

# EFFECTS OF SCIENCE AND TECHNOLOGY FOR UPLIFTMENT OF RURAL WOMEN IN INDIA

Dr.D.K.Parmar<sup>1</sup> Mr.Vinitkumar K .Modi <sup>2</sup>Dr.S.K.Dave <sup>3</sup> Heta Shroff<sup>4</sup>

<sup>1</sup>Lecturer in Applied Mechanics Department, <sup>2</sup>Lecturer in Mechanical Engg. Department, <sup>3</sup>Head Civil Engg. Department, <sup>4</sup>Student Applied Mechanics Department B & B Institute of Technology Vallabh Vidyanagar Gujarat India

## Abstract:

Humans and technology both are developed simultaneously. They are attached twins. From the time when the dawn of human origin, since Darwin's chimpanzees, both have been travelling together From the cave dwelling Homo-sapiens of yesterdays to the present day sophisticated space dwelling Robo-sapiens the technology always set upright by them.

In the developing country like India, rural women's work chooses food production and agricultural products, the supporters of technology and technology transfer not consider the multifaceted requirements and living conditions of rural women. Deep-rooted preconceptions, which are accepted by scientists, engineers, technocrats and technology disseminators, give to a gap between needs and actions in technology development and technology transfer to rural women.

The other side of the truth is that many a times the same technology turned from benefit to nuisance. Fire, which made the life easy and saved humans from the wild animals, overcome their huts and burned many a cities.

The necessity of connecting science and technology for transforming rural women of India has long been recognized. In fact, Mahatma Gandhi had clearly shown an appreciation of this requirement. Numerous innovative and emerging technologies have better prospective for women's empowerment but not all takes care of gender dissimilarities sufficiently. Additional systematic analysis is desirable about their effects on women and men .In this paper we discuss these varied impacts of science and technology on upliftment of rural women to improve their status in India

**IndexTerms :-Science. Technology Rural Women, empowerment**

## I INTRODUCTION

There is no controversy in saying that the duo of science and technology paves the way for the development of a country. Associated with this stand, recently governments and policy makers have started emphasizing the introduction of such S&T devices, products suitable to geographical location, environment and social fabric. One step ahead, knowledge of innovation is taking shape in everyone's mind. If we consider science, technology and innovation as the three wheels of an automobile which is called development, then scientific temper would be the fourth significant wheel. Scientific temper is in fact a thinking process whereby a person takes rational decisions in his/her daily life through analysis. If people are lacking of such temperament, they will not be able to play their logical role in the development process. Final development shall not be sustainable if a society of scientifically tempered people ignores human emotions, human rights, environment, pollution problems and animal welfare. A good balance between scientific temper and positive mentality having good value system in the background is needed for the sustainable development. We would not accept development at the price of environment, inhumanity and pollution... Taking awareness of such components should be an important part of the policy making in respect of any technology intervention.

## II RESEARCH METHODOLOGY AND OBJECTIVE

Here, in this study descriptive methods are followed and secondary data has been collected. For this study data and information has been collected from various books, Research Article, Magazines, Research Journal, E-journal, Various Reports, and Websites.

### OBJECTIVES

Major objectives of this paper are:

To study Impact of Science & Technology on women

To study various systems for women Empowerment

To study Importance of women and economic development

To identify Challenges for women development

To suggest Solutions for implementing the S&T for women of Rural India

To suggest Schemes and policies for improving women's Upliftment and contribution of women in Science and Technology.

### III THE IMPACT OF TECHNOLOGY ON WOMEN:

The change from existing market economy has an intense negative impact on women. The Green revolution, which focused on growing harvests of rice, pulses, wheat sugarcane and other grains and crops involved a shift in inputs from human to technical with advanced technology. Due to his women's participation, knowledge and inputs were dropped, and their role shifted from being 'primary producers to subordinate workers.'

Women are replaced by men where newer innovative technology are used in agricultural area in recent years. Previously threshing of grain previously completely a female task, and with the introduction of automatic grain thrashers- which are only operated by men in farm so that women have lost an important source of income during harvesting season. Use of combined harvesters where both men and women are working together are very less. This means that this source of income is no longer available to women, which has an intense impact on women's workload. In the same way as cattle dung is being used as fertilizer, there is less availability of fuel for cooking and household uses for rural women. Commercialization and the subsequent focus on cash crops has led to a situation where food is elevated straight from the farm to the market for buyers. The income collected is controlled by men. Earlier, most of the produce was taken home and stored, and the women bartered all farm products for other necessary 'commodities. In this exchange system women have more control than men in rural areas.

