) on Women's Economic Empowerment (WEE) Ahmedabad, India:August 4-5.

Fairbairn,B.(1994).Constructing an Alternative Language for Co-operative Growth: An Ecological Metaphor. Paper Presented to the Association for Studies in Co-operation, Calgary, June.

Gunadasa,J.M.(1980).Member Education, Member Participation and Leadership Development with Special Reference to Women in Cooperatives In ICA (eds.), Enhancing Women's Participation in Co-operative Activities. Report of the Regional Seminar held at Kandy, Sri Lanka (pp.72-83). New Delhi: ICA.

Gurumurthy,T.R.(2000). Self-help Groups Empower Rural Women. Kurukshetra, Feb, 34(2).

ICA,(1975). Reports and Papers of Regional Seminar on "Role of Women in Co-operative Development". New Delhi: Modern Press Private Ltd.

ICA,(1997).Cooperative Leadership Training for Women-Report of the Regional Preparatory Workshop, Kuala Lumpur, Malaysia, 9-11, Dec. ICAROAP:New Delhi.

ICA (2013). Blueprint for a Co-operative Decade. Retrieved from <http://ica.coop/en/media/library/member-publication/blueprint-co-operative-decade-february-2013> on 21.05-2015

India Brand Equity Foundation.(IBEF) (2016). Overview of Indian Economy. Retrieved from <http://www.ibef.org/economy/indian-economy-overview> on 27.03.2016.

ILO(2014).Cooperatives and the Sustainable Development Goals: A Contribution to the Post - 2015 development Debate- A Policy Brief. Retrieved from [http://www.ilo.org/wcmsp5/groups/public/---ed\\_emp/documents/publication/wcms\\_240640.pdf](http://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_240640.pdf) on 9-10-2016.

Jha, U.S.(1998). Gender and Social Order, New Delhi:Kanishka Publishers and Distributors

Joshi, D.D. (1990). Impact Evaluation of Dairy Development Corporation Milk Collection Activity on Income Rural Milk Product, FAO, 31- 32.

Krishnaswami, O.R.(1976). Democracy in Action. New Delhi: Somaiya Publication.

Kurien, Verghese. (1983).Dairy Development. Economic and Political Weekly,18(14),521-522.

Retrieved from <http://www.jstor.org/stable/4372029> on 24.07.2016

Lorraine, Corner. (1997). Women's Participation in Decision Making and Leadership: A Global Perspective.Report of a Regional Conference titled Women in Decision Making in Co-operatives held in Tagatay City, Philippines published by ACWF and ICAROAP

Malhotra, Anju, Schuler Ruth, Sidney and Boender, Carol.(2002). Measuring Women's Empowerment as a Variable in International Development. Background paper prepared for the World Bank workshop on Poverty and Gender: New perspectives. Retrieved from <http://site.resources.worldbank.org/INTGENDER/Resources/MalhotraSchulerBoender.pdf>.

Malhotra, N. (2005). Marketing research: An applied orientation. New Delhi: Pearson/Prentice Hall

Mascarenhas, R.C.(1988).A Strategy for Rural Development: Dairy Cooperatives in India. New Delhi: Sage Publications, 295.

Meera, M. and Krishne Gowda.(2013). Towards Economic Empowerment: Study of Rural Women in Dairy Cooperatives of Heggada Devana Kote Taluk in Mysore District. Journal of Media and Social Development.July-Sept, 1(1), 17-36. Retrieved from [www.uni-mysore.ac.in/.../Journal%20of%20Media%20and%20Social%20Developme..](http://www.uni-mysore.ac.in/.../Journal%20of%20Media%20and%20Social%20Developme..)

Meeta, Punjabi.(2004).India: Increasing Demand Challenges the Dairy Sector . Retrieved from <http://www.fao.org/docrep/011/i0588e/I0588E05.htm> on 22-10-2016

Nair, K N.(1985). 'White Revolution in India: Facts and Issues', Economic and Political Weekly, 20 (25-26), A 89.

National Cooperative Union of India, (1987). Women and Co-operatives- A Report of National Convention on Involvement of Women in Cooperation, April 21-22, New Delhi: NCUI.

Nunnaly, J.(1978). Psychometric Theory. New York: McGraw-Hill.

Parnell, E.(2014). Market Intervention Changes Lives. Retrieved from <http://co-oppundit.blogspot.com>

Parthasarathy, G.(1991).White Revolution, Dairy co-operatives and Weaker Sections. Economic and Political Weekly, 26(52), A177-183.

Ranjana Devi, (1999). Women and Cooperatives. Paper Presented at the National Seminar on Women Cooperatives, Cooperative Perspective, April, 39(3),18-22.

Renana, Jabvala. (1994). Economic Development through Women Cooperatives. Cooperative Catalogue, July, 3(1),15-20.

Riba,M.(1980). Enhancing Women's Participation in Cooperative Activities in North Eastern India. In ICA (eds.), Enhancing Women's participation in Co-operative activities. *Report of the Regional seminar held at Kady, Sri Lanka* (pp.161-192). New Delhi: ICA.

Roy,A.K. (1994).Women Entrepreneurship Vital for the Development of Cooperatives. Indian Cooperative Review,32(1), 32-36.

Sandhya Neb,(1998). The Need for Gender Integration in Cooperatives. The Cooperator, Dec, 36(6), 241.

Sarker, Debanarayan and Ghosh, Bikas, Kumar.(2010).Constraints of Milk Production: A Study on Cooperative and Non- Cooperative Dairy Farms in West Bengal.Agriculture Economics Research Review,23, July –December,303-314.

Sen, Amartya.(1989). Development as capability Expansion. Journal of Development Planning,19, 41-58.

Shah, Tushaar, Mehta, Yashree, Verma, Shilp, and Patel, Amit.(2015). Vasudhara Adivasi Dairy Cooperative Model for the Second White Revolution? Economic & Political Weekly, February,1(7),15-18.

Shah, Deepak. (1997). Co-operative Dairying in Maharashtra: Lessons to be Learned. Economic and Political Weekly. 32(39), (Sep.27-Oct.3.),A125- A135.

Shanti,George.(1985). Operation Flood: An Appraisal of Current Indian Dairy Policy, Delhi: Oxford Press.

Shashikumar.(2015).Beyond Milk: Rural Women Empowerment through Dairying in Rural India. International Journal of Academic Research,2(1-2),8-14.Retrieved from [www.ijar.org.in](http://www.ijar.org.in)

Sheela, K.S. and Ramegowda, A.(2013). Dairy Cooperatives and Empowerment of Women. International Journal of Advanced Social Science and Humanities.2(9), 34-42.

Shivaraman, B.(1973). Importance of Animal Production in the Rural Economy', Indian Dairyman, 25 (6), 223.

Sudha, K. (2005). Micro Initiatives: An Effective Member Relationship Management (MRM) Strategy in Cooperatives in India. The Review of International Cooperation, 98,(1), ICA, Geneva, Switzerland.

Sudha, K.(2007). Bridging the Missing Links in Primary Cooperatives in India, A Paper Presented in International Conference in 1st World CIRIEC Research Conference on the Social Economy in Victoria, BC, Canada.

..... (2010). Strengthening the Spirit of Enterprise - The Cooperative Way. International Journal of Co-operative Management. 5(1), 54-61, U.K: New Harmony Press LTD.

.....,(2015).Women empowerment through participatory strategies -A Study. A Research Paper Presented in ICA-ILO International Research Conference on the Theme Cooperatives and the World of Work held during 10-11 November in Antalya, Turkey.

Taimni,K.K.(1993).Cooperative Development: The Next Phase. New Delhi: ICA- DOMUS Trust.

United Nations.(2001). Guidelines on Women’s Empowerment for the UN Resident Coordinator System. Secretariat of the UN Inter-Agency Task Force on the Implementation of the ICPD Program of Action. New York: United Nations.  
Retrieved from <http://www.un.org/popin/unfpa/taskforce/guide/iatfwemp.gdl.html>.

UNGA. (2012). The Future We Want” .Resolution of the United Nations General Assembly adopted on 27th July 2012. Retrieved from <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N11/476/10./PDF/N1147610/pdf?>

.....