### IV WOMEN EMPOWERMENT

Woman is born equal but opposite to men. But history made woman slave and weak. For centuries she lived in a state of oppression, negligence and carelessness. From so many years she was suffering from domestic violence, kidnapped, raped, butchered during the wars and conflicts. Society gave her low status than her cousin man. Her birth was seen discouraging and inauspicious in the family. She was silently killed in the womb or after birth. After marriage, she was just on the mercy of her husband and in-laws. If we think about the origin of this inequality then we find out one factor that is – man's superior muscle power. It appears that due to his physical strength, primitive man was in a better position than woman in hunting wild animals and fighting the rival tribes. This some way or other gave rise to male supremacy in primitive society which was further accentuated by various social norms in later periods. But today technology has made man's superior physical strength redundant and surplus.. Machines have empowered women to do any tough work with ease. But well-established social injustice prejudices and biases remain in the society. Again here, technology is helping break these stereotypes life of women by bringing new ideas through TV, cinema, and social media. In a way we can say that women empowerment that we are observing and witnessing today would not have been possible in the absence of certain technological breakthroughs

### V WOMEN AND ECONOMIC DEVELOPMENT

There is need to improve the policies and implement them with greater motivation for economic development of women. In rural area of India poor women remain in traditional fields of employment. When traditional jobs become unavailable due to number of factors, like technology up gradation so that women are forced to seek employment in other areas, which may have no any connection with their original experience and expertise. Women have a marginal role in family decision making of family, in rural area they are primarily responsible for keeping the household work.

Women are frequently consulted on marriage discussions but not on any monetary financial and other important matters in the villages or rural areas. Women's economic contribution has been reduced due to newer innovative technology in the agricultural industrial process and economic development. Women are also moved and lost their share in the industrial workforce due to up gradation of innovative technology, and reduction of labor force due to production through automation and adoption of upgraded technology. Owners in the private sector, in the process of modernization, avoid the responsibility for women workers welfare.

#### A Education

Science and technology has improved education and teaching learning process in recent time. Women education with help of visual Aids like using computers laptops, overhead projectors, LCD projectors, has proved to be a better technique of teaching and learning in classrooms and laboratory. So government is motivating the use of ICT (Information & Communication Technology) tools in education. Online courses have opened borders for in so many area for students of villages.

#### B Health

Maximum unhappiness of people in old times due to be early deaths of family members due to poor health and diseases. With the development of medical science and latest medicine and scientific treatment in hospitals most of the incurable diseases like cancer, Diabetes heart attack tuberculosis, have been either cured or contained. Medical and health facilities in rural areas have improved considerably, though they still lack far behind compared to city areas. New technological innovations like telemedicine and online medicine would appreciably bridge this gap of medical facility in rural areas. This has overall positive impact on the good health of rural people, increasing their life hope. Thus, the technology has reduced the tragedies and narrowed the painful and not curable diseases. Women upliftment can also be possible with better health facilities in rural areas.(3)

#### C Environment

Conventional Indian life is closely related to natural world and environment. In India rural economy is still mostly dependent on agriculture and farm products which in turn depend on monsoon and good weather condition suitable for local crops. That is why Indian festivals, culture, songs, rituals are connected with nature by different way. But due to the introduction of new technologies to clean the forests, dam on the various rivers, hunt the animals, a profit-making and entrepreneurial approach towards nature has been increased. Due to this exploitation of the natural resources causing pollution, earthquake environmental degradation, monsoon disturbance and ever increasing man-animal conflicts (2, 3). With better environment facilities rural women can be benefited in agricultural area.

### D Communication

The maximum visible impact of technology and inventions on villages, in recent times, has been on the communication and networking system. Electronic and communication media like radio, television, cell phones internet cable TV and social media have enhanced the information flow to rural area in this information technology era. These electronic media can also be used to influence, entertain and inform the people in rural areas. Multiplex Cinema and TV serials, Cable TV have motivated the women for equal participation in the male leading activities like in government jobs, banking ,malls, sports, literature, national events ,driving and all areas of latest science and technology earlier, every village in India had its own distinctive identity. Its people recognized themselves with their village name. (3). Rural women can take advantages of better communication facilities to upgrade their life connecting with urban areas.

### E Transportation

Previously fast connectivity to the urban area from villages was the major problems for villagers for overall development.. Their mode of transportation was very slow with bullock carts, mules or boats. Kuchcha roads would become non usable and unusable in monsoon season. Technology has improved this facilities.and transportation mode of villagers. Now villages are well connected by highways, roads and rail lines and state transport facilities. It has provided good transportation facility for people and goods and thus has spurred economic activity there. The tedious journeys of miles on foot or by bullock-carts to meet their relatives and procuring and selling their farm crops in the urban area have become the things of past. Now Motorcycles, tractors, cars and bikes are the custom of the day for rural farmer also. With better transportation facilities rural women can take advantages of urban areas for their activities.

### F Agriculture

The farmer provides and cultivates grains and agricultural product for the society and people.. They grown different crops for the humans with their plough and bullocks and depended on the sympathy of rain gods for enough rains for centuries. But now they all are equipped with the tractor and cultivator, and latest equipments in farm instead of plough and bullocks. They have developed the irrigation system to provide enough water to their crops via cannel of river or well in farm. This has increased production of food grains from 45 million tons in 1951-52 to 252 million tons by 2001-02. Infamous Bengal famine of 1940s had then become the part of tragic folksongs in India but not anymore. The practice of newer technology and research in agriculture has also caused in the cultivation of different crops which can cultivate rapidly and they can be strong to many pests and vermin so no wastages of crops due to various diseases. (3).Newer agricultural technology always helps rural women.

### G ICT For Agriculture

The main problems for farmers in rural India are their lack of access to up-to-date grain market information for best process and prices of their crops This generates an inequity in negotiating power with urban buyers which are big corporations that have the resources and information to effect the market. Other than market information, a farmer needs to know about weather on a day to day basis, about new technologies and various government schemes for farmer welfare. With the use of latest ICT and fast communication this information this major problems can be solved effectively in rural areas. With the help of ICT farmers in rural areas can get updated latest information about, market, weather etc.

### H ICT for Effective Implementation of Welfare Schemes

Every year, government spends Billions ff Rupees on the welfare of The poor. As around two-third of the total population and large number of the poor reside in rural areas, most of these welfare schemes are targeted at the rural populations. Use of ICT can improve the efficacy of these schemes, it can stop leakages and eliminate corruption in the system due to on line transaction of the of financial benefits in account only... Scientific techniques becoming a part of local knowledge vs. productivity

Harnessing the scientific development for the local welfare needs is the major objective of our scientific goals and the main work of the institutions of the government. Some of the interesting scientific techniques which have the potential to revolutionize the agricultural activities on the rural fronts are as follows.

1. Vermiculture
2. Seed banks for banking the local variety of seeds Vs. Productivity: This can helps demands of the world's food Needs through better maintenance of crop diversity
3. Institutional development Vs. Productivity: an -IDEA for fostering innovation and entrepreneurship in Agriculture

### I RENEWABLE ENERGY

In an our country where vast topographical differences make it difficult for the grid to be extended to many remote regions, renewable sources of energy can bring in the real change in people's lives, and hence, development in rural areas

### VI CHALLENGES FOR WOMEN DEVELOPMENT THROUGH S & T

There are numerous challenges before accentuating the use of S&T in Rural India.

1. Various agencies are involved in R&D work but the cost of maintaining this technology transfer is very high.
2. Awareness level is very poor, which needs to be increased through regular campaigns and training programmes. Mobile phones, Televisions, Radios, FM Radios local cable channels and social networking sites can be instrumental In spreading the awareness.
3. The root of the problem is that it had worked like this only in respect of some technologies and produced remote Pockets of achievement i.e. green and white revolution in some parts of the country. Green revolution yielded results in States like Punjab similarly, white revolution has an extra-large success in Gujarat, not in many other States of India. Due to lack of inspired interaction at advanced level, rural India has not been able to gain the full advantages of S&T That it deserves.

4. Due to lack of linkage with industries, the S&T work in Rural India is badly affected.
5. Lack of integration of S&T system in developmental activities and no S&T based planning and distributions of responsibility amongst nodal implementing agencies are the major challenges.

## VII SUITABLE SOLUTIONS FOR WOMEN DEVELOPMENT

Considering the challenges for implementing the S&T for Rural India, following measures can be taken:

1. Centrally funded Agencies like the District Rural Development Agencies (DRDA) establish in every district for implementation of poverty relief programme. It should be provided with S&T supports to look into the technology aspects of developmental and anti-poverty programmes. It should find technology gaps and make suitable choice or to prepare R. and D. scheme as per their local rural necessities.
2. A partnership should be forged with S&T institutions and civil society to assess the need and popularize the usage of S&T in various rural economic activities.
3. IT means should be used to increase the awareness and disseminate the information regarding the benefits of S&T in promoting rural areas as economic activities centers.
4. Need based R&D work should be promoted for development of women.
5. Sector wise survey conducted for S&T needs and gaps, particularly for non-farm sector and find areas for entrepreneurship development in rural area for women. Just like small industries of papad making in rural area with latest machines and technology.
6. Make appropriate selection of field NGOs and organizations that could be trained and supported to progress capability in S&T intervention and to act as incubators for enterprise growth and development.
7. Organize training and development programs for NGO partners in project activities in the rural area. For development of women with help of science and technology. Government agencies can also help in this training programs
8. In all areas and recognize technologies developed already for spreading and priorities of research work with importance on difficulties 'evolving' from the field.
9. There are many entrepreneurs and researchers doing technological advancements of tools and processes at local levels. Efforts should be made to identify such innovations and to make them commercially viable. Local science and technical institutions like as polytechnics should be asked to take up such projects in co-ordination with the experts from field.
10. Actual participation in technology transfer projects has positive benefits in floating the self- confidence of rural women.
11. With the help of better rural communications can speed up technology spreading to poor women in rural area.

## VIII STRATEGIES FOR IMPROVING WOMEN'S ACCESS TO AND PARTICIPATION IN SCIENCE AND TECHNOLOGY

The outcomes deliberated above are not particularly new. They capture points that have been made.

We can provide better access to science and technology to poor women to solve all the problems of upliftment in society. If women do not have equal access to recognition, social, human rights, salaries, political, property, education, economical and other services, etc. then access to science and technology is unlikely to have a major influence on improving their life style

There is need for serious assurance to gender equality on the part of world governments if women are to reach parity with men in the rural sector.

The following are a major areas where governments should make provisions in terms of policies/funds.

### (1) Policy of Government

Women are play essential role in food production & agricultural sector that governments must empowered women farm workers and agricultural producers for their benefits. Their benefits should be transfer to their account only.

Governments can play a most important role in shifting conventional mindsets that stereotype women into secondary places.

Gender mainstreaming in rural departments and research organizations should not be unpaid or donor-driven. Governments should make it an essential policy to get better their own potential to meet requirements of rural women so they can sustained with better way in rural areas with better life.

### (2) Education / Skill Training

Education and skill training is a main source of changing of all status of community, it should be seen as life-long for everyone, including rich/poor men and women across the society. Governments have to play an important role in conventional populations that gaining of new skills and technologies is a usual part of time. Adult education, through various extension programs can be provided vocational need & skill based training, through various extension centers at their remote rural location should be started by the government by the various standard and known agencies like ITI and polytechnics just like community development through polytechnic scheme. Various government schemes of scholarship, free tuition fee for women students can also help for education of rural women.

### (3) Women's Knowledge

Women's conventional knowledge frequently is based on years of examination and training it can be consider as an initial point for the beginning of new technologies. The researcher should be take advantages for innovation of new technology, which can be up-lift life-style and status of the rural women with improving their living standards and can improve their income.



## IX.CONCLUSIONS

This paper has shown, women's effort is still mostly overlooked by the technology development and technology transfer processes by agencies. An integrated approach through various bodies is suggested, that will help rural women in the course of a technology support system.

It is therefore essential that rural women's unique situation be recognized and their needs in the technology development and transfer processes be responded to. The provision of support to women is most often viewed simplistically as assistance to women, although such interventions can, in fact, improve women household food security prospects. Science and Technology has the command to convey regarding the changes in up gradation of rural women. Thus, harnessing S&T is the solution to change Rural India as a growth engine through upgrading of livelihood, employment generation, environment prediction and ecological security. As a root of socio-economic growth, it may be improved at every one levels. Nowadays, we require concentrated hard work to device user-friendly S&T solution for transforming status of rural women in India.

## REFERENCES

- [1] Agarwal, Sunil ,Kurukshetra Technology Development and Transfer at Grassroots Level Vol. 50,No. 5, March-2002
- [2] Dr. Shri Nath Sahai,Kurukshetra(2016) Technology For Information And Marketing Needs Of Rural India,
- [3] Dr. Shushma H.(2017) India's Strive for Technology Intervention and Its Effects on Rural Economy(International Journal of Engineering Technology Science and Research IJETSR Volume 4, Issue 10
- [4] Eva M. Rathgeber Rural Women's Access to Science and Technology in the Context of Natural Resource Management Institute of Women's Studies,University of Ottawa
- [5] Nisheeth Rai & Vijay Kumar (2012) Role Of Science And Technology In making Rural India Shine IJRDMs: Volume 6 • Number 1 •
- [6] Science and Technology Education in Rural India(2016), JP Pandey, Kurukshetra
- [7] Sunil Kumar, Neeraja , Kurukshetra (2016) Effects of Science and Technology on Rural Society
- [8] [www.nistads.res.in/indiasnt2008/t6rural/t6rur1.htm](http://www.nistads.res.in/indiasnt2008/t6rural/t6rur1.htm)
- [9] [www.studymoose.com/unorganised-sector-for-women-essay](http://www.studymoose.com/unorganised-sector-for-women-essay)

